LDC #: 29423 G26

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 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?	✓			
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%/15% 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) $\leq$ 20% 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 #: 26423 G26

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
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 SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 29425G26

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: JYG
2nd Reviewer:

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

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

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

Blank extraction date: 12/07/12 **Blank analysis date:** 12/12/12
Conc. units: ug/kg Associated Samples: All Code: B

Compound	Blank ID	Sample Identification							
MB	280-151130/1-A (5X)	1	3	5	7	8	9	10	
W	0.410	2.05	0.79 / 11 U	0.76 / 12 U	0.49 / 11 U	1.1 / # 11 U	1.7 / 11 U	0.66 / 11 U	1.8 / 11 U

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

Compound	Blank ID	Sample Identification							
MB	280-151130/1-A (5X)	17	20						
W	0.410	2.05	0.84 / 11 U	1.1 / 11 U					

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 29423G2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 2
Reviewer: SM
2nd Reviewer:

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

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: 12/05/12

Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: ~~7, 9, 11, 15, 10, 14, 16, 12, 13~~ (7-16) >5x or N

Compound	Blank ID	Sample Identification								
	EB-120512	Action Limit								
	(280-36640-1)									
TTT	0.0087	0.0435								
W	0.0081	0.0405								
GG	0.016	0.08								
NN	0.021	0.105								
S	0.046	0.23								
UU	0.019	0.095								

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

Sampling date: 12/06/12

Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 6, 19 (No good)

Compound	Blank ID	Sample Identification								
	EB1-120612	Action								
	(280-36711-1)									
TTT	0.012	0.06								
W	0.015	0.075								
GG	0.018	0.09								
NN	0.027	0.135								
S	0.071	0.355								
UU	0.028	0.14								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 29423G2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SY
2nd Reviewer: [illegible]

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

(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: µg/L **Associated sample units:** µg/kg
Sampling date: 12/6/12
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1-5, 17-18, 20 (No quals)

Compound	Blank ID	Sample Identification								
	EB2-120612	Action limit								
TTT	(280-36711-1) 0.011	0.055								
W	0.013	0.065								
GG	0.017	0.085								
LLL	0.0042	0.021								
DDD	0.0038	0.019								
NN	0.022	0.11								
S	0.061	0.305								
UU	0.023	0.115								

Blank units: µg/L **Associated sample units:** µg/kg
Sampling date: 11/14/12
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: all (No quals)

Compound	Blank ID	Sample Identification								
	FB-111412	Action Level								
TTT	(280-35930-1) 0.010	0.05								
W	0.013	0.065								
S	0.054	0.27								
UU	0.025	0.125								
ZZ	0.014	0.07								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 29423 G26

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: JVG
2nd Reviewer: A

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

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

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?

Y (N) N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		7	NBZ	137 (40-130)	No qual (only 1 out)
				( )	
		8		154 ( )	
				( )	
		9		166 ( )	
				( )	
		12		174 ( )	
				( )	
		13		328 ( )	
				( )	
		14		318 ( )	
				( )	
		16		244 ( )	
				( )	
		17		134 ( )	
				( )	
		20	↓	140 (↓)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)		QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114	S5 (2FP)= 2-Fluorophenol	25-121	21-100
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116	S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S3 (TPH) = Terphenyl-d14	18-137	33-141	S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S4 (PHL) = Phenol-d5	24-113	10-94	S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 29423, G 26

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

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

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

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

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

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (600 std)	Recalculated RRF (600 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL SMS F	12/10/12	Naphthalene (ANT)	1.8755	1.8755	1.9364	1.9364	12	12
			Phenanthrene (PHN)	1.1805	1.1805	1.2150	1.2150	10	10
			Benzo(a)pyrene (CRY)	0.9876	0.9876	0.9641	0.9641	7.0	7.0

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

LDC # 29423G25

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

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

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = (Ax)(Cis)/(Ais)(Cx)

Where:
ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
Ax = Area of compound
Cx = Concentration of compound
Ais = Area of associated internal standard
Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound	Ave RRF	Reported RRF	Recalculated RRF	Reported % D	Recalculated %D
1	F7873	12/12/2012	Naphthalene (ANT)	1.9364	1.9191	1.9191	0.9	0.9
			Phenanthrene (PHN)	1.2150	1.2018	1.2018	1.1	1.1
			Benzo(a)pyrene (CRY)	0.9641	0.9077	0.9077	5.9	5.9

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.

CCV1

Compound	Ax	Ais
Naphthalene (ANT)	181525	94588
Phenanthrene (PHN)	194180	161570
Benzo(a)pyrene (CRY)	147336	162323

LDC #: 29423 G26

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	500	486.9	97	97	0
2-Fluorobiphenyl	↓	358.2	72	72	↓
Terphenyl-d14	↓	380.9	76	76	↓
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 #: 29423 G26

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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

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

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

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

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

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

MS/MSD samples: 21/22

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	Recalc
Phenol											
N-Nitroso-di-n-propylamine											
4-Chloro-3-methylphenol											
Acenaphthene	31.8	31.7	0	25.2	24.5	79	79	77	77	3	3
~~Pentachlorophenol~~	↓	↓	↓								
Pyrene	↓	↓	↓	26.89	26.84	84	84	85	85	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 #: 29423 G26

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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

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

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

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

LCS/LCSD samples: LCS 280-151130/2-A

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	Recalc
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	28.8	NA	26.2	NA	91	91				
Pentachlorophenol		↓		↓						
Pyrene	28.8	↓	27.4	↓	95	95				

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 #: 29423 G 26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

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

Example:

Sample I.D. #1, S:

Conc. = $\frac{(3488)(600)(1.0\ ml)(\quad)(\quad)}{(9501)(1.9364)(31.1\ g)(0.858)(\quad)}$

= 0.426

≈ 0.43 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: December 4, 2012

LDC Report Date: April 8, 2013

Matrix: Soil

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-632-SA6-SB-0.0-0.5
SL-630-SA6-SB-0.0-0.5
SL-626-SA6-SB-0.0-0.5MS
SL-626-SA6-SB-0.0-0.5MSD
SL-626-SA6-SB-0.0-0.5
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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 .

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

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

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
11/15/12	11150030	CLP1	Toxaphene	44.06	All samples in SDG 280-36589-1	J (all detects) UJ (all non-detects)	A
11/15/12	11150030	CLP2	Toxaphene	32.14	All samples in SDG 280-36589-1	J (all detects) UJ (all non-detects)	A

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

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

V. Blanks

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

Sample EB-120512 (from SDG 280-36640-1) was identified as an equipment blank. No chlorinated pesticide contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No chlorinated pesticide contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-626-SA6-SB-0.0-0.5MS/MSD (SL-626-SA6-SB-0.0-0.5)	Toxaphene	1087 (19-74)	1055 (19-174)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation

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

Sample	Compound	RPD	Flag	A or P
SL-626-SA6-SB-0.0-0.5	4,4'-DDE	49.4	J (all detects)	A
SL-628-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	65.9 62.9	J (all detects) J (all detects)	A
SL-628-SA6-SB-4.0-5.0	4,4'-DDT	84.6	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-1	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

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

XV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-632-SA6-SB-0.0-0.5 SL-630-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0	Toxaphene	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
280-36589-1	SL-626-SA6-SB-0.0-0.5	Toxaphene	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
280-36589-1	SL-626-SA6-SB-0.0-0.5	4,4'-DDE	J (all detects)	A	Compound quantitation (RPD) (*XIII)
280-36589-1	SL-628-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	J (all detects) J (all detects)	A	Compound quantitation (RPD) (*XIII)
280-36589-1	SL-628-SA6-SB-4.0-5.0	4,4'-DDT	J (all detects)	A	Compound quantitation (RPD) (*XIII)
280-36589-1	SL-632-SA6-SB-0.0-0.5 SL-630-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G3a **VALIDATION COMPLETENESS WORKSHEET** Date: 4/03/13
SDG #: 280-36589-1 Level IV Page: 1 of 1
Laboratory: Test America, Inc. Reviewer: JW
2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	2 RSD ≤ 20% r2
IV.	Continuing calibration/ICV	SW	CCV/ICV ≤ 20%
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	ND	EB = EB-120512 (280-36640-1) FB = FB-111412 (280-35930-1)

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-632-SA6-SB-0.0-0.5	11		21		31	
2	SL-630-SA6-SB-0.0-0.5	12		22		32	
3	SL-626-SA6-SB-0.0-0.5MS	13		23		33	
4	SL-626-SA6-SB-0.0-0.5MSD	14		24		34	
5	SL-626-SA6-SB-0.0-0.5	15		25		35	
6	SL-628-SA6-SB-0.0-0.5	16		26		36	
7	SL-628-SA6-SB-1.0-5.0	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: TCLP

LDC #: 29423 G3a

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

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

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

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?				✓
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.				✓
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

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

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 29423 G 3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: JVG
2nd Reviewer:

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8081/8082)
Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

Y N N/A Were Evaluation mix standards run before initial calibration and before samples?
Y N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard (≤15.0% for individual breakdowns)?
Y N N/A Was at least one standard run daily to verify the working curve?
Y N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of ≤20.0%?

Level IV/D Only

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

#	Date	Standard ID	Column	Compound	%D (Limit ≤ 20.0)	RT (Limits)	Associated Samples	Qualifications
	11/15/12	11150030	CLP1	4	44.06	( )	All	J / UJ / A (C)
		(1CV)	CLP2	↓	32.14	( )	↓	↓
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

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

LDC #: 29493G3a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	3/4	U	1087 (19-174)	1055 (19-174)	( )	5	J dets/A
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 29423 G3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: JVB
2nd Reviewer:

METHOD: ✓ GC __ HPLC

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

Level IV/D Only

(Y) N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
(Y) N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?
Y (N) N/A Did the percent difference of detected compounds between two columns./detectors ≤40%?
If no, please see findings bellow.

#	Compound Name	Sample ID	(%RPD/%D) Between Two Columns/Detectors Limit (≤ 40%)	Qualifications
	J	5	49.4	J dets /A (*#)
	J	6	65.9	
	O	↓	62.9	
	O	7	84.6	↓

Comments: See sample calculation verification worksheet for recalculations

LDC#: 29fr3 G3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVL
2nd Reviewer:

Method: GC Chlorinated Pesticides (EPA SW 846 Method 8081A)

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/11/2012	SGC_P2	g-BHC	1	6021650	4
			2	14069277	10
	CLP1		3	32825944	25
			4	60055050	50
			5	90960136	75
			6	120996504	100

Regression Output		*Calculated*	*Reported WLR*
Constant	b =	*-1.568769*	*1264211.55*
Std Err of Y Est			
R Squared	r^2 =	*0.999646*	*0.998000*
Degrees of Freedom			
X Coefficient(s)	m1 =	*1187997.8463*	*1216903.47*
Std Err of Coef.			
Correlation Coefficient		*0.999823*	
Coefficient of Determination (r^2)		*0.999646*	*0.998000*

LDC#: 29423G3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: MG
2nd Reviewer:

Method: GC Chlorinated Pesticides (EPA SW 846 Method 8081A)

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/11/2012	SGC_P2	g-BHC	1	4157667	4
			2	9956166	10
	CLP2		3	23545691	25
			4	43602957	50
			5	67261706	75
			6	90645549	100

Regression Output		*Calculated*	*Reported WLR*
Constant	b =	*-0.632041*	*628727.449*
Std Err of Y Est			
R Squared	r^2 =	*0.999321*	*0.999900*
Degrees of Freedom			
X Coefficient(s)	m1 =	*892509.9199*	*896624.97*
Std Err of Coef.			
Correlation Coefficient		*0.999660*	
Coefficient of Determination (r^2)		*0.999321*	*0.999900*

LDC#: 29423G3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SVG
2nd Reviewer:

Method: GC Chlorinated Pesticides (EPA SW 846 Method 8081A)

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/11/2012	SGC_P2	4,4'-DDT	1	3810077	4
			2	9384942	10
	CLP1		3	23570648	25
			4	43515051	50
			5	66342801	75
			6	86202244	100

Regression Output		*Calculated*	*Reported WLR*
Constant	b =	*-1.161982*	*318496.577*
Std Err of Y Est			
R Squared	r^2 =	*0.999411*	*0.999900*
Degrees of Freedom			
X Coefficient(s)	m1 =	*858718.5353*	*885453.054*
Std Err of Coef.			
Correlation Coefficient		*0.999705*	
Coefficient of Determination (r^2)		*0.999411*	*0.999900*

LDC#: 29423G3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVC
2nd Reviewer: [signature]

Method: GC Chlorinated Pesticides (EPA SW 846 Method 8081A)

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/11/2012	SGC_P2	4,4'-DDT	1	2200108	4
			2	5327439	10
	CLP2		3	13712084	25
			4	26238528	50
			5	40469240	75
			6	53872986	100

Regression Output		*Calculated*	*Reported WLR*
Constant	b =	*0.061847*	*50738.040*
Std Err of Y Est			
R Squared	r^2 =	*0.999751*	*1.000000*
Degrees of Freedom			
X Coefficient(s)	m1 =	*537820.4113*	*535393.010*
Std Err of Coef.			
Correlation Coefficient		*0.999875*	
Coefficient of Determination (r^2)		*0.999751*	*1.000000*

LDC#: 29473A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: GC ✓ HPLC ____

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

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound		CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	12120040	12/13/2012	g-BHC	CLP1	50.0	53.0	53.0	6.1	6.1
			4,4'-DDT	CLP1	50.0	48.8	48.8	2.4	2.4
			g-BHC	CLP2	50.0	53.1	53.1	6.1	6.1
			4,4'-DDT	CLP2	50.0	50.1	50.1	0.2	0.2

LDC #: 26493G3c

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	CLP 1	20	16.8	84	84	0
Decachlorobiphenyl	"	"	17.3	87	87	"
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Notes:

LDC #: 29473G3a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

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

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

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

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

RPD = | MS - MSD | * 2/(MS + MSD)

MS = Matrix spike percent recovery

MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 3/4

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC	18.3	18.4	0	15.6	15.3	85	85	83	83	✓	✓
4,4'-DDT	↓	↓	6.5	21.7	22.9	80	80	89	89	8	8
Aroclor 1260											

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

LDC #: 29473G3c

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: JVG
2nd Reviewer:

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

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

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

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

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

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 280-151297/2-A

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC	16.6	NA	16.7	NA	101	101				
4,4'-DDT	↓	↓	16.8	↓	101	101				
Aroclor 1260										

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

LDC #: 29693G2a

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd reviewer: A

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

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

CCP 1

Example:

Sample I.D. #1 4,4'-DDT

Conc. = $\frac{[(15828010) - (3158496.577)]}{88545306}$

= 17.5 ng

final conc. = $\frac{(17.52)(10\ ml)}{(30.0\ g)(0.89\ g)}$

= 6.547

≈ 6.5 ug/kg

(6.5)

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

Note: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 4, 2012

LDC Report Date: April 8, 2013

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-529-SA6-SB-0.0-0.5
SL-531-SA6-SB-0.0-0.5
SL-532-SA6-SB-0.0-0.5
SL-533-SA6-SB-0.0-0.5
SL-534-SA6-SB-0.0-0.5
SL-534-SA6-SB-3.0-4.0
SL-626-SA6-SB-0.0-0.5
SL-627-SA6-SB-0.0-0.5
SL-627-SA6-SB-1.0-2.0
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0
SL-631-SA6-SB-0.0-0.5
SL-632-SA6-SB-0.0-0.5
SL-629-SA6-SB-0.0-0.5
SL-629-SA6-SB-2.5-3.5
SL-630-SA6-SB-0.0-0.5
SL-536-SA6-SB-0.0-0.5
SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5
SL-549-SA6-SB-0.0-0.5
SL-626-SA6-SB-0.0-0.5MS
SL-626-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082A for Polychlorinated Biphenyls.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

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
12/12/12	1212A004	CLP1	Aroclor-5460	25.7	SL-529-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5MS SL-626-SA6-SB-0.0-0.5MSD MB 280-151292/1-A	Aroclor-5460 Aroclor-5432 Aroclor-5442	J (all detects) UJ (all non-detects)	A

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

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

V. Blanks

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

Samples EB1-120612, EB2-120612 (both from SDG 280-36711-1) and EB-120512 (from SDG 280-36640-1) were identified as equipment blanks. No polychlorinated biphenyl contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-631-SA6-SB-0.0-0.5	CLP 1	Decachlorobiphenyl	125 (45-120)	All TCL compounds	J (all detects)	P
SL-632-SA6-SB-0.0-0.5	CLP 1	Decachlorobiphenyl	126 (45-120)	All TCL compounds	J (all detects)	P

VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Affected Compound	Flag	A or P
SL-626-SA6-SB-0.0-0.5MS/MSD (SL-626-SA6-SB-0.0-0.5)	Aroclor-1016 Aroclor-1260	146 (54-132) 139 (62-129)	186 (54-132) 162 (62-129)	- -	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-1	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 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5	Aroclor-5460 Aroclor-5432 Aroclor-5442	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (C)
280-36589-1	SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5	All TCL compounds	J (all detects)	P	Surrogate spikes (%R) (S)
280-36589-1	SL-626-SA6-SB-0.0-0.5	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260 Aroclor-1262 Aroclor-1268	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	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 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G3b

SDG #: 280-36589-1

Laboratory: Test America, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 4/03/13

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: [signature]

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II.	GC/ECD Instrument Performance Check	N	
III.	Initial calibration	A	~~%RSD ≤ 20%~~ r
IV.	Continuing calibration/ICV	SW	CCV/ICV ≤ 20 %
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	A	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	N	
XVI.	Field blanks	ND	EB: EB1-120612, EB2-120612 (280-36711-1) EB-120512 (280-36640-1) FB = FB-111412 (280-35930-1)

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-529-SA6-SB-0.0-0.5	− 11	SL-628-SA6-SB-4.0-5.0	21	SL-626-SA6-SB-0.0-0.5MS	− 31	MB 280-151292/1-A
+ 2	SL-531-SA6-SB-0.0-0.5	− 12	SL-631-SA6-SB-0.0-0.5	22	SL-626-SA6-SB-0.0-0.5MSD	32	
+ 3	SL-532-SA6-SB-0.0-0.5	− 13	SL-632-SA6-SB-0.0-0.5	23		33	
− 4	SL-533-SA6-SB-0.0-0.5	+ 14	SL-629-SA6-SB-0.0-0.5	24		34	
− 5	SL-534-SA6-SB-0.0-0.5	− 15	SL-629-SA6-SB-2.5-3.5	25		35	
− 6	SL-534-SA6-SB-3.0-4.0	− 16	SL-630-SA6-SB-0.0-0.5	26		36	
− 7	SL-626-SA6-SB-0.0-0.5	− 17	SL-536-SA6-SB-0.0-0.5	27		37	
− 8	SL-627-SA6-SB-0.0-0.5	− 18	SL-546-SA6-SB-0.0-0.5	28		38	
− 9	SL-627-SA6-SB-1.0-2.0	− 19	SL-546-SA6-SB-6.5-7.5	29		39	
+ 10	SL-628-SA6-SB-0.0-0.5	− 20	SL-549-SA6-SB-0.0-0.5	30		40	

Notes: _____

LDC #: 29423 G3b

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: [illegible]

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

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

VALIDATION FINDINGS CHECKLIST

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?			✓	
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

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

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN. Aroclor-1262

OO. Aroclor-1268
PP. Aroclor-5460
QQ, ↓ -5432
RR. ↓ -5442

Notes:_____

LDC #: 29423 G3b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

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

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

Y N N/A Were Evaluation mix standards run before initial calibration and before samples?

Y N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard (≤15.0% for individual breakdowns)?

Y N N/A Was at least one standard run daily to verify the working curve?

Y N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of ≤20.0%?

Level IV/D Only

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

#	Date	Standard ID	Column	Compound	%D (Limit ≤ 20.0)	RT (Limits)	Associated Samples	Qualifications
	12/12/17	1212A004	CLP1	PP	25.7	( )	1, 3-7, 21, 22, MB 280-151292/1-A	J/UJ/A (c) (qual PP, QQ, RR)
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		
						( )		

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

LDC #: 29423G36

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

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

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

Y N N/A Were surrogates spiked into all samples, standards and blanks?

Y N N/A Did all surrogate percent recoveries (%R) meet the QC limits?

#	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications
	2	CLP 2	A, B	0 (45-120)	No qual (di)
	(50X)			( )	
				( )	
	12	CLP 1	B	125 ( )	J dets / P (5)
		↓	↓	( )	↓ ↓
	13	↓	↓	126 ( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

Letter Designation	Surrogate Compound	Recovery QC Limits (Soil)	Recovery QC Limits (Water)	Comments
A	Tetrachloro-m-xylene			
B	Decachlorobiphenyl			

LDC #: 29423 G 3b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: SV6
2nd Reviewer: [illegible]

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

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

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	21/22	V	146 (54-132)	186 (54-132)	( )	7	J det / A (Q)
		BB	139 (62-129)	162 (62-129)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		(qual V - BB, NN, 00)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC#: 29423 G 3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JV6
2nd Reviewer: C

Method: GC PCBs (EPA SW 846 Method 8082A)

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
11/28/2012	GCS_P3a	1260-1	1	3396184	25
			2	7882840	50
	CLP1		3	12092202	100
			4	28288921	250
			5	51770552	500
			6	75152986	750
			7	92657187	1000

Regression Output		*Calculated*	*Reported*
Constant	b =	*-20.581552*	*1902755.010000*
Std Err of Y Est			
R Squared	r^2 =	*0.997743*	*0.994000*
Degrees of Freedom			
X Coefficient(s)	m1 =	*100395.4287*	*1978.0626*
Std Err of Coef.			
Correlation Coefficient		*0.998871*	
Coefficient of Determination (r^2)		*0.997743*	*0.994000*

LDC#: 29423 G36

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: JW6
2nd Reviewer:

METHOD: GC / HPLC____

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

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	1212a003	1212/12	1260-1 CLP1	0.500	0.528	0.528	5.6	5.6
2	1212a019	1212/12	1260-1 CLP1	0.500	0.555	0.555	11.1	11.1

LDC #: 29423635

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Tetrachloro-m-xylene						
Tetrachloro-m-xylene	CLP 1	20	18.5	93	93	6
Decachlorobiphenyl	↓	↓	19.2	96	96	↓
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Sample ID:

Surrogate	Column	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Tetrachloro-m-xylene						
Tetrachloro-m-xylene						
Decachlorobiphenyl						
Decachlorobiphenyl						

Notes:

LDC #: 24423 G 3b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: GVG
2nd Reviewer: [illegible]

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

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

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

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

RPD = I MS - MSD I * 2/(MS + MSD)

MS = Matrix spike percent recovery; MSD = Matrix spike duplicate percent recovery

MS/MSD samples: 21/22

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
gamma-BHC											
4,4'-DDT											
Aroclor 1260	71.2	74.8	0	99.0	121	139	139	16 v	16 v	20	20

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

LDC #: 29423635

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Reviewer: JVG
2nd Reviewer:

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

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

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

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

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

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: LCS 280 - 151294/4-A

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
gamma-BHC										
4,4'-DDT										
Aroclor 1260	66.4	NA	82.6	NA	124	124				

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 #: 29423 G3b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

Example:

Sample I.D. #3 1260:

1260-1 Conc. = $\frac{[(14310765) - (19027550 1)]}{96419.2848}$

= 128.7

Ave = $\frac{128.7 + 234.7 + 111.7 + 179.1 + 195.3}{5}$

= 169.9

final conc. = $\frac{(169.9)(10\,ml)}{(30.5g)(0.847)}$

= 65.77

≈ 66 ug/kg

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

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 4, 2012

LDC Report Date: April 17, 2013

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-529-SA6-SB-0.0-0.5
SL-531-SA6-SB-0.0-0.5
SL-532-SA6-SB-0.0-0.5
SL-533-SA6-SB-0.0-0.5
SL-534-SA6-SB-0.0-0.5
SL-534-SA6-SB-3.0-4.0
SL-626-SA6-SB-0.0-0.5
SL-627-SA6-SB-0.0-0.5
SL-627-SA6-SB-1.0-2.0
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0
SL-631-SA6-SB-0.0-0.5
SL-632-SA6-SB-0.0-0.5
SL-629-SA6-SB-0.0-0.5
SL-629-SA6-SB-2.5-3.5
SL-630-SA6-SB-0.0-0.5
SL-536-SA6-SB-0.0-0.5
SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5
SL-549-SA6-SB-0.0-0.5
SL-549-SA6-SB-0.0-0.5MS
SL-549-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010C, 6020A, and 7471B for Metals. The metals analyzed were Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

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

III. Calibration

An initial calibration was performed.

The calibration standards criteria were met.

IV. Blanks

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

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Sodium	115 ug/L	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

Samples EB1-120612 and EB2-120612 (both from SDG 280-36711-1) and EB-120512 (from SDG 280-36640-1) were identified as equipment blanks. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB2-120612	12/6/12	Sodium	0.15 mg/L	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-549-SA6-SB-0.0-0.5
EB-120512	12/5/12	Boron Magnesium Manganese Sodium	0.0059 mg/L 0.012 mg/L 0.00051 mg/L 0.27 mg/L	SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5
EB1-120612	12/6/12	Boron Manganese Sodium	0.0044 mg/L 0.00038 mg/L 0.19 mg/L	SL-534-SA6-SB-3.0-4.0 SL-546-SA6-SB-6.5-7.5

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No metal contaminants were was found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-111412	11/14/12	Boron Sodium Silver	0.024 mg/L 0.17 mg/L 0.00078 mg/L	All samples in SDG 280-36589-1

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

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-529-SA6-SB-0.0-0.5	Boron Silver	1.5 mg/Kg 0.050 mg/Kg	1.5U mg/Kg 0.050U mg/Kg
SL-531-SA6-SB-0.0-0.5	Sodium Silver	79 mg/Kg 0.028 mg/Kg	79U mg/Kg 0.028U mg/Kg
SL-532-SA6-SB-0.0-0.5	Boron Silver	2.1 mg/Kg 0.046 mg/Kg	2.1U mg/Kg 0.046U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-533-SA6-SB-0.0-0.5	Boron Sodium Silver	1.6 mg/Kg 76 mg/Kg 0.062 mg/Kg	1.6U mg/Kg 76U mg/Kg 0.062U mg/Kg
SL-534-SA6-SB-0.0-0.5	Boron Silver	1.8 mg/Kg 0.082 mg/Kg	1.8U mg/Kg 0.082U mg/Kg
SL-536-SA6-SB-0.0-0.5	Silver	0.045 mg/Kg	0.045U mg/Kg
SL-546-SA6-SB-0.0-0.5	Silver	0.020 mg/Kg	0.020U mg/Kg
SL-626-SA6-SB-0.0-0.5	Boron Sodium Silver	1.3 mg/Kg 91 mg/Kg 0.17 mg/Kg	1.3U mg/Kg 91U mg/Kg 0.17U mg/Kg
SL-627-SA6-SB-0.0-0.5	Boron Sodium Silver	1.3 mg/Kg 82 mg/Kg 0.13 mg/Kg	1.3U mg/Kg 82U mg/Kg 0.13U mg/Kg
SL-627-SA6-SB-1.0-2.0	Boron Sodium Silver	0.96 mg/Kg 80 mg/Kg 0.17 mg/Kg	0.96U mg/Kg 80U mg/Kg 0.17U mg/Kg
SL-628-SA6-SB-0.0-0.5	Boron Sodium	1.7 mg/Kg 86 mg/Kg	1.7U mg/Kg 86U mg/Kg
SL-628-SA6-SB-4.0-5.0	Boron Silver	1.3 mg/Kg 0.11 mg/Kg	1.3U mg/Kg 0.11U mg/Kg
SL-631-SA6-SB-0.0-0.5	Boron Sodium Silver	3.7 mg/Kg 87 mg/Kg 0.11 mg/Kg	3.7U mg/Kg 87U mg/Kg 0.11U mg/Kg
SL-632-SA6-SB-0.0-0.5	Boron Sodium Silver	1.6 mg/Kg 62 mg/Kg 0.084 mg/Kg	1.6U mg/Kg 62U mg/Kg 0.084U mg/Kg
SL-629-SA6-SB-0.0-0.5	Boron Sodium	3.8 mg/Kg 120 mg/Kg	3.8U mg/Kg 120U mg/Kg
SL-629-SA6-SB-2.5-3.5	Boron Sodium Silver	1.4 mg/Kg 130 mg/Kg 0.15 mg/Kg	1.4U mg/Kg 130U mg/Kg 0.15U mg/Kg
SL-630-SA6-SB-0.0-0.5	Boron Sodium Silver	3.6 mg/Kg 75 mg/Kg 0.12 mg/Kg	3.6U mg/Kg 75U mg/Kg 0.12U mg/Kg
SL-534-SA6-SB-3.0-4.0	Boron Silver	1.1 mg/Kg 0.062 mg/Kg	1.1U mg/Kg 0.062U mg/Kg

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-549-SA6-SB-0.0-0.5MS/MSD (All samples in SDG 280-36589-1)	Antimony	13 (75-125)	12 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-549-SA6-SB-0.0-0.5MS/MSD (All samples in SDG 280-36589-1)	Chromium	132 (75-125)	-	-	J (all 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) were within QC limits.

IX. Internal Standards

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

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-549-SA6-SB-0.0-0.5	Lithium	11 (≤10)	All samples in SDG 280-36589-1	J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 280-36589-1	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 280-36589-1

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	Antimony	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	Chromium	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	Lithium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	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 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Metals - Field Blank Data Qualification Summary - SDG 280-36589-1

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
280-36589-1	SL-529-SA6-SB-0.0-0.5	Boron Silver	1.5U mg/Kg 0.050U mg/Kg	A	F
280-36589-1	SL-531-SA6-SB-0.0-0.5	Sodium Silver	79U mg/Kg 0.028U mg/Kg	A	F

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
280-36589-1	SL-532-SA6-SB-0.0-0.5	Boron Silver	2.1U mg/Kg 0.046U mg/Kg	A	F
280-36589-1	SL-533-SA6-SB-0.0-0.5	Boron Sodium Silver	1.6U mg/Kg 76U mg/Kg 0.062U mg/Kg	A	F
280-36589-1	SL-534-SA6-SB-0.0-0.5	Boron Silver	1.8U mg/Kg 0.082U mg/Kg	A	F
280-36589-1	SL-536-SA6-SB-0.0-0.5	Silver	0.045U mg/Kg	A	F
280-36589-1	SL-546-SA6-SB-0.0-0.5	Silver	0.020U mg/Kg	A	F
280-36589-1	SL-626-SA6-SB-0.0-0.5	Boron Sodium Silver	1.3U mg/Kg 91U mg/Kg 0.17U mg/Kg	A	F
280-36589-1	SL-627-SA6-SB-0.0-0.5	Boron Sodium Silver	1.3U mg/Kg 82U mg/Kg 0.13U mg/Kg	A	F
280-36589-1	SL-627-SA6-SB-1.0-2.0	Boron Sodium Silver	0.96U mg/Kg 80U mg/Kg 0.17U mg/Kg	A	F
280-36589-1	SL-628-SA6-SB-0.0-0.5	Boron Sodium	1.7U mg/Kg 86U mg/Kg	A	F
280-36589-1	SL-628-SA6-SB-4.0-5.0	Boron Silver	1.3U mg/Kg 0.11U mg/Kg	A	F
280-36589-1	SL-631-SA6-SB-0.0-0.5	Boron Sodium Silver	3.7U mg/Kg 87U mg/Kg 0.11U mg/Kg	A	F
280-36589-1	SL-632-SA6-SB-0.0-0.5	Boron Sodium Silver	1.6U mg/Kg 62U mg/Kg 0.084U mg/Kg	A	F
280-36589-1	SL-629-SA6-SB-0.0-0.5	Boron Sodium	3.8U mg/Kg 120U mg/Kg	A	F
280-36589-1	SL-629-SA6-SB-2.5-3.5	Boron Sodium Silver	1.4U mg/Kg 130U mg/Kg 0.15U mg/Kg	A	F
280-36589-1	SL-630-SA6-SB-0.0-0.5	Boron Sodium Silver	3.6U mg/Kg 75U mg/Kg 0.12U mg/Kg	A	F

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
280-36589-1	SL-534-SA6-SB-3.0-4.0	Boron Silver	1.1U mg/Kg 0.062U mg/Kg	A	F

LDC #: 29423G4
SDG #: 280-36589-1
Laboratory: Test America, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

9m4.

Date: 4-12-13
Page: 1 of 1
Reviewer: MG
2nd Reviewer:

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12-4-12
II.	ICP/MS Tune	A	
III.	Calibration	A	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	~~SW~~ A	
VI.	Matrix Spike Analysis	SW	MS/MSD
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS
IX.	Internal Standard (ICP-MS)	A	
X.	Furnace Atomic Absorption QC	N	not utilized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	N	
XV	Field Blanks	SW	EB = EB2-120612 (SDG 280-36711-1)

9m4 ~~EB = EB2-120712~~ EB = EB1-120612 (SDG 280-36711-1)

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

FB = FB-111412 (SDG: 280-35930-1)
EB = EB-120512 (SDG 280-36640-1)

Validated Samples:
all soil

1	SL-529-SA6-SB-0.0-0.5	11	SL-628-SA6-SB-4.0-5.0	21	SL-549-SA6-SB-0.0-0.5MS	31	
2	SL-531-SA6-SB-0.0-0.5	12	SL-631-SA6-SB-0.0-0.5	22	SL-549-SA6-SB-0.0-0.5MSD	32	
3	SL-532-SA6-SB-0.0-0.5	13	SL-632-SA6-SB-0.0-0.5	23		33	
4	SL-533-SA6-SB-0.0-0.5	14	SL-629-SA6-SB-0.0-0.5	24		34	
5	SL-534-SA6-SB-0.0-0.5	15	SL-629-SA6-SB-2.5-3.5	25		35	
6	SL-534-SA6-SB-3.0-4.0	16	SL-630-SA6-SB-0.0-0.5	26		36	
7	SL-626-SA6-SB-0.0-0.5	17	SL-536-SA6-SB-0.0-0.5	27		37	
8	SL-627-SA6-SB-0.0-0.5	18	SL-546-SA6-SB-0.0-0.5	28		38	
9	SL-627-SA6-SB-1.0-2.0	19	SL-546-SA6-SB-6.5-7.5	29		39	
10	SL-628-SA6-SB-0.0-0.5	20	SL-549-SA6-SB-0.0-0.5	30		40	PBS

Notes:

LDC #: 29423G4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer:

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

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

LDC #: 29423G4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer:

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 #: 29423G4
SDG #:

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: V

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→20	S	(Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B,) Si,
QC 21, 22		(Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B,) Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si,
1→20		Nb, Pd, (P,) Pt, (Sn, Sr, Ti,) W, U, (Li,) S, (Zr,)
QC 21, 22		Nb, Pd, (P,) Pt, (Sn, Sr, Ti,) W, U, (Li,) S, (Zr,)
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr,
Analysis Method		
ICP	S	(Li,) S, (Al, B, Ca, Fe, Mg, Mn, P, K, Na, Sr, Sn, Ti, Zr)
ICP-MS	↓	Al, (Sb, As, Ba, Be, Cd,) Ca, (Cr, Co, Cu,) Fe, (Pb,) Mg, Mn, (Ni,) K, (Se, Ag,) Na, (Tl, V, Zn, Mo,) B, Si,
ICP-MS		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Zr,
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN:

Comments: (Mercury by CVAA if performed)
Nb: Niobium, Pd: Palladium, P: Phosphorus, Pt: Platinum, S: Sulfur, W: Tungsten, U: Uranium, Zr: Zirconium

LDC #: 29423G4
SDG #: See Cover
METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000)
Sample Concentration units, unless otherwise noted: mg/kg

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES
Soil preparation factor applied: 100x
Associated Samples: 1-7 (>5x)

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Limit	No Qual's.									
Na			115	57.50										

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: MG
2nd Reviewer:

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

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

(Y) N N/A Were target analytes detected in the field blanks?

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

Sampling date: see below Soil factor applied 100x

Field blank type: (circle one) Field Blank / Rinsate / (Other): EB Associated Samples: 1-5,17,18,20 Qual: U (F)

Analyte	Blank ID	Blank ID	Sample Identification										
	FB-111412 sampled: 11/14/12	EB2-120612 sampled: 12/06/12	Action Level	1	2	3	4	5	17	18			
B	0.024		12.00	1.5		2.1	1.6	1.8					
Na	0.17	0.15	85.00		79		76						
Ag	0.00078		0.39	0.050	0.028	0.046	0.062	0.082	0.045	0.020			

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

Sampling date: see below Soil factor applied 100x

Field blank type: (circle one) Field Blank / Rinsate / (Other): EB Associated Samples: 7-16 Qual: U (F)

Analyte	Blank ID	Blank ID	Sample Identification										
	FB-111412 sampled: 11/14/12	EB-120512 sampled: 12/05/12	Action Level	7	8	9	10	11	12	13	14	15	16
B	0.024	0.0059	12.00	1.3	1.3	0.96	1.7	1.3	3.7	1.6	3.8	1.4	3.6
Mg		0.012	6.00										
Mn		0.00051	0.26										
Na	0.17	0.27	135.0	91	82	80	86		87	62	120	130	75
Ag	0.00078		0.39	0.17	0.13	0.17		0.11	0.11	0.084		0.15	0.12

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: MG
2nd Reviewer:

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

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

(Y) N N/A Were target analytes detected in the field blanks?

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

Sampling date: see below Soil factor applied 100x

Field blank type: (circle one) (Field Blank) / Rinsate / (Other): EB Associated Samples: 6,19 Qual: U (F)

Analyte	Blank ID	Blank ID	Sample Identification										
	FB-111412 sampled: 11/14/12	EB1-120612 sampled: 12/06/12	Action Level	6									
B	0.024	0.0044	12.00	1.1									
Mn		0.00038	0.19										
Na	0.17	0.19	95.00										
Ag	0.00078		0.39	0.062									

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 #: 29423G4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: MG
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
1	21/22	soil	Sb	13 (75-125)	12 (75-125)		all	J/UJ/A (Q) ~~(dets & ND)~~
	↓	↓	Cr	132 (↓)			↓	J dets/A (↓) ~~(dets)~~

mlg ↓

Comments: 21/22: Al, Fe, Mn, Ti – 4x

Post dig. spike in limit for Sb-97%

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Reviewer: MG
2nd Reviewer:

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

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

(Y) N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?

Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?

(Y) N N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

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

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
1		20	soil	Li	11 (≤10)	all	J/UJ/A (A) ~~(dets)~~

mf

Comments:

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: V

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)
1351 ICV	ICP (Initial calibration)	P	1967.5	2000	98	98	Y
1635 ICV	ICP/MS (Initial calibration)	Cu	41.11	40.0	103	103	
1427 ICV	CVAA (Initial calibration)	Hg	4.184	4.00	105	105	
1831 CCV	ICP (Continuing calibration)	Sr	488.73	500	98	98	
0022 CCV	ICP/MS (Continuing calibration)	V	48.24	50.0	96	96	
1808 CCV	CVAA (Continuing calibration)	Hg	4.901	5.00	98	98	
	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 #: 29423G4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
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)
1653 ICSAB	ICP interference check	Ni	101.40 (µg/L)	100 (µg/L)	101	101	Y
2356 LCS	Laboratory control sample	Pb	21.00 (mg/kg)	20.0 (mg/kg)	105	105	
0180 21	Matrix spike	Sb	(SSR-SR) 2.62 (mg/kg)	19.6 (mg/kg)	13	13	
0180 / 0183 21/22	Duplicate	Cr	39.86 (mg/kg)	34.21 (mg/kg)	15	15	
1845/1847 20	ICP serial dilution	Li	23.72 (mg/kg)	26.43 (mg/kg)	11	11	

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 #: 29423G4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: MG
2nd reviewer:

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

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

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

Detected analyte results for #1, Zr 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:

$$\frac{(0.01234\ mg/L)(0.100\ L)}{(0.00106\ kg)(0.858)} = 1.357\ mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	1	Al	13000	13000	Y
		B	1.5	1.5	
		Ca	2300	2300	
		Fe	17000	17000	
		Li	24	24	
		Mg	3600	3600	
		Mn	230	230	
		P	290	290	
		K	2900	2900	
		Na	130	130	
		Sr	14	14	
		Sn	3.3	3.3	
		Ti	840	840	
		Zr	1.4	1.4	
		Sb	0.023	0.025	
		As	5.7	5.7	
		Ba	94	94	
		Be	0.71	0.71	
		Cd	0.26	0.26	
		Cr	17	17	

Note:

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: MG
2nd reviewer:

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

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

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

Detected analyte results for #1, Hg were recalculated and verified using the following equation:

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

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

Recalculation:

$$\frac{(0.285\ \mu g/L)(0.050\ L)}{(0.58\ g)(0.858)} = 0.0286\ \mu g/g \text{ or } mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	1 cont'd	Co	6.3	6.3	Y
		Cu	10	10	
		Pb	11	11	
		Mo	0.42	0.42	
		Ni	12	12	
		Se	0.90	0.90	
		Ag	0.050	0.050	
		Tl	0.36	0.36	
		V	33	33	
		Zn	68	68	
		Hg	0.029	0.029	
2	20	Al	9700	9700	
		Ca	2400	2400	
		Fe	17000	17000	
		Li	24	24	
		Mg	3900	3900	
		Mn	240	240	
		P	320	320	
		K	2700	2700	

Note:

LDC #: 29423G4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: MG
2nd reviewer:

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

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Have results been reported and calculated correctly?
(Y) N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
(Y) N N/A Are all detection limits below the CRDL?

Detected analyte results for # 20, Mo 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:

$$\frac{(0.42\ mg/L)(0.100\ L)(5)}{(1.05\ g)(0.909)} = 0.2200\ mg/g \text{ or } mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
2	20 cont'd	Na	100	100	Y
		Sr	11	11	
		Sn	3.5	3.5	
		Ti	920	920	
		Zr	0.86	0.86	
		Sb	0.016	0.016	
		As	3.1	3.1	
		Ba	76	76	
		Be	0.40	0.40	
		Cd	0.13	0.13	
		Cr	14	14	
		Co	5.2	5.2	
		Cu	7.2	7.2	
		Pb	3.8	3.8	
		Mo	0.22	0.22	
		Ni	8.3	8.3	
		Se	0.61	0.61	
		Tl	0.27	0.27	
		V	29	29	
		Zn	61	61	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 4, 2012

LDC Report Date: April 8, 2013

Matrix: Soil

Parameters: Herbicides

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-632-SA6-SB-0.0-0.5
SL-630-SA6-SB-0.0-0.5
SL-626-SA6-SB-0.0-0.5
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

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

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

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

IV. Blanks

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

Sample EB-120512 (from SDG 280-36640-1) was identified as an equipment blank. No herbicide contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No herbicide contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicate

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-1	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Herbicides - Data Qualification Summary - SDG 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-632-SA6-SB-0.0-0.5 SL-630-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G5 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/03/13
SDG #: 280-36589-1 Level IV Page: 1 of 1
Laboratory: Test America, Inc. Reviewer: JV6
2nd Reviewer: A

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II	Initial calibration	A	~~%RSD ≤ 20%~~ r
III.	Calibration verification/ICV	A	CCV/ICV ≤ 20 %
IV.	Blanks	A	
V	Surrogate recovery	~~SW~~ A	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	~~SW~~ A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	*EB = EB-120512 (280-36640-1) *FB = FB-111412 (280-35930-1)

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-632-SA6-SB-0.0-0.5	11	MB 280-150882/1-A	21		31	
2	SL-630-SA6-SB-0.0-0.5	12		22		32	
3	SL-626-SA6-SB-0.0-0.5	13		23		33	
4	SL-628-SA6-SB-0.0-0.5	14		24		34	
5	SL-628-SA6-SB-4.0-5.0	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: (Surr failure in secondary col. only)

LDC #: 29423G5

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				

LDC #: 29423S5

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: [illegible]

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

VALIDATION FINDINGS WORKSHEET

METHOD: ✓ GC ___ HPLC

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

Notes: _____

LDC #: 29423G5

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: JVC
2nd Reviewer:

METHOD: ✓ GC __ HPLC

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

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?
Y N N/A Did the percent difference of detected compounds between two columns./detectors ≤40%?
If no, please see findings bellow.

#	Compound Name	Sample ID	%RPD/%D Between Two Columns/Detectors Limit (≤ 40%)	Qualifications
	B	2	63.5	J dets /A (*#)

Comments: See sample calculation verification worksheet for recalculations

LDC#: 29423 G5

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: NB
2nd Reviewer:

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

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/10/2012	SGC_M	2,4-DB	1	19673687	0.0473
			2	61488313	0.237
	DB35MS		3	122367580	0.477
			4	170132173	0.71
			5	210070457	0.947
			6	421889006	1.89

Regression Output		*Calculated*	*Reported*
Constant	b =	*-0.056111*	*9151752.71*
Std Err of Y Est			
R Squared	r^2 =	*0.994715*	*0.998000*
Degrees of Freedom			
X Coefficient(s)	m1 =	*215145538.9042*	*222940635.0*
Std Err of Coef.			
Correlation Coefficient		*0.997354*	
Coefficient of Determination (r^2)		*0.994715*	*0.998000*

LDC#: 9fr365

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVB
2nd Reviewer: A

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

Calibration Date	Instrument/Column	Compound	Standard	(Y) Response	(X) Concentration
12/10/2012	SGC_M	2,4-DB	1	20121650	0.0189
			2	43839341	0.0473
			3	185352023	0.237
	DBXLB		4	355231122	0.477
			5	486500009	0.71
			6	632554733	0.947
			7	1160981003	1.89

Regression Output		*Calculated*	*Reported*
Constant	b =	*-0.027837*	*7636898.20*
Std Err of Y Est			
R Squared	r^2 =	*0.997179*	*0.992000*
Degrees of Freedom			
X Coefficient(s)	m1 =	*659981184.1094*	*692464359.0*
Std Err of Coef.			
Correlation Coefficient		*0.998589*	
Coefficient of Determination (r^2)		*0.997179*	*0.992000*

LDC#: 24423G5

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	12100011 ICV	12/10/2012	2,4-DB DB35MS	355	341	341	3.9	3.9
			2,4-DB DBXLB	355	336	336	5.4	5.4

LDC #: 29423G5

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

METHOD: ___ GC ___ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: # 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4-DCAA	DB 35 MS	0.100	0.0924	92	92	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 #: 29423b5

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: ✓GC __HPLC

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

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration; LCS = Laboratory Control Sample; SA = Spike added; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/~~D~~ 280-150882/2,3-A

Compound	Spike Added (ug/kg)		Spike 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)	90.4	90.2	92.3	81.8	102 ~~92.3~~	107	91	91	12	12
Dinoseb (8151)	↓	↓	7.52	5.02	8	8	6	6	40	40
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 #: 24403 G5

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
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= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

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

Example:

Sample ID. # 2 Compound Name 2,4-DB

Concentration = $\frac{[(18440386) - (9151752.71)]}{(22240635)} = 0.0417$

final conc. = $\frac{(0.0417)(10\ ml)(1000)}{(52.1g)(0.797)} = 10.04\ ug/kg$

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

Comments: (1)

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 4, 2012
LDC Report Date:	April 16, 2013
Matrix:	Soil
Parameters:	Hexavalent Chromium
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	280-36589-1

Sample Identification

SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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 were met.

III. Calibration Verification

Continuing calibration frequency and analysis criteria were met.

IV. Blanks

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

Samples EB1-120612 and EB2-120612 (both from SDG 280-36711-1) were identified as equipment blanks. No hexavalent chromium was found.

Sample FB-111412 (from SDG 280-35930-1) 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 RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 280-36589-1	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

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

X. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Hexavalent Chromium - Data Qualification Summary - SDG 280-36589-1

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
280-36589-1	SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Hexavalent Chromium – Laboratory Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Hexavalent Chromium - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G6
SDG #: 280-36589-1
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 4-15-13
Page: 1 of 1
Reviewer: MG
2nd Reviewer:

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: 12-4-12
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	N	client specified
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	ND	EB = EB2-120612 (SDG: 280-36711-1) ~~EB = EB2-120712 (ClO4 only)~~

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

Validated Samples:
all soil

FB = FB-111412 (SDG: 280-35930-1)
EB = EB1-120612 (SDG: 280-36711-1)

1	SL-546-SA6-SB-0.0-0.5	11		21		31	
2	SL-546-SA6-SB-6.5-7.5	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	PBS	30		40	

Notes:

LDC #: 29423G6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: ✓

Method: Inorganics (EPA Method 7199)

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

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 #: 29423G6

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

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

METHOD: Inorganics, Method 7199

The correlation coefficient (r) for the calibration of Cr VI was recalculated. Calibration date: 12-5-12

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 ID	Conc Found (units)	Area True (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	Cr VI	Blank	-	-	r^2=0.9999	r^2= 1.0000	Y
		Standard 1	0.3 (mg/L)	12907			
		Standard 2	1.0 ( )	40150			
		Standard 3	10.0 ( )	399759			
		Standard 4	25.0 ( )	949739			
		Standard 5	50.0 ( )	1866526			
		Standard 6	75.0 ( )	2823748			
		Standard 7	100.0 ( )	3734300			
Calibration verification	Cr VI	0217 CCV	49.2 (mg/L)	50.0 (mg/L)	98	98	
Calibration verification	-	-	-	-	-	-	-
Calibration verification	-	-	-	-	-	-	-

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 #: 29423G6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: MG
2nd Reviewer: ✓

METHOD: Inorganics, Method 7199

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 VI	13.0 (mg/kg)	16.0 (mg/kg)	81	81	Y
—	Matrix spike sample	—	(SSR-SR) —	—	—	—	—
—	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 #: 29423G6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: Inorganics, Method 7199

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 all samples = N.D. ~~reported with a positive detect were recalculated and verified using the following equation:~~

Concentration =

Recalculation:

#	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: December 4, 2012

LDC Report Date: May 1, 2013

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-628-SA6-SB-4.5
SL-629-SA6-SB-3.0
SL-546-SA6-SB-7.0
SL-534-SA6-SB-3.5
SL-627-SA6-SB-1.5
TB-120412

Introduction

This data review covers 5 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Gasoline.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

III. Calibration Verification

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

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-120412 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Samples EB-120512 (from SDG 280-36640-1) and EB1-120612 (from SDG 280-36711-1) were identified as equipment blanks. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-1	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 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-628-SA6-SB-4.5 SL-629-SA6-SB-3.0 SL-546-SA6-SB-7.0 SL-534-SA6-SB-3.5 SL-627-SA6-SB-1.5 TB-120412	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G7 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/03/13
SDG #: 280-36589-1 Level IV Page: 1 of 1
Laboratory: Test America, Inc. Reviewer: JG
2nd Reviewer: A

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II	Initial calibration	A	~~%RSD ≤ 20%~~ rr
III.	Calibration verification/ICV	A	CCV/ICV ≤ 20%
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	TB = TB-120412 (same SDG) EB= EB-120512 (280-36640-1), EB1-120612 (280-36711- FB = FB-111412 (280-35430-1)

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-628-SA6-SB-4.5 S	11	MB 280-150673/1-A	21		31	
2	SL-629-SA6-SB-3.0	12	MB 280-150591/7	22		32	
3	SL-546-SA6-SB-7.0	13		23		33	
4	SL-534-SA6-SB-3.5	14		24		34	
5	SL-627-SA6-SB-1.5	15		25		35	
6	TB-120412 W	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 29422G7

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ___%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?	✓			
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 29473G7

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

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

LDC#: 29423G7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer: [illegible]

Method: GRO (EPA SW 846 Method 8015B)

Calibration Date	Instrument	Compound	Standard	(Y) Response	(X) Concentration
10/30/2012	VGC Q	C4-C12	1	7506779	20
			2	14959062	50
			3	27355248	100
			4	52502125	200
			5	130196947	500
			6	256220696	1000

Regression Output		*Calculated*	*Reported*
Constant	b =	*2194876.440852*	*2313432.660000*
R Squared	r2 =	*0.999974*	*1.000000*
X Coefficient(s)	m =	*254316.362757*	*253935.9680*
Correlation Coefficient		*0.999987*	
Coefficient of Determination (r^2)		*0.999974*	*1.000000*

LDC #_ 29423G7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Calculation Verification

Reviewer: MC
2nd Reviewer:

Method: GRO (EPA SW 846 Method 8015B)

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

Percent difference (%D) = 100 * (N - C)/N

Where:

N = Initial Calibration Factor or Nominal Amount

C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	004f0401	12/5/2012	C4-C12	200	196.3	196.3	1.9	1.9
2	004f0401	12/11/2012	C4-C12	200	195.5	195.5	2.2	2.2

LDC #: 29423G7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

METHOD: ✓ **GC** __ **HPLC**

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TFT	RTX-502.2	40	37.1	93	93	0

Sample ID:

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

Sample ID:

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

LDC #: 29423G7

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer: [illegible]

METHOD: ___ GC __HPLC

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

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
LCS = Laboratory Control Sample
SA = Spike added
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/D 280-150673/28-A

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (C4-C12) (8015)	5.50	5.50	5.97	6.01	109	109	109	109	1	1
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 #: 29423G7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
2nd Reviewer: [signature]

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 GRO (C_4-C_{12})

Concentration = $\frac{[(3969151) - (2313432.66)]}{(253935.968)} = 6.52$

final conc. = $\frac{(6.52)(5ml)(50)}{(5.135g)(0.952)(1000)} = 0.333$ mg/kg

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

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 4, 2012

LDC Report Date: April 8, 2013

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-1

Sample Identification

SL-529-SA6-SB-0.0-0.5
SL-531-SA6-SB-0.0-0.5
SL-532-SA6-SB-0.0-0.5
SL-533-SA6-SB-0.0-0.5
SL-534-SA6-SB-0.0-0.5
SL-534-SA6-SB-3.0-4.0
SL-626-SA6-SB-0.0-0.5
SL-627-SA6-SB-0.0-0.5
SL-627-SA6-SB-1.0-2.0
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0
SL-631-SA6-SB-0.0-0.5
SL-632-SA6-SB-0.0-0.5
SL-629-SA6-SB-0.0-0.5
SL-629-SA6-SB-2.5-3.5
SL-630-SA6-SB-0.0-0.5
SL-536-SA6-SB-0.0-0.5
SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5
SL-549-SA6-SB-0.0-0.5
SL-532-SA6-SB-0.0-0.5MS
SL-532-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA 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.

Samples EB1-120612, EB2-120612 (both from SDG 280-36711-1), and EB-120512 (from SDG 280-36640-1) were identified as equipment blanks. No total petroleum hydrocarbons as extractables contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB1-120612	12/6/12	Total petroleum hydrocarbons (C8-C40)	0.11 ug/L	SL-534-SA6-SB-3.0-4.0 SL-546-SA6-SB-6.5-7.5

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No total petroleum hydrocarbons as extractables contaminants were found.

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. Surrogate recoveries (%R) were not within QC limits for sample SL-549-SA6-SB-0.0-0.5. Since the samples were diluted out, no data were qualified.

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-1	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 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	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 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G8 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/03/13
SDG #: 280-36589-1 Level IV Page: 1 of 1
Laboratory: Test America, Inc. Reviewer: JH
2nd Reviewer: A

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II	Initial calibration	A	2 RSD ≤ 20%
III.	Calibration verification/ICV	A	ccv/icv ≤ 20%
IV.	Blanks	A	
V	Surrogate recovery	SW	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	SW	EB = EB1-120612, *EB2-120612 (280-36711-1) *FB-120512 (280-36640-1) *FB = FB-111412 (280-35930-1)

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-529-SA6-SB-0.0-0.5	11	SL-628-SA6-SB-4.0-5.0	21	SL-532-SA6-SB-0.0-0.5MS	31	MB 280-151022/1-A
2	SL-531-SA6-SB-0.0-0.5	12	SL-631-SA6-SB-0.0-0.5	22	SL-532-SA6-SB-0.0-0.5MSD	32	
3	SL-532-SA6-SB-0.0-0.5	13	SL-632-SA6-SB-0.0-0.5	23		33	
4	SL-533-SA6-SB-0.0-0.5	14	SL-629-SA6-SB-0.0-0.5	24		34	
5	SL-534-SA6-SB-0.0-0.5	15	SL-629-SA6-SB-2.5-3.5	25		35	
6	SL-534-SA6-SB-3.0-4.0	16	SL-630-SA6-SB-0.0-0.5	26		36	
7	SL-626-SA6-SB-0.0-0.5	17	SL-536-SA6-SB-0.0-0.5	27		37	
8	SL-627-SA6-SB-0.0-0.5	18	SL-546-SA6-SB-0.0-0.5	28		38	
9	SL-627-SA6-SB-1.0-2.0	19	SL-546-SA6-SB-6.5-7.5	29		39	
10	SL-628-SA6-SB-0.0-0.5	20	SL-549-SA6-SB-0.0-0.5	30		40	

Notes:

LDC #: 29423 6 8

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?		✓		
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 24473G4

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer: A

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

LDC #: 29423G8

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: [signature]

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:** mg/kg

Sampling date: 12/6/12

Field blank type: (circle one) Field Blank / Trip Blank / Atmospheric Blank / Ambient Blank
Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:_____

Associated Samples: 6, 19 (>5x)

Compound	Blank ID	~~Blank ID~~ Actual level	Sample Identification							
	EB1-120612									
TPH(C8-C40)	0.11	0.55								
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 #: 29423G8

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: JVC
2nd Reviewer: ~~SA~~

METHOD: ✓ GC __ HPLC

Are surrogates required by the method? Yes ✓ or No____.

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

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	20	RTX-1	H	0 (49-115)	No qual (dil)
	(20x)			( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound		
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene	Y	Tetrachloro-m- xylene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene	Z	2-Bromonaphthalene
C`	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decachlorobiphenyl (DCB)	U	Tripentyltin	AA	1-Chlorooctadecane
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	Tri-n-propyltin	BB	2,4-DCPA
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	Tributyl Phosphate		
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	Triphenyl Phosphate		

LDC #: 29493G8

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JVG
2nd Reviewer:

METHOD: GC / HPLC _____

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

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

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (250 std)	Recalculated CF (250 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL GCS U2	12/6/2012	C30-C40	1630.6	1630.6	1653	1653	8.4	8.4

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.

Conc (ug/ml)	CF	Response
25	1877.5	
62.5	1745.9	
125	1625.2	
250	1630.6	407659.0
1250	1532.6	
2500	1506.0	
X =	1653.0	
S =	138.860	

LDC # 29423 G8

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

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

METHOD: GC ✓ HPLC ____

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

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated % D
1	003f0301	12/12/2012	C15-C20	250	231.30	231.30	7.5	7.5
2	019f1901	12/12/2012	C15-C20	250	279.86	279.86	11.9	11.9

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 #: 29423G8

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: JVG
2nd reviewer:

METHOD: ✓ **GC** ___ **HPLC**

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
o_TPH	RTX-1	50	46.13	92	92	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 #: 29422 G8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: ✓ **GC** **HPLC**

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 21/22 ✓

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~~ EFH (C_{12}-C_{14}) (8015)	39.✓	38.4	0	40	38.4	102 ✓	102 ✓	102	102	4	4
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

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

LDC #: 28423 G8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: / GC __HPLC

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

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
LCS = Laboratory Control Sample
SA = Spike added
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS 780-15100 2/2-A

Compound	Spike Added (mg/kg)		Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
~~Diesel~~ EFH (C_{12}-C_{24}) (8015)	33.1	NA	33.6	NA	101	101				
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 #: 29423 G8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
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= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

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

Example:

Sample ID. #1 Compound Name $C_{30} - C_{40}$

Concentration = $\frac{(57\,3057)\ (1\,ml)}{(1652.97x)\ (31.2g)\ (0.858)} = 12.95$

$\approx$ 13 mg/kg

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

Comments: 13

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 4, 2012
LDC Report Date:	April 8, 2013
Matrix:	Soil
Parameters:	Formaldehyde
Validation Level:	Level IV
Laboratory:	TestAmerica, Inc.
Sample Delivery Group (SDG):	280-36589-1

Sample Identification

SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5
SL-546-SA6-SB-0.0-0.5MS
SL-546-SA6-SB-0.0-0.5MSD

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 8315A for Formaldehyde.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

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.

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

IV. Blanks

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

Samples EB1-120612 and EB2-120612 (both from SDG 280-36711-1) were identified as equipment blanks. No formaldehyde was found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No formaldehyde was found.

V. Surrogate Recovery

Surrogate spikes were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) 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 280-36589-1	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Formaldehyde - Data Qualification Summary - SDG 280-36589-1

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-1	SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Formaldehyde - Laboratory Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG 280-36589-1

No Sample Data Qualified in this SDG

LDC #: 29423G71 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/03/13
SDG #: 280-36589-1 Level IV Page: 1 of 1
Laboratory: Test America, Inc. Reviewer: JNG
2nd Reviewer:

METHOD: HPLC Formaldehyde (EPA SW 846 Method 8315A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/04/12
II	Initial calibration	A	%RSD ≤ 20 %
III.	Calibration verification/ICV	A	CCV/ICV ≤ 20 %
IV.	Blanks	A	
V	Surrogate recovery	N	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	*EB= EB1-120612 *EB2-120612 (280-36711-1) *FB= FB111412 (280-35930-1)

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-546-SA6-SB-0.0-0.5	11	MB 490-125444/1-A	21		31	
2	SL-546-SA6-SB-6.5-7.5	12		22		32	
3	SL-546-SA6-SB-0.0-0.5MS	13		23		33	
4	SL-546-SA6-SB-0.0-0.5MSD	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 #: 29423 G71

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
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?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓	✓	
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ✓ %D or ____ %R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?		✓		
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				

LDC #: 29873671

VALIDATION FINDINGS CHECKLIST

Reviewer: JVG
2nd Reviewer:

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

LDC #: 24423G7I

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: JVG
2nd Reviewer:

METHOD: GC _____ HPLC ✓

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

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

Where:
A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (10 std)	Recalculated CF (10 std)	Reported Average CF (Initial)	Recalculated Average CF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL LC5	12/8/2012	Formaldehyde	105010	105010	105540	105540	1.0	1.0

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

LDC # 29473G71

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: GC____HPLC__✓__

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

Percent difference (%D) = 100 * (N - C)/N

Where:
N = Initial Calibration Factor or Nominal Amount
C = Calibration Factor from Continuing Calibration Standard or Calculated Amount

#	Standard ID	Calibration Date	Compound	CCV Conc	Reported Conc	Recalculated Conc	Reported % D	Recalculated %D
1	22_ccvrt	12/12/2012	Formaldehyde	10	10.51	10.51	5.1	5.1

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

LDC #: 26423 G71

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: __ GC __HPLC

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100

Where SSC = Spiked sample concentration; SC = Sample concentration; SA = Spike added; MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples:

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Formaldehyde (8315)	2160	2130	0	2380	1840	110	110	86	86	26	25

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 #: 29492G71

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: JVG
2nd Reviewer:

METHOD: ___ GC _/_ HPLC

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

%Recovery = 100 * (SSC/SA)
RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
LCS = Laboratory Control Sample
SA = Spike added
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS490-42544/2-A

Compound	Spike Added (ug/kg)		Spike Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde (8315)	2000	NA	2270	NA	113	113				

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 #: 29423G71

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: JVG
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= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

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

Example:

Sample ID._____ Compound Name MD

Concentration =_____

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

Comments:

SAMPLE DELIVERY GROUP

280-36589-2

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
04-Dec-2012	SL-532-SA6-SB-0.0-0.5	280-36589-7	N	1613	1613B	IV
04-Dec-2012	SL-626-SA6-SB-0.0-0.5	280-36589-16	N	1613	1613B	IV
04-Dec-2012	SL-531-SA6-SB-0.0-0.5	280-36589-5	N	1613	1613B	IV
04-Dec-2012	SL-627-SA6-SB-0.0-0.5	280-36589-18	N	1613	1613B	IV
04-Dec-2012	SL-533-SA6-SB-0.0-0.5	280-36589-9	N	1613	1613B	IV
04-Dec-2012	SL-627-SA6-SB-1.0-2.0	280-36589-20	N	1613	1613B	IV
04-Dec-2012	SL-534-SA6-SB-0.0-0.5	280-36589-11	N	1613	1613B	IV
04-Dec-2012	SL-534-SA6-SB-3.0-4.0	280-36589-13	N	1613	1613B	IV
04-Dec-2012	SL-529-SA6-SB-0.0-0.5	280-36589-3	N	1613	1613B	IV
04-Dec-2012	SL-632-SA6-SB-0.0-0.5	280-36589-30	N	1613	1613B	IV
04-Dec-2012	SL-631-SA6-SB-0.0-0.5	280-36589-28	N	1613	1613B	IV
04-Dec-2012	SL-628-SA6-SB-0.0-0.5	280-36589-23	N	1613	1613B	IV
04-Dec-2012	SL-628-SA6-SB-4.0-5.0	280-36589-25	N	1613	1613B	IV
04-Dec-2012	SL-549-SA6-SB-0.0-0.5	280-36589-46	N	1613	1613B	IV
04-Dec-2012	SL-629-SA6-SB-0.0-0.5	280-36589-32	N	1613	1613B	IV
04-Dec-2012	SL-536-SA6-SB-0.0-0.5	280-36589-39	N	1613	1613B	IV
04-Dec-2012	SL-629-SA6-SB-2.5-3.5	280-36589-34	N	1613	1613B	IV
04-Dec-2012	SL-546-SA6-SB-0.0-0.5	280-36589-41	N	1613	1613B	IV
04-Dec-2012	SL-630-SA6-SB-0.0-0.5	280-36589-37	N	1613	1613B	IV
04-Dec-2012	SL-546-SA6-SB-6.5-7.5	280-36589-43	N	1613	1613B	IV

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-529-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.33	J	0.17	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.40	J	0.082	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.3	J	0.17	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.29	Q J	0.078	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.88	Q J	0.16	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.18	Q J	0.11	MDL	5.8	MRL	ng/kg	J	Z

Sample ID: SL-531-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 8:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	3.6	J	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.56	Q J	0.13	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	2.5	J	0.069	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.46	C J	0.12	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.29	Q J	0.087	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.16	Q J	0.19	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	3.1	J	0.16	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	5.3	J	0.072	MDL	5.9	MRL	ng/kg	J	Z

Sample ID: SL-532-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.80	Q J	0.34	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.5	J	0.22	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.1	C J	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	5.6	J	0.23	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.4	Q J	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	3.3	C J	0.21	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.23	Q J	0.17	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.98	Q J	0.24	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.67	J	0.21	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.56	Q J	0.14	MDL	5.9	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-532-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	1.5	J	0.19	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.87	Q J	0.34	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: SL-533-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	5.4	J	0.13	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.31	J	0.17	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.23	Q J	0.16	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.25	Q J	0.088	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.99	Q J	0.17	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.34	Q J	0.086	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.99	J	0.15	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	J	0.087	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.27	Q J	0.22	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-534-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 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-HxCDD	0.45	Q J	0.15	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.50	C J	0.10	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.6	J	0.17	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.41	J	0.094	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.3	Q J	0.15	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.36	Q J	0.25	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: SL-534-SA6-SB-3.0-4.0 *Collected:* 12/4/2012 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	0.46	J	0.14	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.15	Q J	0.12	MDL	5.7	MRL	ng/kg	J	Z
OCDD	4.9	S B J	0.18	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-536-SA6-SB-0.0-0.5** ***Collected:*** **12/4/2012 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	2.7	J	1.4	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.4	Q J	0.92	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	2.7	J	2.0	MDL	5.5	MRL	ng/kg	J	Z
OCDF	9.0	Q J	3.4	MDL	11	MRL	ng/kg	J	Z

Sample ID: **SL-546-SA6-SB-0.0-0.5** ***Collected:*** **12/4/2012 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-PECDD	3.0	U	3.0	MDL	5.4	MRL	ng/kg	UJ	I
2,3,4,7,8-PECDF	1.0	U	1.0	MDL	5.4	MRL	ng/kg	UJ	I
OCDD	25	S B	16	MDL	11	MRL	ng/kg	J	I
OCDF	11	U	15	MDL	11	MRL	ng/kg	UJ	I

Sample ID: **SL-546-SA6-SB-6.5-7.5** ***Collected:*** **12/4/2012 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
1,2,3,4,6,7,8-HPCDD	0.090	J	0.051	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.75	J	0.061	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.30	Q J	0.036	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.76	J	0.052	MDL	5.4	MRL	ng/kg	J	Z
OCDD	0.30	Q S B J	0.084	MDL	11	MRL	ng/kg	U	B
OCDF	0.18	J	0.075	MDL	11	MRL	ng/kg	J	Z

Sample ID: **SL-549-SA6-SB-0.0-0.5** ***Collected:*** **12/4/2012 12:55:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.29	J	0.21	MDL	5.5	MRL	ng/kg	J	Z
OCDD	1.9	Q S B J	0.55	MDL	11	MRL	ng/kg	U	B

Sample ID: **SL-626-SA6-SB-0.0-0.5** ***Collected:*** **12/4/2012 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.4	Q J	0.22	MDL	5.6	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-626-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	1.6	Q J	0.18	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.0	Q J	0.12	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.7	Q J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	3.4	C J	0.17	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.83	Q J	0.19	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.49	Q J	0.11	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.29	Q J	0.15	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.46	Q J	0.26	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-627-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 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
1,2,3,4,7,8,9-HPCDF	2.3	J	0.19	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.9	J	0.17	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.1	C J	0.11	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.7	Q J	0.11	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.90	Q J	0.19	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.18	Q J	0.17	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.81	Q J	0.11	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.47	J	0.14	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.41	Q J	0.23	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: SL-627-SA6-SB-1.0-2.0 *Collected:* 12/4/2012 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
1,2,3,4,7,8,9-HPCDF	3.3	J	0.14	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.0	J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.6	J	0.087	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	4.2	Q J	0.086	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	4.8	J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.2	J	0.14	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.16	Q J	0.12	MDL	5.6	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-627-SA6-SB-1.0-2.0** ***Collected:*** **12/4/2012 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
2,3,4,6,7,8-HXCDF	0.80	Q J	0.089	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.42	J	0.11	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.53	Q J	0.22	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-628-SA6-SB-0.0-0.5** ***Collected:*** **12/4/2012 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-HxCDD	4.2	J	0.17	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	5.1	Q J	0.089	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	5.8	Q J	0.089	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.8	Q J	0.17	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.32	Q J	0.14	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	1.7	J	0.088	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.88	J	0.12	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.46	J	0.38	MDL	1.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	1.1	Q J	0.21	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: **SL-628-SA6-SB-4.0-5.0** ***Collected:*** **12/4/2012 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	0.63	J	0.17	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.31	Q J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.46	Q J	0.070	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.4	J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.45	Q J	0.074	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.86	J	0.10	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.18	Q J	0.069	MDL	5.2	MRL	ng/kg	J	Z
OCDF	9.8	J	0.17	MDL	10	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-629-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 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-HxCDD	3.3	Q J	0.16	MDL	6.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.6	Q J	0.26	MDL	6.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.57	J	0.20	MDL	6.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	2.1	Q J	0.10	MDL	6.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	1.2	J	0.17	MDL	6.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.97	Q J	0.32	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: SL-629-SA6-SB-2.5-3.5 *Collected:* 12/4/2012 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	1.2	J	0.14	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.79	J	0.10	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.78	J	0.056	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.9	J	0.11	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.2	Q J	0.058	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.6	Q J	0.10	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.39	Q J	0.15	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.26	J	0.058	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.20	J	0.20	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-630-SA6-SB-0.0-0.5 *Collected:* 12/4/2012 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	5.8	J	0.15	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.41	J	0.23	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.41	Q J	0.17	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.21	Q J	0.12	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.4	Q J	0.19	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.50	Q J	0.11	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.1	Q J	0.17	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.23	Q J	0.13	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.44	Q J	0.26	MDL	6.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-630-SA6-SB-0.0-0.5** *Collected:* **12/4/2012 2:25:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.22	Q J	0.12	MDL	6.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.33	Q J	0.35	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: **SL-631-SA6-SB-0.0-0.5** *Collected:* **12/4/2012 10:20:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.2	Q J	0.094	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.17	Q J	0.14	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.14	Q J	0.13	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.15	Q J	0.070	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.64	J	0.13	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.31	Q J	0.067	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.58	J	0.12	MDL	6.1	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.26	Q J	0.15	MDL	6.1	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.22	J	0.065	MDL	6.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.44	J	0.21	MDL	1.2	MRL	ng/kg	J	Z
OCDF	8.1	J	0.15	MDL	12	MRL	ng/kg	J	Z

Sample ID: **SL-632-SA6-SB-0.0-0.5** *Collected:* **12/4/2012 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-HPCDF	1.7	J	0.081	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.17	Q J	0.069	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.33	Q J	0.11	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.33	J	0.068	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.25	Q J	0.095	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.17	Q J	0.067	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.17	Q J	0.094	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.20	Q J	0.22	MDL	1.2	MRL	ng/kg	J	Z
OCDF	9.0	J	0.12	MDL	12	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
I	Internal Standard Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36589-2/
H2L080402

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L100000018B	12/26/2012 3:53:00 PM	OCDD	0.41 ng/kg	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-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-546-SA6-SB-6.5-7.5(RES)	OCDD	0.30 ng/kg	0.30U ng/kg
SL-549-SA6-SB-0.0-0.5(RES)	OCDD	1.9 ng/kg	1.9U ng/kg

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-529-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	J	0.33	5.8	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	J	0.40	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.3	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.29	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.88	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.18	5.8	MRL	ng/kg	
SL-531-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	3.6	5.9	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDD	Q J	0.56	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	2.5	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	0.46	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.29	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.16	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	3.1	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	5.3	5.9	MRL	ng/kg	
SL-532-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q J	0.80	5.9	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	1.5	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	2.1	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	5.6	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.4	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	3.3	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.23	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.98	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.67	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.56	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	1.5	5.9	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.87	1.2	MRL	ng/kg	
SL-533-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	5.4	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	J	0.31	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.23	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.25	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.99	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.34	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.99	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.23	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.27	1.1	MRL	ng/kg	
SL-534-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	Q J	0.45	5.8	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	C J	0.50	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.6	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.41	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	1.3	5.8	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.36	1.2	MRL	ng/kg	
SL-534-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	J	0.46	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	0.15	5.7	MRL	ng/kg	
	OCDD	S B J	4.9	11	MRL	ng/kg	
SL-536-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	2.7	5.5	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDF	Q J	1.4	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	2.7	5.5	MRL	ng/kg	
	OCDF	Q J	9.0	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-546-SA6-SB-6.5-7.5	1,2,3,4,6,7,8-HPCDD	J	0.090	5.4	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDD	J	0.75	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.30	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.76	5.4	MRL	ng/kg	
	OCDD	Q S B	0.30	11	MRL	ng/kg	
	OCDF	J	0.18	11	MRL	ng/kg	
SL-549-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	0.29	5.5	MRL	ng/kg	J (all detects)
	OCDD	Q S B	1.9	11	MRL	ng/kg	
SL-626-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J					
	1,2,3,4,7,8-HxCDD	Q J	2.4	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	Q J	1.6	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.0	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	1.7	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	C J	3.4	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.83	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.49	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.29	5.6	MRL	ng/kg	
		Q J	0.46	1.1	MRL	ng/kg	
SL-627-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	2.3	5.8	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.9	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	2.1	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.7	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.90	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.18	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.81	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.47	5.8	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.41	1.2	MRL	ng/kg	
SL-627-SA6-SB-1.0-2.0	1,2,3,4,7,8,9-HPCDF	J	3.3	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.0	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	2.6	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	4.2	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	4.8	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	1.2	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.16	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.80	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.42	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.53	1.1	MRL	ng/kg	
SL-628-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	J	4.2	5.9	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	Q J	5.1	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	5.8	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	1.8	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.32	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	1.7	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.88	5.9	MRL	ng/kg	
	2,3,7,8-TCDD	J	0.46	1.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	1.1	1.2	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-628-SA6-SB-4.0-5.0	1,2,3,4,7,8,9-HPCDF	J	0.63	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.31	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.46	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.4	5.2	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDF	Q J	0.45	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.86	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.18	5.2	MRL	ng/kg	
	OCDF	J	9.8	10	MRL	ng/kg	
SL-629-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	Q J	3.3	6.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	1.6	6.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.57	6.2	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	Q J	2.1	6.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	1.2	6.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.97	1.2	MRL	ng/kg	
SL-629-SA6-SB-2.5-3.5	1,2,3,4,7,8,9-HPCDF	J	1.2	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.79	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.78	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.9	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.2	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	1.6	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.39	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.26	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.20	1.1	MRL	ng/kg	
SL-630-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	5.8	6.1	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	J	0.41	6.1	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.41	6.1	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.21	6.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	1.4	6.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.50	6.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	1.1	6.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.23	6.1	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.44	6.1	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.22	6.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.33	1.2	MRL	ng/kg	
SL-631-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	2.2	6.1	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q J	0.17	6.1	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.14	6.1	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.15	6.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.64	6.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.31	6.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	0.58	6.1	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.26	6.1	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.22	6.1	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.44	1.2	MRL	ng/kg	
	OCDF	J	8.1	12	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36589-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36589-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-632-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	1.7	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.17	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.33	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.33	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.25	5.9	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	Q J	0.17	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.17	5.9	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.20	1.2	MRL	ng/kg	
	OCDF	J	9.0	12	MRL	ng/kg	

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 4, 2012

LDC Report Date: April 23, 2013

Matrix: Soil

Parameters: Dioxins/Dibenzofurans

Validation Level: Level IV

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): 280-36589-2/H2L080402

Sample Identification

SL-529-SA6-SB-0.0-0.5
SL-531-SA6-SB-0.0-0.5
SL-532-SA6-SB-0.0-0.5
SL-533-SA6-SB-0.0-0.5
SL-534-SA6-SB-0.0-0.5
SL-534-SA6-SB-3.0-4.0
SL-626-SA6-SB-0.0-0.5
SL-627-SA6-SB-0.0-0.5
SL-627-SA6-SB-1.0-2.0
SL-628-SA6-SB-0.0-0.5
SL-628-SA6-SB-4.0-5.0
SL-631-SA6-SB-0.0-0.5
SL-632-SA6-SB-0.0-0.5
SL-629-SA6-SB-0.0-0.5
SL-629-SA6-SB-2.5-3.5
SL-630-SA6-SB-0.0-0.5
SL-536-SA6-SB-0.0-0.5
SL-546-SA6-SB-0.0-0.5
SL-546-SA6-SB-6.5-7.5
SL-549-SA6-SB-0.0-0.5

Introduction

This data review covers 20 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1613B for Polychlorinated Dioxins/Dibenzofurans.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required daily frequency.

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

PFK and static resolving power were within validation criteria.

III. Initial Calibration

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

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

The percent differences (%D) of the second source calibration standard were within QC limits.

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

V. Blanks

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

Method Blank ID	Extraction Date	Compound	Concentration	Associated Samples
H2L100000-018B	12/10/12	OCDD	0.41 ng/Kg	All samples in SDG 280-365892-2/ H2L080402

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

Sample	Compound	Reported Concentration	Modified Final Concentration
SL-546-SA6-SB-6.5-7.5	OCDD	0.30 ng/Kg	0.30U ng/Kg
SL-549-SA6-SB-0.0-0.5	OCDD	1.9 ng/Kg	1.9U ng/Kg

Sample FB-111412 (from SDG 280-35930-2/H2K170402) was identified as a field blank. No polychlorinated dioxin/dibenzofuran contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-111412	11/14/13	2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,6,7,8-HpCDD OCDD 1,2,3,4,6,7,8-HpCDF OCDF	0.20 pg/L 1.1 pg/L 1.1 pg/L 6.7 pg/L 0.63 pg/L 2.0 pg/L	All samples in SDG 280-36589-2/H2L080402

Samples EB1-120612, EB2-120612 (both from SDG 280-36711-2/H2L110413), and EB-120512 (from SDG 280-36640-2/H2L080401) were identified as field blanks. No polychlorinated dioxin/dibenzofuran contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB1-120612	12/6/12	1,2,3,4,6,7,8-HpCDD OCDD	0.52 pg/L 4.0 pg/L	SL-534-SA6-SB-3.0-4.0 SL-546-SA6-SB-6.5-7.5
EB2-120612	12/6/12	OCDD	3.0 pg/L	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-549-SA6-SB-0.0-0.5

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-120512	12/5/12	1,2,3,4,6,7,8-HpCDD OCDD 1,2,3,7,8,9-HxCDF 1,2,3,4,6,7,8-HpCDF OCDF	0.99 pg/L 3.3 pg/L 0.33 pg/L 0.33 pg/L 1.6 pg/L	SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples (LCS)

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

VIII. Regional Quality Assurance and Quality Control

Not applicable.

IX. Internal Standards

All internal standard recoveries were within QC limits with the following exceptions:

Sample	Internal Standards	%R (Limits)	Compound	Flag	A or P
SL-546-SA6-SB-0.0-0.5	^{13}C-1,2,3,7,8-PeCDD	11 (25-181)	1,2,3,7,8-PeCDD	J (all detects) UJ (all non-detects)	P
SL-546-SA6-SB-0.0-0.5	^{13}C-OCDD	12 (17-157)	OCDD OCDF	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	P
SL-546-SA6-SB-0.0-0.5	^{13}C-2,3,4,7,8-PeCDF	18 (21-178)	2,3,4,7,8-PeCDF	J (all detects) UJ (all non-detects)	P

X. Target Compound Identifications

All target compound identifications were within validation criteria.

XI. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5	2,3,7,8-TCDF	2nd column confirmation was not performed for this compound.	This compound must be confirmed on the 2nd column per the method.	None	P

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 280-36589-2/ H2L080402	All compounds reported below the RL.	J (all detects)	A

XII. System Performance

The system performance was acceptable.

XIII. Overall Assessment of Data

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

XIV. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Data Qualification Summary - SDG 280-36589-2/H2L080402

SDG	Sample	Compound	Flag	A or P	Reason (Code)
280-36589-2/ H2L080402	SL-546-SA6-SB-0.0-0.5	1,2,3,7,8-PeCDD OCDD OCDF 2,3,4,7,8-PeCDF	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
280-36589-2/ H2L080402	SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5	2,3,7,8-TCDF	None	P	Compound quantitation and RLs
280-36589-2/ H2L080402	SL-529-SA6-SB-0.0-0.5 SL-531-SA6-SB-0.0-0.5 SL-532-SA6-SB-0.0-0.5 SL-533-SA6-SB-0.0-0.5 SL-534-SA6-SB-0.0-0.5 SL-534-SA6-SB-3.0-4.0 SL-626-SA6-SB-0.0-0.5 SL-627-SA6-SB-0.0-0.5 SL-627-SA6-SB-1.0-2.0 SL-628-SA6-SB-0.0-0.5 SL-628-SA6-SB-4.0-5.0 SL-631-SA6-SB-0.0-0.5 SL-632-SA6-SB-0.0-0.5 SL-629-SA6-SB-0.0-0.5 SL-629-SA6-SB-2.5-3.5 SL-630-SA6-SB-0.0-0.5 SL-536-SA6-SB-0.0-0.5 SL-546-SA6-SB-0.0-0.5 SL-546-SA6-SB-6.5-7.5 SL-549-SA6-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG 280-36589-2/H2L080402

SDG	Sample	Compound	Modified Final Concentration	A or P	Code
280-36589-2/ H2L080402	SL-546-SA6-SB-6.5-7.5	OCDD	0.30U ng/Kg	A	B
280-36589-2/ H2L080402	SL-549-SA6-SB-0.0-0.5	OCDD	1.9U ng/Kg	A	B

Santa Susana Field Laboratory
Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG 280-36589-2/H2L080402

No Sample Data Qualified in this SDG

LDC #: 29423H21 **VALIDATION COMPLETENESS WORKSHEET** Date: 4-9-13
SDG #: 280-36589-2/H2L080402 Level IV Page: 1 of
Laboratory: Test America, Inc. Reviewer: Om
2nd Reviewer: A

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/4/12
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration	A	≤ 20/35
IV.	Continuing Calibration / ICV	A	QC limits
V.	Blanks	SW	
VI.	Matrix spike/Matrix spike duplicates	N	client
VII.	Laboratory control samples	A	LCS
VIII.	Regional quality assurance and quality control	N	
IX.	Internal standards	SW	
X.	Target compound identifications	A	
XI.	Compound quantitation/~~RL/LOQ/LODs~~	SW	
XII.	System performance	A	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks SW	N	SEE Below

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: Solid soil

1	SL-529-SA6-SB-0.0-0.5	11	SL-628-SA6-SB-4.0-5.0	21		31	H2L100000-018B
2	SL-531-SA6-SB-0.0-0.5	12	SL-631-SA6-SB-0.0-0.5	22		32	
3	SL-532-SA6-SB-0.0-0.5	13	SL-632-SA6-SB-0.0-0.5	23		33	
4	SL-533-SA6-SB-0.0-0.5	14	SL-629-SA6-SB-0.0-0.5	24		34	
5	SL-534-SA6-SB-0.0-0.5	15	SL-629-SA6-SB-2.5-3.5	25		35	
6	SL-534-SA6-SB-3.0-4.0	16	SL-630-SA6-SB-0.0-0.5	26		36	
7	SL-626-SA6-SB-0.0-0.5	17	SL-536-SA6-SB-0.0-0.5	27		37	
8	SL-627-SA6-SB-0.0-0.5	18	SL-546-SA6-SB-0.0-0.5	28		38	
9	SL-627-SA6-SB-1.0-2.0	19	SL-546-SA6-SB-6.5-7.5	29		39	
10	SL-628-SA6-SB-0.0-0.5	20	SL-549-SA6-SB-0.0-0.5	30		40	

Notes: EB = EB1-120612 (280-36711-2/H2L110413) EB = EB2-120612 (280-36711-2/H2L110411
EB = EB-120512 (280-36640-2/H2L080401)
FB = FB-111412 (280-35930-2/H2K170402)

LDC #: 29423H21

VALIDATION FINDINGS CHECKLIST

Reviewer: YM
2nd Reviewer: M

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

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

LDC #29423A21

VALIDATION FINDINGS CHECKLIST

Reviewer: TM
2nd Reviewer: M

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

VALIDATION FINDINGS WORKSHEET

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

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

Notes:

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Blanks

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 all samples associated with a method blank?
Y (N) N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y (N) N/A Was method blank contamination less < CRQL for all target compounds?

Blank extraction date: 12/10/12 **Blank analysis date:** 12/26/12 **Associated samples:** All (U) B
Conc. units: ng/kg

Compound	Blank ID	Sample Identification								
	H2L100000-018B	5x	19	20						
G	0.41	2.05	0.30*	1.9*						

*EMPC

Blank extraction date: **Blank analysis date:** **Associated samples:**
Conc. units:

Compound	Blank ID	Sample Identification								

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

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

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 11/14/12
Field blank type: (circle one) Field Blank / Rinsate / Other: FB Associated Samples: All >5x

Compound	Blank ID	Sample Identification								
	FB-111412	5X								
A	0.20*	1								
B	1.1	5.5								
F	1.1*	5.5								
G	6.7*	33.5								
O	0.63*	3.15								
Q	2.0	10								

* EMPC

FB-111412 (280-35930-2/H2K170402)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 12/06/12
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 6, 19 >5x

Compound	Blank ID	Sample Identification								
	EB1-120612	5X								
F	0.52*	2.6								
G	4.0	20								

* EMPC

EB1-120612 (280-36711-2/H2L110413)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 12/06/12
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1-5, 17-18, 20 >5x

Compound	Blank ID	Sample Identification								
	EB2-120612	5X								
G	3.0	15								

* EMPC

EB2-120612 (280-36711-2/H2L110413)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: [illegible]

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

Blank units: pg/L **Associated sample units:** ng/kg
Sampling date: 12/05/12
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 7-16 >5x

Compound	Blank ID	Sample Identification								
	EB-120512	5X								
F	0.99*	4.95								
G	3.3*	16.5								
N	0.33*	1.65								
O	0.33*	1.65								
Q	1.6	8								

* EMPC

EB-120512 (280-36640-2/H2L080401)

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

V:\Field Blanks\29423H21_EB3.wpd4

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Internal Standards

Reviewer: CM
2nd Reviewer: M

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 Are all internal standard recoveries were within the QC criteria?
(Y) N N/A Was the S/N ratio all internal standard peaks ≥ 10?

#	Date	Lab ID/Reference	Internal Standard	% Recovery (Limit)	Qualifications
		18	13C-B	11 (25-181)	J/UJ/P (B) ~~(P)~~ (I) SM
			13C-G	12 (17-157)	J/UJ/P (G, Q) ~~(P)~~ (I)
			13C-J	18 (21-178)	J/UJ/P (J) ~~(P)~~ (I)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

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

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA ~~SW 846~~ Method 1613B ~~8290~~)

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	Compound	Finding	Associated Samples	Qualifications
		H	no 2,3,7,8-TCDF confirmation	2-5, 7-10, 12-16	None / P

Comments: See sample calculation verification worksheet for recalculations

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: VM
2nd Reviewer: A

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS_3 std)	Recalculated RRF (CS_3 std)	Reported %RSD	Recalculated %RSD
1	ICAL (Rtx-5)	12-19-11	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	1.035	1.025	1.025	7.4	7.4
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.068	1.029	1.029	8.4	8.4
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.086	1.094	1.094	6.0	6.0
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.094	1.047	1.047	5.6	5.6
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.331	1.324	1.324	9.7	9.7
2	~~ICAL~~		2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-~~OCDF~~ OCDD)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-~~OCDF~~ OCDD)						

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 #: 29423H2J

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: Jm
2nd Reviewer: _____

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	TCAL (NB-225)	11-20-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.969	0.969	0.936	0.936	9.2	9.2
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-~~OCDF~~ OCDD)						
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

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

LDC #: 29423H2J

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: JW
2nd Reviewer: K

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	a121226S2	12-26-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	0.964	0.964		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.036	1.036		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.069	1.069		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.044	1.044		
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.457	1.457		
2	a121226S3	12-26-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	0.938	0.938		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.013	1.013		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.043	1.043		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.043	1.043		
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.334	1.334		
3	a121227S1	12-27-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	0.968	0.968		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.076	1.076		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.095	1.095		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.077	1.077		
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.405	1.405		

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

LDC #: 29423H2I

VALIDATION FINDINGS WORKSHEET
Routine Calibration Results Verification

Reviewer: CH
2nd Reviewer: M

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	a121228S1	12-28-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	0.915	0.915		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.075	1.075		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.067	1.067		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.030	1.030		
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.271	1.271		
2	a121230S1	12-30-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.035	0.915	0.915		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.068	1.014	1.014		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.086	1.081	1.081		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	1.094	1.022	1.022		
			OCDF (^{13}C-~~OCDF~~ OCDD)	1.331	1.318	1.318		
3	d21212315 2 (dB-225)	12-31-12	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	0.969	1.027	1.027		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-~~OCDF~~ OCDD)					

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

LDC #: 29423H21

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: 9m
2nd Reviewer: 1

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

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

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

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

LCS ID: HZL1000000-018

Compound	Spike Added (ng/Kg)		Spiked Sample Concentration (ng/Kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	20.0	NA	21.6	NA	108	108				
1,2,3,7,8-PeCDD	100	~~100~~	106		106	106				
1,2,3,4,7,8-HxCDD	100		106		106	106				
1,2,3,4,7,8,9-HpCDF	100		104		104	104				
OCDF	200		194		97	97				

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

LDC #: 29423H2J

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CM
2nd reviewer: M

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

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

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

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

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

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

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

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

Df = Dilution Factor.

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

Example:

Sample I.D. 4 , H :

Conc. = $\frac{(22916)(1000pg)(1)}{(955682)(1.035)(10g)(0.87)}$

= 0.27pg/g

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

SAMPLE DELIVERY GROUP

280-36640-1

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	TB-120512	280-36640-1	TB	METHOD	8015B GRO	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-2	N	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-2	N	3550C	8015B EFH	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-3	N	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-3	N	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-3	N	3546	8082A	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-3	N	7471B	7471B	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MS	280-36640-3MS	MS	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MS	280-36640-3MS	MS	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MS	280-36640-3MS	MS	7471B	7471B	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MSD	280-36640-3MSD	MSD	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MSD	280-36640-3MSD	MSD	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-0.0-0.5MSD	280-36640-3MSD	MSD	7471B	7471B	III
05-Dec-2012	SL-519-SA6-SB-4.5	280-36640-6	N	5035	8015B GRO	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-4	N	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-4	N	3550C	8015B EFH	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-5	N	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-5	N	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-5	N	3546	8082A	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-5	N	7471B	7471B	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-16	N	3546	8270C SIM	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-16	N	3550C	8015B EFH	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-17	N	3050B	6010C	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-17	N	3050B	6020A	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-17	N	3546	8082A	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-17	N	7471B	7471B	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	SL-519-SA6-SB-9.5	280-36640-9	N	5035	8015B GRO	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-7	N	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-7	N	3550C	8015B EFH	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-8	N	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-8	N	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-8	N	3546	8082A	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-8	N	7471B	7471B	III
05-Dec-2012	SL-519-SA6-SB-14.5	280-36640-12	N	5035	8015B GRO	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-10	N	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-10	N	3550C	8015B EFH	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0MS	280-36640-10MS	MS	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-11	N	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-11	N	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-11	N	3546	8082A	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-11	N	7471B	7471B	III
05-Dec-2012	SL-519-SA6-SB-21.5	280-36640-15	N	5035	8015B GRO	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-13	N	3546	8270C SIM	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-13	N	3550C	8015B EFH	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-14	N	3050B	6010C	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-14	N	3050B	6020A	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-14	N	3546	8082A	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-14	N	7471B	7471B	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-18	N	3546	8270C SIM	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-18	N	3550C	8015B EFH	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-19	N	3050B	6010C	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-19	N	3050B	6020A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-19	N	3546	8082A	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-19	N	7471B	7471B	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-20	N	3546	8270C SIM	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-20	N	3550C	8015B EFH	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5MS	280-36640-20MS	MS	3550C	8015B EFH	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5MSD	280-36640-20MSD	MSD	3550C	8015B EFH	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-21	N	3050B	6010C	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-21	N	3050B	6020A	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-21	N	3546	8082A	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-21	N	7471B	7471B	III
05-Dec-2012	SL-633-SA6-SB-3.0	280-36640-22	N	5035	8015B GRO	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-32	N	3546	8270C SIM	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-32	N	3550C	8015B EFH	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-33	N	3050B	6010C	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-33	N	3050B	6020A	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-33	N	3546	8082A	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-33	N	7471B	7471B	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-23	N	3546	8270C SIM	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-23	N	3550C	8015B EFH	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-24	N	3050B	6010C	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-24	N	3050B	6020A	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-24	N	3546	8082A	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-24	N	7471B	7471B	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-34	N	3546	8270C SIM	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-34	N	3550C	8015B EFH	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-35	N	3050B	6010C	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-35	N	3050B	6020A	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-35	N	3546	8082A	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-35	N	7471B	7471B	III
05-Dec-2012	SL-636-SA6-SB-3.0	280-36640-36	N	5035	8015B GRO	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-25	N	3546	8270C SIM	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-25	N	3550C	8015B EFH	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	3050B	6010C	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	3050B	6020A	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	3546	8081B	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	3546	8082A	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	7471B	7471B	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	8151A	8151A	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5MS	280-36640-26MS	MS	3546	8081B	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5MSD	280-36640-26MSD	MSD	3546	8081B	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-27	N	3546	8270C SIM	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-27	N	3550C	8015B EFH	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	3050B	6010C	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	3050B	6020A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	3546	8081B	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	3546	8082A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	7471B	7471B	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	8151A	8151A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0MS	280-36640-28MS	MS	3050B	6020A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0MS	280-36640-28MS	MS	3546	8082A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0MSD	280-36640-28MSD	MSD	3050B	6020A	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0MSD	280-36640-28MSD	MSD	3546	8082A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	EB-120512	280-36640-37	EB	3010A	6010C	III
05-Dec-2012	EB-120512	280-36640-37	EB	3020A	6020A	III
05-Dec-2012	EB-120512	280-36640-37	EB	3510C	8015B EFH	III
05-Dec-2012	EB-120512	280-36640-37	EB	3510C	8081B	III
05-Dec-2012	EB-120512	280-36640-37	EB	3510C	8082A	III
05-Dec-2012	EB-120512	280-36640-37	EB	3510C	8270C SIM	III
05-Dec-2012	EB-120512	280-36640-37	EB	7470A	7470A	III
05-Dec-2012	EB-120512	280-36640-37	EB	8151A	8151A	III
05-Dec-2012	EB-120512	280-36640-37	EB	METHOD	8015B GRO	III
05-Dec-2012	SL-634-SA6-SB-2.5	280-36640-29	N	5035	8015B GRO	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-30	N	3546	8270C SIM	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-30	N	3550C	8015B EFH	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-31	N	3050B	6010C	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-31	N	3050B	6020A	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-31	N	3546	8082A	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-31	N	7471B	7471B	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: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: AQ**

Sample ID: EB-120512 *Collected:* 12/5/2012 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
BORON	0.0059	J	0.0044	MDL	0.10	MRL	mg/L	J	Z
MAGNESIUM	0.012	J	0.011	MDL	0.20	MRL	mg/L	J	Z
MANGANESE	0.00051	J	0.00025	MDL	0.010	MRL	mg/L	J	Z
SODIUM	0.27	J	0.092	MDL	1.0	MRL	mg/L	U	B

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-519-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.4	MDL	18000	MRL	mg/Kg	J	Z
BORON	1.2	J	0.89	MDL	8.8	MRL	mg/Kg	U	F
IRON	17000		3.4	MDL	31	MRL	mg/Kg	J	E
LITHIUM	18	J	0.27	MDL	33	MRL	mg/Kg	J	Z
MANGANESE	240	J	0.090	MDL	450	MRL	mg/Kg	J	Z
POTASSIUM	2600	J	37	MDL	5800	MRL	mg/Kg	J	Z
SODIUM	230	J	53	MDL	450	MRL	mg/Kg	J	Z
TIN	3.2	J	0.83	MDL	9.9	MRL	mg/Kg	J	Z
Zirconium	1.7	J	0.32	MDL	7.8	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 10:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
IRON	19000		3.8	MDL	34	MRL	mg/Kg	J	E
LITHIUM	21	J	0.30	MDL	37	MRL	mg/Kg	J	Z
MANGANESE	220	J	0.10	MDL	500	MRL	mg/Kg	J	Z
POTASSIUM	1600	J	41	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	110	J	60	MDL	500	MRL	mg/Kg	J	Z
TIN	3.9	J	0.92	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.5	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-519-SA6-SB-21.0-22.0** ***Collected:*** **12/5/2012 10:05:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
IRON	16000		3.9	MDL	34	MRL	mg/Kg	J	E
LITHIUM	18	J	0.30	MDL	37	MRL	mg/Kg	J	Z
MANGANESE	260	J	0.10	MDL	500	MRL	mg/Kg	J	Z
POTASSIUM	1400	J	42	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	140	J	60	MDL	510	MRL	mg/Kg	J	Z
TIN	3.2	J	0.92	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.2	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

Sample ID: **SL-519-SA6-SB-4.0-5.0** ***Collected:*** **12/5/2012 9:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	16000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
BORON	1.0	J	1.0	MDL	9.9	MRL	mg/Kg	U	F, F
IRON	20000		3.9	MDL	35	MRL	mg/Kg	J	E
LITHIUM	20	J	0.30	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	270	J	0.10	MDL	500	MRL	mg/Kg	J	Z
POTASSIUM	2500	J	42	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	150	J	60	MDL	510	MRL	mg/Kg	J	Z
TIN	3.7	J	0.93	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.9	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

Sample ID: **SL-519-SA6-SB-9.0-10.0** ***Collected:*** **12/5/2012 9:55:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	16000	J	1.6	MDL	21000	MRL	mg/Kg	J	Z
IRON	21000		3.9	MDL	35	MRL	mg/Kg	J	E
LITHIUM	23	J	0.31	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	300	J	0.10	MDL	510	MRL	mg/Kg	J	Z
POTASSIUM	2000	J	43	MDL	6600	MRL	mg/Kg	J	Z
SODIUM	120	J	61	MDL	520	MRL	mg/Kg	J	Z
TIN	3.8	J	0.95	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.7	J	0.37	MDL	8.9	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-520-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 12:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13000	J	1.4	MDL	19000	MRL	mg/Kg	J	Z
BORON	0.93	J	0.91	MDL	9.0	MRL	mg/Kg	U	F
IRON	18000		3.5	MDL	32	MRL	mg/Kg	J	E
LITHIUM	22	J	0.28	MDL	34	MRL	mg/Kg	J	Z
MANGANESE	250	J	0.093	MDL	460	MRL	mg/Kg	J	Z
POTASSIUM	2500	J	38	MDL	5900	MRL	mg/Kg	J	Z
SODIUM	130	J	55	MDL	460	MRL	mg/Kg	J	Z
TIN	3.7	J	0.85	MDL	10	MRL	mg/Kg	J	Z
Zirconium	1.5	J	0.33	MDL	8.0	MRL	mg/Kg	J	Z

Sample ID: **SL-550-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 9:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z
IRON	20000		4.3	MDL	38	MRL	mg/Kg	J	E
LITHIUM	27	J	0.34	MDL	41	MRL	mg/Kg	J	Z
MANGANESE	310	J	0.11	MDL	550	MRL	mg/Kg	J	Z
POTASSIUM	4000	J	46	MDL	7200	MRL	mg/Kg	J	Z
SODIUM	86	J	66	MDL	560	MRL	mg/Kg	U	F
TIN	3.8	J	1.0	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.3	J	0.40	MDL	9.6	MRL	mg/Kg	J	Z

Sample ID: **SL-633-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 10:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	6900	J	1.6	MDL	21000	MRL	mg/Kg	J	Z
BORON	1.1	J	1.0	MDL	10	MRL	mg/Kg	U	F, F
IRON	12000		3.9	MDL	35	MRL	mg/Kg	J	E
LITHIUM	19	J	0.31	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	140	J	0.10	MDL	510	MRL	mg/Kg	J	Z
POTASSIUM	1800	J	42	MDL	6600	MRL	mg/Kg	J	Z
SODIUM	100	J	61	MDL	510	MRL	mg/Kg	U	F
TIN	2.8	J	0.94	MDL	11	MRL	mg/Kg	J	Z
Zirconium	0.68	J	0.36	MDL	8.8	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-633-SA6-SB-2.5-3.5** ***Collected:*** **12/5/2012 10:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8200	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
BORON	1.1	J	0.99	MDL	9.8	MRL	mg/Kg	U	F, F
IRON	21000		3.9	MDL	35	MRL	mg/Kg	J	E
LITHIUM	21	J	0.30	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	200	J	0.10	MDL	500	MRL	mg/Kg	J	Z
POTASSIUM	2100	J	42	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	100	J	60	MDL	510	MRL	mg/Kg	U	F
TIN	3.1	J	0.93	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.1	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

Sample ID: **SL-634-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 1:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
BORON	1.5	J	1.0	MDL	9.9	MRL	mg/Kg	U	F, F
IRON	13000		3.9	MDL	35	MRL	mg/Kg	J	E
LITHIUM	21	J	0.30	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	190	J	0.10	MDL	500	MRL	mg/Kg	J	Z
POTASSIUM	2100	J	42	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	110	J	60	MDL	510	MRL	mg/Kg	U	F
TIN	3.2	J	0.93	MDL	11	MRL	mg/Kg	J	Z
Zirconium	0.72	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

Sample ID: **SL-634-SA6-SB-2.0-3.0** ***Collected:*** **12/5/2012 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	9200	J	1.3	MDL	17000	MRL	mg/Kg	J	Z
BORON	1.3	J	0.85	MDL	8.4	MRL	mg/Kg	U	F, F
IRON	17000		3.3	MDL	30	MRL	mg/Kg	J	E
LITHIUM	23	J	0.26	MDL	32	MRL	mg/Kg	J	Z
MANGANESE	170	J	0.087	MDL	430	MRL	mg/Kg	J	Z
POTASSIUM	2400	J	36	MDL	5600	MRL	mg/Kg	J	Z
SODIUM	130	J	51	MDL	430	MRL	mg/Kg	U	F
TIN	3.1	J	0.79	MDL	9.5	MRL	mg/Kg	J	Z
Zirconium	1.2	J	0.31	MDL	7.5	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13000	J	1.8	MDL	23000	MRL	mg/Kg	J	Z
BORON	3.7	J	1.1	MDL	11	MRL	mg/Kg	U	F
IRON	20000		4.4	MDL	39	MRL	mg/Kg	J	E
LITHIUM	29	J	0.35	MDL	43	MRL	mg/Kg	J	Z
MANGANESE	310	J	0.12	MDL	570	MRL	mg/Kg	J	Z
POTASSIUM	4100	J	47	MDL	7400	MRL	mg/Kg	J	Z
SODIUM	130	J	68	MDL	580	MRL	mg/Kg	U	F
TIN	4.2	J	1.0	MDL	13	MRL	mg/Kg	J	Z
Zirconium	1.4	J	0.41	MDL	9.9	MRL	mg/Kg	J	Z

Sample ID: SL-636-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13000	J	1.8	MDL	23000	MRL	mg/Kg	J	Z
BORON	1.8	J	1.1	MDL	11	MRL	mg/Kg	U	F, F
IRON	19000		4.3	MDL	39	MRL	mg/Kg	J	E
LITHIUM	24	J	0.34	MDL	42	MRL	mg/Kg	J	Z
MANGANESE	250	J	0.11	MDL	560	MRL	mg/Kg	J	Z
POTASSIUM	3400	J	47	MDL	7300	MRL	mg/Kg	J	Z
SODIUM	99	J	67	MDL	570	MRL	mg/Kg	U	F
TIN	4.1	J	1.0	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.3	J	0.40	MDL	9.8	MRL	mg/Kg	J	Z

Sample ID: SL-636-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 1:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.3	MDL	17000	MRL	mg/Kg	J	Z
BORON	1.2	J	0.85	MDL	8.4	MRL	mg/Kg	U	F, F
IRON	20000		3.3	MDL	30	MRL	mg/Kg	J	E
LITHIUM	29	J	0.26	MDL	32	MRL	mg/Kg	J	Z
MANGANESE	290	J	0.087	MDL	430	MRL	mg/Kg	J	Z
POTASSIUM	2900	J	36	MDL	5600	MRL	mg/Kg	J	Z
SODIUM	120	J	51	MDL	440	MRL	mg/Kg	U	F
TIN	3.5	J	0.79	MDL	9.5	MRL	mg/Kg	J	Z
Zirconium	1.1	J	0.31	MDL	7.5	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-519-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.051	J B	0.015	MDL	9.4	MRL	mg/Kg	UJ	B, Q
ARSENIC	4.2	J	0.054	MDL	16	MRL	mg/Kg	J	Z
BARIUM	85	J B	0.076	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.58	J	0.024	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.35	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	16	J B	0.082	MDL	40	MRL	mg/Kg	J	Z
COBALT	5.9	J B	0.0071	MDL	23	MRL	mg/Kg	J	Z
COPPER	11	J B	0.076	MDL	31	MRL	mg/Kg	J	Z, E
LEAD	12	J B	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.59	J	0.019	MDL	5.7	MRL	mg/Kg	J	Z
NICKEL	10	J B	0.027	MDL	31	MRL	mg/Kg	J	Z
SELENIUM	0.18	J	0.14	MDL	0.70	MRL	mg/Kg	J	Z
SILVER	0.035	J	0.022	MDL	0.85	MRL	mg/Kg	U	F
THALLIUM	0.28	J B	0.0038	MDL	0.49	MRL	mg/Kg	J	Z
VANADIUM	31	J B	0.041	MDL	67	MRL	mg/Kg	J	Z
ZINC	88	J B	0.34	MDL	120	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 10:00:00 *Analysis Type:* RE2/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.13	J	0.13	MDL	0.64	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 10:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.018	J B	0.014	MDL	8.5	MRL	mg/Kg	UJ	B, Q
ARSENIC	3.7	J	0.049	MDL	15	MRL	mg/Kg	J	Z
BARIUM	78	J B	0.069	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.64	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.045	J	0.0091	MDL	0.97	MRL	mg/Kg	J	Z
CHROMIUM	19	J B	0.074	MDL	36	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix:** SO

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 10:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	5.3	J B	0.0065	MDL	20	MRL	mg/Kg	J	Z
COPPER	6.3	J B	0.069	MDL	28	MRL	mg/Kg	J	Z, E
LEAD	4.4	J B	0.018	MDL	33	MRL	mg/Kg	J	Z
MOLYBDENUM	0.53	J	0.017	MDL	5.2	MRL	mg/Kg	J	Z
NICKEL	9.5	J B	0.025	MDL	28	MRL	mg/Kg	J	Z
SILVER	0.029	J	0.020	MDL	0.77	MRL	mg/Kg	U	F
THALLIUM	0.24	J B	0.0034	MDL	0.45	MRL	mg/Kg	J	Z
VANADIUM	36	J B	0.037	MDL	60	MRL	mg/Kg	J	Z
ZINC	43	J B	0.31	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-21.0-22.0 *Collected:* 12/5/2012 10:05:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.016	J B	0.015	MDL	9.1	MRL	mg/Kg	UJ	B, Q
ARSENIC	3.4	J	0.053	MDL	16	MRL	mg/Kg	J	Z
BARIUM	64	J B	0.073	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.60	J	0.023	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.022	J	0.0098	MDL	1.0	MRL	mg/Kg	J	Z
CHROMIUM	16	J B	0.079	MDL	38	MRL	mg/Kg	J	Z
COBALT	5.0	J B	0.0069	MDL	22	MRL	mg/Kg	J	Z
COPPER	6.6	J B	0.074	MDL	30	MRL	mg/Kg	J	Z, E
LEAD	4.0	J B	0.019	MDL	35	MRL	mg/Kg	J	Z
MOLYBDENUM	0.24	J	0.018	MDL	5.5	MRL	mg/Kg	J	Z
NICKEL	8.1	J B	0.026	MDL	30	MRL	mg/Kg	J	Z
SILVER	0.032	J	0.021	MDL	0.82	MRL	mg/Kg	U	F
THALLIUM	0.18	J B	0.0037	MDL	0.48	MRL	mg/Kg	U	B, B
VANADIUM	30	J B	0.040	MDL	65	MRL	mg/Kg	J	Z
ZINC	40	J B	0.33	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-4.0-5.0 *Collected:* 12/5/2012 9:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.026	J B	0.013	MDL	7.9	MRL	mg/Kg	UJ	B, Q
ARSENIC	4.2	J	0.046	MDL	14	MRL	mg/Kg	J	Z
BARIUM	100	J B	0.064	MDL	130	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-519-SA6-SB-4.0-5.0 *Collected:* 12/5/2012 9:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.83	J	0.020	MDL	1.0	MRL	mg/Kg	J	Z
CADMIUM	0.096	J	0.0085	MDL	0.91	MRL	mg/Kg	J	Z
CHROMIUM	19	J B	0.069	MDL	33	MRL	mg/Kg	J	Z
COBALT	6.2	J B	0.0060	MDL	19	MRL	mg/Kg	J	Z
COPPER	7.9	J B	0.064	MDL	26	MRL	mg/Kg	J	Z, E
LEAD	5.2	J B	0.016	MDL	31	MRL	mg/Kg	J	Z
MOLYBDENUM	0.62	J	0.016	MDL	4.8	MRL	mg/Kg	J	Z
NICKEL	12	J B	0.023	MDL	26	MRL	mg/Kg	J	Z
SELENIUM	0.12	J	0.12	MDL	0.59	MRL	mg/Kg	J	Z
SILVER	0.030	J	0.018	MDL	0.72	MRL	mg/Kg	U	F
THALLIUM	0.30	J B	0.0032	MDL	0.42	MRL	mg/Kg	J	Z
VANADIUM	35	J B	0.035	MDL	56	MRL	mg/Kg	J	Z
ZINC	50	J B	0.29	MDL	100	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-9.0-10.0 *Collected:* 12/5/2012 9:55:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.019	J B	0.013	MDL	8.2	MRL	mg/Kg	UJ	B, Q
ARSENIC	4.0	J	0.048	MDL	14	MRL	mg/Kg	J	Z
BARIUM	88	J B	0.066	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.64	J	0.021	MDL	1.0	MRL	mg/Kg	J	Z
CADMIUM	0.064	J	0.0088	MDL	0.94	MRL	mg/Kg	J	Z
CHROMIUM	19	J B	0.071	MDL	35	MRL	mg/Kg	J	Z
COBALT	5.7	J B	0.0062	MDL	20	MRL	mg/Kg	J	Z
COPPER	6.3	J B	0.067	MDL	27	MRL	mg/Kg	J	Z, E
LEAD	4.5	J B	0.017	MDL	32	MRL	mg/Kg	J	Z
MOLYBDENUM	0.42	J	0.017	MDL	5.0	MRL	mg/Kg	J	Z
NICKEL	12	J B	0.024	MDL	27	MRL	mg/Kg	J	Z
SILVER	0.023	J	0.019	MDL	0.74	MRL	mg/Kg	U	F
THALLIUM	0.25	J B	0.0033	MDL	0.43	MRL	mg/Kg	U	B
VANADIUM	36	J B	0.036	MDL	58	MRL	mg/Kg	J	Z
ZINC	43	J B	0.30	MDL	100	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

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

Sample ID: **SL-520-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 12:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.029	J B	0.014	MDL	8.6	MRL	mg/Kg	UJ	B, Q
ARSENIC	4.2	J	0.050	MDL	15	MRL	mg/Kg	J	Z
BARIUM	81	J B	0.070	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.56	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.28	J	0.0093	MDL	0.99	MRL	mg/Kg	J	Z
CHROMIUM	16	J B	0.075	MDL	36	MRL	mg/Kg	J	Z
COBALT	6.1	J B	0.0066	MDL	21	MRL	mg/Kg	J	Z
COPPER	8.7	J B	0.070	MDL	29	MRL	mg/Kg	J	Z, E
LEAD	24	J B	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.56	J	0.017	MDL	5.2	MRL	mg/Kg	J	Z
NICKEL	10	J B	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.12	J	0.020	MDL	0.78	MRL	mg/Kg	U	F
THALLIUM	0.20	J B	0.0035	MDL	0.45	MRL	mg/Kg	U	B
VANADIUM	31	J B	0.038	MDL	61	MRL	mg/Kg	J	Z

Sample ID: **SL-550-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 9:50:00** ***Analysis Type:*** **RE2/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.18	J	0.13	MDL	0.65	MRL	mg/Kg	J	Z

Sample ID: **SL-550-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 9:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.025	J B	0.014	MDL	8.6	MRL	mg/Kg	UJ	B, Q
ARSENIC	7.1	J	0.050	MDL	15	MRL	mg/Kg	J	Z
BARIUM	76	J B	0.070	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.60	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.15	J	0.0093	MDL	0.99	MRL	mg/Kg	J	Z
CHROMIUM	22	J B	0.075	MDL	36	MRL	mg/Kg	J	Z
COBALT	6.0	J B	0.0066	MDL	21	MRL	mg/Kg	J	Z
COPPER	9.5	J B	0.071	MDL	29	MRL	mg/Kg	J	Z, E
LEAD	9.6	J B	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.41	J	0.017	MDL	5.3	MRL	mg/Kg	J	Z
NICKEL	17	J B	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.065	J	0.020	MDL	0.78	MRL	mg/Kg	U	F

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-550-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 9:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.25	J B	0.0035	MDL	0.46	MRL	mg/Kg	J	Z
VANADIUM	36	J B	0.038	MDL	61	MRL	mg/Kg	J	Z
ZINC	57	J B	0.31	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-633-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 10:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.013	J B	0.013	MDL	8.4	MRL	mg/Kg	UJ	B, Q
ARSENIC	3.6	J	0.049	MDL	14	MRL	mg/Kg	J	Z
BARIUM	55	J B	0.068	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.33	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.33	J	0.0090	MDL	0.96	MRL	mg/Kg	J	Z
CHROMIUM	12	J B	0.073	MDL	35	MRL	mg/Kg	J	Z
COBALT	3.4	J B	0.0064	MDL	20	MRL	mg/Kg	J	Z
COPPER	7.2	J B	0.068	MDL	28	MRL	mg/Kg	J	Z, E
LEAD	9.0	J B	0.018	MDL	33	MRL	mg/Kg	J	Z
MOLYBDENUM	0.40	J	0.017	MDL	5.1	MRL	mg/Kg	J	Z
NICKEL	7.8	J B	0.024	MDL	28	MRL	mg/Kg	J	Z
THALLIUM	0.15	J B	0.0034	MDL	0.44	MRL	mg/Kg	U	B, B
VANADIUM	18	J B	0.037	MDL	60	MRL	mg/Kg	J	Z
ZINC	58	J B	0.30	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 10:50:00 *Analysis Type:* RE2/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.15	J	0.11	MDL	0.57	MRL	mg/Kg	J	Z

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 10:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.014	J B	0.012	MDL	7.5	MRL	mg/Kg	UJ	B, Q
ARSENIC	3.7	J	0.044	MDL	13	MRL	mg/Kg	J	Z
BARIUM	47	J B	0.061	MDL	120	MRL	mg/Kg	J	Z
BERYLLIUM	0.36	J	0.019	MDL	0.95	MRL	mg/Kg	J	Z
CADMIUM	0.39	J	0.0081	MDL	0.86	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 10:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	12	J B	0.066	MDL	32	MRL	mg/Kg	J	Z
COBALT	4.9	J B	0.0057	MDL	18	MRL	mg/Kg	J	Z
COPPER	8.3	J B	0.061	MDL	25	MRL	mg/Kg	J	Z, E
LEAD	9.0	J B	0.016	MDL	29	MRL	mg/Kg	J	Z
MOLYBDENUM	0.43	J	0.015	MDL	4.6	MRL	mg/Kg	J	Z
NICKEL	8.6	J B	0.022	MDL	25	MRL	mg/Kg	J	Z
THALLIUM	0.14	J B	0.0030	MDL	0.40	MRL	mg/Kg	U	B, B
VANADIUM	19	J B	0.033	MDL	54	MRL	mg/Kg	J	Z
ZINC	64	J B	0.27	MDL	95	MRL	mg/Kg	J	Z

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 1:45:00 *Analysis Type:* RE2/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.15	J	0.15	MDL	0.72	MRL	mg/Kg	J	Z

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 1:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.019	J B	0.015	MDL	9.5	MRL	mg/Kg	UJ	B, Q
ARSENIC	3.3	J	0.056	MDL	16	MRL	mg/Kg	J	Z
BARIUM	50	J B	0.077	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.29	J	0.025	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.33	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	11	J B	0.083	MDL	40	MRL	mg/Kg	J	Z
COBALT	3.5	J B	0.0073	MDL	23	MRL	mg/Kg	J	Z
COPPER	8.4	J B	0.078	MDL	32	MRL	mg/Kg	J	Z, E
LEAD	9.5	J B	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.33	J	0.019	MDL	5.8	MRL	mg/Kg	J	Z
NICKEL	7.7	J B	0.028	MDL	32	MRL	mg/Kg	J	Z
THALLIUM	0.15	J B	0.0039	MDL	0.50	MRL	mg/Kg	U	B, B
VANADIUM	18	J B	0.042	MDL	68	MRL	mg/Kg	J	Z
ZINC	57	J B	0.35	MDL	120	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

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

Sample ID: **SL-634-SA6-SB-2.0-3.0** ***Collected:*** **12/5/2012 2:00:00** ***Analysis Type:*** **RE2/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.41	J	0.020	MDL	0.96	MRL	mg/Kg	J	Z
CADMIUM	0.37	J	0.0082	MDL	0.87	MRL	mg/Kg	J	Z
VANADIUM	23	J	0.033	MDL	54	MRL	mg/Kg	J	Z

Sample ID: **SL-634-SA6-SB-2.0-3.0** ***Collected:*** **12/5/2012 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
ANTIMONY	0.015	J	0.013	MDL	7.8	MRL	mg/Kg	J	Z, Q
ARSENIC	3.1	J	0.046	MDL	13	MRL	mg/Kg	J	Z
BARIUM	69	J	0.063	MDL	130	MRL	mg/Kg	J	Z
CHROMIUM	15	J	0.068	MDL	33	MRL	mg/Kg	J	Z
COBALT	4.6	J	0.0060	MDL	19	MRL	mg/Kg	J	Z
COPPER	9.3	J	0.064	MDL	26	MRL	mg/Kg	J	Z
LEAD	8.8	J	0.016	MDL	31	MRL	mg/Kg	J	Z
MOLYBDENUM	0.47	J	0.016	MDL	4.8	MRL	mg/Kg	J	Z
NICKEL	12	J	0.023	MDL	26	MRL	mg/Kg	J	Z
THALLIUM	0.22	J	0.0032	MDL	0.41	MRL	mg/Kg	J	Z
ZINC	63	J	0.28	MDL	99	MRL	mg/Kg	J	Z, Q

Sample ID: **SL-635-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 2:20:00** ***Analysis Type:*** **RE2/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.62	J	0.025	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.43	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
VANADIUM	31	J	0.042	MDL	68	MRL	mg/Kg	J	Z

Sample ID: **SL-635-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 2:20:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.026	J	0.016	MDL	10	MRL	mg/Kg	J	Z, Q
ARSENIC	5.9	J	0.059	MDL	18	MRL	mg/Kg	J	Z
BARIUM	100	J	0.083	MDL	160	MRL	mg/Kg	J	Z
CHROMIUM	20	J	0.089	MDL	43	MRL	mg/Kg	J	Z
COBALT	6.3	J	0.0078	MDL	25	MRL	mg/Kg	J	Z
COPPER	17	J	0.083	MDL	34	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
LEAD	15	J	0.021	MDL	40	MRL	mg/Kg	J	Z
MOLYBDENUM	0.52	J	0.021	MDL	6.2	MRL	mg/Kg	J	Z
NICKEL	16	J	0.030	MDL	34	MRL	mg/Kg	J	Z
THALLIUM	0.29	J	0.0041	MDL	0.54	MRL	mg/Kg	J	Z
ZINC	79	J	0.37	MDL	130	MRL	mg/Kg	J	Z, Q

Sample ID: SL-636-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:40:00 *Analysis Type:* RE2/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.56	J	0.027	MDL	1.3	MRL	mg/Kg	J	Z
CADMIUM	0.35	J	0.011	MDL	1.2	MRL	mg/Kg	J	Z
VANADIUM	33	J	0.045	MDL	73	MRL	mg/Kg	J	Z

Sample ID: SL-636-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.020	J	0.015	MDL	9.3	MRL	mg/Kg	J	Z, Q
ARSENIC	6.0	J	0.054	MDL	16	MRL	mg/Kg	J	Z
BARIUM	98	J	0.075	MDL	150	MRL	mg/Kg	J	Z
CHROMIUM	20	J	0.081	MDL	39	MRL	mg/Kg	J	Z
COBALT	5.6	J	0.0071	MDL	22	MRL	mg/Kg	J	Z
COPPER	9.7	J	0.076	MDL	31	MRL	mg/Kg	J	Z
LEAD	15	J	0.019	MDL	36	MRL	mg/Kg	J	Z
MOLYBDENUM	0.59	J	0.019	MDL	5.6	MRL	mg/Kg	J	Z
NICKEL	14	J	0.027	MDL	31	MRL	mg/Kg	J	Z
THALLIUM	0.27	J	0.0037	MDL	0.49	MRL	mg/Kg	J	Z
ZINC	65	J	0.34	MDL	120	MRL	mg/Kg	J	Z, Q

Sample ID: SL-636-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 1:15:00 *Analysis Type:* RE2/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BERYLLIUM	0.62	J	0.020	MDL	0.99	MRL	mg/Kg	J	Z
SELENIUM	0.22	J	0.12	MDL	0.59	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-636-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 1:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.014	J B	0.013	MDL	7.8	MRL	mg/Kg	UJ	B, Q
ARSENIC	6.4	J	0.046	MDL	14	MRL	mg/Kg	J	Z
BARIUM	92	J B	0.063	MDL	130	MRL	mg/Kg	J	Z
CADMIUM	0.19	J	0.0084	MDL	0.90	MRL	mg/Kg	J	Z
CHROMIUM	20	J B	0.068	MDL	33	MRL	mg/Kg	J	Z
COBALT	6.1	J B	0.0060	MDL	19	MRL	mg/Kg	J	Z
COPPER	8.6	J B	0.064	MDL	26	MRL	mg/Kg	J	Z, E
LEAD	5.2	J B	0.016	MDL	31	MRL	mg/Kg	J	Z
MOLYBDENUM	0.42	J	0.016	MDL	4.8	MRL	mg/Kg	J	Z
NICKEL	14	J B	0.023	MDL	26	MRL	mg/Kg	J	Z
SILVER	0.17	J	0.018	MDL	0.71	MRL	mg/Kg	U	F
THALLIUM	0.21	J B	0.0032	MDL	0.41	MRL	mg/Kg	U	B
VANADIUM	33	J B	0.035	MDL	56	MRL	mg/Kg	J	Z
ZINC	52	J B	0.28	MDL	99	MRL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-519-SA6-SB-4.0-5.0 *Collected:* 12/5/2012 9:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0070	J	0.0066	MDL	0.024	MRL	mg/Kg	J	Z

Sample ID: SL-550-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 9:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.014	J	0.0062	MDL	0.022	MRL	mg/Kg	J	Z

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 10:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.019	J	0.0069	MDL	0.025	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-634-SA6-SB-2.0-3.0 *Collected:* 12/5/2012 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
MERCURY	0.020	J	0.0064	MDL	0.023	MRL	mg/Kg	J	Z

Method Category: SVOA

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

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 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(C21-C30)	1.2	J	1.1	MDL	5.5	MRL	mg/Kg	J	Z
EFH(C30-C40)	7.5	J	1.1	MDL	11	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-21.0-22.0 *Collected:* 12/5/2012 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
TOTAL EFH(C8-C40)	0.99	J B	0.73	MDL	4.3	MRL	mg/Kg	U	B

Sample ID: SL-519-SA6-SB-4.0-5.0 *Collected:* 12/5/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	1.4	J	1.0	MDL	5.2	MRL	mg/Kg	J	Z
EFH(C30-C40)	6.4	J	1.0	MDL	10	MRL	mg/Kg	J	Z

Sample ID: SL-519-SA6-SB-9.0-10.0 *Collected:* 12/5/2012 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
EFH(C30-C40)	1.1	J	1.0	MDL	10	MRL	mg/Kg	J	Z
TOTAL EFH(C8-C40)	1.9	J B	0.70	MDL	4.2	MRL	mg/Kg	U	B

Sample ID: SL-520-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.8	J	1.1	MDL	5.3	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-550-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 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
EFH(C15-C20)	1.7	J	1.1	MDL	5.5	MRL	mg/Kg	J	Z
EFH(C21-C30)	4.5	J	1.1	MDL	5.5	MRL	mg/Kg	J	Z

Sample ID: **SL-633-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 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
EFH(C15-C20)	2.5	J	1.1	MDL	5.3	MRL	mg/Kg	J	Z

Sample ID: **SL-633-SA6-SB-2.5-3.5** ***Collected:*** **12/5/2012 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
EFH(C15-C20)	2.8	J	1.0	MDL	5.0	MRL	mg/Kg	J	Z

Sample ID: **SL-634-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 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(C15-C20)	1.1	J	1.1	MDL	5.4	MRL	mg/Kg	J	Z

Sample ID: **SL-634-SA6-SB-2.0-3.0** ***Collected:*** **12/5/2012 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
EFH(C12-C14)	1.4	J	1.0	MDL	5.0	MRL	mg/Kg	J	Z
EFH(C15-C20)	4.5	J	1.0	MDL	5.0	MRL	mg/Kg	J	Z

Sample ID: **SL-635-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 2:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	5.1	J	1.2	MDL	5.9	MRL	mg/Kg	J	Z

Sample ID: **SL-636-SA6-SB-0.0-0.5** ***Collected:*** **12/5/2012 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	3.0	J	1.2	MDL	5.9	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-636-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	2.4	J	1.0	MDL	5.1	MRL	mg/Kg	J	Z
EFH(C30-C40)	6.0	J	1.0	MDL	10	MRL	mg/Kg	J	Z

Method Category: SVOA

Method: 8081B **Matrix: SO**

Sample ID: SL-634-SA6-SB-2.0-3.0 *Collected:* 12/5/2012 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DELTA-BHC	0.62	J p	0.40	MDL	1.7	MRL	ug/Kg	J	Z

Method Category: SVOA

Method: 8082A **Matrix: SO**

Sample ID: SL-519-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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
Aroclor 5460	31	J	17	MDL	52	MRL	ug/Kg	J	Z

Sample ID: SL-520-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	38	J	17	MDL	53	MRL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: EB-120512 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	0.0087	J	0.0059	MDL	0.10	MRL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.0081	J	0.0053	MDL	0.10	MRL	ug/L	J	Z
ACENAPHTHENE	0.016	J	0.011	MDL	0.10	MRL	ug/L	J	Z
FLUORENE	0.021	J	0.020	MDL	0.10	MRL	ug/L	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: EB-120512 *Collected:* 12/5/2012 2:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.046	J	0.0055	MDL	0.10	MRL	ug/L	J	Z
PHENANTHRENE	0.019	J B	0.010	MDL	0.10	MRL	ug/L	U	B

Method Category: SVOA

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

Sample ID: SL-519-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	0.29	J	0.27	MDL	10	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	0.49	J B	0.32	MDL	10	MRL	ug/Kg	U	B
BENZO(A)ANTHRACENE	6.0	J	0.94	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	7.0	J	0.77	MDL	10	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	8.1	J	1.1	MDL	10	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	3.8	J	1.0	MDL	10	MRL	ug/Kg	J	Z
CHRYSENE	6.7	J	1.0	MDL	10	MRL	ug/Kg	J	Z
FLUORANTHENE	7.3	J	1.0	MDL	10	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	5.3	J	1.1	MDL	10	MRL	ug/Kg	J	Z
NAPHTHALENE	0.35	J	0.34	MDL	10	MRL	ug/Kg	J	Z
PHENANTHRENE	1.4	J	1.1	MDL	10	MRL	ug/Kg	J	Z
PYRENE	7.8	J	1.1	MDL	10	MRL	ug/Kg	J	Z

Sample ID: SL-550-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 9:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.48	J B	0.34	MDL	11	MRL	ug/Kg	U	B
FLUORANTHENE	1.2	J	1.1	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	0.64	J	0.36	MDL	11	MRL	ug/Kg	J	Z

Sample ID: SL-633-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	0.34	J	0.26	MDL	10	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	0.99	J B	0.31	MDL	10	MRL	ug/Kg	U	B
ACENAPHTHYLENE	0.39	J	0.17	MDL	10	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-633-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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(A)ANTHRACENE	1.3	J	0.92	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	1.8	J	0.75	MDL	10	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	4.1	J	1.2	MDL	10	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	5.4	J	1.1	MDL	10	MRL	ug/Kg	J	Z
CHRYSENE	2.5	J	1.0	MDL	10	MRL	ug/Kg	J	Z
FLUORANTHENE	2.9	J	1.0	MDL	10	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	3.1	J	1.1	MDL	10	MRL	ug/Kg	J	Z
NAPHTHALENE	0.91	J	0.33	MDL	10	MRL	ug/Kg	J	Z
PHENANTHRENE	1.7	J	1.1	MDL	10	MRL	ug/Kg	J	Z
PYRENE	4.1	J	1.1	MDL	10	MRL	ug/Kg	J	Z

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	1.0	J	0.26	MDL	10	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	3.0	J B	0.31	MDL	10	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	0.87	J	0.17	MDL	10	MRL	ug/Kg	J	Z
ANTHRACENE	1.4	J	0.73	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	5.5	J	0.91	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	5.4	J	0.75	MDL	10	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	9.6	J	1.1	MDL	10	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	3.1	J	1.0	MDL	10	MRL	ug/Kg	J	Z
CHRYSENE	8.7	J	1.0	MDL	10	MRL	ug/Kg	J	Z
FLUORENE	0.55	J	0.48	MDL	10	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	6.3	J	1.1	MDL	10	MRL	ug/Kg	J	Z
NAPHTHALENE	1.8	J	0.33	MDL	10	MRL	ug/Kg	J	Z
PHENANTHRENE	4.1	J	1.1	MDL	10	MRL	ug/Kg	J	Z

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	0.33	J	0.29	MDL	11	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	0.77	J B	0.34	MDL	11	MRL	ug/Kg	U	B
ACENAPHTHYLENE	0.23	J	0.19	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.0	J	0.99	MDL	11	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.3	J	0.81	MDL	11	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	3.0	J	1.3	MDL	11	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	3.6	J	1.2	MDL	11	MRL	ug/Kg	J	Z
CHRYSENE	2.2	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORANTHENE	2.3	J	1.1	MDL	11	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	2.1	J	1.2	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	0.67	J	0.36	MDL	11	MRL	ug/Kg	J	Z
PHENANTHRENE	1.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z
PYRENE	3.3	J	1.2	MDL	11	MRL	ug/Kg	J	Z

Sample ID: SL-634-SA6-SB-2.0-3.0 *Collected:* 12/5/2012 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-METHYLNAPHTHALENE	1.6	J	0.25	MDL	9.7	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	4.5	J B	0.30	MDL	9.7	MRL	ug/Kg	J	Z
ACENAPHTHENE	0.41	J	0.16	MDL	9.7	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	2.4	J	0.16	MDL	9.7	MRL	ug/Kg	J	Z
ANTHRACENE	3.9	J	0.70	MDL	9.7	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	8.0	J	0.87	MDL	9.7	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	9.2	J	0.72	MDL	9.7	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	4.5	J	0.97	MDL	9.7	MRL	ug/Kg	J	Z
FLUORENE	1.3	J	0.46	MDL	9.7	MRL	ug/Kg	J	Z
NAPHTHALENE	3.2	J	0.32	MDL	9.7	MRL	ug/Kg	J	Z
PHENANTHRENE	8.7	J	1.1	MDL	9.7	MRL	ug/Kg	J	Z

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	2.0	J	0.31	MDL	12	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	3.2	J B	0.37	MDL	12	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	2.4	J	0.20	MDL	12	MRL	ug/Kg	J	Z
ANTHRACENE	2.9	J	0.86	MDL	12	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	3.9	J	1.1	MDL	12	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	4.0	J	0.89	MDL	12	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	9.2	J	1.4	MDL	12	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	5.1	J	1.3	MDL	12	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	2.6	J	1.2	MDL	12	MRL	ug/Kg	J	Z
CHRYSENE	11	J	1.2	MDL	12	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	4.1	J	1.3	MDL	12	MRL	ug/Kg	J	Z
NAPHTHALENE	5.6	J	0.39	MDL	12	MRL	ug/Kg	J	Z
PHENANTHRENE	9.1	J	1.3	MDL	12	MRL	ug/Kg	J	Z

Sample ID: SL-636-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.70	J	0.29	MDL	11	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	1.2	J B	0.34	MDL	11	MRL	ug/Kg	U	B
ANTHRACENE	1.0	J	0.80	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	3.1	J	1.0	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	2.4	J	0.82	MDL	11	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	4.8	J	1.3	MDL	11	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	3.2	J	1.2	MDL	11	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	2.3	J	1.1	MDL	11	MRL	ug/Kg	J	Z
CHRYSENE	6.2	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORANTHENE	6.7	J	1.1	MDL	11	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	2.7	J	1.2	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	2.4	J	0.36	MDL	11	MRL	ug/Kg	J	Z
PHENANTHRENE	5.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z
PYRENE	6.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix: SO**

Sample ID: SL-519-SA6-SB-14.5 *Collected:* 12/5/2012 9:59:00 *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 (C4-C12)	0.50	J	0.34	MDL	1.1	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **SO**

Sample ID: **SL-519-SA6-SB-4.5** ***Collected:*** **12/5/2012 9:44:00** ***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 (C4-C12)	0.39	J	0.30	MDL	0.92	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36640-1

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151250/1-A	12/11/2012 7:37:00 PM	THALLIUM	0.000287 mg/L	EB-120512

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151258/1-A	12/11/2012 4:35:00 PM	ANTIMONY	0.0226 mg/Kg	SL-519-SA6-SB-0.0-0.5
		BARIUM	0.775 mg/Kg	SL-519-SA6-SB-14.0-15.0
		CHROMIUM	0.109 mg/Kg	SL-519-SA6-SB-21.0-22.0
		COBALT	0.0375 mg/Kg	SL-519-SA6-SB-4.0-5.0
		COPPER	0.136 mg/Kg	SL-519-SA6-SB-9.0-10.0
		LEAD	0.0647 mg/Kg	SL-520-SA6-SB-0.0-0.5
		NICKEL	0.0634 mg/Kg	SL-550-SA6-SB-0.0-0.5
		THALLIUM	0.0390 mg/Kg	SL-633-SA6-SB-0.0-0.5
		VANADIUM	0.188 mg/Kg	SL-633-SA6-SB-2.5-3.5
		ZINC	0.660 mg/Kg	SL-634-SA6-SB-0.0-0.5
				SL-636-SA6-SB-2.5-3.5

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-519-SA6-SB-0.0-0.5(RES/TOT)	ANTIMONY	0.051 mg/Kg	0.051U mg/Kg
SL-519-SA6-SB-14.0-15.0(RES/TOT)	ANTIMONY	0.018 mg/Kg	0.018U mg/Kg
SL-519-SA6-SB-21.0-22.0(RES/TOT)	ANTIMONY	0.016 mg/Kg	0.016U mg/Kg
SL-519-SA6-SB-21.0-22.0(RES/TOT)	THALLIUM	0.18 mg/Kg	0.18U mg/Kg
SL-519-SA6-SB-4.0-5.0(RES/TOT)	ANTIMONY	0.026 mg/Kg	0.026U mg/Kg
SL-519-SA6-SB-9.0-10.0(RES/TOT)	ANTIMONY	0.019 mg/Kg	0.019U mg/Kg
SL-520-SA6-SB-0.0-0.5(RES/TOT)	ANTIMONY	0.029 mg/Kg	0.029U mg/Kg
SL-550-SA6-SB-0.0-0.5(RES/TOT)	ANTIMONY	0.025 mg/Kg	0.025U mg/Kg
SL-633-SA6-SB-0.0-0.5(RES/TOT)	ANTIMONY	0.013 mg/Kg	0.013U mg/Kg
SL-633-SA6-SB-0.0-0.5(RES/TOT)	THALLIUM	0.15 mg/Kg	0.15U mg/Kg
SL-633-SA6-SB-2.5-3.5(RES/TOT)	ANTIMONY	0.014 mg/Kg	0.014U mg/Kg
SL-633-SA6-SB-2.5-3.5(RES/TOT)	THALLIUM	0.14 mg/Kg	0.14U mg/Kg
SL-634-SA6-SB-0.0-0.5(RES/TOT)	ANTIMONY	0.019 mg/Kg	0.019U mg/Kg
SL-634-SA6-SB-0.0-0.5(RES/TOT)	THALLIUM	0.15 mg/Kg	0.15U mg/Kg
SL-636-SA6-SB-2.5-3.5(RES/TOT)	ANTIMONY	0.014 mg/Kg	0.014U mg/Kg

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151516/1-A	12/13/2012 1:06:00 AM	TOTAL EFH(C8-C40)	1.18 mg/Kg	SL-519-SA6-SB-0.0-0.5 SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-9.0-10.0 SL-520-SA6-SB-0.0-0.5 SL-550-SA6-SB-0.0-0.5 SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5

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-519-SA6-SB-21.0-22.0(RES)	TOTAL EFH(C8-C40)	0.99 mg/Kg	4.3U mg/Kg
SL-519-SA6-SB-9.0-10.0(RES)	TOTAL EFH(C8-C40)	1.9 mg/Kg	4.2U mg/Kg

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-150872/1-A	12/10/2012 9:57:00 PM	BENZO(A)ANTHRACENE FLUORANTHENE PHENANTHRENE	0.00348 ug/L 0.00552 ug/L 0.0121 ug/L	EB-120512

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-120512(RES)	PHENANTHRENE	0.019 ug/L	0.10U ug/L

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151447/1-A	12/16/2012 8:46:00 AM	2-METHYLNAPHTHALENE	0.416 ug/Kg	SL-519-SA6-SB-0.0-0.5 SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-9.0-10.0 SL-520-SA6-SB-0.0-0.5 SL-550-SA6-SB-0.0-0.5 SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5

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-519-SA6-SB-0.0-0.5(RES)	2-METHYLNAPHTHALENE	0.49 ug/Kg	10U ug/Kg
SL-550-SA6-SB-0.0-0.5(RES)	2-METHYLNAPHTHALENE	0.48 ug/Kg	11U ug/Kg
SL-633-SA6-SB-0.0-0.5(RES)	2-METHYLNAPHTHALENE	0.99 ug/Kg	10U ug/Kg
SL-634-SA6-SB-0.0-0.5(RES)	2-METHYLNAPHTHALENE	0.77 ug/Kg	11U ug/Kg
SL-636-SA6-SB-0.0-0.5(RES)	2-METHYLNAPHTHALENE	1.2 ug/Kg	11U ug/Kg

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**
Matrix: **SO**

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-120612(RES/TOT)	12/6/2012 3:00:00 PM	BORON MANGANESE SODIUM	0.0044 mg/L 0.00038 mg/L 0.19 mg/L	SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-14.5 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-21.5 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-4.5 SL-519-SA6-SB-9.0-10.0 SL-519-SA6-SB-9.5 SL-550-SA6-SB-0.0-0.5
EB-120512(RES/TOT)	12/5/2012 2:00:00 PM	BORON MAGNESIUM MANGANESE SODIUM	0.0059 mg/L 0.012 mg/L 0.00051 mg/L 0.27 mg/L	SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-633-SA6-SB-3.0 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-634-SA6-SB-2.5 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5 SL-636-SA6-SB-3.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-519-SA6-SB-4.0-5.0(RES/TOT)	BORON	1.0 mg/Kg	1.0U mg/Kg
SL-550-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	86 mg/Kg	86U mg/Kg
SL-633-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.1 mg/Kg	1.1U mg/Kg
SL-633-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	100 mg/Kg	100U mg/Kg
SL-633-SA6-SB-2.5-3.5(RES/TOT)	BORON	1.1 mg/Kg	1.1U mg/Kg
SL-633-SA6-SB-2.5-3.5(RES/TOT)	SODIUM	100 mg/Kg	100U mg/Kg
SL-634-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.5 mg/Kg	1.5U mg/Kg
SL-634-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	110 mg/Kg	110U mg/Kg
SL-634-SA6-SB-2.0-3.0(RES/TOT)	BORON	1.3 mg/Kg	1.3U mg/Kg
SL-634-SA6-SB-2.0-3.0(RES/TOT)	SODIUM	130 mg/Kg	130U mg/Kg
SL-635-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	130 mg/Kg	130U mg/Kg
SL-636-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.8 mg/Kg	1.8U mg/Kg
SL-636-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	99 mg/Kg	99U mg/Kg
SL-636-SA6-SB-2.5-3.5(RES/TOT)	BORON	1.2 mg/Kg	1.2U mg/Kg
SL-636-SA6-SB-2.5-3.5(RES/TOT)	SODIUM	120 mg/Kg	120U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-111412(RES/TOT)	11/14/2012 3:00:00 PM	BORON SODIUM	0.024 mg/L 0.17 mg/L	SL-519-SA6-SB-0.0-0.5 SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-14.5 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-21.5 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-4.5 SL-519-SA6-SB-9.0-10.0 SL-519-SA6-SB-9.5 SL-520-SA6-SB-0.0-0.5 SL-550-SA6-SB-0.0-0.5 SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-633-SA6-SB-3.0 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-634-SA6-SB-2.5 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5 SL-636-SA6-SB-3.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-519-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.2 mg/Kg	1.2U mg/Kg
SL-519-SA6-SB-4.0-5.0(RES/TOT)	BORON	1.0 mg/Kg	1.0U mg/Kg
SL-520-SA6-SB-0.0-0.5(RES/TOT)	BORON	0.93 mg/Kg	0.93U mg/Kg
SL-633-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.1 mg/Kg	1.1U mg/Kg
SL-633-SA6-SB-2.5-3.5(RES/TOT)	BORON	1.1 mg/Kg	1.1U mg/Kg
SL-634-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.5 mg/Kg	1.5U mg/Kg
SL-634-SA6-SB-2.0-3.0(RES/TOT)	BORON	1.3 mg/Kg	1.3U mg/Kg
SL-635-SA6-SB-0.0-0.5(RES/TOT)	BORON	3.7 mg/Kg	3.7U mg/Kg
SL-636-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.8 mg/Kg	1.8U mg/Kg
SL-636-SA6-SB-2.5-3.5(RES/TOT)	BORON	1.2 mg/Kg	1.2U mg/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-111412(RES/TOT)	11/14/2012 3:00:00 PM	SILVER	0.00078 mg/L	SL-519-SA6-SB-0.0-0.5 SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-14.5 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-21.5 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-4.5 SL-519-SA6-SB-9.0-10.0 SL-519-SA6-SB-9.5 SL-520-SA6-SB-0.0-0.5 SL-550-SA6-SB-0.0-0.5 SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-633-SA6-SB-3.0 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-634-SA6-SB-2.5 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5 SL-636-SA6-SB-3.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-519-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.035 mg/Kg	0.035U mg/Kg
SL-519-SA6-SB-14.0-15.0(RES/TOT)	SILVER	0.029 mg/Kg	0.029U mg/Kg
SL-519-SA6-SB-21.0-22.0(RES/TOT)	SILVER	0.032 mg/Kg	0.032U mg/Kg
SL-519-SA6-SB-4.0-5.0(RES/TOT)	SILVER	0.030 mg/Kg	0.030U mg/Kg
SL-519-SA6-SB-9.0-10.0(RES/TOT)	SILVER	0.023 mg/Kg	0.023U mg/Kg
SL-520-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.12 mg/Kg	0.12U mg/Kg
SL-550-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.065 mg/Kg	0.065U mg/Kg
SL-636-SA6-SB-2.5-3.5(RES/TOT)	SILVER	0.17 mg/Kg	0.17U mg/Kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-519-SA6-SB-0.0-0.5MS (TOT) **SL-519-SA6-SB-0.0-0.5MSD (TOT)** (SL-519-SA6-SB-0.0-0.5 SL -519-SA6-SB-14.0-15.0 SL -519-SA6-SB-21.0-22.0 SL -519-SA6-SB-4.0-5.0 SL -519-SA6-SB-9.0-10.0 SL -520-SA6-SB-0.0-0.5 SL -550-SA6-SB-0.0-0.5 SL -633-SA6-SB-0.0-0.5 SL -633-SA6-SB-2.5-3.5 SL -634-SA6-SB-0.0-0.5 SL -636-SA6-SB-2.5-3.5)	ANTIMONY ZINC	4 -1	3 -11	75.00-125.00 75.00-125.00	- -	ANTIMONY ZINC	J (all detects) UJ (all non-detects) Zn, No Qual, >4x Sb, Post Spike = 101%
SL-519-SA6-SB-0.0-0.5MSD (TOT) (SL-519-SA6-SB-0.0-0.5 SL -519-SA6-SB-14.0-15.0 SL -519-SA6-SB-21.0-22.0 SL -519-SA6-SB-4.0-5.0 SL -519-SA6-SB-9.0-10.0 SL -520-SA6-SB-0.0-0.5 SL -550-SA6-SB-0.0-0.5 SL -633-SA6-SB-0.0-0.5 SL -633-SA6-SB-2.5-3.5 SL -634-SA6-SB-0.0-0.5 SL -636-SA6-SB-2.5-3.5)	COPPER	-	-	75.00-125.00	28 (20.00)	COPPER	J(all detects) UJ(all non-detects)

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-519-SA6-SB-0.0-0.5MS (TOT) **SL-519-SA6-SB-0.0-0.5MSD (TOT)** (SL-519-SA6-SB-0.0-0.5 SL -519-SA6-SB-14.0-15.0 SL -519-SA6-SB-21.0-22.0 SL -519-SA6-SB-4.0-5.0 SL -519-SA6-SB-9.0-10.0 SL -520-SA6-SB-0.0-0.5 SL -550-SA6-SB-0.0-0.5 SL -633-SA6-SB-0.0-0.5 SL -633-SA6-SB-2.5-3.5 SL -634-SA6-SB-0.0-0.5 SL -634-SA6-SB-2.0-3.0 SL -635-SA6-SB-0.0-0.5 SL -636-SA6-SB-0.0-0.5 SL -636-SA6-SB-2.5-3.5)	ALUMINUM TITANIUM	2123 141	2285 185	75.00-125.00 75.00-125.00	- -	ALUMINUM TITANIUM	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-519-SA6-SB-0.0-0.5MS (TOT) **SL-519-SA6-SB-0.0-0.5MSD (TOT)** (SL-519-SA6-SB-0.0-0.5 SL-519-SA6-SB-14.0-15.0 SL-519-SA6-SB-21.0-22.0 SL-519-SA6-SB-4.0-5.0 SL-519-SA6-SB-9.0-10.0 SL-520-SA6-SB-0.0-0.5 SL-550-SA6-SB-0.0-0.5 SL-633-SA6-SB-0.0-0.5 SL-633-SA6-SB-2.5-3.5 SL-634-SA6-SB-0.0-0.5 SL-634-SA6-SB-2.0-3.0 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5 SL-636-SA6-SB-2.5-3.5)	IRON	6713	702	75.00-125.00	28 (20.00)	IRON	J(all detects) UJ(all non-detects) No Qual %R >4x

Method: 8082A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-634-SA6-SB-2.0-3.0MS **SL-634-SA6-SB-2.0-3.0MSD** (SL-634-SA6-SB-2.0-3.0)	AROCLOR 1016	143	137	54.00-132.00	-	AROCLOR 1016 AROCLOR 1221 AROCLOR 1232	J(all detects)

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-634-SA6-SB-2.0-3.0MSD (TOT) (SL-634-SA6-SB-2.0-3.0 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5)	ZINC	-	164	75.00-125.00	-	ZINC	J(all detects)
SL-634-SA6-SB-2.0-3.0MS (TOT) **SL-634-SA6-SB-2.0-3.0MSD (TOT)** (SL-634-SA6-SB-2.0-3.0 SL-635-SA6-SB-0.0-0.5 SL-636-SA6-SB-0.0-0.5)	ANTIMONY	10	9	75.00-125.00	-	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike = 103%

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-120512	BORON	J	0.0059	0.10	MRL	mg/L	J (all detects)
	MAGNESIUM	J	0.012	0.20	MRL	mg/L	
	MANGANESE	J	0.00051	0.010	MRL	mg/L	
	SODIUM	J	0.27	1.0	MRL	mg/L	

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-120512	1-METHYLNAPHTHALENE	J	0.0087	0.10	MRL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J	0.0081	0.10	MRL	ug/L	
	ACENAPHTHENE	J	0.016	0.10	MRL	ug/L	
	FLUORENE	J	0.021	0.10	MRL	ug/L	
	NAPHTHALENE	J	0.046	0.10	MRL	ug/L	
	PHENANTHRENE	J B	0.019	0.10	MRL	ug/L	

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-0.0-0.5	ALUMINUM	J	12000	18000	MRL	mg/Kg	J (all detects)
	BORON	J	1.2	8.8	MRL	mg/Kg	
	LITHIUM	J	18	33	MRL	mg/Kg	
	MANGANESE	J	240	450	MRL	mg/Kg	
	POTASSIUM	J	2600	5800	MRL	mg/Kg	
	SODIUM	J	230	450	MRL	mg/Kg	
	TIN	J	3.2	9.9	MRL	mg/Kg	
	Zirconium	J	1.7	7.8	MRL	mg/Kg	
SL-519-SA6-SB-14.0-15.0	ALUMINUM	J	14000	20000	MRL	mg/Kg	J (all detects)
	LITHIUM	J	21	37	MRL	mg/Kg	
	MANGANESE	J	220	500	MRL	mg/Kg	
	POTASSIUM	J	1600	6500	MRL	mg/Kg	
	SODIUM	J	110	500	MRL	mg/Kg	
	TIN	J	3.9	11	MRL	mg/Kg	
	Zirconium	J	1.5	8.7	MRL	mg/Kg	
SL-519-SA6-SB-21.0-22.0	ALUMINUM	J	12000	20000	MRL	mg/Kg	J (all detects)
	LITHIUM	J	18	37	MRL	mg/Kg	
	MANGANESE	J	260	500	MRL	mg/Kg	
	POTASSIUM	J	1400	6500	MRL	mg/Kg	
	SODIUM	J	140	510	MRL	mg/Kg	
	TIN	J	3.2	11	MRL	mg/Kg	
	Zirconium	J	1.2	8.7	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-4.0-5.0	ALUMINUM	J	16000	20000	MRL	mg/Kg	J (all detects)
	BORON	J	1.0	9.9	MRL	mg/Kg	
	LITHIUM	J	20	38	MRL	mg/Kg	
	MANGANESE	J	270	500	MRL	mg/Kg	
	POTASSIUM	J	2500	6500	MRL	mg/Kg	
	SODIUM	J	150	510	MRL	mg/Kg	
	TIN	J	3.7	11	MRL	mg/Kg	
	Zirconium	J	1.9	8.7	MRL	mg/Kg	
SL-519-SA6-SB-9.0-10.0	ALUMINUM	J	16000	21000	MRL	mg/Kg	J (all detects)
	LITHIUM	J	23	38	MRL	mg/Kg	
	MANGANESE	J	300	510	MRL	mg/Kg	
	POTASSIUM	J	2000	6600	MRL	mg/Kg	
	SODIUM	J	120	520	MRL	mg/Kg	
	TIN	J	3.8	11	MRL	mg/Kg	
	Zirconium	J	1.7	8.9	MRL	mg/Kg	
SL-520-SA6-SB-0.0-0.5	ALUMINUM	J	13000	19000	MRL	mg/Kg	J (all detects)
	BORON	J	0.93	9.0	MRL	mg/Kg	
	LITHIUM	J	22	34	MRL	mg/Kg	
	MANGANESE	J	250	460	MRL	mg/Kg	
	POTASSIUM	J	2500	5900	MRL	mg/Kg	
	SODIUM	J	130	460	MRL	mg/Kg	
	TIN	J	3.7	10	MRL	mg/Kg	
	Zirconium	J	1.5	8.0	MRL	mg/Kg	
SL-550-SA6-SB-0.0-0.5	ALUMINUM	J	14000	22000	MRL	mg/Kg	J (all detects)
	LITHIUM	J	27	41	MRL	mg/Kg	
	MANGANESE	J	310	550	MRL	mg/Kg	
	POTASSIUM	J	4000	7200	MRL	mg/Kg	
	SODIUM	J	86	560	MRL	mg/Kg	
	TIN	J	3.8	12	MRL	mg/Kg	
	Zirconium	J	1.3	9.6	MRL	mg/Kg	
SL-633-SA6-SB-0.0-0.5	ALUMINUM	J	6900	21000	MRL	mg/Kg	J (all detects)
	BORON	J	1.1	10	MRL	mg/Kg	
	LITHIUM	J	19	38	MRL	mg/Kg	
	MANGANESE	J	140	510	MRL	mg/Kg	
	POTASSIUM	J	1800	6600	MRL	mg/Kg	
	SODIUM	J	100	510	MRL	mg/Kg	
	TIN	J	2.8	11	MRL	mg/Kg	
	Zirconium	J	0.68	8.8	MRL	mg/Kg	
SL-633-SA6-SB-2.5-3.5	ALUMINUM	J	8200	20000	MRL	mg/Kg	J (all detects)
	BORON	J	1.1	9.8	MRL	mg/Kg	
	LITHIUM	J	21	38	MRL	mg/Kg	
	MANGANESE	J	200	500	MRL	mg/Kg	
	POTASSIUM	J	2100	6500	MRL	mg/Kg	
	SODIUM	J	100	510	MRL	mg/Kg	
	TIN	J	3.1	11	MRL	mg/Kg	
	Zirconium	J	1.1	8.7	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-634-SA6-SB-0.0-0.5	ALUMINUM	J	8000	20000	MRL	mg/Kg	J (all detects)
	BORON	J	1.5	9.9	MRL	mg/Kg	
	LITHIUM	J	21	38	MRL	mg/Kg	
	MANGANESE	J	190	500	MRL	mg/Kg	
	POTASSIUM	J	2100	6500	MRL	mg/Kg	
	SODIUM	J	110	510	MRL	mg/Kg	
	TIN	J	3.2	11	MRL	mg/Kg	
	Zirconium	J	0.72	8.7	MRL	mg/Kg	
SL-634-SA6-SB-2.0-3.0	ALUMINUM	J	9200	17000	MRL	mg/Kg	J (all detects)
	BORON	J	1.3	8.4	MRL	mg/Kg	
	LITHIUM	J	23	32	MRL	mg/Kg	
	MANGANESE	J	170	430	MRL	mg/Kg	
	POTASSIUM	J	2400	5600	MRL	mg/Kg	
	SODIUM	J	130	430	MRL	mg/Kg	
	TIN	J	3.1	9.5	MRL	mg/Kg	
	Zirconium	J	1.2	7.5	MRL	mg/Kg	
SL-635-SA6-SB-0.0-0.5	ALUMINUM	J	13000	23000	MRL	mg/Kg	J (all detects)
	BORON	J	3.7	11	MRL	mg/Kg	
	LITHIUM	J	29	43	MRL	mg/Kg	
	MANGANESE	J	310	570	MRL	mg/Kg	
	POTASSIUM	J	4100	7400	MRL	mg/Kg	
	SODIUM	J	130	580	MRL	mg/Kg	
	TIN	J	4.2	13	MRL	mg/Kg	
	Zirconium	J	1.4	9.9	MRL	mg/Kg	
SL-636-SA6-SB-0.0-0.5	ALUMINUM	J	13000	23000	MRL	mg/Kg	J (all detects)
	BORON	J	1.8	11	MRL	mg/Kg	
	LITHIUM	J	24	42	MRL	mg/Kg	
	MANGANESE	J	250	560	MRL	mg/Kg	
	POTASSIUM	J	3400	7300	MRL	mg/Kg	
	SODIUM	J	99	570	MRL	mg/Kg	
	TIN	J	4.1	12	MRL	mg/Kg	
	Zirconium	J	1.3	9.8	MRL	mg/Kg	
SL-636-SA6-SB-2.5-3.5	ALUMINUM	J	14000	17000	MRL	mg/Kg	J (all detects)
	BORON	J	1.2	8.4	MRL	mg/Kg	
	LITHIUM	J	29	32	MRL	mg/Kg	
	MANGANESE	J	290	430	MRL	mg/Kg	
	POTASSIUM	J	2900	5600	MRL	mg/Kg	
	SODIUM	J	120	440	MRL	mg/Kg	
	TIN	J	3.5	9.5	MRL	mg/Kg	
	Zirconium	J	1.1	7.5	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-0.0-0.5	ANTIMONY	J B	0.051	9.4	MRL	mg/Kg	J (all detects)
	ARSENIC	J	4.2	16	MRL	mg/Kg	
	BARIUM	J B	85	150	MRL	mg/Kg	
	BERYLLIUM	J	0.58	1.2	MRL	mg/Kg	
	CADMIUM	J	0.35	1.1	MRL	mg/Kg	
	CHROMIUM	J B	16	40	MRL	mg/Kg	
	COBALT	J B	5.9	23	MRL	mg/Kg	
	COPPER	J B	11	31	MRL	mg/Kg	
	LEAD	J B	12	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.59	5.7	MRL	mg/Kg	
	NICKEL	J B	10	31	MRL	mg/Kg	
	SELENIUM	J	0.18	0.70	MRL	mg/Kg	
	SILVER	J	0.035	0.85	MRL	mg/Kg	
	THALLIUM	J B	0.28	0.49	MRL	mg/Kg	
	VANADIUM	J B	31	67	MRL	mg/Kg	
	ZINC	J B	88	120	MRL	mg/Kg	
SL-519-SA6-SB-14.0-15.0	ANTIMONY	J B	0.018	8.5	MRL	mg/Kg	J (all detects)
	ARSENIC	J	3.7	15	MRL	mg/Kg	
	BARIUM	J B	78	140	MRL	mg/Kg	
	BERYLLIUM	J	0.64	1.1	MRL	mg/Kg	
	CADMIUM	J	0.045	0.97	MRL	mg/Kg	
	CHROMIUM	J B	19	36	MRL	mg/Kg	
	COBALT	J B	5.3	20	MRL	mg/Kg	
	COPPER	J B	6.3	28	MRL	mg/Kg	
	LEAD	J B	4.4	33	MRL	mg/Kg	
	MOLYBDENUM	J	0.53	5.2	MRL	mg/Kg	
	NICKEL	J B	9.5	28	MRL	mg/Kg	
	SELENIUM	J	0.13	0.64	MRL	mg/Kg	
	SILVER	J	0.029	0.77	MRL	mg/Kg	
	THALLIUM	J B	0.24	0.45	MRL	mg/Kg	
	VANADIUM	J B	36	60	MRL	mg/Kg	
	ZINC	J B	43	110	MRL	mg/Kg	
SL-519-SA6-SB-21.0-22.0	ANTIMONY	J B	0.016	9.1	MRL	mg/Kg	J (all detects)
	ARSENIC	J	3.4	16	MRL	mg/Kg	
	BARIUM	J B	64	150	MRL	mg/Kg	
	BERYLLIUM	J	0.60	1.1	MRL	mg/Kg	
	CADMIUM	J	0.022	1.0	MRL	mg/Kg	
	CHROMIUM	J B	16	38	MRL	mg/Kg	
	COBALT	J B	5.0	22	MRL	mg/Kg	
	COPPER	J B	6.6	30	MRL	mg/Kg	
	LEAD	J B	4.0	35	MRL	mg/Kg	
	MOLYBDENUM	J	0.24	5.5	MRL	mg/Kg	
	NICKEL	J B	8.1	30	MRL	mg/Kg	
	SILVER	J	0.032	0.82	MRL	mg/Kg	
	THALLIUM	J B	0.18	0.48	MRL	mg/Kg	
	VANADIUM	J B	30	65	MRL	mg/Kg	
	ZINC	J B	40	110	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-4.0-5.0	ANTIMONY	J B	0.026	7.9	MRL	mg/Kg	
	ARSENIC	J	4.2	14	MRL	mg/Kg	
	BARIUM	J B	100	130	MRL	mg/Kg	
	BERYLLIUM	J	0.83	1.0	MRL	mg/Kg	
	CADMIUM	J	0.096	0.91	MRL	mg/Kg	
	CHROMIUM	J B	19	33	MRL	mg/Kg	
	COBALT	J B	6.2	19	MRL	mg/Kg	
	COPPER	J B	7.9	26	MRL	mg/Kg	
	LEAD	J B	5.2	31	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.62	4.8	MRL	mg/Kg	
	NICKEL	J B	12	26	MRL	mg/Kg	
	SELENIUM	J	0.12	0.59	MRL	mg/Kg	
	SILVER	J	0.030	0.72	MRL	mg/Kg	
	THALLIUM	J B	0.30	0.42	MRL	mg/Kg	
	VANADIUM	J B	35	56	MRL	mg/Kg	
	ZINC	J B	50	100	MRL	mg/Kg	
SL-519-SA6-SB-9.0-10.0	ANTIMONY	J B	0.019	8.2	MRL	mg/Kg	
	ARSENIC	J	4.0	14	MRL	mg/Kg	
	BARIUM	J B	88	130	MRL	mg/Kg	
	BERYLLIUM	J	0.64	1.0	MRL	mg/Kg	
	CADMIUM	J	0.064	0.94	MRL	mg/Kg	
	CHROMIUM	J B	19	35	MRL	mg/Kg	
	COBALT	J B	5.7	20	MRL	mg/Kg	
	COPPER	J B	6.3	27	MRL	mg/Kg	J (all detects)
	LEAD	J B	4.5	32	MRL	mg/Kg	
	MOLYBDENUM	J	0.42	5.0	MRL	mg/Kg	
	NICKEL	J B	12	27	MRL	mg/Kg	
	SILVER	J	0.023	0.74	MRL	mg/Kg	
	THALLIUM	J B	0.25	0.43	MRL	mg/Kg	
	VANADIUM	J B	36	58	MRL	mg/Kg	
	ZINC	J B	43	100	MRL	mg/Kg	
SL-520-SA6-SB-0.0-0.5	ANTIMONY	J B	0.029	8.6	MRL	mg/Kg	
	ARSENIC	J	4.2	15	MRL	mg/Kg	
	BARIUM	J B	81	140	MRL	mg/Kg	
	BERYLLIUM	J	0.56	1.1	MRL	mg/Kg	
	CADMIUM	J	0.28	0.99	MRL	mg/Kg	
	CHROMIUM	J B	16	36	MRL	mg/Kg	
	COBALT	J B	6.1	21	MRL	mg/Kg	
	COPPER	J B	8.7	29	MRL	mg/Kg	J (all detects)
	LEAD	J B	24	34	MRL	mg/Kg	
	MOLYBDENUM	J	0.56	5.2	MRL	mg/Kg	
	NICKEL	J B	10	29	MRL	mg/Kg	
	SILVER	J	0.12	0.78	MRL	mg/Kg	
	THALLIUM	J B	0.20	0.45	MRL	mg/Kg	
	VANADIUM	J B	31	61	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-550-SA6-SB-0.0-0.5	ANTIMONY	J B	0.025	8.6	MRL	mg/Kg	
	ARSENIC	J	7.1	15	MRL	mg/Kg	
	BARIUM	J B	76	140	MRL	mg/Kg	
	BERYLLIUM	J	0.60	1.1	MRL	mg/Kg	
	CADMIUM	J	0.15	0.99	MRL	mg/Kg	
	CHROMIUM	J B	22	36	MRL	mg/Kg	
	COBALT	J B	6.0	21	MRL	mg/Kg	
	COPPER	J B	9.5	29	MRL	mg/Kg	J (all detects)
	LEAD	J B	9.6	34	MRL	mg/Kg	
	MOLYBDENUM	J	0.41	5.3	MRL	mg/Kg	
	NICKEL	J B	17	29	MRL	mg/Kg	
	SELENIUM	J	0.18	0.65	MRL	mg/Kg	
	SILVER	J	0.065	0.78	MRL	mg/Kg	
	THALLIUM	J B	0.25	0.46	MRL	mg/Kg	
	VANADIUM	J B	36	61	MRL	mg/Kg	
	ZINC	J B	57	110	MRL	mg/Kg	
SL-633-SA6-SB-0.0-0.5	ANTIMONY	J B	0.013	8.4	MRL	mg/Kg	
	ARSENIC	J	3.6	14	MRL	mg/Kg	
	BARIUM	J B	55	130	MRL	mg/Kg	
	BERYLLIUM	J	0.33	1.1	MRL	mg/Kg	
	CADMIUM	J	0.33	0.96	MRL	mg/Kg	
	CHROMIUM	J B	12	35	MRL	mg/Kg	
	COBALT	J B	3.4	20	MRL	mg/Kg	
	COPPER	J B	7.2	28	MRL	mg/Kg	J (all detects)
	LEAD	J B	9.0	33	MRL	mg/Kg	
	MOLYBDENUM	J	0.40	5.1	MRL	mg/Kg	
	NICKEL	J B	7.8	28	MRL	mg/Kg	
	THALLIUM	J B	0.15	0.44	MRL	mg/Kg	
	VANADIUM	J B	18	60	MRL	mg/Kg	
	ZINC	J B	58	110	MRL	mg/Kg	
SL-633-SA6-SB-2.5-3.5	ANTIMONY	J B	0.014	7.5	MRL	mg/Kg	
	ARSENIC	J	3.7	13	MRL	mg/Kg	
	BARIUM	J B	47	120	MRL	mg/Kg	
	BERYLLIUM	J	0.36	0.95	MRL	mg/Kg	
	CADMIUM	J	0.39	0.86	MRL	mg/Kg	
	CHROMIUM	J B	12	32	MRL	mg/Kg	
	COBALT	J B	4.9	18	MRL	mg/Kg	
	COPPER	J B	8.3	25	MRL	mg/Kg	J (all detects)
	LEAD	J B	9.0	29	MRL	mg/Kg	
	MOLYBDENUM	J	0.43	4.6	MRL	mg/Kg	
	NICKEL	J B	8.6	25	MRL	mg/Kg	
	SELENIUM	J	0.15	0.57	MRL	mg/Kg	
	THALLIUM	J B	0.14	0.40	MRL	mg/Kg	
	VANADIUM	J B	19	54	MRL	mg/Kg	
	ZINC	J B	64	95	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-634-SA6-SB-0.0-0.5	ANTIMONY	J B	0.019	9.5	MRL	mg/Kg	
	ARSENIC	J	3.3	16	MRL	mg/Kg	
	BARIUM	J B	50	150	MRL	mg/Kg	
	BERYLLIUM	J	0.29	1.2	MRL	mg/Kg	
	CADMIUM	J	0.33	1.1	MRL	mg/Kg	
	CHROMIUM	J B	11	40	MRL	mg/Kg	
	COBALT	J B	3.5	23	MRL	mg/Kg	
	COPPER	J B	8.4	32	MRL	mg/Kg	J (all detects)
	LEAD	J B	9.5	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.33	5.8	MRL	mg/Kg	
	NICKEL	J B	7.7	32	MRL	mg/Kg	
	SELENIUM	J	0.15	0.72	MRL	mg/Kg	
	THALLIUM	J B	0.15	0.50	MRL	mg/Kg	
	VANADIUM	J B	18	68	MRL	mg/Kg	
	ZINC	J B	57	120	MRL	mg/Kg	
SL-634-SA6-SB-2.0-3.0	ANTIMONY	J	0.015	7.8	MRL	mg/Kg	
	ARSENIC	J	3.1	13	MRL	mg/Kg	
	BARIUM	J	69	130	MRL	mg/Kg	
	BERYLLIUM	J	0.41	0.96	MRL	mg/Kg	
	CADMIUM	J	0.37	0.87	MRL	mg/Kg	
	CHROMIUM	J	15	33	MRL	mg/Kg	
	COBALT	J	4.6	19	MRL	mg/Kg	
	COPPER	J	9.3	26	MRL	mg/Kg	J (all detects)
	LEAD	J	8.8	31	MRL	mg/Kg	
	MOLYBDENUM	J	0.47	4.8	MRL	mg/Kg	
	NICKEL	J	12	26	MRL	mg/Kg	
	THALLIUM	J	0.22	0.41	MRL	mg/Kg	
	VANADIUM	J	23	54	MRL	mg/Kg	
	ZINC	J	63	99	MRL	mg/Kg	
SL-635-SA6-SB-0.0-0.5	ANTIMONY	J	0.026	10	MRL	mg/Kg	
	ARSENIC	J	5.9	18	MRL	mg/Kg	
	BARIUM	J	100	160	MRL	mg/Kg	
	BERYLLIUM	J	0.62	1.2	MRL	mg/Kg	
	CADMIUM	J	0.43	1.1	MRL	mg/Kg	
	CHROMIUM	J	20	43	MRL	mg/Kg	
	COBALT	J	6.3	25	MRL	mg/Kg	
	COPPER	J	17	34	MRL	mg/Kg	J (all detects)
	LEAD	J	15	40	MRL	mg/Kg	
	MOLYBDENUM	J	0.52	6.2	MRL	mg/Kg	
	NICKEL	J	16	34	MRL	mg/Kg	
	THALLIUM	J	0.29	0.54	MRL	mg/Kg	
	VANADIUM	J	31	68	MRL	mg/Kg	
	ZINC	J	79	130	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-636-SA6-SB-0.0-0.5	ANTIMONY	J	0.020	9.3	MRL	mg/Kg	J (all detects)
	ARSENIC	J	6.0	16	MRL	mg/Kg	
	BARIUM	J	98	150	MRL	mg/Kg	
	BERYLLIUM	J	0.56	1.3	MRL	mg/Kg	
	CADMIUM	J	0.35	1.2	MRL	mg/Kg	
	CHROMIUM	J	20	39	MRL	mg/Kg	
	COBALT	J	5.6	22	MRL	mg/Kg	
	COPPER	J	9.7	31	MRL	mg/Kg	
	LEAD	J	15	36	MRL	mg/Kg	
	MOLYBDENUM	J	0.59	5.6	MRL	mg/Kg	
	NICKEL	J	14	31	MRL	mg/Kg	
	THALLIUM	J	0.27	0.49	MRL	mg/Kg	
	VANADIUM	J	33	73	MRL	mg/Kg	
	ZINC	J	65	120	MRL	mg/Kg	
SL-636-SA6-SB-2.5-3.5	ANTIMONY	J B	0.014	7.8	MRL	mg/Kg	J (all detects)
	ARSENIC	J	6.4	14	MRL	mg/Kg	
	BARIUM	J B	92	130	MRL	mg/Kg	
	BERYLLIUM	J	0.62	0.99	MRL	mg/Kg	
	CADMIUM	J	0.19	0.90	MRL	mg/Kg	
	CHROMIUM	J B	20	33	MRL	mg/Kg	
	COBALT	J B	6.1	19	MRL	mg/Kg	
	COPPER	J B	8.6	26	MRL	mg/Kg	
	LEAD	J B	5.2	31	MRL	mg/Kg	
	MOLYBDENUM	J	0.42	4.8	MRL	mg/Kg	
	NICKEL	J B	14	26	MRL	mg/Kg	
	SELENIUM	J	0.22	0.59	MRL	mg/Kg	
	SILVER	J	0.17	0.71	MRL	mg/Kg	
	THALLIUM	J B	0.21	0.41	MRL	mg/Kg	
	VANADIUM	J B	33	56	MRL	mg/Kg	
	ZINC	J B	52	99	MRL	mg/Kg	

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-4.0-5.0	MERCURY	J	0.0070	0.024	MRL	mg/Kg	J (all detects)
SL-550-SA6-SB-0.0-0.5	MERCURY	J	0.014	0.022	MRL	mg/Kg	J (all detects)
SL-633-SA6-SB-2.5-3.5	MERCURY	J	0.019	0.025	MRL	mg/Kg	J (all detects)
SL-634-SA6-SB-2.0-3.0	MERCURY	J	0.020	0.023	MRL	mg/Kg	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-14.0-15.0	EFH(C21-C30)	J	1.2	5.5	MRL	mg/Kg	J (all detects)
	EFH(C30-C40)	J	7.5	11	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-21.0-22.0	TOTAL EFH(C8-C40)	J B	0.99	4.3	MRL	mg/Kg	J (all detects)
SL-519-SA6-SB-4.0-5.0	EFH(C21-C30) EFH(C30-C40)	J J	1.4 6.4	5.2 10	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-519-SA6-SB-9.0-10.0	EFH(C30-C40) TOTAL EFH(C8-C40)	J J B	1.1 1.9	10 4.2	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-520-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.8	5.3	MRL	mg/Kg	J (all detects)
SL-550-SA6-SB-0.0-0.5	EFH(C15-C20) EFH(C21-C30)	J J	1.7 4.5	5.5 5.5	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-633-SA6-SB-0.0-0.5	EFH(C15-C20)	J	2.5	5.3	MRL	mg/Kg	J (all detects)
SL-633-SA6-SB-2.5-3.5	EFH(C15-C20)	J	2.8	5.0	MRL	mg/Kg	J (all detects)
SL-634-SA6-SB-0.0-0.5	EFH(C15-C20)	J	1.1	5.4	MRL	mg/Kg	J (all detects)
SL-634-SA6-SB-2.0-3.0	EFH(C12-C14) EFH(C15-C20)	J J	1.4 4.5	5.0 5.0	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-635-SA6-SB-0.0-0.5	EFH(C15-C20)	J	5.1	5.9	MRL	mg/Kg	J (all detects)
SL-636-SA6-SB-0.0-0.5	EFH(C15-C20)	J	3.0	5.9	MRL	mg/Kg	J (all detects)
SL-636-SA6-SB-2.5-3.5	EFH(C21-C30) EFH(C30-C40)	J J	2.4 6.0	5.1 10	MRL MRL	mg/Kg mg/Kg	J (all detects)

Method: 8015B GRO

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-14.5	GASOLINE RANGE ORGANICS (C4-C12)	J	0.50	1.1	MRL	mg/Kg	J (all detects)
SL-519-SA6-SB-4.5	GASOLINE RANGE ORGANICS (C4-C12)	J	0.39	0.92	MRL	mg/Kg	J (all detects)

Method: 8081B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-634-SA6-SB-2.0-3.0	DELTA-BHC	J p	0.62	1.7	MRL	ug/Kg	J (all detects)

Method: 8082A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-0.0-0.5	Aroclor 5460	J	31	52	MRL	ug/Kg	J (all detects)
SL-520-SA6-SB-0.0-0.5	Aroclor 5460	J	38	53	MRL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.29	10	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	0.49	10	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	6.0	10	MRL	ug/Kg	
	BENZO(A)PYRENE	J	7.0	10	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	8.1	10	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	3.8	10	MRL	ug/Kg	J (all detects)
	CHRYSENE	J	6.7	10	MRL	ug/Kg	
	FLUORANTHENE	J	7.3	10	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	5.3	10	MRL	ug/Kg	
	NAPHTHALENE	J	0.35	10	MRL	ug/Kg	
	PHENANTHRENE	J	1.4	10	MRL	ug/Kg	
	PYRENE	J	7.8	10	MRL	ug/Kg	
SL-550-SA6-SB-0.0-0.5	2-METHYLNAPHTHALENE	J B	0.48	11	MRL	ug/Kg	
	FLUORANTHENE	J	1.2	11	MRL	ug/Kg	J (all detects)
	NAPHTHALENE	J	0.64	11	MRL	ug/Kg	
SL-633-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.34	10	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	0.99	10	MRL	ug/Kg	
	ACENAPHTHYLENE	J	0.39	10	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.3	10	MRL	ug/Kg	
	BENZO(A)PYRENE	J	1.8	10	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	4.1	10	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	5.4	10	MRL	ug/Kg	J (all detects)
	CHRYSENE	J	2.5	10	MRL	ug/Kg	
	FLUORANTHENE	J	2.9	10	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.1	10	MRL	ug/Kg	
	NAPHTHALENE	J	0.91	10	MRL	ug/Kg	
	PHENANTHRENE	J	1.7	10	MRL	ug/Kg	
	PYRENE	J	4.1	10	MRL	ug/Kg	
SL-633-SA6-SB-2.5-3.5	1-METHYLNAPHTHALENE	J	1.0	10	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	3.0	10	MRL	ug/Kg	
	ACENAPHTHYLENE	J	0.87	10	MRL	ug/Kg	
	ANTHRACENE	J	1.4	10	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	5.5	10	MRL	ug/Kg	
	BENZO(A)PYRENE	J	5.4	10	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	9.6	10	MRL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	3.1	10	MRL	ug/Kg	
	CHRYSENE	J	8.7	10	MRL	ug/Kg	
	FLUORENE	J	0.55	10	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	6.3	10	MRL	ug/Kg	
	NAPHTHALENE	J	1.8	10	MRL	ug/Kg	
	PHENANTHRENE	J	4.1	10	MRL	ug/Kg	
SL-634-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.33	11	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	0.77	11	MRL	ug/Kg	
	ACENAPHTHYLENE	J	0.23	11	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.0	11	MRL	ug/Kg	
	BENZO(A)PYRENE	J	1.3	11	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	3.0	11	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	3.6	11	MRL	ug/Kg	J (all detects)
	CHRYSENE	J	2.2	11	MRL	ug/Kg	
	FLUORANTHENE	J	2.3	11	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	2.1	11	MRL	ug/Kg	
	NAPHTHALENE	J	0.67	11	MRL	ug/Kg	
	PHENANTHRENE	J	1.5	11	MRL	ug/Kg	
	PYRENE	J	3.3	11	MRL	ug/Kg	

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-1 **Laboratory: TA DEN**

EDD Filename: 280-36640-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-634-SA6-SB-2.0-3.0	1-METHYLNAPHTHALENE	J	1.6	9.7	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	4.5	9.7	MRL	ug/Kg	
	ACENAPHTHENE	J	0.41	9.7	MRL	ug/Kg	
	ACENAPHTHYLENE	J	2.4	9.7	MRL	ug/Kg	
	ANTHRACENE	J	3.9	9.7	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	8.0	9.7	MRL	ug/Kg	J (all detects)
	BENZO(A)PYRENE	J	9.2	9.7	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	4.5	9.7	MRL	ug/Kg	
	FLUORENE	J	1.3	9.7	MRL	ug/Kg	
	NAPHTHALENE	J	3.2	9.7	MRL	ug/Kg	
	PHENANTHRENE	J	8.7	9.7	MRL	ug/Kg	
SL-635-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	2.0	12	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	3.2	12	MRL	ug/Kg	
	ACENAPHTHYLENE	J	2.4	12	MRL	ug/Kg	
	ANTHRACENE	J	2.9	12	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	3.9	12	MRL	ug/Kg	
	BENZO(A)PYRENE	J	4.0	12	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	9.2	12	MRL	ug/Kg	J (all detects)
	BENZO(G,H,I)PERYLENE	J	5.1	12	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	2.6	12	MRL	ug/Kg	
	CHRYSENE	J	11	12	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	4.1	12	MRL	ug/Kg	
	NAPHTHALENE	J	5.6	12	MRL	ug/Kg	
	PHENANTHRENE	J	9.1	12	MRL	ug/Kg	
SL-636-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.70	11	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J B	1.2	11	MRL	ug/Kg	
	ANTHRACENE	J	1.0	11	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	3.1	11	MRL	ug/Kg	
	BENZO(A)PYRENE	J	2.4	11	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	4.8	11	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	3.2	11	MRL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	2.3	11	MRL	ug/Kg	
	CHRYSENE	J	6.2	11	MRL	ug/Kg	
	FLUORANTHENE	J	6.7	11	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	2.7	11	MRL	ug/Kg	
	NAPHTHALENE	J	2.4	11	MRL	ug/Kg	
	PHENANTHRENE	J	5.5	11	MRL	ug/Kg	
	PYRENE	J	6.5	11	MRL	ug/Kg	

LDC #: 29423I4
SDG #: 280-36640-1
Laboratory: Test America, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/3/13
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates: 12/5/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	16/17 (Al, Fe, Mn, Ti, Zn; Sb PS=101% (J/UJ)) 18/19: (Sb PS=1[illegible] (J/[illegible]
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	
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	3 EB=15, 2 EB1-120612 ~~EB1-120712~~ c, ~~EB2-120612~~ SW (280-36711-1) FB= FB-111[illegible] (280-35930-[illegible]

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

1 EB2-120612 (280-36711-1)
~~EB2-120712~~ c

Validated Samples:

1	SL-519-SA6-SB-0.0-0.5 1	11	SL-634-SA6-SB-2.0-3.0 3	21		31	
2	SL-519-SA6-SB-4.0-4.5 2	12	SL-635-SA6-SB-0.0-0.5 3	22		32	
3	SL-519-SA6-SB-9.0-10.0 2	13	SL-636-SA6-SB-0.0-0.5 3	23		33	
4	SL-519-SA6-SB-14.0-15.0 2	14	SL-636-SA6-SB-2.5-3.5 3	24		34	
5	SL-519-SA6-SB-21.0-22.0 2	15	EB-120512 W	25		35	
6	SL-550-SA6-SB-0.0-0.5 3	16	SL-519-SA6-SB-0.0-0.5MS	26		36	
7	SL-633-SA6-SB-0.0-0.5 3	17	SL-519-SA6-SB-0.0-0.5MSD	27		37	
8	SL-633-SA6-SB-2.5-3.5 3	18	SL-634-SA6-SB-2.0-3.0MS 6020	28		38	
9	SL-520-SA6-SB-0.0-0.5 1	19	SL-634-SA6-SB-2.0-3.0MSD	29		39	
10	SL-634-SA6-SB-0.0-0.5 3	20		30		40	

Notes:

LDC #: 29423I4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B
Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 1-3

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	3								
Tl			0.525	0.2625	0.25								

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 4-10, 14

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	5	7	8	9	10	14			
Tl			0.479	0.2395	0.18	0.15	0.14	0.20	0.15	0.21			

Sample Concentration units, unless otherwise noted: ~~ug/L~~ mg/L Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/l)	Maximum ICB/CCB[a] (ug/l)	Action Level	15								
~~Be~~			~~0.0990~~	~~0.000495~~ CR									
Tl			0.463	0.0023									
Na			103	0.515	0.27								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29423I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

METHOD: Trace Metals (EPA SW846 6010C/6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/6/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 2-5

Analyte	Blank ID	Sample Identification										
	EB1-120612	Action Limit	2									
B	0.0044	2.2	1.0									
Mn	0.00038	0.19										
Na	0.19	95										

Sampling date: 12/7/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1, 9

Analyte	Blank ID	Sample Identification										
	EB2-120712	Action Limit	No Qualifiers									
Na	0.15	75										

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 #: 29423I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: V

METHOD: Trace Metals (EPA SW846 6010C/6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/5/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 6-8, 10-14

Analyte	Blank ID	Sample Identification										
	EB-120512	Action Limit	6	7	8	10	11	12	13	14		
B	0.0059	2.95		1.1	1.1	1.5	1.3		1.8	1.2		
Mg	0.012	6										
Mn	0.00051	0.255										
Na	0.27	135	86	100	100	110	130	130	99	120		

LDC #: 29423I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010C/6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412	Action Limit	1	2	3	4	5	6	7	8	9	10
B	0.024	12	1.2	1.0					1.1	1.1	0.93	1.5
Na	0.17	85										
Ag	0.00078	0.39	0.035	0.030	0.023	0.029	0.032	0.065			0.12	

Sampling date: mg/L Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412	Action Limit	11	12	13	14						
B	0.024	12	1.3	3.7	1.8	1.2						
Na	0.17	85										
Ag	0.00078	0.39				0.17						

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

280-36640-2

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
05-Dec-2012	SL-519-SA6-SB-0.0-0.5	280-36640-3	N	1613	1613B	III
05-Dec-2012	SL-519-SA6-SB-4.0-5.0	280-36640-5	N	1613	1613B	III
05-Dec-2012	SL-550-SA6-SB-0.0-0.5	280-36640-17	N	1613	1613B	III
05-Dec-2012	SL-519-SA6-SB-9.0-10.0	280-36640-8	N	1613	1613B	III
05-Dec-2012	SL-519-SA6-SB-14.0-15.0	280-36640-11	N	1613	1613B	III
05-Dec-2012	SL-519-SA6-SB-21.0-22.0	280-36640-14	N	1613	1613B	III
05-Dec-2012	SL-633-SA6-SB-0.0-0.5	280-36640-19	N	1613	1613B	III
05-Dec-2012	SL-633-SA6-SB-2.5-3.5	280-36640-21	N	1613	1613B	III
05-Dec-2012	SL-636-SA6-SB-0.0-0.5	280-36640-33	N	1613	1613B	III
05-Dec-2012	SL-520-SA6-SB-0.0-0.5	280-36640-24	N	1613	1613B	III
05-Dec-2012	SL-636-SA6-SB-2.5-3.5	280-36640-35	N	1613	1613B	III
05-Dec-2012	SL-634-SA6-SB-0.0-0.5	280-36640-26	N	1613	1613B	III
05-Dec-2012	SL-634-SA6-SB-2.0-3.0	280-36640-28	N	1613	1613B	III
05-Dec-2012	EB-120512	280-36640-37	EB	1613	1613B	III
05-Dec-2012	SL-635-SA6-SB-0.0-0.5	280-36640-31	N	1613	1613B	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: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-120512 *Collected:* 12/5/2012 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	0.99	Q B J	0.35	MDL	47	MRL	pg/L	U	B
1,2,3,4,6,7,8-HPCDF	0.33	Q B J	0.27	MDL	47	MRL	pg/L	U	B
1,2,3,7,8,9-HXCDF	0.33	Q B J	0.25	MDL	47	MRL	pg/L	U	B
OCDD	3.3	Q B J	0.46	MDL	95	MRL	pg/L	U	B
OCDF	1.6	B J	0.41	MDL	95	MRL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-519-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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
1,2,3,4,7,8,9-HPCDF	1.8	Q J	0.33	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.28	Q J	0.30	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.5	Q J	0.17	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.9	Q J	0.31	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.23	Q J	0.16	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.82	C J	0.28	MDL	5.3	MRL	ng/kg	J	Z

Sample ID: SL-519-SA6-SB-14.0-15.0 *Collected:* 12/5/2012 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	0.32	Q J	0.20	MDL	5.5	MRL	ng/kg	J	Z
OCDD	3.1	B J	0.21	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-519-SA6-SB-21.0-22.0 *Collected:* 12/5/2012 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
OCDD	3.5	B J	0.20	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-519-SA6-SB-4.0-5.0 *Collected:* 12/5/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.7	J	0.25	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.41	Q J	0.16	MDL	5.2	MRL	ng/kg	J	Z
OCDF	0.88	J	0.23	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-519-SA6-SB-9.0-10.0 *Collected:* 12/5/2012 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
OCDD	4.6	B J	0.23	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-520-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.3	J	0.31	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.36	J	0.16	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.84	Q J	0.10	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.4	Q J	0.19	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.51	Q J	0.10	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.91	Q J	0.16	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.25	Q J	0.18	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.16	Q J	0.11	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.27	Q J	0.13	MDL	5.4	MRL	ng/kg	J	Z

Sample ID: SL-550-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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
1,2,3,4,6,7,8-HPCDD	4.9	J	0.16	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.85	Q J	0.12	MDL	5.5	MRL	ng/kg	J	Z
OCDF	3.4	J	0.15	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-633-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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	0.75	J	0.15	MDL	5.2	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-633-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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-HxCDD	0.32	Q J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.71	C J	0.063	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.3	J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.54	J	0.060	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.84	C J	0.10	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.17	Q J	0.13	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.13	Q J	0.11	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	Q J	0.066	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.28	J	0.095	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.39	J	0.20	MDL	1.0	MRL	ng/kg	J	Z
OCDF	8.5	J	0.15	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-633-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 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	0.98	Q J	0.14	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.59	Q J	0.093	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.92	C J	0.057	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.1	J	0.099	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.48	Q J	0.056	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.2	C J	0.089	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.17	J	0.089	MDL	5.1	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.27	J	0.061	MDL	5.1	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.28	J	0.076	MDL	5.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.44	Q J	0.18	MDL	1.0	MRL	ng/kg	J	Z

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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	1.5	J	0.13	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.80	J	0.12	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.4	C J	0.070	MDL	5.5	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-634-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 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
1,2,3,6,7,8-HXCDD	2.9	J	0.13	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.93	Q J	0.065	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.6	C J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.33	Q J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.12	Q J	0.089	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.37	J	0.075	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.37	Q J	0.081	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.60	Q J	0.17	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-634-SA6-SB-2.0-3.0 *Collected:* 12/5/2012 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	0.83	Q J	0.12	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.49	J	0.099	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.95	C J	0.059	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.1	J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.71	Q J	0.061	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.1	Q J	0.096	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.31	Q J	0.12	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.16	Q J	0.095	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.30	J	0.058	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.33	J	0.088	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.43	J	0.18	MDL	1.0	MRL	ng/kg	J	Z

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.6	J	0.33	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.1	J	0.28	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.8	J C	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	4.1	J	0.29	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.3	Q J	0.12	MDL	5.9	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-635-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDD	2.5	Q J	0.27	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.68	Q J	0.30	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.27	Q J	0.17	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.53	J	0.14	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.49	J	0.18	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.54	J	0.28	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: SL-636-SA6-SB-0.0-0.5 *Collected:* 12/5/2012 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.86	J	0.33	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.81	J	0.18	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.2	Q J	0.34	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.87	Q J	0.18	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.77	J	0.31	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.61	Q J	0.37	MDL	6.0	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.38	Q J	0.19	MDL	6.0	MRL	ng/kg	J	Z

Sample ID: SL-636-SA6-SB-2.5-3.5 *Collected:* 12/5/2012 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.3	Q J	0.29	MDL	5.2	MRL	ng/kg	J	Z
OCDF	1.8	Q J	0.72	MDL	10	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36640-2/
H2L080401

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L190000018B	12/26/2012 12:41:00 PM	1,2,3,4,6,7,8-HPCDD	1.5 pg/L	EB-120512
		1,2,3,4,6,7,8-HPCDF	1.1 pg/L	
		1,2,3,4,7,8,9-HPCDF	2.1 pg/L	
		1,2,3,4,7,8-HxCDD	0.72 pg/L	
		1,2,3,4,7,8-HXCDF	0.84 pg/L	
		1,2,3,6,7,8-HXCDD	0.85 pg/L	
		1,2,3,7,8,9-HXCDD	0.96 pg/L	
		1,2,3,7,8,9-HXCDF	1.0 pg/L	
		1,2,3,7,8-PECDD	0.91 pg/L	
		2,3,4,6,7,8-HXCDF	0.80 pg/L	
		2,3,4,7,8-PECDF	1.1 pg/L	
		OCDD	11 pg/L	
		OCDF	2.7 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-120512(RES)	1,2,3,4,6,7,8-HPCDD	0.99 pg/L	0.99U pg/L
EB-120512(RES)	1,2,3,4,6,7,8-HPCDF	0.33 pg/L	0.33U pg/L
EB-120512(RES)	1,2,3,7,8,9-HXCDF	0.33 pg/L	0.33U pg/L
EB-120512(RES)	OCDD	3.3 pg/L	3.3U pg/L
EB-120512(RES)	OCDF	1.6 pg/L	1.6U pg/L

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L100000027B	12/21/2012 12:59:00 AM	OCDD	0.47 ng/kg	SL-519-SA6-SB-0.0-0.5
				SL-519-SA6-SB-14.0-15.0
				SL-519-SA6-SB-21.0-22.0
				SL-519-SA6-SB-4.0-5.0
				SL-519-SA6-SB-9.0-10.0
				SL-520-SA6-SB-0.0-0.5
				SL-550-SA6-SB-0.0-0.5
				SL-633-SA6-SB-0.0-0.5
				SL-633-SA6-SB-2.5-3.5
				SL-634-SA6-SB-0.0-0.5
				SL-634-SA6-SB-2.0-3.0
				SL-635-SA6-SB-0.0-0.5
				SL-636-SA6-SB-0.0-0.5
				SL-636-SA6-SB-2.5-3.5

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-120512	1,2,3,4,6,7,8-HPCDD	Q B J	0.99	47	MRL	pg/L	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.33	47	MRL	pg/L	
	1,2,3,7,8,9-HXCDF	Q B J	0.33	47	MRL	pg/L	
	OCDD	Q B J	3.3	95	MRL	pg/L	
	OCDF	B J	1.6	95	MRL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-519-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q J	1.8	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	Q J	0.28	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	1.5	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	2.9	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.23	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	0.82	5.3	MRL	ng/kg	
SL-519-SA6-SB-14.0-15.0	1,2,3,4,6,7,8-HPCDD	Q J	0.32	5.5	MRL	ng/kg	J (all detects)
	OCDD	B J	3.1	11	MRL	ng/kg	
SL-519-SA6-SB-21.0-22.0	OCDD	B J	3.5	11	MRL	ng/kg	J (all detects)
SL-519-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	J	2.7	5.2	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q J	0.41	5.2	MRL	ng/kg	
	OCDF	J	0.88	10	MRL	ng/kg	
SL-519-SA6-SB-9.0-10.0	OCDD	B J	4.6	11	MRL	ng/kg	J (all detects)
SL-520-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	1.3	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.36	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.84	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	1.4	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.51	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.91	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.25	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.16	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.27	5.4	MRL	ng/kg	
SL-550-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	4.9	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q J	0.85	5.5	MRL	ng/kg	
	OCDF	J	3.4	11	MRL	ng/kg	
SL-633-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	0.75	5.2	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	Q J	0.32	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	0.71	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.3	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.54	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	0.84	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.17	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.13	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.23	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.28	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.39	1.0	MRL	ng/kg	
	OCDF	J	8.5	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36640-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36640-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-633-SA6-SB-2.5-3.5	1,2,3,4,7,8,9-HPCDF	Q J	0.98	5.1	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.59	5.1	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	0.92	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.1	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.48	5.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	C J	1.2	5.1	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.17	5.1	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.27	5.1	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.28	5.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.44	1.0	MRL	ng/kg	
SL-634-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	1.5	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.80	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	1.4	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.9	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.93	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	1.6	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.33	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.12	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.37	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.37	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.60	1.1	MRL	ng/kg	
SL-634-SA6-SB-2.0-3.0	1,2,3,4,7,8,9-HPCDF	Q J	0.83	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.49	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	0.95	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.1	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.71	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	1.1	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.31	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.16	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.30	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.33	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.43	1.0	MRL	ng/kg	
SL-635-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	1.6	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	1.1	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J C	1.8	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	4.1	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.3	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	2.5	5.9	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.68	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.27	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.53	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.49	5.9	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.54	1.2	MRL	ng/kg	
SL-636-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	J	0.86	6.0	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.81	6.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	1.2	6.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.87	6.0	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	0.77	6.0	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.61	6.0	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.38	6.0	MRL	ng/kg	
SL-636-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	Q J	2.3	5.2	MRL	ng/kg	J (all detects)
	OCDF	Q J	1.8	10	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-36711-1

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Dec-2012	EB1-120612	280-36711-20	EB	3010A	6010C	III
06-Dec-2012	EB1-120612	280-36711-20	EB	3020A	6020A	III
06-Dec-2012	EB1-120612	280-36711-20	EB	3510C	8015B EFH	III
06-Dec-2012	EB1-120612	280-36711-20	EB	3510C	8082A	III
06-Dec-2012	EB1-120612	280-36711-20	EB	3510C	8270C SIM	III
06-Dec-2012	EB1-120612	280-36711-20	EB	7470A	7470A	III
06-Dec-2012	EB1-120612	280-36711-20	EB	8315_W_Prep	8315A	III
06-Dec-2012	EB1-120612	280-36711-20	EB	METHOD	7199	III
06-Dec-2012	EB1-120612	280-36711-20	EB	METHOD	8015B GRO	III
06-Dec-2012	EB1-120612MS	280-36711-20MS	MS	7470A	7470A	III
06-Dec-2012	EB1-120612MSD	280-36711-20MSD	MSD	7470A	7470A	III
06-Dec-2012	EB2-120612	280-36711-21	EB	3010A	6010C	III
06-Dec-2012	EB2-120612	280-36711-21	EB	3020A	6020A	III
06-Dec-2012	EB2-120612	280-36711-21	EB	3510C	8015B EFH	III
06-Dec-2012	EB2-120612	280-36711-21	EB	3510C	8082A	III
06-Dec-2012	EB2-120612	280-36711-21	EB	3510C	8270C SIM	III
06-Dec-2012	EB2-120612	280-36711-21	EB	7470A	7470A	III
06-Dec-2012	EB2-120612	280-36711-21	EB	8315_W_Prep	8315A	III
06-Dec-2012	EB2-120612	280-36711-21	EB	METHOD	7199	III
06-Dec-2012	EB2-120612MS	280-36711-21MS	MS	3510C	8082A	III
06-Dec-2012	EB2-120612MSD	280-36711-21MSD	MSD	3510C	8082A	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: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: AQ**

Sample ID: EB1-120612 *Collected:* 12/6/2012 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
BORON	0.0044	J	0.0044	MDL	0.10	MRL	mg/L	J	Z
MANGANESE	0.00038	J	0.00025	MDL	0.010	MRL	mg/L	J	Z
SODIUM	0.19	J	0.092	MDL	1.0	MRL	mg/L	U	B

Sample ID: EB2-120612 *Collected:* 12/6/2012 3:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	0.15	J	0.092	MDL	1.0	MRL	mg/L	U	B

Method Category: SVOA

Method: 8015B EFH **Matrix: AQ**

Sample ID: EB1-120612 *Collected:* 12/6/2012 3:00:00 *Analysis Type:* RE2 *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL EFH(C8-C40)	0.11	J	0.10	MDL	0.26	MRL	mg/L	J	Z

Method Category: SVOA

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

Sample ID: EB1-120612 *Collected:* 12/6/2012 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-METHYLNAPHTHALENE	0.012	J	0.0061	MDL	0.11	MRL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.015	J B	0.0055	MDL	0.11	MRL	ug/L	U	B
ACENAPHTHENE	0.018	J	0.012	MDL	0.11	MRL	ug/L	J	Z
FLUORENE	0.027	J	0.020	MDL	0.11	MRL	ug/L	J	Z
NAPHTHALENE	0.071	J B	0.0057	MDL	0.11	MRL	ug/L	J	Z
PHENANTHRENE	0.028	J B	0.010	MDL	0.11	MRL	ug/L	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **EB2-120612** ***Collected:*** **12/6/2012 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-METHYLNAPHTHALENE	0.011	J	0.0061	MDL	0.11	MRL	ug/L	J	Z
2-METHYLNAPHTHALENE	0.013	J B	0.0056	MDL	0.11	MRL	ug/L	U	B
ACENAPHTHENE	0.017	J	0.012	MDL	0.11	MRL	ug/L	J	Z
BENZO(G,H,I)PERYLENE	0.0042	J B	0.0038	MDL	0.11	MRL	ug/L	U	B
CHRYSENE	0.0038	J B	0.0035	MDL	0.11	MRL	ug/L	U	B
FLUORENE	0.022	J	0.020	MDL	0.11	MRL	ug/L	J	Z
NAPHTHALENE	0.061	J B	0.0058	MDL	0.11	MRL	ug/L	J	Z
PHENANTHRENE	0.023	J B	0.011	MDL	0.11	MRL	ug/L	U	B

Method Category: **SVOA**

Method: **BaP EQUIVALENCE** ***Matrix:*** **AQ**

Sample ID: **EB2-120612** ***Collected:*** **12/6/2012 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*
BAP EQUIVALENCE	0.0000038	J	0.0000032	MDL	0.00010	MRL	ug/L	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Matrix Spike Precision
Q	Matrix Spike Precision
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36711-1

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**
Matrix: **AQ**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151250/1-A	12/11/2012 7:37:00 PM	THALLIUM	0.000287 mg/L	EB1-120612 EB2-120612

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151495/1-A	12/13/2012 5:59:00 PM	2-METHYLNAPHTHALENE	0.00843 ug/L	EB1-120612 EB2-120612
		BENZO(A)ANTHRACENE	0.0353 ug/L	
		BENZO(A)PYRENE	0.0209 ug/L	
		BENZO(B)FLUORANTHENE	0.0398 ug/L	
		BENZO(G,H,I)PERYLENE	0.0388 ug/L	
		BENZO(K)FLUORANTHENE	0.0387 ug/L	
		CHRYSENE	0.0407 ug/L	
		DIBENZO(A,H)ANTHRACENE	0.0346 ug/L	
		FLUORANTHENE	0.0273 ug/L	
		INDENO(1,2,3-CD)PYRENE	0.0389 ug/L	
		NAPHTHALENE	0.00571 ug/L	
		PHENANTHRENE	0.0177 ug/L	
		PYRENE	0.0282 ug/L	

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-120612(RES)	2-METHYLNAPHTHALENE	0.015 ug/L	0.11U ug/L
EB1-120612(RES)	PHENANTHRENE	0.028 ug/L	0.11U ug/L
EB2-120612(RES)	2-METHYLNAPHTHALENE	0.013 ug/L	0.11U ug/L
EB2-120612(RES)	BENZO(G,H,I)PERYLENE	0.0042 ug/L	0.11U ug/L
EB2-120612(RES)	CHRYSENE	0.0038 ug/L	0.11U ug/L
EB2-120612(RES)	PHENANTHRENE	0.023 ug/L	0.11U ug/L

Surrogate Outlier Report

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
EB2-120612	Terphenyl-d14	141	45.00-130.00	No Affected Compounds	

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8082A**
Matrix: **AQ**

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
EB2-120612MSD (EB2-120612)	Aroclor 5460	-	-	50.00-150.00	28 (24.00)	Aroclor 5432 Aroclor 5442 Aroclor 5460	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36711-1 **Laboratory: TA DEN**

EDD Filename: 280-36711-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6010C

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-120612	BORON	J	0.0044	0.10	MRL	mg/L	J (all detects)
	MANGANESE	J	0.00038	0.010	MRL	mg/L	
	SODIUM	J	0.19	1.0	MRL	mg/L	
EB2-120612	SODIUM	J	0.15	1.0	MRL	mg/L	J (all detects)

Method: 8015B EFH

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-120612	TOTAL EFH(C8-C40)	J	0.11	0.26	MRL	mg/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-120612	1-METHYLNAPHTHALENE	J	0.012	0.11	MRL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J B	0.015	0.11	MRL	ug/L	
	ACENAPHTHENE	J	0.018	0.11	MRL	ug/L	
	FLUORENE	J	0.027	0.11	MRL	ug/L	
	NAPHTHALENE	J B	0.071	0.11	MRL	ug/L	
	PHENANTHRENE	J B	0.028	0.11	MRL	ug/L	
EB2-120612	1-METHYLNAPHTHALENE	J	0.011	0.11	MRL	ug/L	J (all detects)
	2-METHYLNAPHTHALENE	J B	0.013	0.11	MRL	ug/L	
	ACENAPHTHENE	J	0.017	0.11	MRL	ug/L	
	BENZO(G,H,I)PERYLENE	J B	0.0042	0.11	MRL	ug/L	
	CHRYSENE	J B	0.0038	0.11	MRL	ug/L	
	FLUORENE	J	0.022	0.11	MRL	ug/L	
	NAPHTHALENE	J B	0.061	0.11	MRL	ug/L	
	PHENANTHRENE	J B	0.023	0.11	MRL	ug/L	

Method: BaP EQUIVALENCE

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB2-120612	BAP EQUIVALENCE	J	0.0000038	0.00010	MRL	ug/L	J (all detects)

LDC #: 29423K4
SDG #: 280-36711-1
Laboratory: Test America, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/3/13
Page: 1 of 1
Reviewer: ar
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates:
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS ID
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	~~N~~ A	
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=1,2

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

Validated Samples:

1	EB1-120612	11		21		31	
2	EB2-120612	12		22		32	
3	EB1-120612MS	13		23		33	
4	EB1-120612MSD	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 #: 29423K4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: CR
2nd Reviewer: MC

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: ~~ug/L~~ mg/L Associated Samples: All Water

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Level	1	2							
Tl			0.463	0.0023									
Na			103	0.515	0.19	0.15							

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

SAMPLE DELIVERY GROUP

280-36711-2

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	280-36711-3	N	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	280-36711-4	N	1613	1613B	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	280-36711-1	N	1613	1613B	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	280-36711-1 MS	MS	1613	1613B	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	280-36711-1 MSD	MSD	1613	1613B	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	280-36711-2	FD	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	280-36711-5	N	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	280-36711-6	N	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	280-36711-7	N	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	280-36711-8	N	1613	1613B	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	280-36711-9	N	1613	1613B	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	280-36711-12	N	1613	1613B	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	280-36711-10	N	1613	1613B	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	280-36711-11	N	1613	1613B	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	280-36711-13	N	1613	1613B	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	280-36711-15	N	1613	1613B	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	280-36711-14	N	1613	1613B	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	280-36711-16	N	1613	1613B	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	280-36711-17	N	1613	1613B	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	280-36711-18	N	1613	1613B	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	280-36711-19	N	1613	1613B	III
06-Dec-2012	EB1-120612	280-36711-20	EB	1613	1613B	III
06-Dec-2012	EB2-120612	280-36711-21	EB	1613	1613B	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: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-120612 *Collected:* 12/6/2012 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	0.52	Q B J	0.37	MDL	48	MRL	pg/L	U	B
OCDD	4.0	B J	0.52	MDL	96	MRL	pg/L	U	B

Sample ID: EB2-120612 *Collected:* 12/6/2012 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
OCDD	3.0	B J	0.71	MDL	95	MRL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-1018-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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
1,2,3,4,6,7,8-HPCDF	2.3	Q B J	0.046	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.55	B J	0.078	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.19	B J	0.060	MDL	5.8	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.20	Q B J	0.034	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.59	J	0.062	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.20	Q J	0.031	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.51	C B J	0.057	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.064	Q B J	0.039	MDL	5.8	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDD	0.14	Q J	0.071	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.11	Q B J	0.031	MDL	5.8	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.15	B J	0.048	MDL	5.8	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.23	J	0.068	MDL	1.2	MRL	ng/kg	J	Z, FD
OCDF	4.4	Q B J	0.071	MDL	12	MRL	ng/kg	J	Z

Sample ID: SL-516-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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-HPCDF	1.0	Q B J	0.077	MDL	5.7	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-516-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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	0.067	Q B J	0.094	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.10	B J	0.058	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.067	B J	0.045	MDL	5.7	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.38	Q J	0.061	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.092	Q J	0.044	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.095	Q B J	0.056	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.094	Q J	0.082	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.047	Q B J	0.040	MDL	5.7	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.038	Q J	0.068	MDL	1.1	MRL	ng/kg	J	Z
OCDF	2.5	S B J	0.063	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-516-SA6-SB-3.0-4.0 *Collected:* 12/6/2012 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.13	B J	0.067	MDL	6.2	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.067	Q B J	0.056	MDL	6.2	MRL	ng/kg	U	B
OCDD	0.82	B J	0.092	MDL	12	MRL	ng/kg	U	B
OCDF	0.21	Q B J	0.079	MDL	12	MRL	ng/kg	U	B

Sample ID: SL-520-SA6-SB-14.0-15.0 *Collected:* 12/6/2012 8:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.11	B J	0.030	MDL	5.4	MRL	ng/kg	U	B
OCDD	1.2	B J	0.032	MDL	11	MRL	ng/kg	U	B
OCDF	0.036	Q B J	0.028	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-520-SA6-SB-19.0-20.0 *Collected:* 12/6/2012 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDD	0.62	B J	0.049	MDL	11	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-520-SA6-SB-24.0-25.0 *Collected:* 12/6/2012 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.056	Q B J	0.032	MDL	5.6	MRL	ng/kg	U	B
OCDD	0.53	B J	0.045	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-520-SA6-SB-30.0-31.0 *Collected:* 12/6/2012 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	1.0	B J	0.024	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.17	B J	0.018	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.019	Q B J	0.023	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.016	Q B J	0.015	MDL	5.6	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.089	J	0.023	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.12	Q B J	0.021	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.084	Q J	0.045	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.063	Q J	0.057	MDL	1.1	MRL	ng/kg	J	Z
OCDD	8.7	B J	0.032	MDL	11	MRL	ng/kg	J	Z
OCDF	0.22	B J	0.024	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-520-SA6-SB-4.0-5.0 *Collected:* 12/6/2012 8:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.8	B J	0.037	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.22	B J	0.056	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.072	Q B J	0.032	MDL	5.4	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.32	J	0.046	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.071	J	0.031	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.28	C B J	0.044	MDL	5.4	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.048	J	0.077	MDL	1.1	MRL	ng/kg	J	Z
OCDF	3.5	B J	0.049	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-520-SA6-SB-9.0-10.0 *Collected:* 12/6/2012 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
1,2,3,4,6,7,8-HPCDD	0.13	B J	0.027	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.071	Q B J	0.027	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.036	Q B J	0.039	MDL	5.7	MRL	ng/kg	U	B
OCDD	0.42	B J	0.038	MDL	11	MRL	ng/kg	U	B
OCDF	0.083	Q B J	0.034	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-521-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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	0.40	Q B J	0.040	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.12	Q B J	0.032	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.060	Q J	0.044	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.068	B J	0.040	MDL	5.2	MRL	ng/kg	U	B
OCDD	4.1	B J	0.046	MDL	10	MRL	ng/kg	J	Z
OCDF	0.14	Q B J	0.041	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-521-SA6-SB-4.0-5.0 *Collected:* 12/6/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDD	0.30	Q B J	0.034	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-566-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 12:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.66	B J	0.088	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.40	Q B J	0.051	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.50	B J	0.036	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.2	J	0.053	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.30	J	0.038	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.3	C B J	0.049	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.28	Q J	0.083	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.16	Q J	0.065	MDL	5.5	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-566-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 12:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.23	Q B J	0.033	MDL	5.5	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.30	Q B J	0.058	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.13	Q J	0.11	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.71	Q J	0.087	MDL	1.1	MRL	ng/kg	J	Z
OCDF	4.8	B J	0.056	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-567-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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-HPCDF	7.0	S B	0.10	MDL	5.6	MRL	ng/kg	J	I
1,2,3,4,7,8,9-HPCDF	0.76	Q B J	0.065	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.38	B J	0.037	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.35	C B J	0.023	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.1	J	0.037	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.25	J	0.023	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.1	C B J	0.035	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.068	Q B J	0.024	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.17	Q J	0.054	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.12	J	0.042	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.15	Q B J	0.020	MDL	5.6	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.17	Q B J	0.038	MDL	5.6	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.29	Q J	0.047	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-567-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 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	3.2	B J	0.032	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.95	B J	0.031	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.074	Q B J	0.025	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.053	B J	0.020	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.14	Q J	0.028	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.17	B J	0.025	MDL	5.3	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-567-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 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
2,3,4,7,8-PECDF	0.035	Q B J	0.031	MDL	5.3	MRL	ng/kg	U	B
2,3,7,8-TCDD	0.17	Q J	0.068	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.039	Q J	0.042	MDL	1.1	MRL	ng/kg	J	Z
OCDF	2.1	B J	0.028	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-612-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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	2.6	Q B J	0.039	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.26	Q B J	0.064	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.16	Q B J	0.034	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.13	Q B J	0.036	MDL	5.7	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.61	J	0.036	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.11	Q J	0.035	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.79	B J	0.033	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.36	Q B J	0.037	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.18	Q J	0.085	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.19	Q B J	0.030	MDL	5.7	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.14	B J	0.058	MDL	5.7	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.21	J	0.074	MDL	1.1	MRL	ng/kg	J	Z
OCDF	4.3	B J	0.045	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-612-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 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-HPCDD	1.1	B J	0.027	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.21	Q B J	0.030	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.10	J	0.030	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.092	Q B J	0.028	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.070	Q B J	0.021	MDL	5.3	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.031	J	0.046	MDL	1.1	MRL	ng/kg	J	Z
OCDF	0.41	B J	0.029	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-618-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.6	B J	0.044	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.37	Q B J	0.077	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.25	Q B J	0.048	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.18	C B J	0.028	MDL	5.6	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.55	J	0.048	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.16	Q J	0.027	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.53	C B J	0.045	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.034	U	0.034	MDL	5.6	MRL	ng/kg	UJ	FD
1,2,3,7,8-PECDD	0.15	Q J	0.061	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.13	B J	0.027	MDL	5.6	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.16	B J	0.050	MDL	5.6	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.10	Q J	0.064	MDL	1.1	MRL	ng/kg	J	Z, FD
OCDF	3.9	B J	0.058	MDL	11	MRL	ng/kg	J	Z, Q, Q

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.2	Q B J	0.095	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.66	B J	0.046	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.63	C B J	0.043	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.9	J	0.046	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.39	J	0.042	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.7	C B J	0.044	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.071	Q B J	0.052	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.30	Q J	0.072	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.20	Q B J	0.042	MDL	5.4	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.16	Q B J	0.054	MDL	5.4	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.25	Q J	0.082	MDL	1.1	MRL	ng/kg	J	Z
OCDF	9.9	B J	0.061	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-620-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 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	2.1	B J	0.030	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.22	Q B J	0.049	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.15	Q B J	0.034	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.13	Q B J	0.026	MDL	5.6	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.40	Q J	0.034	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.091	Q J	0.027	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.46	C B J	0.032	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.16	Q J	0.054	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.048	J	0.044	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.19	B J	0.023	MDL	5.6	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.11	Q B J	0.041	MDL	5.6	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.20	Q J	0.052	MDL	1.1	MRL	ng/kg	J	Z
OCDF	4.0	B J	0.038	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
I	Internal Standard Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36711-2/
H2L110413

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L190000018B	12/26/2012 12:41:00 PM	1,2,3,4,6,7,8-HPCDD	1.5 pg/L	EB1-120612
		1,2,3,4,6,7,8-HPCDF	1.1 pg/L	EB2-120612
		1,2,3,4,7,8,9-HPCDF	2.1 pg/L	
		1,2,3,4,7,8-HxCDD	0.72 pg/L	
		1,2,3,4,7,8-HXCDF	0.84 pg/L	
		1,2,3,6,7,8-HXCDD	0.85 pg/L	
		1,2,3,7,8,9-HXCDD	0.96 pg/L	
		1,2,3,7,8,9-HXCDF	1.0 pg/L	
		1,2,3,7,8-PECDD	0.91 pg/L	
		2,3,4,6,7,8-HXCDF	0.80 pg/L	
		2,3,4,7,8-PECDF	1.1 pg/L	
		OCDD	11 pg/L	
		OCDF	2.7 pg/L	

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-120612(RES)	1,2,3,4,6,7,8-HPCDD	0.52 pg/L	0.52U pg/L
EB1-120612(RES)	OCDD	4.0 pg/L	4.0U pg/L
EB2-120612(RES)	OCDD	3.0 pg/L	3.0U pg/L

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L120000020B	12/31/2012 1:36:00 PM	1,2,3,4,6,7,8-HPCDD	0.15 ng/kg	SL-1018-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.065 ng/kg	SL-516-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.077 ng/kg	SL-516-SA6-SB-3.0-4.0
		1,2,3,4,7,8-HxCDD	0.051 ng/kg	SL-520-SA6-SB-14.0-15.0
		1,2,3,4,7,8-HXCDF	0.036 ng/kg	SL-520-SA6-SB-19.0-20.0
		1,2,3,7,8,9-HXCDD	0.069 ng/kg	SL-520-SA6-SB-24.0-25.0
		1,2,3,7,8,9-HXCDF	0.048 ng/kg	SL-520-SA6-SB-30.0-31.0
		2,3,4,6,7,8-HXCDF	0.11 ng/kg	SL-520-SA6-SB-4.0-5.0
		2,3,4,7,8-PECDF	0.045 ng/kg	SL-520-SA6-SB-9.0-10.0
		OCDD	0.42 ng/kg	SL-521-SA6-SB-0.0-0.5
		OCDF	0.078 ng/kg	SL-521-SA6-SB-4.0-5.0
				SL-566-SA6-SB-0.0-0.5
				SL-567-SA6-SB-0.0-0.5
				SL-567-SA6-SB-2.0-3.0
				SL-612-SA6-SB-0.0-0.5
				SL-612-SA6-SB-2.0-3.0
				SL-618-SA6-SB-0.0-0.5
				SL-619-SA6-SB-0.0-0.5
				SL-620-SA6-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-1018-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.19 ng/kg	0.19U ng/kg
SL-1018-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.064 ng/kg	0.064U ng/kg
SL-1018-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.11 ng/kg	0.11U ng/kg
SL-1018-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.15 ng/kg	0.15U ng/kg

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-516-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.067 ng/kg	0.067U ng/kg
SL-516-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.10 ng/kg	0.10U ng/kg
SL-516-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.067 ng/kg	0.067U ng/kg
SL-516-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.095 ng/kg	0.095U ng/kg
SL-516-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.047 ng/kg	0.047U ng/kg
SL-516-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.13 ng/kg	0.13U ng/kg
SL-516-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.067 ng/kg	0.067U ng/kg
SL-516-SA6-SB-3.0-4.0(RES)	OCDD	0.82 ng/kg	0.82U ng/kg
SL-516-SA6-SB-3.0-4.0(RES)	OCDF	0.21 ng/kg	0.21U ng/kg
SL-520-SA6-SB-14.0-15.0(RES)	1,2,3,4,6,7,8-HPCDD	0.11 ng/kg	0.11U ng/kg
SL-520-SA6-SB-14.0-15.0(RES)	OCDD	1.2 ng/kg	1.2U ng/kg
SL-520-SA6-SB-14.0-15.0(RES)	OCDF	0.036 ng/kg	0.036U ng/kg
SL-520-SA6-SB-19.0-20.0(RES)	OCDD	0.62 ng/kg	0.62U ng/kg
SL-520-SA6-SB-24.0-25.0(RES)	1,2,3,4,6,7,8-HPCDD	0.056 ng/kg	0.056U ng/kg
SL-520-SA6-SB-24.0-25.0(RES)	OCDD	0.53 ng/kg	0.53U ng/kg
SL-520-SA6-SB-30.0-31.0(RES)	1,2,3,4,6,7,8-HPCDF	0.17 ng/kg	0.17U ng/kg
SL-520-SA6-SB-30.0-31.0(RES)	1,2,3,4,7,8-HxCDD	0.019 ng/kg	0.019U ng/kg
SL-520-SA6-SB-30.0-31.0(RES)	1,2,3,4,7,8-HXCDF	0.016 ng/kg	0.016U ng/kg
SL-520-SA6-SB-30.0-31.0(RES)	1,2,3,7,8,9-HXCDD	0.12 ng/kg	0.12U ng/kg
SL-520-SA6-SB-30.0-31.0(RES)	OCDF	0.22 ng/kg	0.22U ng/kg
SL-520-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.22 ng/kg	0.22U ng/kg
SL-520-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.072 ng/kg	0.072U ng/kg
SL-520-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.28 ng/kg	0.28U ng/kg
SL-520-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.13 ng/kg	0.13U ng/kg
SL-520-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.071 ng/kg	0.071U ng/kg
SL-520-SA6-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.036 ng/kg	0.036U ng/kg
SL-520-SA6-SB-9.0-10.0(RES)	OCDD	0.42 ng/kg	0.42U ng/kg
SL-520-SA6-SB-9.0-10.0(RES)	OCDF	0.083 ng/kg	0.083U ng/kg
SL-521-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.40 ng/kg	0.40U ng/kg
SL-521-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.12 ng/kg	0.12U ng/kg
SL-521-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.068 ng/kg	0.068U ng/kg
SL-521-SA6-SB-0.0-0.5(RES)	OCDF	0.14 ng/kg	0.14U ng/kg
SL-521-SA6-SB-4.0-5.0(RES)	OCDD	0.30 ng/kg	0.30U ng/kg
SL-566-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.23 ng/kg	0.23U ng/kg
SL-567-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.068 ng/kg	0.068U ng/kg
SL-567-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-567-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.17 ng/kg	0.17U ng/kg

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-567-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8-HxCDD	0.074 ng/kg	0.074U ng/kg
SL-567-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8-HXCDF	0.053 ng/kg	0.053U ng/kg
SL-567-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	0.17 ng/kg	0.17U ng/kg
SL-567-SA6-SB-2.0-3.0(RES)	2,3,4,7,8-PECDF	0.035 ng/kg	0.035U ng/kg
SL-612-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.26 ng/kg	0.26U ng/kg
SL-612-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.16 ng/kg	0.16U ng/kg
SL-612-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.13 ng/kg	0.13U ng/kg
SL-612-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.19 ng/kg	0.19U ng/kg
SL-612-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.14 ng/kg	0.14U ng/kg
SL-612-SA6-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	0.21 ng/kg	0.21U ng/kg
SL-612-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	0.092 ng/kg	0.092U ng/kg
SL-612-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDF	0.070 ng/kg	0.070U ng/kg
SL-618-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.37 ng/kg	0.37U ng/kg
SL-618-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.25 ng/kg	0.25U ng/kg
SL-618-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.18 ng/kg	0.18U ng/kg
SL-618-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.13 ng/kg	0.13U ng/kg
SL-618-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.16 ng/kg	0.16U ng/kg
SL-619-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.071 ng/kg	0.071U ng/kg
SL-619-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.20 ng/kg	0.20U ng/kg
SL-619-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.16 ng/kg	0.16U ng/kg
SL-620-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.22 ng/kg	0.22U ng/kg
SL-620-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.15 ng/kg	0.15U ng/kg
SL-620-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.13 ng/kg	0.13U ng/kg
SL-620-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.19 ng/kg	0.19U ng/kg
SL-620-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.11 ng/kg	0.11U ng/kg

TestAmerica Denver

Client Sample ID: SL-567-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L110413 - 016	Work Order #....:	MXJTV1AC	Matrix.....:	SO
Date Sampled....:	12/06/12	Date Received....:	12/11/12	Units....:	ng/kg
Prep Date....:	12/12/12			Dilution Factor:	1
Prep Batch # ....:	2347020			Percent Moisture:	9.4
Initial Wgt/Vol :	9.9 g	Instrument ID....:	M2A	Method....:	EPA-5 1613B
Analyst ID....:	Kathryn B. Lay				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/3/13	1	1.3 Q	1.1	0.065	1.0	1.3
1,2,3,7,8-PeCDD	1/3/13	1	0.17 Q J	5.6	0.054	1.0	0.17
1,2,3,4,7,8-HxCDD	1/3/13	1	0.38 B J	5.6	0.037	0.1	0.038
1,2,3,6,7,8-HxCDD	1/3/13	1	1.1 J	5.6	0.037	0.1	0.11
1,2,3,7,8,9-HxCDD	1/3/13	1	1.1	5.6	0.035	0.1	0.11
1,2,3,4,6,7,8-HpCDD	1/3/13	1	29 B	5.6	0.048	0.01	0.29
OCDD	1/3/13	1	260 B	11	0.047	0.0003	0.078
2,3,7,8-TCDF	1/3/13	1	0.29 Q J	1.1	0.047	0.1	0.029
1,2,3,7,8-PeCDF	1/3/13	1	0.12 J	5.6	0.042	0.03	0.0036
2,3,4,7,8-PeCDF	1/3/13	1	0.17 Q B J	5.6	0.038	0.3	0.051
1,2,3,4,7,8-HxCDF	1/3/13	1	0.35	5.6	0.023	0.1	0.035
1,2,3,6,7,8-HxCDF	1/3/13	1	0.25 J	5.6	0.023	0.1	0.025
2,3,4,6,7,8-HxCDF	1/3/13	1	0.15 Q B J	5.6	0.020	0.1	0.015
1,2,3,7,8,9-HxCDF	1/3/13	1	0.068 Q B J	5.6	0.024	0.1	0.0068
1,2,3,4,6,7,8-HpCDF	1/3/13	1	7.0 S B	5.6	0.10	0.01	0.070
1,2,3,4,7,8,9-HpCDF	1/3/13	1	0.76 Q B J	5.6	0.065	0.01	0.0076
OCDF	1/3/13	1	11 B J	11	0.039	0.0003	0.0033
Total TEQ Concentration							2.3

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	88	(25 - 164)
13C-1,2,3,7,8-PeCDD	102	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	82	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	71	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	92	(23 - 140)
13C-OCDD	82	(17 - 157)
13C-2,3,7,8-TCDF	85	(24 - 169)
13C-1,2,3,7,8-PeCDF	107	(24 - 185)
13C-2,3,4,7,8-PeCDF	97	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	75	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	66	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	73	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	78	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	23 *	(28 - 143) J/UJ/P
13C-1,2,3,4,7,8,9-HpCDF	71	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	96	(35 - 197)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-618-SA6-SB-0.0-0.5MS **SL-618-SA6-SB-0.0-0.5MSD** (SL-618-SA6-SB-0.0-0.5)	OCDF	36	-	40.00-135.00	34 (20.00)	OCDF	J (all detects) UJ (all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5	SL-1018-SA6-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	10	9.5	5	50.00	
1,2,3,4,6,7,8-HPCDF	2.6	2.3	12	50.00	
1,2,3,4,7,8,9-HPCDF	0.37	0.55	39	50.00	
1,2,3,4,7,8-HxCDD	0.25	0.19	27	50.00	
1,2,3,4,7,8-HXCDF	0.18	0.20	11	50.00	
1,2,3,6,7,8-HXCDD	0.55	0.59	7	50.00	
1,2,3,6,7,8-HXCDF	0.16	0.20	22	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDD	0.53	0.51	4	50.00	
1,2,3,7,8-PECDD	0.15	0.14	7	50.00	
2,3,4,6,7,8-HXCDF	0.13	0.11	17	50.00	
2,3,4,7,8-PECDF	0.16	0.15	6	50.00	
OCDD	80	73	9	50.00	
OCDF	3.9	4.4	12	50.00	
1,2,3,7,8,9-HXCDF	5.6 U	0.064	200	50.00	J(all detects)
2,3,7,8-TCDF	0.10	0.23	79	50.00	UJ(all non-detects)

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-120612	1,2,3,4,6,7,8-HPCDD	Q B J	0.52	48	MRL	pg/L	J (all detects)
	OCDD	B J	4.0	96	MRL	pg/L	
EB2-120612	OCDD	B J	3.0	95	MRL	pg/L	J (all detects)

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1018-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	2.3	5.8	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	B J	0.55	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	B J	0.19	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.20	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.59	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.20	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.51	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.064	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.14	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.11	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	B J	0.15	5.8	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.23	1.2	MRL	ng/kg	
	OCDF	Q B J	4.4	12	MRL	ng/kg	
SL-516-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	1.0	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.067	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	B J	0.10	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.067	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.38	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.092	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.095	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.094	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.047	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.038	1.1	MRL	ng/kg	
	OCDF	S B J	2.5	11	MRL	ng/kg	
SL-516-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	B J	0.13	6.2	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.067	6.2	MRL	ng/kg	
	OCDD	B J	0.82	12	MRL	ng/kg	
	OCDF	Q B J	0.21	12	MRL	ng/kg	
SL-520-SA6-SB-14.0-15.0	1,2,3,4,6,7,8-HPCDD	B J	0.11	5.4	MRL	ng/kg	J (all detects)
	OCDD	B J	1.2	11	MRL	ng/kg	
	OCDF	Q B J	0.036	11	MRL	ng/kg	
SL-520-SA6-SB-19.0-20.0	OCDD	B J	0.62	11	MRL	ng/kg	J (all detects)
SL-520-SA6-SB-24.0-25.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.056	5.6	MRL	ng/kg	J (all detects)
	OCDD	B J	0.53	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-520-SA6-SB-30.0-31.0	1,2,3,4,6,7,8-HPCDD	B J	1.0	5.6	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.17	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.019	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.016	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.089	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q B J	0.12	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.084	5.6	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.063	1.1	MRL	ng/kg	
	OCDD	B J	8.7	11	MRL	ng/kg	
	OCDF	B J	0.22	11	MRL	ng/kg	
SL-520-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	B J	1.8	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.22	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.072	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.32	5.4	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDF	J	0.071	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.28	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.048	1.1	MRL	ng/kg	
	OCDF	B J	3.5	11	MRL	ng/kg	
SL-520-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	B J	0.13	5.7	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.071	5.7	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.036	5.7	MRL	ng/kg	J (all detects)
	OCDD	B J	0.42	11	MRL	ng/kg	
	OCDF	Q B J	0.083	11	MRL	ng/kg	
SL-521-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	Q B J	0.40	5.2	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.12	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.060	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	B J	0.068	5.2	MRL	ng/kg	
	OCDD	B J	4.1	10	MRL	ng/kg	
	OCDF	Q B J	0.14	10	MRL	ng/kg	
SL-521-SA6-SB-4.0-5.0	OCDD	Q B J	0.30	11	MRL	ng/kg	J (all detects)
SL-566-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.66	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.40	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.50	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.2	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.30	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.3	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.28	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.16	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.23	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.30	5.5	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.13	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.71	1.1	MRL	ng/kg	
	OCDF	B J	4.8	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-567-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.76	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	B J	0.38	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	0.35	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.1	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.25	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.1	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.068	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.17	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.12	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.15	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.17	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.29	1.1	MRL	ng/kg	
SL-567-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD	B J	3.2	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	B J	0.95	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.074	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.053	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.14	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.17	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.035	5.3	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.17	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.039	1.1	MRL	ng/kg	
	OCDF	B J	2.1	11	MRL	ng/kg	
SL-612-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	2.6	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.26	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.16	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.13	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.61	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.11	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.79	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.36	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.18	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.19	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	B J	0.14	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.21	1.1	MRL	ng/kg	
	OCDF	B J	4.3	11	MRL	ng/kg	
SL-612-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD	B J	1.1	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.21	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.10	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.092	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.070	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.031	1.1	MRL	ng/kg	
	OCDF	B J	0.41	11	MRL	ng/kg	
SL-618-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	2.6	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.37	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.25	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	0.18	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.55	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.16	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.53	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.15	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.13	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	B J	0.16	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.10	1.1	MRL	ng/kg	
	OCDF	B J	3.9	11	MRL	ng/kg	

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36711-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36711-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-619-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	1.2	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	B J	0.66	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	0.63	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.9	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.39	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.7	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.071	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.30	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.20	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.16	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.25	1.1	MRL	ng/kg	
	OCDF	B J	9.9	11	MRL	ng/kg	
SL-620-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	2.1	5.6	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.22	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.15	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.13	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.40	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.091	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.46	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.16	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.048	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.19	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.11	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.20	1.1	MRL	ng/kg	
	OCDF	B J	4.0	11	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-36788-1

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
07-Dec-2012	EB1-120712	280-36788-10	EB	METHOD	6860	III
07-Dec-2012	EB2-120712	280-36788-11	EB	METHOD	6860	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: 280-36788-1 **Laboratory: TA DEN**

EDD Filename: 280-36788-1 **eQAPP Name: CDM_SSFL_120907_TA**

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36788-1

(No Outliers)

SAMPLE DELIVERY GROUP

280-36788-2

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
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	280-36788-1	N	1613	1613B	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	280-36788-2	N	1613	1613B	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	280-36788-2 MS	MS	1613	1613B	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	280-36788-2 MSD	MSD	1613	1613B	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	280-36788-3	FD	1613	1613B	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	280-36788-4	N	1613	1613B	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	280-36788-5	N	1613	1613B	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	280-36788-6	N	1613	1613B	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	280-36788-7	N	1613	1613B	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	280-36788-8	N	1613	1613B	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	280-36788-9	N	1613	1613B	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: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-542-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.6	B J	0.045	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.80	B J	0.048	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.15	U	0.15	MDL	5.8	MRL	ng/kg	UJ	I
1,2,3,4,7,8-HxCDD	0.085	Q J	0.037	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.092	Q J	0.040	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.18	Q J	0.036	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.072	Q J	0.032	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.20	J	0.034	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.11	Q J	0.068	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.12	Q B J	0.023	MDL	5.8	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.086	Q J	0.047	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.096	Q J	0.11	MDL	1.2	MRL	ng/kg	J	Z
OCDF	0.21	B J	0.051	MDL	12	MRL	ng/kg	UJ	L, B

Sample ID: **SL-542-SA6-SB-3.0-4.0** ***Collected:*** **12/7/2012 8:45:00** ***Analysis Type:*** **RES** ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.9	B J	0.053	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.37	Q B J	0.11	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.076	Q J	0.037	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.17	Q J	0.034	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.51	Q J	0.038	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.13	J	0.031	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.29	J	0.035	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.12	Q J	0.069	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.059	Q J	0.066	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	B J	0.026	MDL	5.2	MRL	ng/kg	J	Z, FD
2,3,4,7,8-PECDF	0.096	Q J	0.051	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.13	Q J	0.095	MDL	1.0	MRL	ng/kg	J	Z
OCDF	1.6	B J	0.064	MDL	10	MRL	ng/kg	J	Z, L, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-545-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 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
1,2,3,4,7,8,9-HPCDF	1.1	B J	0.064	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.19	Q J	0.053	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.9	S J C	0.042	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.7	J	0.055	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.93	J	0.037	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.53	C J	0.051	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.073	Q B J	0.054	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.13	Q J	0.088	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.28	Q J	0.075	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.44	B J	0.034	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.75	Q J	0.059	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.82	J	0.10	MDL	1.1	MRL	ng/kg	J	Z
OCDF	14	B	0.064	MDL	11	MRL	ng/kg	J	L

Sample ID: **SL-545-SA6-SB-4.0-5.0** ***Collected:*** **12/7/2012 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.66	Q B J	0.053	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.27	B J	0.065	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.32	U	0.32	MDL	5.1	MRL	ng/kg	UJ	I
1,2,3,7,8,9-HXCDF	0.073	B J	0.048	MDL	5.1	MRL	ng/kg	U	B
OCDF	0.27	B J	0.048	MDL	10	MRL	ng/kg	UJ	L, B

Sample ID: **SL-545-SA6-SB-9.0-10.0** ***Collected:*** **12/7/2012 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-HPCDD	0.15	Q B J	0.040	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.078	Q J	0.029	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.079	B J	0.023	MDL	5.4	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.060	Q J	0.036	MDL	5.4	MRL	ng/kg	J	Z
OCDD	0.81	Q B J	0.046	MDL	11	MRL	ng/kg	U	B
OCDF	0.14	B J	0.051	MDL	11	MRL	ng/kg	UJ	L, B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: SL-547-SA6-SB-0.0-0.5 ***Collected:*** 12/7/2012 12:40:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.1	B J	0.034	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.26	B J	0.034	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.062	Q B J	0.046	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.032	Q J	0.021	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.23	J	0.026	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.043	Q J	0.020	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.059	Q J	0.025	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.026	Q B J	0.028	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.060	Q J	0.037	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.038	Q B J	0.020	MDL	5.3	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.026	Q J	0.027	MDL	5.3	MRL	ng/kg	J	Z
OCDD	10	B J	0.047	MDL	11	MRL	ng/kg	J	Z
OCDF	0.22	S B J	0.047	MDL	11	MRL	ng/kg	UJ	L, B

Sample ID: SL-547-SA6-SB-4.0-5.0 ***Collected:*** 12/7/2012 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	0.19	B J	0.088	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.13	Q B J	0.072	MDL	5.6	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.26	Q B J	0.13	MDL	5.6	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.073	Q B J	0.048	MDL	5.6	MRL	ng/kg	U	B
OCDD	0.88	Q B J	0.12	MDL	11	MRL	ng/kg	U	B
OCDF	0.096	U	0.096	MDL	11	MRL	ng/kg	UJ	L

Sample ID: SL-547-SA6-SB-9.0-10.0 ***Collected:*** 12/7/2012 1:50:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.18	B J	0.058	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.25	Q B J	0.081	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.057	Q B J	0.069	MDL	5.5	MRL	ng/kg	U	B
OCDD	0.77	Q B J	0.12	MDL	11	MRL	ng/kg	U	B
OCDF	0.27	Q B J	0.11	MDL	11	MRL	ng/kg	UJ	L, B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-942-SA6-SB-3.0-4.0** ***Collected:*** **12/7/2012 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-HPCDF	1.9	B J	0.036	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.32	B J	0.050	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.059	Q J	0.036	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.22	J	0.030	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.55	J	0.039	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.097	Q J	0.027	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.23	J	0.035	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.19	Q J	0.057	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.059	J	0.052	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.037	Q B J	0.026	MDL	5.3	MRL	ng/kg	UJ	B, FD
2,3,4,7,8-PECDF	0.12	J	0.042	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.085	Q J	0.058	MDL	1.1	MRL	ng/kg	J	Z
OCDF	3.7	B J	0.054	MDL	11	MRL	ng/kg	J	Z, L, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
I	Internal Standard Estimation
L	Laboratory Control Spike Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36788-2/
H2L120404

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L140000029B	12/28/2012 2:30:00 AM	1,2,3,4,6,7,8-HPCDD	0.084 ng/kg	SL-542-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.051 ng/kg	SL-542-SA6-SB-3.0-4.0
		1,2,3,4,7,8,9-HPCDF	0.096 ng/kg	SL-545-SA6-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.043 ng/kg	SL-545-SA6-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.045 ng/kg	SL-545-SA6-SB-9.0-10.0
		OCDD	0.45 ng/kg	SL-547-SA6-SB-0.0-0.5
		OCDF	0.19 ng/kg	SL-547-SA6-SB-4.0-5.0
				SL-547-SA6-SB-9.0-10.0
				SL-942-SA6-SB-3.0-4.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-542-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.12 ng/kg	0.12U ng/kg
SL-542-SA6-SB-0.0-0.5(RES)	OCDF	0.21 ng/kg	0.21U ng/kg
SL-542-SA6-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.37 ng/kg	0.37U ng/kg
SL-545-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.073 ng/kg	0.073U ng/kg
SL-545-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.073 ng/kg	0.073U ng/kg
SL-545-SA6-SB-4.0-5.0(RES)	OCDF	0.27 ng/kg	0.27U ng/kg
SL-545-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.15 ng/kg	0.15U ng/kg
SL-545-SA6-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.079 ng/kg	0.079U ng/kg
SL-545-SA6-SB-9.0-10.0(RES)	OCDD	0.81 ng/kg	0.81U ng/kg
SL-545-SA6-SB-9.0-10.0(RES)	OCDF	0.14 ng/kg	0.14U ng/kg
SL-547-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.062 ng/kg	0.062U ng/kg
SL-547-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.026 ng/kg	0.026U ng/kg
SL-547-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.038 ng/kg	0.038U ng/kg
SL-547-SA6-SB-0.0-0.5(RES)	OCDF	0.22 ng/kg	0.22U ng/kg
SL-547-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.19 ng/kg	0.19U ng/kg
SL-547-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.13 ng/kg	0.13U ng/kg
SL-547-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.26 ng/kg	0.26U ng/kg
SL-547-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.073 ng/kg	0.073U ng/kg
SL-547-SA6-SB-4.0-5.0(RES)	OCDD	0.88 ng/kg	0.88U ng/kg
SL-547-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.18 ng/kg	0.18U ng/kg
SL-547-SA6-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.25 ng/kg	0.25U ng/kg
SL-547-SA6-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.057 ng/kg	0.057U ng/kg
SL-547-SA6-SB-9.0-10.0(RES)	OCDD	0.77 ng/kg	0.77U ng/kg
SL-547-SA6-SB-9.0-10.0(RES)	OCDF	0.27 ng/kg	0.27U ng/kg
SL-942-SA6-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.32 ng/kg	0.32U ng/kg
SL-942-SA6-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.037 ng/kg	0.037U ng/kg

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
H2L140000029C (SL-542-SA6-SB-0.0-0.5 SL-542-SA6-SB-3.0-4.0 SL-545-SA6-SB-0.0-0.5 SL-545-SA6-SB-4.0-5.0 SL-545-SA6-SB-9.0-10.0 SL-547-SA6-SB-0.0-0.5 SL-547-SA6-SB-4.0-5.0 SL-547-SA6-SB-9.0-10.0 SL-942-SA6-SB-3.0-4.0)	OCDF	27	-	63.00-170.00	-	OCDF	J (all detects) UJ (all non-detects)

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

TestAmerica Denver

Client Sample ID: SL-542-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L120404 - 001	Work Order #....:	MXJ5L1AC	Matrix.....:	SO
Date Sampled....:	12/07/12	Date Received....:	12/12/12	Units....:	ng/kg
Prep Date....:	12/14/12			Dilution Factor:	1
Prep Batch # ....:	2349029			Percent Moisture:	15
Initial Wgt/Vol :	10.2 g	Instrument ID....:	M2A	Method....:	EPA-5 1613B
Analyst ID....:	Jon M. Nordquist				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	12/31/12	1	ND	1.2	0.16	1.0	0
1,2,3,7,8-PeCDD	12/31/12	1	0.11 Q J	5.8	0.068	1.0	0.11
1,2,3,4,7,8-HxCDD	12/31/12	1	0.085 Q J	5.8	0.037	0.1	0.0085
1,2,3,6,7,8-HxCDD	12/31/12	1	0.18 Q J	5.8	0.036	0.1	0.018
1,2,3,7,8,9-HxCDD	12/31/12	1	0.20 J	5.8	0.034	0.1	0.020
1,2,3,4,6,7,8-HpCDD	12/31/12	1	5.6 B J	5.8	0.045	0.01	0.056
OCDD	12/31/12	1	61 B	12	0.055	0.0003	0.018
2,3,7,8-TCDF	12/31/12	1	0.096 Q J	1.2	0.11	0.1	0.0096
1,2,3,7,8-PeCDF	12/31/12	1	ND	5.8	0.067	0.03	0
2,3,4,7,8-PeCDF	12/31/12	1	0.086 Q J	5.8	0.047	0.3	0.026
1,2,3,4,7,8-HxCDF	12/31/12	1	0.092 Q J	5.8	0.040	0.1	0.0092
1,2,3,6,7,8-HxCDF	12/31/12	1	0.072 Q J	5.8	0.032	0.1	0.0072
2,3,4,6,7,8-HxCDF	12/31/12	1	0.12 Q B J	5.8	0.023	0.1	0.012
1,2,3,7,8,9-HxCDF	12/31/12	1	ND	5.8	0.051	0.1	0
1,2,3,4,6,7,8-HpCDF	12/31/12	1	0.80 B J	5.8	0.048	0.01	0.0080
1,2,3,4,7,8,9-HpCDF	12/31/12	1	ND	5.8	0.15	0.01	0
OCDF	12/31/12	1	0.21 B J	12	0.051	0.0003	0.000063
Total TEQ Concentration							0.30

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	41	(25 - 164)
13C-1,2,3,7,8-PeCDD	76	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	85	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	74	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	86	(23 - 140)
13C-OCDD	77	(17 - 157)
13C-2,3,7,8-TCDF	39	(24 - 169)
13C-1,2,3,7,8-PeCDF	62	(24 - 185)
13C-2,3,4,7,8-PeCDF	74	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	49	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	55	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	72	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	43	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	47	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	22 *	(26 - 138) J/UJ/P

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	48	(35 - 197)

TestAmerica Denver

Client Sample ID: SL-545-SA6-SB-4.0-5.0

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L120404 - 005	Work Order #....:	MXJ501AC	Matrix.....:	SO
Date Sampled....:	12/07/12	Date Received....:	12/12/12	Units....:	ng/kg
Prep Date....:	12/14/12			Dilution Factor:	1
Prep Batch # ....:	2349029			Percent Moisture:	4.3
Initial Wgt/Vol :	10.3 g	Instrument ID....:	M2A	Method....:	EPA-5 1613B
Analyst ID....:	Jon M. Nordquist				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	12/31/12	1	ND	1.0	0.19	1.0	0
1,2,3,7,8-PeCDD	12/31/12	1	ND	5.1	0.087	1.0	0
1,2,3,4,7,8-HxCDD	12/31/12	1	ND	5.1	0.046	0.1	0
1,2,3,6,7,8-HxCDD	12/31/12	1	ND	5.1	0.049	0.1	0
1,2,3,7,8,9-HxCDD	12/31/12	1	ND	5.1	0.045	0.1	0
1,2,3,4,6,7,8-HpCDD	**12/31/12**	**1**	**0.66 Q B J**	**5.1**	**0.053**	**0.01**	**0.0066**
OCDD	**12/31/12**	**1**	**11 B**	**10**	**0.055**	**0.0003**	**0.0033**
2,3,7,8-TCDF	12/31/12	1	ND	1.0	0.13	0.1	0
1,2,3,7,8-PeCDF	12/31/12	1	ND	5.1	0.065	0.03	0
2,3,4,7,8-PeCDF	12/31/12	1	ND	5.1	0.045	0.3	0
1,2,3,4,7,8-HxCDF	12/31/12	1	ND	5.1	0.029	0.1	0
1,2,3,6,7,8-HxCDF	12/31/12	1	ND	5.1	0.025	0.1	0
2,3,4,6,7,8-HxCDF	12/31/12	1	ND	5.1	0.020	0.1	0
1,2,3,7,8,9-HxCDF	**12/31/12**	**1**	**0.073 B J**	**5.1**	**0.048**	**0.1**	**0.0073**
1,2,3,4,6,7,8-HpCDF	**12/31/12**	**1**	**0.27 B J**	**5.1**	**0.065**	**0.01**	**0.0027**
1,2,3,4,7,8,9-HpCDF	12/31/12	1	ND	5.1	0.32	0.01	0
OCDF	**12/31/12**	**1**	**0.27 B J**	**10**	**0.048**	**0.0003**	**0.000081**
Total TEQ Concentration							**0.020**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	39	(25 - 164)
13C-1,2,3,7,8-PeCDD	78	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	86	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	71	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	91	(23 - 140)
13C-OCDD	84	(17 - 157)
13C-2,3,7,8-TCDF	36	(24 - 169)
13C-1,2,3,7,8-PeCDF	65	(24 - 185)
13C-2,3,4,7,8-PeCDF	75	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	58	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	61	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	78	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	42	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	41	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	14 *	(26 - 138) JLWJP

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	43	(35 - 197)

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-542-SA6-SB-3.0-4.0	SL-942-SA6-SB-3.0-4.0			
1,2,3,4,6,7,8-HPCDD	22	22	0	50.00	
1,2,3,4,6,7,8-HPCDF	1.9	1.9	0	50.00	
1,2,3,4,7,8,9-HPCDF	0.37	0.32	14	50.00	
1,2,3,4,7,8-HxCDD	0.076	0.059	25	50.00	
1,2,3,4,7,8-HXCDF	0.17	0.22	26	50.00	
1,2,3,6,7,8-HXCDD	0.51	0.55	8	50.00	
1,2,3,6,7,8-HXCDF	0.13	0.097	29	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDD	0.29	0.23	23	50.00	
1,2,3,7,8-PECDD	0.12	0.19	45	50.00	
1,2,3,7,8-PECDF	0.059	0.059	0	50.00	
2,3,4,7,8-PECDF	0.096	0.12	22	50.00	
2,3,7,8-TCDF	0.13	0.085	42	50.00	
OCDD	400	360	11	50.00	
2,3,4,6,7,8-HXCDF	0.23	0.037	145	50.00	J(all detects)
OCDF	1.6	3.7	79	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-542-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	B J	5.6	5.8	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.80	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.085	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.092	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.18	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.072	5.8	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	0.20	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.11	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.12	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.086	5.8	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.096	1.2	MRL	ng/kg	
	OCDF	B J	0.21	12	MRL	ng/kg	
SL-542-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDF	B J	1.9	5.2	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.37	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.076	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.17	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.51	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.13	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.29	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.12	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.059	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.23	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.096	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.13	1.0	MRL	ng/kg	
	OCDF	B J	1.6	10	MRL	ng/kg	
SL-545-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.1	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.19	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	S J C	1.9	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.7	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.93	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	0.53	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.073	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.13	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.28	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.44	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.75	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.82	1.1	MRL	ng/kg	
SL-545-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.66	5.1	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.27	5.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	B J	0.073	5.1	MRL	ng/kg	
	OCDF	B J	0.27	10	MRL	ng/kg	
SL-545-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.15	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.078	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.079	5.4	MRL	ng/kg	J (all detects)
	2,3,4,7,8-PECDF	Q J	0.060	5.4	MRL	ng/kg	
	OCDD	Q B J	0.81	11	MRL	ng/kg	
	OCDF	B J	0.14	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36788-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36788-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-547-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	B J	2.1	5.3	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.26	5.3	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.062	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.032	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.23	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.043	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.059	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.026	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.060	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.038	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.026	5.3	MRL	ng/kg	
	OCDD	B J	10	11	MRL	ng/kg	
	OCDF	S B J	0.22	11	MRL	ng/kg	
SL-547-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	B J	0.19	5.6	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.13	5.6	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.26	5.6	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	Q B J	0.073	5.6	MRL	ng/kg	
	OCDD	Q B J	0.88	11	MRL	ng/kg	
SL-547-SA6-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	B J	0.18	5.5	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.25	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.057	5.5	MRL	ng/kg	J (all detects)
	OCDD	Q B J	0.77	11	MRL	ng/kg	
	OCDF	Q B J	0.27	11	MRL	ng/kg	
SL-942-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDF	B J	1.9	5.3	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.32	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.059	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.22	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.55	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.097	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.23	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.19	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.059	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.037	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.12	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.085	1.1	MRL	ng/kg	
	OCDF	B J	3.7	11	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-36846-1

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
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	280-36846-49	N	8315A Prep	8315A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	280-36846-50	N	8315A Prep	8315A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	280-36846-50MS	MS	8315A Prep	8315A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	280-36846-50MSD	MSD	8315A Prep	8315A	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	280-36846-51	N	8315A Prep	8315A	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	280-36846-52	N	8315A Prep	8315A	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	280-36846-53	N	8315A Prep	8315A	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	280-36846-54	N	8315A Prep	8315A	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	280-36846-55	N	8315A Prep	8315A	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	280-36846-56	N	8315A Prep	8315A	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	280-36846-57	N	8315A Prep	8315A	III
10-Dec-2012	TB-121012	280-36846-1	TB	METHOD	8015B GRO	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-19	N	3546	8270C SIM	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-19	N	3550C	8015B EFH	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-20	N	3050B	6010C	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-20	N	3050B	6020A	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-20	N	3546	8082A	III
10-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-20	N	7471B	7471B	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-7	N	3546	8270C SIM	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-7	N	3550C	8015B EFH	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-8	N	3050B	6010C	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-8	N	3050B	6020A	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-8	N	3546	8082A	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-8	N	7471B	7471B	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-10	N	3050B	6010C	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-10	N	3050B	6020A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-10	N	3546	8082A	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-10	N	7471B	7471B	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-9	N	3546	8270C SIM	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-9	N	3550C	8015B EFH	III
10-Dec-2012	SL-603-SA6-SB-4.5	280-36846-11	N	5035	8015B GRO	III
10-Dec-2012	SL-654A-SA6-SB-2.0-3.0	280-36846-21	N	3546	8082A	III
10-Dec-2012	SL-654B-SA6-SB-0.0-0.5	280-36846-22	N	3546	8082A	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-12	N	3546	8270C SIM	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-12	N	3550C	8015B EFH	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-13	N	3050B	6010C	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-13	N	3050B	6020A	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-13	N	3546	8082A	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-13	N	7471B	7471B	III
10-Dec-2012	SL-654C-SA6-SB-0.0-0.5	280-36846-23	N	3546	8082A	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-14	N	3546	8270C SIM	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-14	N	3550C	8015B EFH	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-15	N	3050B	6010C	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-15	N	3050B	6020A	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-15	N	3546	8082A	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-15	N	7471B	7471B	III
10-Dec-2012	SL-604-SA6-SB-4.0	280-36846-16	N	5035	8015B GRO	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-17	N	3546	8270C SIM	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-17	N	3550C	8015B EFH	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-18	N	3050B	6010C	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-18	N	3050B	6020A	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-18	N	3546	8082A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-18	N	7471B	7471B	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-2	N	3546	8270C SIM	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-2	N	3550C	8015B EFH	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MS	280-36846-2MS	MS	3546	8270C SIM	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MSD	280-36846-2MSD	MSD	3546	8270C SIM	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-3	N	3050B	6010C	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-3	N	3050B	6020A	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-3	N	3546	8082A	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-3	N	7471B	7471B	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MS	280-36846-3MS	MS	3546	8082A	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MS	280-36846-3MS	MS	7471B	7471B	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MSD	280-36846-3MSD	MSD	3546	8082A	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5MSD	280-36846-3MSD	MSD	7471B	7471B	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-4	N	3546	8270C SIM	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-4	N	3550C	8015B EFH	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5MS	280-36846-4MS	MS	3550C	8015B EFH	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5MSD	280-36846-4MSD	MSD	3550C	8015B EFH	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-5	N	3050B	6010C	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-5	N	3050B	6020A	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-5	N	3546	8082A	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-5	N	7471B	7471B	III
10-Dec-2012	SL-557-SA6-SB-6.0	280-36846-6	N	5035	8015B GRO	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-39	N	3546	8270C SIM	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-39	N	3550C	8015B EFH	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-40	N	3050B	6010C	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-40	N	3050B	6020A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-40	N	3546	8082A	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-40	N	7471B	7471B	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-41	N	3546	8270C SIM	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-41	N	3550C	8015B EFH	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-42	N	3050B	6010C	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-42	N	3050B	6020A	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-42	N	3546	8082A	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-42	N	7471B	7471B	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-34	N	3546	8270C SIM	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-34	N	3550C	8015B EFH	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-35	N	3050B	6010C	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-35	N	3050B	6020A	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-35	N	3546	8082A	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-35	N	7471B	7471B	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5MS	280-36846-35MS	MS	3050B	6010C	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5MSD	280-36846-35MSD	MSD	3050B	6010C	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-36	N	3546	8270C SIM	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-36	N	3550C	8015B EFH	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-37	N	3050B	6010C	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-37	N	3050B	6020A	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-37	N	3546	8082A	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-37	N	7471B	7471B	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0MS	280-36846-37MS	MS	3546	8082A	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0MS	280-36846-37MS	MS	7471B	7471B	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0MSD	280-36846-37MSD	MSD	3546	8082A	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0MSD	280-36846-37MSD	MSD	7471B	7471B	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-45	N	3546	8270C SIM	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-45	N	3550C	8015B EFH	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-46	N	3050B	6010C	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-46	N	3050B	6020A	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-46	N	3546	8082A	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-46	N	7471B	7471B	III
10-Dec-2012	SL-601-SA6-SB-4.5	280-36846-38	N	5035	8015B GRO	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-29	N	3546	8270C SIM	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-29	N	3550C	8015B EFH	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-30	N	3050B	6010C	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-30	N	3050B	6020A	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-30	N	3546	8082A	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-30	N	7471B	7471B	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-31	N	3546	8270C SIM	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-31	N	3550C	8015B EFH	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-32	N	3050B	6010C	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-32	N	3050B	6020A	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-32	N	3546	8082A	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-32	N	7471B	7471B	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0MS	280-36846-32MS	MS	3050B	6020A	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0MSD	280-36846-32MSD	MSD	3050B	6020A	III
10-Dec-2012	SL-598-SA6-SB-4.5	280-36846-33	N	5035	8015B GRO	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-43	N	3546	8270C SIM	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-43	N	3550C	8015B EFH	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-44	N	3050B	6010C	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-44	N	3050B	6020A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-44	N	3546	8082A	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-44	N	7471B	7471B	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-24	N	3546	8270C SIM	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-24	N	3550C	8015B EFH	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-25	N	3050B	6010C	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-25	N	3050B	6020A	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-25	N	3546	8082A	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-25	N	7471B	7471B	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-26	N	3546	8270C SIM	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-26	N	3550C	8015B EFH	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-27	N	3050B	6010C	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-27	N	3050B	6020A	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-27	N	3546	8082A	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-27	N	7471B	7471B	III
10-Dec-2012	SL-596-SA6-SB-4.5	280-36846-28	N	5035	8015B GRO	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-47	N	3546	8270C SIM	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-47	N	3550C	8015B EFH	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-48	N	3050B	6010C	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-48	N	3050B	6020A	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-48	N	3546	8082A	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-48	N	7471B	7471B	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5MS	280-36846-48MS	MS	3050B	6010C	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5MS	280-36846-48MS	MS	3050B	6020A	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5MSD	280-36846-48MSD	MSD	3050B	6010C	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5MSD	280-36846-48MSD	MSD	3050B	6020A	III

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

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-557-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 10:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z
BORON	1.2	J	1.1	MDL	11	MRL	mg/Kg	U	F
LITHIUM	20	J ^ B	0.34	MDL	41	MRL	mg/Kg	J	Z
MANGANESE	300	J	0.11	MDL	550	MRL	mg/Kg	J	Z
POTASSIUM	3800	J	46	MDL	7200	MRL	mg/Kg	J	Z
SODIUM	97	J	66	MDL	560	MRL	mg/Kg	J	Z
TIN	1.6	J	1.0	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.6	J	0.40	MDL	9.6	MRL	mg/Kg	J	Z

Sample ID: **SL-557-SA6-SB-5.5-6.5** ***Collected:*** **12/10/2012 10:45:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
POTASSIUM	3500	J	38	MDL	6000	MRL	mg/Kg	J	Z
TIN	2.9	J	0.85	MDL	10	MRL	mg/Kg	J	Z
Zirconium	2.1	J	0.33	MDL	8.0	MRL	mg/Kg	J	Z

Sample ID: **SL-596-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 2:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.7	MDL	21000	MRL	mg/Kg	J	Z
LITHIUM	18	J B ^	0.32	MDL	39	MRL	mg/Kg	J	Z
MANGANESE	280	J	0.11	MDL	530	MRL	mg/Kg	J	Z
POTASSIUM	3800	J	44	MDL	6800	MRL	mg/Kg	J	Z
SODIUM	81	J	63	MDL	530	MRL	mg/Kg	U	F
TIN	1.4	J	0.97	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.5	J	0.38	MDL	9.2	MRL	mg/Kg	J	Z

Sample ID: **SL-596-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 2:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10000	J	1.6	MDL	21000	MRL	mg/Kg	J	Z
LITHIUM	22	J B ^	0.31	MDL	38	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-596-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 2:35:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MANGANESE	270	J	0.10	MDL	510	MRL	mg/Kg	J	Z
POTASSIUM	2200	J	42	MDL	6600	MRL	mg/Kg	J	Z
SODIUM	100	J	61	MDL	520	MRL	mg/Kg	J	Z
TIN	1.6	J	0.94	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.0	J	0.37	MDL	8.9	MRL	mg/Kg	J	Z

Sample ID: SL-598-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z
BORON	1.6	J	1.1	MDL	11	MRL	mg/Kg	U	F
LITHIUM	18	J B ^	0.33	MDL	41	MRL	mg/Kg	J	Z
MANGANESE	310	J	0.11	MDL	540	MRL	mg/Kg	J	Z
POTASSIUM	3400	J	45	MDL	7000	MRL	mg/Kg	J	Z
SODIUM	80	J	65	MDL	550	MRL	mg/Kg	U	F
TIN	1.5	J	1.0	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.6	J	0.39	MDL	9.4	MRL	mg/Kg	J	Z

Sample ID: SL-598-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	16000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z
LITHIUM	23	J B ^	0.31	MDL	38	MRL	mg/Kg	J	Z
MANGANESE	300	J	0.10	MDL	510	MRL	mg/Kg	J	Z
POTASSIUM	2800	J	42	MDL	6500	MRL	mg/Kg	J	Z
SODIUM	110	J	60	MDL	510	MRL	mg/Kg	J	Z
TIN	1.6	J	0.93	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.8	J	0.36	MDL	8.8	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-601-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13000	J	1.7	MDL	21000	MRL	mg/Kg	J	Z
LITHIUM	19	J B ^	0.32	MDL	39	MRL	mg/Kg	J	Z
MANGANESE	350	J	0.11	MDL	530	MRL	mg/Kg	J	Z
POTASSIUM	3900	J	44	MDL	6800	MRL	mg/Kg	J	Z
SODIUM	74	J	63	MDL	530	MRL	mg/Kg	U	F
TIN	1.3	J	0.97	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.5	J	0.38	MDL	9.2	MRL	mg/Kg	J	Z

Sample ID: SL-601-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	18000	J	1.6	MDL	20000	MRL	mg/Kg	J	Z, Q
BORON	1.4	J	0.99	MDL	9.8	MRL	mg/Kg	U	F
IRON	22000	B	3.8	MDL	34	MRL	mg/Kg	J	Q
LITHIUM	24	J	0.30	MDL	37	MRL	mg/Kg	J	Z
MANGANESE	300	J B	0.10	MDL	500	MRL	mg/Kg	J	Z, Q
POTASSIUM	2900	J	41	MDL	6400	MRL	mg/Kg	J	Z
SODIUM	150	J	59	MDL	500	MRL	mg/Kg	J	Z
TIN	1.6	J	0.92	MDL	11	MRL	mg/Kg	J	Z
TITANIUM	950		0.14	MDL	1.0	MRL	mg/Kg	J	Q
Zirconium	2.1	J	0.36	MDL	8.7	MRL	mg/Kg	J	Z

Sample ID: SL-603-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:20:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.5	MDL	19000	MRL	mg/Kg	J	Z
LITHIUM	19	J ^ B	0.28	MDL	35	MRL	mg/Kg	J	Z
MANGANESE	310	J	0.094	MDL	470	MRL	mg/Kg	J	Z
POTASSIUM	4100	J	39	MDL	6000	MRL	mg/Kg	J	Z
SODIUM	97	J	56	MDL	470	MRL	mg/Kg	J	Z
TIN	1.7	J	0.86	MDL	10	MRL	mg/Kg	J	Z
Zirconium	1.8	J	0.33	MDL	8.1	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-603-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 8:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	15000	J	1.7	MDL	21000	MRL	mg/Kg	J	Z
LITHIUM	21	J ^ B	0.32	MDL	40	MRL	mg/Kg	J	Z
MANGANESE	160	J	0.11	MDL	530	MRL	mg/Kg	J	Z
POTASSIUM	2000	J	44	MDL	6900	MRL	mg/Kg	J	Z
SODIUM	280	J	63	MDL	540	MRL	mg/Kg	J	Z
TIN	1.9	J	0.98	MDL	12	MRL	mg/Kg	J	Z
Zirconium	1.3	J	0.38	MDL	9.2	MRL	mg/Kg	J	Z

Sample ID: SL-604-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 9:25:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	15000	J	1.5	MDL	20000	MRL	mg/Kg	J	Z
BORON	1.5	J	0.97	MDL	9.6	MRL	mg/Kg	U	F
LITHIUM	21	J ^ B	0.30	MDL	37	MRL	mg/Kg	J	Z
MANGANESE	250	J	0.099	MDL	490	MRL	mg/Kg	J	Z
POTASSIUM	2400	J	40	MDL	6300	MRL	mg/Kg	J	Z
SODIUM	240	J	58	MDL	490	MRL	mg/Kg	J	Z
TIN	1.7	J	0.90	MDL	11	MRL	mg/Kg	J	Z
Zirconium	1.8	J	0.35	MDL	8.5	MRL	mg/Kg	J	Z

Sample ID: SL-604-SA6-SB-3.5-4.5 *Collected:* 12/10/2012 9:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	21000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z
MANGANESE	240	J	0.11	MDL	540	MRL	mg/Kg	J	Z
POTASSIUM	3000	J	44	MDL	6900	MRL	mg/Kg	J	Z
TIN	3.0	J	0.99	MDL	12	MRL	mg/Kg	J	Z
Zirconium	2.4	J	0.38	MDL	9.3	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-608-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 12:25:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z, Q
BORON	3.1	J	1.1	MDL	11	MRL	mg/Kg	U	F
IRON	19000	B	4.1	MDL	37	MRL	mg/Kg	J	Q
LITHIUM	20	J	0.33	MDL	40	MRL	mg/Kg	J	Z
MANGANESE	310	J B	0.11	MDL	540	MRL	mg/Kg	J	Z, Q
POTASSIUM	4300	J	45	MDL	7000	MRL	mg/Kg	J	Z
SODIUM	88	J	64	MDL	540	MRL	mg/Kg	J	Z
TIN	1.4	J	0.99	MDL	12	MRL	mg/Kg	J	Z
TITANIUM	900		0.15	MDL	1.1	MRL	mg/Kg	J	Q
Zirconium	1.5	J	0.39	MDL	9.4	MRL	mg/Kg	J	Z

Sample ID: SL-653-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	15000	J	1.7	MDL	21000	MRL	mg/Kg	J	Z
BORON	2.2	J	1.0	MDL	10	MRL	mg/Kg	U	F
LITHIUM	17	J ^ B	0.32	MDL	39	MRL	mg/Kg	J	Z
MANGANESE	250	J	0.11	MDL	530	MRL	mg/Kg	J	Z
POTASSIUM	3100	J	44	MDL	6800	MRL	mg/Kg	J	Z
SODIUM	81	J	63	MDL	530	MRL	mg/Kg	U	F
TIN	1.3	J	0.97	MDL	12	MRL	mg/Kg	J	Z
Zirconium	2.8	J	0.38	MDL	9.2	MRL	mg/Kg	J	Z

Sample ID: SL-654A-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	20000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z
BORON	3.4	J	1.1	MDL	11	MRL	mg/Kg	U	F
LITHIUM	21	J B ^	0.33	MDL	41	MRL	mg/Kg	J	Z
MANGANESE	340	J	0.11	MDL	540	MRL	mg/Kg	J	Z
POTASSIUM	4300	J	45	MDL	7000	MRL	mg/Kg	J	Z
SODIUM	100	J	65	MDL	550	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **6010C** ***Matrix:*** **SO**

Sample ID: **SL-654A-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 8:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TIN	1.6	J	1.0	MDL	12	MRL	mg/Kg	J	Z
Zirconium	3.7	J	0.39	MDL	9.5	MRL	mg/Kg	J	Z

Sample ID: **SL-666-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 12:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.5	MDL	19000	MRL	mg/Kg	J	Z, Q
BORON	2.4	J	0.93	MDL	9.2	MRL	mg/Kg	U	F
IRON	16000	B	3.6	MDL	32	MRL	mg/Kg	J	Q
LITHIUM	18	J	0.28	MDL	35	MRL	mg/Kg	J	Z
MANGANESE	380	J B	0.095	MDL	470	MRL	mg/Kg	J	Z, Q
POTASSIUM	3800	J	39	MDL	6100	MRL	mg/Kg	J	Z
SODIUM	87	J	56	MDL	470	MRL	mg/Kg	J	Z
TIN	1.2	J	0.87	MDL	10	MRL	mg/Kg	J	Z
TITANIUM	860		0.13	MDL	0.94	MRL	mg/Kg	J	Q
Zirconium	1.7	J	0.34	MDL	8.2	MRL	mg/Kg	J	Z

Sample ID: **SL-667-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 2:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	12000	J	1.7	MDL	22000	MRL	mg/Kg	J	Z, Q
BORON	2.4	J	1.1	MDL	11	MRL	mg/Kg	U	F
IRON	16000	B	4.2	MDL	37	MRL	mg/Kg	J	Q
LITHIUM	17	J	0.33	MDL	41	MRL	mg/Kg	J	Z
MANGANESE	360	J B	0.11	MDL	550	MRL	mg/Kg	J	Z, Q
POTASSIUM	3400	J	45	MDL	7100	MRL	mg/Kg	J	Z
SODIUM	93	J	65	MDL	550	MRL	mg/Kg	J	Z
TIN	1.3	J	1.0	MDL	12	MRL	mg/Kg	J	Z
TITANIUM	840		0.15	MDL	1.1	MRL	mg/Kg	J	Q
Zirconium	1.6	J	0.39	MDL	9.5	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6010C **Matrix: SO**

Sample ID: SL-668-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	26000		1.5	MDL	20000	MRL	mg/Kg	J	Q
BORON	6.0	J	0.98	MDL	9.7	MRL	mg/Kg	U	F
IRON	30000	B	3.8	MDL	34	MRL	mg/Kg	J	Q
LITHIUM	23	J	0.30	MDL	37	MRL	mg/Kg	J	Z
MANGANESE	430	J B	0.10	MDL	490	MRL	mg/Kg	J	Z, Q
POTASSIUM	5500	J	41	MDL	6400	MRL	mg/Kg	J	Z
SODIUM	120	J	59	MDL	500	MRL	mg/Kg	J	Z
TIN	1.7	J	0.91	MDL	11	MRL	mg/Kg	J	Z
TITANIUM	770		0.14	MDL	0.99	MRL	mg/Kg	J	Q
Zirconium	4.3	J	0.35	MDL	8.6	MRL	mg/Kg	J	Z

Sample ID: SL-684-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	14000	J	1.5	MDL	19000	MRL	mg/Kg	J	Z, Q
BORON	1.6	J	0.95	MDL	9.4	MRL	mg/Kg	U	F
IRON	17000	B	3.7	MDL	33	MRL	mg/Kg	J	Q
LITHIUM	20	J	0.29	MDL	36	MRL	mg/Kg	J	Z
MANGANESE	300	J B	0.097	MDL	480	MRL	mg/Kg	J	Z, Q
POTASSIUM	3200	J	40	MDL	6200	MRL	mg/Kg	J	Z
SODIUM	110	J ^	57	MDL	490	MRL	mg/Kg	U	B
TIN	1.4	J	0.89	MDL	11	MRL	mg/Kg	J	Z
TITANIUM	880		0.14	MDL	0.97	MRL	mg/Kg	J	Q
Zirconium	1.8	J	0.34	MDL	8.4	MRL	mg/Kg	J	Z

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-557-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:25:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.044	J	0.015	MDL	9.0	MRL	mg/Kg	J	Z, E, Q

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix:** SO

Sample ID: SL-557-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:25:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ARSENIC	4.2	J	0.052	MDL	16	MRL	mg/Kg	J	Z
BARIUM	99	J	0.073	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.61	J	0.023	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.66	J	0.0097	MDL	1.0	MRL	mg/Kg	J	Z
CHROMIUM	35	J	0.079	MDL	38	MRL	mg/Kg	J	Z
COBALT	7.0	J	0.0069	MDL	22	MRL	mg/Kg	J	Z
COPPER	18	J	0.074	MDL	30	MRL	mg/Kg	J	Z
MOLYBDENUM	0.85	J	0.018	MDL	5.5	MRL	mg/Kg	J	Z
NICKEL	29	J	0.026	MDL	30	MRL	mg/Kg	J	Z
THALLIUM	0.29	J B	0.0036	MDL	0.48	MRL	mg/Kg	J	Z
VANADIUM	36	J	0.040	MDL	64	MRL	mg/Kg	J	Z, Q
ZINC	83	J	0.33	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-557-SA6-SB-5.5-6.5 *Collected:* 12/10/2012 10:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.015	J	0.013	MDL	8.1	MRL	mg/Kg	J	Z, E, Q
ARSENIC	7.2	J	0.047	MDL	14	MRL	mg/Kg	J	Z
CADMIUM	0.59	J	0.0088	MDL	0.94	MRL	mg/Kg	J	Z
CHROMIUM	29	J	0.071	MDL	34	MRL	mg/Kg	J	Z
COBALT	13	J	0.0062	MDL	20	MRL	mg/Kg	J	Z
COPPER	22	J	0.067	MDL	27	MRL	mg/Kg	J	Z
LEAD	17	J	0.017	MDL	32	MRL	mg/Kg	J	Z
MOLYBDENUM	0.33	J	0.016	MDL	5.0	MRL	mg/Kg	J	Z
NICKEL	22	J	0.024	MDL	27	MRL	mg/Kg	J	Z
SILVER	0.033	J	0.019	MDL	0.74	MRL	mg/Kg	U	F
THALLIUM	0.38	J B	0.0033	MDL	0.43	MRL	mg/Kg	J	Z
VANADIUM	49	J	0.036	MDL	58	MRL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-596-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:25:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.029	J	0.014	MDL	8.8	MRL	mg/Kg	J	Z, E, Q
ARSENIC	3.6	J	0.051	MDL	15	MRL	mg/Kg	J	Z
BARIUM	97	J	0.071	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.55	J	0.023	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.40	J	0.0094	MDL	1.0	MRL	mg/Kg	J	Z
CHROMIUM	18	J	0.077	MDL	37	MRL	mg/Kg	J	Z
COBALT	6.0	J	0.0067	MDL	21	MRL	mg/Kg	J	Z
COPPER	11	J	0.072	MDL	29	MRL	mg/Kg	J	Z
LEAD	15	J	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.41	J	0.018	MDL	5.3	MRL	mg/Kg	J	Z
NICKEL	12	J	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.25	J	0.020	MDL	0.80	MRL	mg/Kg	U	F
THALLIUM	0.25	J B	0.0035	MDL	0.46	MRL	mg/Kg	J	Z
VANADIUM	33	J	0.039	MDL	62	MRL	mg/Kg	J	Z, Q
ZINC	65	J	0.32	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-596-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 2:35:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.018	J	0.013	MDL	8.3	MRL	mg/Kg	J	Z, E, Q
ARSENIC	4.1	J	0.048	MDL	14	MRL	mg/Kg	J	Z
BARIUM	66	J	0.067	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.42	J	0.021	MDL	1.0	MRL	mg/Kg	J	Z
CADMIUM	0.14	J	0.0089	MDL	0.95	MRL	mg/Kg	J	Z
CHROMIUM	21	J	0.072	MDL	35	MRL	mg/Kg	J	Z
COBALT	6.1	J	0.0063	MDL	20	MRL	mg/Kg	J	Z
COPPER	8.8	J	0.068	MDL	28	MRL	mg/Kg	J	Z
LEAD	4.3	J	0.017	MDL	32	MRL	mg/Kg	J	Z
MOLYBDENUM	0.28	J	0.017	MDL	5.0	MRL	mg/Kg	J	Z
NICKEL	13	J	0.024	MDL	28	MRL	mg/Kg	J	Z
THALLIUM	0.23	J B	0.0033	MDL	0.44	MRL	mg/Kg	J	Z
VANADIUM	36	J	0.037	MDL	59	MRL	mg/Kg	J	Z, Q

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-596-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 2:35:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	49	J	0.30	MDL	100	MRL	mg/Kg	J	Z

Sample ID: SL-598-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:40:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.032	J	0.015	MDL	9.4	MRL	mg/Kg	J	Z, E, Q
ARSENIC	3.3	J	0.054	MDL	16	MRL	mg/Kg	J	Z
BARIUM	110	J	0.076	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.56	J	0.024	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.49	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	18	J	0.082	MDL	40	MRL	mg/Kg	J	Z
COBALT	6.7	J	0.0071	MDL	23	MRL	mg/Kg	J	Z
COPPER	11	J	0.077	MDL	31	MRL	mg/Kg	J	Z
LEAD	17	J	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.47	J	0.019	MDL	5.7	MRL	mg/Kg	J	Z
NICKEL	13	J	0.027	MDL	31	MRL	mg/Kg	J	Z
THALLIUM	0.24	J B	0.0038	MDL	0.50	MRL	mg/Kg	J	Z
VANADIUM	30	J	0.041	MDL	67	MRL	mg/Kg	J	Z, Q

Sample ID: SL-598-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.014	U	0.014	MDL	8.5	MRL	mg/Kg	UJ	E, Q
ARSENIC	4.1	J	0.049	MDL	15	MRL	mg/Kg	J	Z
BARIUM	93	J	0.069	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.64	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.17	J	0.0091	MDL	0.97	MRL	mg/Kg	J	Z
CHROMIUM	20	J	0.074	MDL	36	MRL	mg/Kg	J	Z
COBALT	6.0	J	0.0065	MDL	20	MRL	mg/Kg	J	Z
COPPER	8.7	J	0.069	MDL	28	MRL	mg/Kg	J	Z
LEAD	5.8	J	0.018	MDL	33	MRL	mg/Kg	J	Z
MOLYBDENUM	0.41	J	0.017	MDL	5.2	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-598-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NICKEL	13	J	0.025	MDL	28	MRL	mg/Kg	J	Z
SILVER	0.060	J	0.020	MDL	0.77	MRL	mg/Kg	U	F
THALLIUM	0.26	J B	0.0034	MDL	0.45	MRL	mg/Kg	J	Z
VANADIUM	38	J	0.038	MDL	60	MRL	mg/Kg	J	Z, Q
ZINC	51	J	0.31	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-601-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:00:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.022	J	0.014	MDL	8.7	MRL	mg/Kg	J	Z, E, Q
ARSENIC	3.1	J	0.051	MDL	15	MRL	mg/Kg	J	Z
BARIUM	100	J	0.070	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.53	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.39	J	0.0094	MDL	1.0	MRL	mg/Kg	J	Z
CHROMIUM	17	J	0.076	MDL	37	MRL	mg/Kg	J	Z
COBALT	5.7	J	0.0066	MDL	21	MRL	mg/Kg	J	Z
COPPER	10	J	0.071	MDL	29	MRL	mg/Kg	J	Z
LEAD	10	J	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.45	J	0.018	MDL	5.3	MRL	mg/Kg	J	Z
NICKEL	13	J	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.30	J	0.020	MDL	0.79	MRL	mg/Kg	U	F
THALLIUM	0.26	J B	0.0035	MDL	0.46	MRL	mg/Kg	J	Z
VANADIUM	28	J	0.038	MDL	62	MRL	mg/Kg	J	Z, Q
ZINC	58	J	0.32	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-601-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.016	J	0.013	MDL	7.8	MRL	mg/Kg	J	Z, Q
ARSENIC	4.2	J	0.045	MDL	13	MRL	mg/Kg	J	Z
BARIUM	100	J	0.063	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.72	J	0.020	MDL	0.98	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-601-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.21	J	0.0084	MDL	0.89	MRL	mg/Kg	J	Z
CHROMIUM	20	J	0.068	MDL	33	MRL	mg/Kg	J	Z
COBALT	6.2	J	0.0059	MDL	19	MRL	mg/Kg	J	Z
COPPER	9.6	J	0.064	MDL	26	MRL	mg/Kg	J	Z
LEAD	6.0	J	0.016	MDL	30	MRL	mg/Kg	J	Z
MOLYBDENUM	0.46	J	0.016	MDL	4.7	MRL	mg/Kg	J	Z
NICKEL	13	J	0.023	MDL	26	MRL	mg/Kg	J	Z
SILVER	0.047	J	0.018	MDL	0.71	MRL	mg/Kg	U	F
THALLIUM	0.30	J	0.0031	MDL	0.41	MRL	mg/Kg	J	Z
VANADIUM	36	J	0.034	MDL	55	MRL	mg/Kg	J	Z
ZINC	51	J	0.28	MDL	98	MRL	mg/Kg	J	Z

Sample ID: SL-603-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:20:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.021	J	0.015	MDL	9.6	MRL	mg/Kg	J	Z, E, Q
ARSENIC	5.9	J	0.056	MDL	16	MRL	mg/Kg	J	Z
BARIUM	100	J	0.077	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.58	J	0.025	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.58	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	19	J	0.083	MDL	40	MRL	mg/Kg	J	Z
COBALT	6.7	J	0.0073	MDL	23	MRL	mg/Kg	J	Z
COPPER	15	J	0.078	MDL	32	MRL	mg/Kg	J	Z
LEAD	7.7	J	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.41	J	0.019	MDL	5.8	MRL	mg/Kg	J	Z
NICKEL	14	J	0.028	MDL	32	MRL	mg/Kg	J	Z
SILVER	0.060	J	0.022	MDL	0.87	MRL	mg/Kg	U	F
THALLIUM	0.28	J B	0.0039	MDL	0.51	MRL	mg/Kg	J	Z
VANADIUM	35	J	0.042	MDL	68	MRL	mg/Kg	J	Z, Q
ZINC	71	J	0.35	MDL	120	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

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

Sample ID: **SL-603-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 8:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.014	U	0.014	MDL	8.6	MRL	mg/Kg	UJ	E, Q
ARSENIC	5.2	J	0.050	MDL	15	MRL	mg/Kg	J	Z
BARIUM	75	J	0.070	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.80	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.15	J	0.0093	MDL	0.99	MRL	mg/Kg	J	Z
CHROMIUM	21	J	0.076	MDL	37	MRL	mg/Kg	J	Z
COBALT	5.0	J	0.0066	MDL	21	MRL	mg/Kg	J	Z
COPPER	8.3	J	0.071	MDL	29	MRL	mg/Kg	J	Z
LEAD	6.8	J	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.17	J	0.017	MDL	5.3	MRL	mg/Kg	J	Z
NICKEL	11	J	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.085	J	0.020	MDL	0.79	MRL	mg/Kg	U	F
THALLIUM	0.25	J B	0.0035	MDL	0.46	MRL	mg/Kg	J	Z
VANADIUM	37	J	0.038	MDL	62	MRL	mg/Kg	J	Z, Q
ZINC	62	J	0.31	MDL	110	MRL	mg/Kg	J	Z

Sample ID: **SL-604-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 9:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.013	U	0.013	MDL	8.1	MRL	mg/Kg	UJ	E, Q
ARSENIC	4.7	J	0.047	MDL	14	MRL	mg/Kg	J	Z
BARIUM	86	J	0.066	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.72	J	0.021	MDL	1.0	MRL	mg/Kg	J	Z
CADMIUM	0.15	J	0.0087	MDL	0.93	MRL	mg/Kg	J	Z
CHROMIUM	18	J	0.071	MDL	34	MRL	mg/Kg	J	Z
COBALT	8.5	J	0.0062	MDL	20	MRL	mg/Kg	J	Z
COPPER	12	J	0.066	MDL	27	MRL	mg/Kg	J	Z
LEAD	7.4	J	0.017	MDL	32	MRL	mg/Kg	J	Z
MOLYBDENUM	0.36	J	0.016	MDL	4.9	MRL	mg/Kg	J	Z
NICKEL	12	J	0.024	MDL	27	MRL	mg/Kg	J	Z
SILVER	0.031	J	0.019	MDL	0.73	MRL	mg/Kg	U	F
THALLIUM	0.26	J B	0.0033	MDL	0.43	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

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

Sample ID: **SL-604-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 9:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	41	J	0.036	MDL	58	MRL	mg/Kg	J	Z, Q
ZINC	52	J	0.29	MDL	100	MRL	mg/Kg	J	Z

Sample ID: **SL-604-SA6-SB-3.5-4.5** ***Collected:*** **12/10/2012 9:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.014	J	0.014	MDL	8.7	MRL	mg/Kg	J	Z, E, Q
ARSENIC	6.9	J	0.050	MDL	15	MRL	mg/Kg	J	Z
CADMIUM	0.31	J	0.0094	MDL	1.0	MRL	mg/Kg	J	Z
COBALT	13	J	0.0066	MDL	21	MRL	mg/Kg	J	Z
COPPER	27	J	0.071	MDL	29	MRL	mg/Kg	J	Z
LEAD	17	J	0.018	MDL	34	MRL	mg/Kg	J	Z
MOLYBDENUM	0.52	J	0.018	MDL	5.3	MRL	mg/Kg	J	Z
NICKEL	24	J	0.025	MDL	29	MRL	mg/Kg	J	Z
SILVER	0.047	J	0.020	MDL	0.79	MRL	mg/Kg	U	F
THALLIUM	0.41	J B	0.0035	MDL	0.46	MRL	mg/Kg	J	Z
VANADIUM	66		0.038	MDL	62	MRL	mg/Kg	J	Q

Sample ID: **SL-608-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 12:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.023	J	0.013	MDL	8.2	MRL	mg/Kg	J	Z, Q
ARSENIC	3.7	J	0.048	MDL	14	MRL	mg/Kg	J	Z
BARIUM	100	J	0.066	MDL	130	MRL	mg/Kg	J	Z
BERYLLIUM	0.56	J	0.021	MDL	1.0	MRL	mg/Kg	J	Z
CADMIUM	0.47	J	0.0088	MDL	0.94	MRL	mg/Kg	J	Z
CHROMIUM	19	J	0.071	MDL	35	MRL	mg/Kg	J	Z
COBALT	5.9	J	0.0062	MDL	20	MRL	mg/Kg	J	Z
COPPER	12	J	0.067	MDL	27	MRL	mg/Kg	J	Z
LEAD	12	J	0.017	MDL	32	MRL	mg/Kg	J	Z
MOLYBDENUM	0.44	J	0.017	MDL	5.0	MRL	mg/Kg	J	Z
NICKEL	14	J	0.024	MDL	27	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

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

Sample ID: **SL-608-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 12:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.14	J	0.019	MDL	0.74	MRL	mg/Kg	U	F
THALLIUM	0.28	J	0.0033	MDL	0.43	MRL	mg/Kg	J	Z
VANADIUM	31	J	0.036	MDL	58	MRL	mg/Kg	J	Z
ZINC	73	J	0.30	MDL	100	MRL	mg/Kg	J	Z

Sample ID: **SL-653-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 10:10:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.015	J	0.015	MDL	9.5	MRL	mg/Kg	J	Z, E, Q
ARSENIC	5.5	J	0.055	MDL	16	MRL	mg/Kg	J	Z
BARIUM	110	J	0.077	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.81	J	0.025	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.42	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	28	J	0.083	MDL	40	MRL	mg/Kg	J	Z
COBALT	9.9	J	0.0073	MDL	23	MRL	mg/Kg	J	Z
COPPER	15	J	0.078	MDL	32	MRL	mg/Kg	J	Z
LEAD	9.8	J	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.27	J	0.019	MDL	5.8	MRL	mg/Kg	J	Z
NICKEL	22	J	0.028	MDL	32	MRL	mg/Kg	J	Z
SILVER	0.048	J	0.022	MDL	0.87	MRL	mg/Kg	U	F
THALLIUM	0.33	J B	0.0038	MDL	0.50	MRL	mg/Kg	J	Z
VANADIUM	53	J	0.042	MDL	68	MRL	mg/Kg	J	Z, Q
ZINC	81	J	0.35	MDL	120	MRL	mg/Kg	J	Z

Sample ID: **SL-654A-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 8:15:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.016	U	0.016	MDL	10	MRL	mg/Kg	UJ	E, Q
ARSENIC	5.1	J	0.058	MDL	17	MRL	mg/Kg	J	Z
BARIUM	110	J	0.081	MDL	160	MRL	mg/Kg	J	Z
BERYLLIUM	0.78	J	0.026	MDL	1.3	MRL	mg/Kg	J	Z
CADMIUM	0.49	J	0.011	MDL	1.1	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix:** SO

Sample ID: SL-654A-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	27	J	0.087	MDL	42	MRL	mg/Kg	J	Z
COBALT	8.6	J	0.0076	MDL	24	MRL	mg/Kg	J	Z
COPPER	15	J	0.081	MDL	33	MRL	mg/Kg	J	Z
LEAD	20	J	0.021	MDL	39	MRL	mg/Kg	J	Z
MOLYBDENUM	0.29	J	0.020	MDL	6.1	MRL	mg/Kg	J	Z
NICKEL	18	J	0.029	MDL	33	MRL	mg/Kg	J	Z
SILVER	0.23	J	0.023	MDL	0.90	MRL	mg/Kg	U	F
THALLIUM	0.30	J B	0.0040	MDL	0.53	MRL	mg/Kg	J	Z
VANADIUM	48	J	0.044	MDL	71	MRL	mg/Kg	J	Z, Q
ZINC	86	J	0.36	MDL	130	MRL	mg/Kg	J	Z

Sample ID: SL-666-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 12:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.021	J	0.015	MDL	9.2	MRL	mg/Kg	J	Z, Q
ARSENIC	2.5	J	0.054	MDL	16	MRL	mg/Kg	J	Z
BARIUM	100	J	0.075	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.52	J	0.024	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.34	J	0.0099	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	14	J	0.080	MDL	39	MRL	mg/Kg	J	Z
COBALT	5.0	J	0.0070	MDL	22	MRL	mg/Kg	J	Z
COPPER	8.3	J	0.075	MDL	31	MRL	mg/Kg	J	Z
LEAD	9.1	J	0.019	MDL	36	MRL	mg/Kg	J	Z
MOLYBDENUM	0.41	J	0.019	MDL	5.6	MRL	mg/Kg	J	Z
NICKEL	10	J	0.027	MDL	31	MRL	mg/Kg	J	Z
SILVER	0.054	J	0.021	MDL	0.84	MRL	mg/Kg	U	F
THALLIUM	0.25	J	0.0037	MDL	0.49	MRL	mg/Kg	J	Z
VANADIUM	26	J	0.041	MDL	66	MRL	mg/Kg	J	Z
ZINC	51	J	0.33	MDL	120	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-667-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.023	J	0.014	MDL	8.5	MRL	mg/Kg	J	Z, Q
ARSENIC	2.6	J	0.049	MDL	15	MRL	mg/Kg	J	Z
BARIUM	100	J	0.069	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.52	J	0.022	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.40	J	0.0092	MDL	0.98	MRL	mg/Kg	J	Z
CHROMIUM	14	J	0.074	MDL	36	MRL	mg/Kg	J	Z
COBALT	5.0	J	0.0065	MDL	20	MRL	mg/Kg	J	Z
COPPER	9.3	J	0.069	MDL	28	MRL	mg/Kg	J	Z
LEAD	14	J	0.018	MDL	33	MRL	mg/Kg	J	Z
MOLYBDENUM	0.40	J	0.017	MDL	5.2	MRL	mg/Kg	J	Z
NICKEL	11	J	0.025	MDL	28	MRL	mg/Kg	J	Z
SILVER	0.14	J	0.020	MDL	0.77	MRL	mg/Kg	U	F
THALLIUM	0.24	J	0.0034	MDL	0.45	MRL	mg/Kg	J	Z
VANADIUM	25	J	0.038	MDL	61	MRL	mg/Kg	J	Z
ZINC	65	J	0.31	MDL	110	MRL	mg/Kg	J	Z

Sample ID: SL-668-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.027	J	0.015	MDL	9.5	MRL	mg/Kg	J	Z, Q
ARSENIC	5.2	J	0.055	MDL	16	MRL	mg/Kg	J	Z
BARIUM	120	J	0.077	MDL	150	MRL	mg/Kg	J	Z
BERYLLIUM	0.96	J	0.024	MDL	1.2	MRL	mg/Kg	J	Z
CADMIUM	0.58	J	0.010	MDL	1.1	MRL	mg/Kg	J	Z
CHROMIUM	31	J	0.083	MDL	40	MRL	mg/Kg	J	Z
COBALT	11	J	0.0072	MDL	23	MRL	mg/Kg	J	Z
COPPER	17	J	0.077	MDL	32	MRL	mg/Kg	J	Z
LEAD	9.8	J	0.020	MDL	37	MRL	mg/Kg	J	Z
MOLYBDENUM	0.22	J	0.019	MDL	5.8	MRL	mg/Kg	J	Z
NICKEL	21	J	0.028	MDL	32	MRL	mg/Kg	J	Z
SILVER	0.051	J	0.022	MDL	0.86	MRL	mg/Kg	U	F
THALLIUM	0.35	J	0.0038	MDL	0.50	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 6020A **Matrix: SO**

Sample ID: SL-668-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
VANADIUM	54	J	0.042	MDL	67	MRL	mg/Kg	J	Z
ZINC	74	J	0.34	MDL	120	MRL	mg/Kg	J	Z

Sample ID: SL-684-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.021	J	0.014	MDL	8.9	MRL	mg/Kg	J	Z, Q
ARSENIC	3.5	J	0.052	MDL	15	MRL	mg/Kg	J	Z
BARIUM	100	J	0.072	MDL	140	MRL	mg/Kg	J	Z
BERYLLIUM	0.52	J	0.023	MDL	1.1	MRL	mg/Kg	J	Z
CADMIUM	0.28	J	0.0096	MDL	1.0	MRL	mg/Kg	J	Z
CHROMIUM	18	J	0.078	MDL	38	MRL	mg/Kg	J	Z
COBALT	5.8	J	0.0068	MDL	22	MRL	mg/Kg	J	Z
COPPER	9.1	J	0.073	MDL	30	MRL	mg/Kg	J	Z
LEAD	9.6	J	0.019	MDL	35	MRL	mg/Kg	J	Z
MOLYBDENUM	0.46	J	0.018	MDL	5.4	MRL	mg/Kg	J	Z
NICKEL	12	J	0.026	MDL	30	MRL	mg/Kg	J	Z
SILVER	0.071	J	0.021	MDL	0.81	MRL	mg/Kg	U	F
THALLIUM	0.25	J	0.0036	MDL	0.47	MRL	mg/Kg	J	Z
VANADIUM	32	J	0.040	MDL	64	MRL	mg/Kg	J	Z
ZINC	58	J	0.32	MDL	110	MRL	mg/Kg	J	Z

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-557-SA6-SB-5.5-6.5 *Collected:* 12/10/2012 10:45:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.011	J	0.0071	MDL	0.026	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **METALS**

Method: **7471B** ***Matrix:*** **SO**

Sample ID: **SL-596-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 2:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.022	J	0.0070	MDL	0.025	MRL	mg/Kg	J	Z

Sample ID: **SL-601-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 1:00:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.020	J	0.0068	MDL	0.025	MRL	mg/Kg	J	Z

Sample ID: **SL-601-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 1:10:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.010	J	0.0069	MDL	0.025	MRL	mg/Kg	J	Z

Sample ID: **SL-603-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 8:20:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.021	J	0.0067	MDL	0.024	MRL	mg/Kg	J	Z

Sample ID: **SL-604-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 9:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.018	J	0.0067	MDL	0.024	MRL	mg/Kg	J	Z

Sample ID: **SL-604-SA6-SB-3.5-4.5** ***Collected:*** **12/10/2012 9:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.011	J	0.0073	MDL	0.026	MRL	mg/Kg	J	Z

Sample ID: **SL-608-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 12:25:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.025	J	0.0071	MDL	0.026	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: METALS

Method: 7471B **Matrix: SO**

Sample ID: SL-653-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.017	J	0.0073	MDL	0.026	MRL	mg/Kg	J	Z

Sample ID: SL-654A-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:15:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.023	J	0.0070	MDL	0.025	MRL	mg/Kg	J	Z

Sample ID: SL-668-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0095	J	0.0068	MDL	0.025	MRL	mg/Kg	J	Z

Sample ID: SL-684-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:50:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.015	J	0.0065	MDL	0.024	MRL	mg/Kg	J	Z

Method Category: SVOA

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

Sample ID: SL-557-SA6-SB-5.5-6.5 *Collected:* 12/10/2012 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
TOTAL EFH(C8-C40)	1.7	J B	0.74	MDL	4.3	MRL	mg/Kg	U	B

Sample ID: SL-596-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	1.7	J	1.1	MDL	5.4	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-596-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 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
TOTAL EFH(C8-C40)	1.0	J B	0.69	MDL	4.1	MRL	mg/Kg	U	B

Sample ID: **SL-598-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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(C15-C20)	2.3	J	1.1	MDL	5.5	MRL	mg/Kg	J	Z

Sample ID: **SL-598-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 1:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TOTAL EFH(C8-C40)	2.1	J B	0.70	MDL	4.1	MRL	mg/Kg	U	B

Sample ID: **SL-601-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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
EFH(C21-C30)	3.4	J	1.1	MDL	5.3	MRL	mg/Kg	J	Z

Sample ID: **SL-601-SA6-SB-4.0-5.0** ***Collected:*** **12/10/2012 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	1.1	J	1.0	MDL	10	MRL	mg/Kg	J	Z
TOTAL EFH(C8-C40)	2.5	J B	0.68	MDL	4.0	MRL	mg/Kg	U	B

Sample ID: **SL-603-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 8:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **5**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	6.6	J	5.5	MDL	28	MRL	mg/Kg	J	Z

Sample ID: **SL-604-SA6-SB-3.5-4.5** ***Collected:*** **12/10/2012 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
EFH(C21-C30)	1.8	J	1.1	MDL	5.5	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-608-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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
EFH(C15-C20)	2.1	J	1.1	MDL	5.4	MRL	mg/Kg	J	Z

Sample ID: **SL-653-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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(C21-C30)	4.7	J	1.1	MDL	5.3	MRL	mg/Kg	J	Z

Sample ID: **SL-666-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 12:30:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	1.1	J	1.1	MDL	11	MRL	mg/Kg	J	Z
TOTAL EFH(C8-C40)	2.7	J B	0.71	MDL	4.2	MRL	mg/Kg	U	B

Sample ID: **SL-667-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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(C12-C14)	1.9	J	1.0	MDL	5.1	MRL	mg/Kg	J	Z

Sample ID: **SL-668-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	1.4	J	1.1	MDL	5.6	MRL	mg/Kg	J	Z
EFH(C21-C30)	3.9	J	1.1	MDL	5.6	MRL	mg/Kg	J	Z

Sample ID: **SL-684-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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
EFH(C15-C20)	1.3	J	1.0	MDL	5.0	MRL	mg/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 8082A **Matrix: SO**

Sample ID: SL-557-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	17	U	17	MDL	53	MRL	ug/Kg	UJ	Q
Aroclor 5442	34	U	34	MDL	53	MRL	ug/Kg	UJ	Q
Aroclor 5460	31	J	18	MDL	53	MRL	ug/Kg	J	Z, Q, Q

Sample ID: SL-598-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
AROCLOR 1254	17	J	6.0	MDL	18	MRL	ug/Kg	J	Z

Sample ID: SL-601-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5432	16	U	16	MDL	52	MRL	ug/Kg	UJ	Q
Aroclor 5442	33	U	33	MDL	52	MRL	ug/Kg	UJ	Q
Aroclor 5460	17	U	17	MDL	52	MRL	ug/Kg	UJ	Q

Sample ID: SL-653-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
AROCLOR 1016	5.8	U	5.8	MDL	19	MRL	ug/Kg	UJ	S
AROCLOR 1221	18	U	18	MDL	38	MRL	ug/Kg	UJ	S
AROCLOR 1232	5.9	U	5.9	MDL	19	MRL	ug/Kg	UJ	S
AROCLOR 1242	10	U	10	MDL	19	MRL	ug/Kg	UJ	S
AROCLOR 1248	6.4	U	6.4	MDL	19	MRL	ug/Kg	UJ	S
AROCLOR 1254	6.3	U	6.3	MDL	19	MRL	ug/Kg	UJ	S
AROCLOR 1260	3.0	U	3.0	MDL	19	MRL	ug/Kg	UJ	S
Aroclor 1262	13	U	13	MDL	38	MRL	ug/Kg	UJ	S
Aroclor 1268	4.5	U	4.5	MDL	38	MRL	ug/Kg	UJ	S
Aroclor 5432	18	U	18	MDL	57	MRL	ug/Kg	UJ	S
Aroclor 5442	37	U	37	MDL	57	MRL	ug/Kg	UJ	S
Aroclor 5460	19	U	19	MDL	57	MRL	ug/Kg	UJ	S

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 8082A **Matrix: SO**

Sample ID: SL-684-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:50:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	15	J	5.9	MDL	18	MRL	ug/Kg	J	Z

Method Category: SVOA

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

Sample ID: SL-557-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 10:25:00 *Analysis Type:* RES *Dilution:* 10

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	3.5	J	2.9	MDL	110	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	5.0	J	3.5	MDL	110	MRL	ug/Kg	J	Z
ACENAPHTHENE	6.0	J	1.8	MDL	110	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	6.1	J	1.9	MDL	110	MRL	ug/Kg	J	Z
ANTHRACENE	26	J	8.2	MDL	110	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	87	J	12	MDL	110	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	86	J	11	MDL	110	MRL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	22	J	15	MDL	110	MRL	ug/Kg	J	Z
FLUORENE	7.3	J	5.3	MDL	110	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	96	J	12	MDL	110	MRL	ug/Kg	J	Z
NAPHTHALENE	6.5	J	3.7	MDL	110	MRL	ug/Kg	J	Z

Sample ID: SL-596-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 2:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	0.81	J	0.29	MDL	11	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	1.3	J	0.35	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHENE	0.53	J	0.18	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	0.88	J	0.19	MDL	11	MRL	ug/Kg	J	Z
ANTHRACENE	1.6	J	0.80	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	2.4	J	1.0	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	2.3	J	0.83	MDL	11	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	6.4	J	1.3	MDL	11	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	2.9	J	1.2	MDL	11	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: **SL-596-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 2:25:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	2.1	J	1.1	MDL	11	MRL	ug/Kg	J	Z
CHRYSENE	9.5	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORANTHENE	9.8	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORENE	2.8	J	0.53	MDL	11	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	2.7	J	1.2	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	1.6	J	0.36	MDL	11	MRL	ug/Kg	J	Z
PHENANTHRENE	5.9	J	1.2	MDL	11	MRL	ug/Kg	J	Z
PYRENE	7.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z

Sample ID: **SL-598-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 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-METHYLNAPHTHALENE	0.85	J	0.28	MDL	11	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	1.2	J	0.33	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHENE	0.73	J	0.17	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	1.1	J	0.18	MDL	11	MRL	ug/Kg	J	Z
ANTHRACENE	1.7	J	0.78	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	3.7	J	0.97	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	4.0	J	0.80	MDL	11	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	9.3	J	1.3	MDL	11	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	4.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	2.6	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORENE	2.9	J	0.51	MDL	11	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	3.7	J	1.2	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	1.8	J	0.35	MDL	11	MRL	ug/Kg	J	Z
PHENANTHRENE	7.4	J	1.2	MDL	11	MRL	ug/Kg	J	Z

Sample ID: **SL-598-SA6-SB-4.0-5.0** *Collected:* **12/10/2012 1:50:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-METHYLNAPHTHALENE	0.35	J	0.32	MDL	10	MRL	ug/Kg	J	Z
ACENAPHTHENE	0.60	J	0.17	MDL	10	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: **SL-598-SA6-SB-4.0-5.0** *Collected:* **12/10/2012 1:50:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.6	J	0.93	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	1.0	J	0.77	MDL	10	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	1.2	J	1.2	MDL	10	MRL	ug/Kg	J	Z
CHRYSENE	1.7	J	1.0	MDL	10	MRL	ug/Kg	J	Z
FLUORANTHENE	1.9	J	1.0	MDL	10	MRL	ug/Kg	J	Z
NAPHTHALENE	0.44	J	0.34	MDL	10	MRL	ug/Kg	U	F
PHENANTHRENE	1.6	J	1.1	MDL	10	MRL	ug/Kg	J	Z
PYRENE	2.4	J	1.1	MDL	10	MRL	ug/Kg	J	Z

Sample ID: **SL-601-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 1:00:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **10**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	17	J	10	MDL	100	MRL	ug/Kg	J	Z
FLUORANTHENE	24	J	10	MDL	100	MRL	ug/Kg	J	Z
PHENANTHRENE	14	J	11	MDL	100	MRL	ug/Kg	J	Z
PYRENE	24	J	11	MDL	100	MRL	ug/Kg	J	Z

Sample ID: **SL-603-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 8:20:00** *Analysis Type:* **RES-BASE/NEUTRAL** *Dilution:* **20**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	4.9	J	3.3	MDL	210	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	3.8	J	3.5	MDL	210	MRL	ug/Kg	J	Z
ANTHRACENE	24	J	15	MDL	210	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	190	J	15	MDL	210	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	100	J	23	MDL	210	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	97	J	21	MDL	210	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	110	J	23	MDL	210	MRL	ug/Kg	J	Z
PHENANTHRENE	130	J	23	MDL	210	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-603-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 8:40:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 20

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	51	J	22	MDL	220	MRL	ug/Kg	J	Z
PYRENE	24	J	24	MDL	220	MRL	ug/Kg	J	Z

Sample ID: SL-608-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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-METHYLNAPHTHALENE	4.4	J	0.28	MDL	11	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	3.8	J	0.33	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHENE	4.1	J	0.17	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	3.9	J	0.18	MDL	11	MRL	ug/Kg	J	Z
DIBENZO(A,H)ANTHRACENE	6.8	J	1.4	MDL	11	MRL	ug/Kg	J	Z
FLUORENE	3.9	J	0.50	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	4.2	J	0.35	MDL	11	MRL	ug/Kg	J	Z

Sample ID: SL-667-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
ACENAPHTHENE	2.7	J	0.17	MDL	11	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	1.7	J	0.18	MDL	11	MRL	ug/Kg	J	Z
ANTHRACENE	3.8	J	0.77	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	4.5	J	0.96	MDL	11	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	4.1	J	0.79	MDL	11	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	7.2	J	1.3	MDL	11	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	3.5	J	1.2	MDL	11	MRL	ug/Kg	J	Z
BENZO(K)FLUORANTHENE	2.0	J	1.1	MDL	11	MRL	ug/Kg	J	Z
CHRYSENE	8.9	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORANTHENE	10	J	1.1	MDL	11	MRL	ug/Kg	J	Z
FLUORENE	5.7	J	0.50	MDL	11	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	2.7	J	1.2	MDL	11	MRL	ug/Kg	J	Z
NAPHTHALENE	6.3	J	0.35	MDL	11	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

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

Sample ID: SL-684-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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-METHYLNAPHTHALENE	1.5	J	0.27	MDL	10	MRL	ug/Kg	J	Z
2-METHYLNAPHTHALENE	2.1	J	0.32	MDL	10	MRL	ug/Kg	J	Z
ACENAPHTHENE	0.20	J	0.16	MDL	10	MRL	ug/Kg	J	Z
ACENAPHTHYLENE	0.18	J	0.18	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)ANTHRACENE	1.1	J	0.93	MDL	10	MRL	ug/Kg	J	Z
BENZO(A)PYRENE	1.3	J	0.76	MDL	10	MRL	ug/Kg	J	Z
BENZO(B)FLUORANTHENE	2.5	J	1.2	MDL	10	MRL	ug/Kg	J	Z
BENZO(G,H,I)PERYLENE	2.8	J	1.1	MDL	10	MRL	ug/Kg	J	Z
CHRYSENE	2.8	J	1.0	MDL	10	MRL	ug/Kg	J	Z
FLUORANTHENE	2.9	J	1.0	MDL	10	MRL	ug/Kg	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	1.1	MDL	10	MRL	ug/Kg	J	Z
NAPHTHALENE	1.8	J	0.34	MDL	10	MRL	ug/Kg	J	Z
PHENANTHRENE	2.8	J	1.1	MDL	10	MRL	ug/Kg	J	Z
PYRENE	2.8	J	1.1	MDL	10	MRL	ug/Kg	J	Z

Method Category: SVOA

Method: 8315A **Matrix: SO**

Sample ID: SL-547-SA6-SB-0.0-0.5 *Collected:* 12/7/2012 12:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1100	J	720	MDL	1800	MRL	ug/Kg	J	Z

Sample ID: SL-547-SA6-SB-4.0-5.0 *Collected:* 12/7/2012 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
FORMALDEHYDE	780	J	750	MDL	1900	MRL	ug/Kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **VOA**

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

Sample ID: **TB-121012** ***Collected:*** **12/10/2012 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 (C4-C12)	10	J	10	MDL	25	MRL	ug/L	J	Z

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **SO**

Sample ID: **SL-557-SA6-SB-6.0** ***Collected:*** **12/10/2012 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*
GASOLINE RANGE ORGANICS (C4-C12)	0.38	U H	0.38	MDL	1.2	MRL	mg/Kg	UJ	H

Sample ID: **SL-603-SA6-SB-4.5** ***Collected:*** **12/10/2012 8:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
GASOLINE RANGE ORGANICS (C4-C12)	0.33	U H	0.33	MDL	1.0	MRL	mg/Kg	UJ	H

Sample ID: **SL-604-SA6-SB-4.0** ***Collected:*** **12/10/2012 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
GASOLINE RANGE ORGANICS (C4-C12)	0.35	U H	0.35	MDL	1.1	MRL	mg/Kg	UJ	H

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Calibration Blank Contamination
B	Method Blank Contamination
E	Matrix Spike Precision
F	Equipment Blank Contamination
F	Field Blank Contamination
H	Sampling to Analysis Estimation
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

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36846-1

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151989/1-A	12/14/2012 4:17:00 PM	LITHIUM	0.371 mg/Kg	SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-601-SA6-SB-0.0-0.5 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5
MB 280-152226/1-A	12/17/2012 5:14:00 PM	IRON MANGANESE	29.9 mg/Kg 0.239 mg/Kg	SL-601-SA6-SB-4.0-5.0 SL-608-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-SB-0.0-0.5

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151990/1-A	12/14/2012 5:06:00 PM	THALLIUM	0.00483 mg/Kg	SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-601-SA6-SB-0.0-0.5 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5
MB 280-152228/1-A	12/17/2012 9:48:00 PM	SELENIUM	0.134 mg/Kg	SL-601-SA6-SB-4.0-5.0 SL-608-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-SB-0.0-0.5

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-152022/1-A	12/14/2012 4:23:00 PM	TOTAL EFH(C8-C40)	0.840 mg/Kg	SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-601-SA6-SB-0.0-0.5 SL-601-SA6-SB-4.0-5.0 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-608-SA6-SB-0.0-0.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-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-557-SA6-SB-5.5-6.5(RES)	TOTAL EFH(C8-C40)	1.7 mg/Kg	4.3U mg/Kg
SL-596-SA6-SB-4.0-5.0(RES)	TOTAL EFH(C8-C40)	1.0 mg/Kg	4.1U mg/Kg
SL-598-SA6-SB-4.0-5.0(RES)	TOTAL EFH(C8-C40)	2.1 mg/Kg	4.1U mg/Kg
SL-601-SA6-SB-4.0-5.0(RES)	TOTAL EFH(C8-C40)	2.5 mg/Kg	4.0U mg/Kg
SL-666-SA6-SB-0.0-0.5(RES)	TOTAL EFH(C8-C40)	2.7 mg/Kg	4.2U mg/Kg

Method: **8015B GRO**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 280-151823/3-A	12/12/2012 6:46:00 PM	GASOLINE RANGE ORGANICS (C4-C12)	0.408 mg/Kg	SL-557-SA6-SB-6.0 SL-596-SA6-SB-4.5 SL-598-SA6-SB-4.5 SL-601-SA6-SB-4.5 SL-603-SA6-SB-4.5 SL-604-SA6-SB-4.0

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8315A**
Matrix: **SO**

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
MB 490-44390/1-A	12/19/2012 11:45:00 PM	FORMALDEHYDE	697 ug/Kg	SL-542-SA6-SB-0.0-0.5 SL-542-SA6-SB-3.0-4.0 SL-545-SA6-SB-0.0-0.5 SL-545-SA6-SB-4.0-5.0 SL-545-SA6-SB-9.0-10.0 SL-547-SA6-SB-0.0-0.5 SL-547-SA6-SB-4.0-5.0 SL-547-SA6-SB-9.0-10.0 SL-942-SA6-SB-3.0-4.0

Equipment Rinsate Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Equipment Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
EB1-121312(RES)	12/13/2012 3:00:00 PM	NAPHTHALENE	0.11 UG/L	SL-557-SA6-SB-5.5-6.5 SL-557-SA6-SB-6.0 SL-596-SA6-SB-4.0-5.0 SL-596-SA6-SB-4.5 SL-598-SA6-SB-4.0-5.0 SL-598-SA6-SB-4.5 SL-601-SA6-SB-4.0-5.0 SL-601-SA6-SB-4.5 SL-603-SA6-SB-4.0-5.0 SL-603-SA6-SB-4.5 SL-604-SA6-SB-3.5-4.5 SL-604-SA6-SB-4.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-598-SA6-SB-4.0-5.0(RES)	NAPHTHALENE	0.44 ug/Kg	10U ug/Kg

Field Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-111412(RES/TOT)	11/14/2012 3:00:00 PM	BORON SODIUM	0.024 mg/L 0.17 mg/L	SL-542-SA6-SB-0.0-0.5 SL-542-SA6-SB-3.0-4.0 SL-545-SA6-SB-0.0-0.5 SL-545-SA6-SB-4.0-5.0 SL-545-SA6-SB-9.0-10.0 SL-547-SA6-SB-0.0-0.5 SL-547-SA6-SB-4.0-5.0 SL-547-SA6-SB-9.0-10.0 SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-557-SA6-SB-6.0 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-596-SA6-SB-4.5 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-598-SA6-SB-4.5 SL-601-SA6-SB-0.0-0.5 SL-601-SA6-SB-4.0-5.0 SL-601-SA6-SB-4.5 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-603-SA6-SB-4.5 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-604-SA6-SB-4.0 SL-608-SA6-SB-0.0-0.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5 SL-654A-SA6-SB-2.0-3.0 SL-654B-SA6-SB-0.0-0.5 SL-654C-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-SB-0.0-0.5 SL-942-SA6-SB-3.0-4.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-557-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.2 mg/Kg	1.2U mg/Kg
SL-596-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	81 mg/Kg	81U mg/Kg
SL-598-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.6 mg/Kg	1.6U mg/Kg
SL-598-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	80 mg/Kg	80U mg/Kg
SL-601-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	74 mg/Kg	74U mg/Kg
SL-601-SA6-SB-4.0-5.0(RES/TOT)	BORON	1.4 mg/Kg	1.4U mg/Kg
SL-604-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.5 mg/Kg	1.5U mg/Kg
SL-608-SA6-SB-0.0-0.5(RES/TOT)	BORON	3.1 mg/Kg	3.1U mg/Kg
SL-653-SA6-SB-0.0-0.5(RES/TOT)	BORON	2.2 mg/Kg	2.2U mg/Kg
SL-653-SA6-SB-0.0-0.5(RES/TOT)	SODIUM	81 mg/Kg	81U mg/Kg
SL-654A-SA6-SB-0.0-0.5(RES/TOT)	BORON	3.4 mg/Kg	3.4U mg/Kg
SL-666-SA6-SB-0.0-0.5(RES/TOT)	BORON	2.4 mg/Kg	2.4U mg/Kg
SL-667-SA6-SB-0.0-0.5(RES/TOT)	BORON	2.4 mg/Kg	2.4U mg/Kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Field Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**
Matrix: **SO**

Field Blank Sample ID	Collected 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-668-SA6-SB-0.0-0.5(RES/TOT)	BORON	6.0 mg/Kg	6.0U mg/Kg
SL-684-SA6-SB-0.0-0.5(RES/TOT)	BORON	1.6 mg/Kg	1.6U mg/Kg

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

Field Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
FB-111412(RES/TOT)	11/14/2012 3:00:00 PM	SILVER	0.00078 mg/L	SL-542-SA6-SB-0.0-0.5 SL-542-SA6-SB-3.0-4.0 SL-545-SA6-SB-0.0-0.5 SL-545-SA6-SB-4.0-5.0 SL-545-SA6-SB-9.0-10.0 SL-547-SA6-SB-0.0-0.5 SL-547-SA6-SB-4.0-5.0 SL-547-SA6-SB-9.0-10.0 SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-557-SA6-SB-6.0 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-596-SA6-SB-4.5 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-598-SA6-SB-4.5 SL-601-SA6-SB-0.0-0.5 SL-601-SA6-SB-4.0-5.0 SL-601-SA6-SB-4.5 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-603-SA6-SB-4.5 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-604-SA6-SB-4.0 SL-608-SA6-SB-0.0-0.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5 SL-654A-SA6-SB-2.0-3.0 SL-654B-SA6-SB-0.0-0.5 SL-654C-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-SB-0.0-0.5 SL-942-SA6-SB-3.0-4.0

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-557-SA6-SB-5.5-6.5(RES/TOT)	SILVER	0.033 mg/Kg	0.033U mg/Kg
SL-596-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.25 mg/Kg	0.25U mg/Kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Field Blank Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Field Blank Sample ID	Collected 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-598-SA6-SB-4.0-5.0(RES/TOT)	SILVER	0.060 mg/Kg	0.060U mg/Kg
SL-601-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.30 mg/Kg	0.30U mg/Kg
SL-601-SA6-SB-4.0-5.0(RES/TOT)	SILVER	0.047 mg/Kg	0.047U mg/Kg
SL-603-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.060 mg/Kg	0.060U mg/Kg
SL-603-SA6-SB-4.0-5.0(RES/TOT)	SILVER	0.085 mg/Kg	0.085U mg/Kg
SL-604-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.031 mg/Kg	0.031U mg/Kg
SL-604-SA6-SB-3.5-4.5(RES/TOT)	SILVER	0.047 mg/Kg	0.047U mg/Kg
SL-608-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.14 mg/Kg	0.14U mg/Kg
SL-653-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.048 mg/Kg	0.048U mg/Kg
SL-654A-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.23 mg/Kg	0.23U mg/Kg
SL-666-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.054 mg/Kg	0.054U mg/Kg
SL-667-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.14 mg/Kg	0.14U mg/Kg
SL-668-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.051 mg/Kg	0.051U mg/Kg
SL-684-SA6-SB-0.0-0.5(RES/TOT)	SILVER	0.071 mg/Kg	0.071U mg/Kg

Surrogate Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8082A**
Matrix: **SO**

Sample ID (Analysis Type)	*Surrogate*	*Sample % Recovery*	*% Recovery Limits*	*Affected Compounds*	*Flag*
SL-653-SA6-SB-0.0 -0.5	DECACHLOROBIPHENYL	43	45.00-120.00	All Target Analytes	J (all detects) UJ (all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 8270C SIM
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-557-SA6-SB-0.0-0.5MS **SL-557-SA6-SB-0.0-0.5MSD** (SL-557-SA6-SB-0.0-0.5)	ANTHRACENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	193 267 - 249	- - - -	43.00-120.00 46.00-120.00 20.00-120.00 20.00-127.00	65 (50.00) 49 (28.00) 43 (25.00) 51 (50.00)	ANTHRACENE BENZO(K)FLUORANTHENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE	No Qual, Diluted Out
SL-557-SA6-SB-0.0-0.5MS **SL-557-SA6-SB-0.0-0.5MSD** (SL-557-SA6-SB-0.0-0.5)	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE PHENANTHRENE PYRENE	531 420 500 626 870 602 952	-71 -47 -71 -144 -294 -95 -309	36.00-120.00 20.00-120.00 37.00-120.00 34.00-120.00 45.00-120.00 44.00-120.00 43.00-120.00	70 (40.00) 64 (30.00) 60 (28.00) 66 (41.00) 80 (30.00) 98 (42.00) 80 (30.00)	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE PHENANTHRENE PYRENE	No Qual, Diluted Out
SL-557-SA6-SB-0.0-0.5MS **SL-557-SA6-SB-0.0-0.5MSD** (SL-557-SA6-SB-0.0-0.5)	BENZO(G,H,I)PERYLENE	215	19	20.00-123.00	50 (30.00)	BENZO(G,H,I)PERYLENE	No Qual, Diluted Out

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-601-SA6-SB-0.0-0.5MS (TOT) **SL-601-SA6-SB-0.0-0.5MSD (TOT)** (SL-557-SA6-SB-0.0-0.5 SL -557-SA6-SB-5.5-6.5 SL -596-SA6-SB-0.0-0.5 SL -596-SA6-SB-4.0-5.0 SL -598-SA6-SB-0.0-0.5 SL -598-SA6-SB-4.0-5.0 SL -601-SA6-SB-0.0-0.5 SL -603-SA6-SB-0.0-0.5 SL -603-SA6-SB-4.0-5.0 SL -604-SA6-SB-0.0-0.5 SL -604-SA6-SB-3.5-4.5 SL -653-SA6-SB-0.0-0.5 SL -654A-SA6-SB-0.0-0.5)	ALUMINUM TITANIUM	1613 187	1472 169	75.00-125.00 75.00-125.00	- -	ALUMINUM TITANIUM	No Qual, >4x
SL-601-SA6-SB-0.0-0.5MS (TOT) **SL-601-SA6-SB-0.0-0.5MSD (TOT)** (SL-557-SA6-SB-0.0-0.5 SL -557-SA6-SB-5.5-6.5 SL -596-SA6-SB-0.0-0.5 SL -596-SA6-SB-4.0-5.0 SL -598-SA6-SB-0.0-0.5 SL -598-SA6-SB-4.0-5.0 SL -601-SA6-SB-0.0-0.5 SL -603-SA6-SB-0.0-0.5 SL -603-SA6-SB-4.0-5.0 SL -604-SA6-SB-0.0-0.5 SL -604-SA6-SB-3.5-4.5 SL -653-SA6-SB-0.0-0.5 SL -654A-SA6-SB-0.0-0.5)	IRON MANGANESE	-1299 5	-2201 -28	75.00-125.00 75.00-125.00	- -	IRON MANGANESE	No Qual, >4x

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-598-SA6-SB-4.0-5.0MSD (TOT) (SL-557-SA6-SB-0.0-0.5 SL -557-SA6-SB-5.5-6.5 SL -596-SA6-SB-0.0-0.5 SL -596-SA6-SB-4.0-5.0 SL -598-SA6-SB-0.0-0.5 SL -598-SA6-SB-4.0-5.0 SL -601-SA6-SB-0.0-0.5 SL -603-SA6-SB-0.0-0.5 SL -603-SA6-SB-4.0-5.0 SL -604-SA6-SB-0.0-0.5 SL -604-SA6-SB-3.5-4.5 SL -653-SA6-SB-0.0-0.5 SL -654A-SA6-SB-0.0-0.5)	VANADIUM	-	126	75.00-125.00	-	VANADIUM	J(all detects)
SL-598-SA6-SB-4.0-5.0MS (TOT) **SL-598-SA6-SB-4.0-5.0MSD (TOT)** (SL-557-SA6-SB-0.0-0.5 SL -557-SA6-SB-5.5-6.5 SL -596-SA6-SB-0.0-0.5 SL -596-SA6-SB-4.0-5.0 SL -598-SA6-SB-0.0-0.5 SL -598-SA6-SB-4.0-5.0 SL -601-SA6-SB-0.0-0.5 SL -603-SA6-SB-0.0-0.5 SL -603-SA6-SB-4.0-5.0 SL -604-SA6-SB-0.0-0.5 SL -604-SA6-SB-3.5-4.5 SL -653-SA6-SB-0.0-0.5 SL -654A-SA6-SB-0.0-0.5)	ANTIMONY	7	6	75.00-125.00	24 (20.00)	ANTIMONY	J(all detects) UJ(all non-detects) Post Spike = 104%

Method: 8082A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-557-SA6-SB-0.0-0.5MS **SL-557-SA6-SB-0.0-0.5MSD** (SL-557-SA6-SB-0.0-0.5)	Aroclor 5460	54	-	62.00-129.00	44 (26.00)	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects) UJ(all non-detects)
SL-601-SA6-SB-4.0-5.0MS **SL-601-SA6-SB-4.0-5.0MSD** (SL-601-SA6-SB-4.0-5.0)	Aroclor 5460	54	54	62.00-129.00	-	Aroclor 5432 Aroclor 5442 Aroclor 5460	J(all detects) UJ(all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6010C
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-684-SA6-SB-0.0-0.5MS (TOT) SL-684-SA6-SB-0.0-0.5MSD (TOT) (SL-601-SA6-SB-4.0-5.0 SL -608-SA6-SB-0.0-0.5 SL -666-SA6-SB-0.0-0.5 SL -667-SA6-SB-0.0-0.5 SL -668-SA6-SB-0.0-0.5 SL -684-SA6-SB-0.0-0.5)	ALUMINUM IRON MANGANESE TITANIUM	2757 2262 148 281	2643 1392 157 219	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM IRON MANGANESE TITANIUM	No Qual, >4x

Method: 6020A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-684-SA6-SB-0.0-0.5MS (TOT) SL-684-SA6-SB-0.0-0.5MSD (TOT) (SL-601-SA6-SB-4.0-5.0 SL -608-SA6-SB-0.0-0.5 SL -666-SA6-SB-0.0-0.5 SL -667-SA6-SB-0.0-0.5 SL -668-SA6-SB-0.0-0.5 SL -684-SA6-SB-0.0-0.5)	ANTIMONY	7	7	75.00-125.00	-	ANTIMONY	J(all detects) UJ (all non-detects) Post Spike = 103%

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-121012	GASOLINE RANGE ORGANICS (C4-C12)	J	10	25	MRL	ug/L	J (all detects)

Method: 6010C

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-0.0-0.5	ALUMINUM	J	13000	22000	MRL	mg/Kg	J (all detects)
	BORON	J	1.2	11	MRL	mg/Kg	
	LITHIUM	J ^ B	20	41	MRL	mg/Kg	
	MANGANESE	J	300	550	MRL	mg/Kg	
	POTASSIUM	J	3800	7200	MRL	mg/Kg	
	SODIUM	J	97	560	MRL	mg/Kg	
	TIN	J	1.6	12	MRL	mg/Kg	
	Zirconium	J	1.6	9.6	MRL	mg/Kg	
SL-557-SA6-SB-5.5-6.5	POTASSIUM	J	3500	6000	MRL	mg/Kg	J (all detects)
	TIN	J	2.9	10	MRL	mg/Kg	
	Zirconium	J	2.1	8.0	MRL	mg/Kg	
SL-596-SA6-SB-0.0-0.5	ALUMINUM	J	12000	21000	MRL	mg/Kg	J (all detects)
	LITHIUM	J B ^	18	39	MRL	mg/Kg	
	MANGANESE	J	280	530	MRL	mg/Kg	
	POTASSIUM	J	3800	6800	MRL	mg/Kg	
	SODIUM	J	81	530	MRL	mg/Kg	
	TIN	J	1.4	12	MRL	mg/Kg	
	Zirconium	J	1.5	9.2	MRL	mg/Kg	
SL-596-SA6-SB-4.0-5.0	ALUMINUM	J	10000	21000	MRL	mg/Kg	J (all detects)
	LITHIUM	J B ^	22	38	MRL	mg/Kg	
	MANGANESE	J	270	510	MRL	mg/Kg	
	POTASSIUM	J	2200	6600	MRL	mg/Kg	
	SODIUM	J	100	520	MRL	mg/Kg	
	TIN	J	1.6	11	MRL	mg/Kg	
	Zirconium	J	1.0	8.9	MRL	mg/Kg	
SL-598-SA6-SB-0.0-0.5	ALUMINUM	J	12000	22000	MRL	mg/Kg	J (all detects)
	BORON	J	1.6	11	MRL	mg/Kg	
	LITHIUM	J B ^	18	41	MRL	mg/Kg	
	MANGANESE	J	310	540	MRL	mg/Kg	
	POTASSIUM	J	3400	7000	MRL	mg/Kg	
	SODIUM	J	80	550	MRL	mg/Kg	
	TIN	J	1.5	12	MRL	mg/Kg	
	Zirconium	J	1.6	9.4	MRL	mg/Kg	
SL-598-SA6-SB-4.0-5.0	ALUMINUM	J	16000	20000	MRL	mg/Kg	J (all detects)
	LITHIUM	J B ^	23	38	MRL	mg/Kg	
	MANGANESE	J	300	510	MRL	mg/Kg	
	POTASSIUM	J	2800	6500	MRL	mg/Kg	
	SODIUM	J	110	510	MRL	mg/Kg	
	TIN	J	1.6	11	MRL	mg/Kg	
	Zirconium	J	1.8	8.8	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-601-SA6-SB-0.0-0.5	ALUMINUM	J	13000	21000	MRL	mg/Kg	
	LITHIUM	J B ^	19	39	MRL	mg/Kg	
	MANGANESE	J	350	530	MRL	mg/Kg	
	POTASSIUM	J	3900	6800	MRL	mg/Kg	J (all detects)
	SODIUM	J	74	530	MRL	mg/Kg	
	TIN	J	1.3	12	MRL	mg/Kg	
	Zirconium	J	1.5	9.2	MRL	mg/Kg	
SL-601-SA6-SB-4.0-5.0	ALUMINUM	J	18000	20000	MRL	mg/Kg	
	BORON	J	1.4	9.8	MRL	mg/Kg	
	LITHIUM	J	24	37	MRL	mg/Kg	
	MANGANESE	J B	300	500	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	2900	6400	MRL	mg/Kg	
	SODIUM	J	150	500	MRL	mg/Kg	
	TIN	J	1.6	11	MRL	mg/Kg	
	Zirconium	J	2.1	8.7	MRL	mg/Kg	
SL-603-SA6-SB-0.0-0.5	ALUMINUM	J	14000	19000	MRL	mg/Kg	
	LITHIUM	J ^ B	19	35	MRL	mg/Kg	
	MANGANESE	J	310	470	MRL	mg/Kg	
	POTASSIUM	J	4100	6000	MRL	mg/Kg	J (all detects)
	SODIUM	J	97	470	MRL	mg/Kg	
	TIN	J	1.7	10	MRL	mg/Kg	
	Zirconium	J	1.8	8.1	MRL	mg/Kg	
SL-603-SA6-SB-4.0-5.0	ALUMINUM	J	15000	21000	MRL	mg/Kg	
	LITHIUM	J ^ B	21	40	MRL	mg/Kg	
	MANGANESE	J	160	530	MRL	mg/Kg	
	POTASSIUM	J	2000	6900	MRL	mg/Kg	J (all detects)
	SODIUM	J	280	540	MRL	mg/Kg	
	TIN	J	1.9	12	MRL	mg/Kg	
	Zirconium	J	1.3	9.2	MRL	mg/Kg	
SL-604-SA6-SB-0.0-0.5	ALUMINUM	J	15000	20000	MRL	mg/Kg	
	BORON	J	1.5	9.6	MRL	mg/Kg	
	LITHIUM	J ^ B	21	37	MRL	mg/Kg	
	MANGANESE	J	250	490	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	2400	6300	MRL	mg/Kg	
	SODIUM	J	240	490	MRL	mg/Kg	
	TIN	J	1.7	11	MRL	mg/Kg	
	Zirconium	J	1.8	8.5	MRL	mg/Kg	
SL-604-SA6-SB-3.5-4.5	ALUMINUM	J	21000	22000	MRL	mg/Kg	
	MANGANESE	J	240	540	MRL	mg/Kg	
	POTASSIUM	J	3000	6900	MRL	mg/Kg	J (all detects)
	TIN	J	3.0	12	MRL	mg/Kg	
	Zirconium	J	2.4	9.3	MRL	mg/Kg	
SL-608-SA6-SB-0.0-0.5	ALUMINUM	J	14000	22000	MRL	mg/Kg	
	BORON	J	3.1	11	MRL	mg/Kg	
	LITHIUM	J	20	40	MRL	mg/Kg	
	MANGANESE	J B	310	540	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	4300	7000	MRL	mg/Kg	
	SODIUM	J	88	540	MRL	mg/Kg	
	TIN	J	1.4	12	MRL	mg/Kg	
	Zirconium	J	1.5	9.4	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6010C**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-653-SA6-SB-0.0-0.5	ALUMINUM	J	15000	21000	MRL	mg/Kg	
	BORON	J	2.2	10	MRL	mg/Kg	
	LITHIUM	J ^ B	17	39	MRL	mg/Kg	
	MANGANESE	J	250	530	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	3100	6800	MRL	mg/Kg	
	SODIUM	J	81	530	MRL	mg/Kg	
	TIN	J	1.3	12	MRL	mg/Kg	
	Zirconium	J	2.8	9.2	MRL	mg/Kg	
SL-654A-SA6-SB-0.0-0.5	ALUMINUM	J	20000	22000	MRL	mg/Kg	
	BORON	J	3.4	11	MRL	mg/Kg	
	LITHIUM	J B ^	21	41	MRL	mg/Kg	
	MANGANESE	J	340	540	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	4300	7000	MRL	mg/Kg	
	SODIUM	J	100	550	MRL	mg/Kg	
	TIN	J	1.6	12	MRL	mg/Kg	
	Zirconium	J	3.7	9.5	MRL	mg/Kg	
SL-666-SA6-SB-0.0-0.5	ALUMINUM	J	12000	19000	MRL	mg/Kg	
	BORON	J	2.4	9.2	MRL	mg/Kg	
	LITHIUM	J	18	35	MRL	mg/Kg	
	MANGANESE	J B	380	470	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	3800	6100	MRL	mg/Kg	
	SODIUM	J	87	470	MRL	mg/Kg	
	TIN	J	1.2	10	MRL	mg/Kg	
	Zirconium	J	1.7	8.2	MRL	mg/Kg	
SL-667-SA6-SB-0.0-0.5	ALUMINUM	J	12000	22000	MRL	mg/Kg	
	BORON	J	2.4	11	MRL	mg/Kg	
	LITHIUM	J	17	41	MRL	mg/Kg	
	MANGANESE	J B	360	550	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	3400	7100	MRL	mg/Kg	
	SODIUM	J	93	550	MRL	mg/Kg	
	TIN	J	1.3	12	MRL	mg/Kg	
	Zirconium	J	1.6	9.5	MRL	mg/Kg	
SL-668-SA6-SB-0.0-0.5	BORON	J	6.0	9.7	MRL	mg/Kg	
	LITHIUM	J	23	37	MRL	mg/Kg	
	MANGANESE	J B	430	490	MRL	mg/Kg	
	POTASSIUM	J	5500	6400	MRL	mg/Kg	J (all detects)
	SODIUM	J	120	500	MRL	mg/Kg	
	TIN	J	1.7	11	MRL	mg/Kg	
	Zirconium	J	4.3	8.6	MRL	mg/Kg	
SL-684-SA6-SB-0.0-0.5	ALUMINUM	J	14000	19000	MRL	mg/Kg	
	BORON	J	1.6	9.4	MRL	mg/Kg	
	LITHIUM	J	20	36	MRL	mg/Kg	
	MANGANESE	J B	300	480	MRL	mg/Kg	J (all detects)
	POTASSIUM	J	3200	6200	MRL	mg/Kg	
	SODIUM	J ^	110	490	MRL	mg/Kg	
	TIN	J	1.4	11	MRL	mg/Kg	
	Zirconium	J	1.8	8.4	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-0.0-0.5	ANTIMONY	J	0.044	9.0	MRL	mg/Kg	
	ARSENIC	J	4.2	16	MRL	mg/Kg	
	BARIUM	J	99	150	MRL	mg/Kg	
	BERYLLIUM	J	0.61	1.1	MRL	mg/Kg	
	CADMIUM	J	0.66	1.0	MRL	mg/Kg	
	CHROMIUM	J	35	38	MRL	mg/Kg	
	COBALT	J	7.0	22	MRL	mg/Kg	J (all detects)
	COPPER	J	18	30	MRL	mg/Kg	
	MOLYBDENUM	J	0.85	5.5	MRL	mg/Kg	
	NICKEL	J	29	30	MRL	mg/Kg	
	THALLIUM	J B	0.29	0.48	MRL	mg/Kg	
	VANADIUM	J	36	64	MRL	mg/Kg	
	ZINC	J	83	110	MRL	mg/Kg	
SL-557-SA6-SB-5.5-6.5	ANTIMONY	J	0.015	8.1	MRL	mg/Kg	
	ARSENIC	J	7.2	14	MRL	mg/Kg	
	CADMIUM	J	0.59	0.94	MRL	mg/Kg	
	CHROMIUM	J	29	34	MRL	mg/Kg	
	COBALT	J	13	20	MRL	mg/Kg	
	COPPER	J	22	27	MRL	mg/Kg	
	LEAD	J	17	32	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.33	5.0	MRL	mg/Kg	
	NICKEL	J	22	27	MRL	mg/Kg	
	SILVER	J	0.033	0.74	MRL	mg/Kg	
	THALLIUM	J B	0.38	0.43	MRL	mg/Kg	
	VANADIUM	J	49	58	MRL	mg/Kg	
SL-596-SA6-SB-0.0-0.5	ANTIMONY	J	0.029	8.8	MRL	mg/Kg	
	ARSENIC	J	3.6	15	MRL	mg/Kg	
	BARIUM	J	97	140	MRL	mg/Kg	
	BERYLLIUM	J	0.55	1.1	MRL	mg/Kg	
	CADMIUM	J	0.40	1.0	MRL	mg/Kg	
	CHROMIUM	J	18	37	MRL	mg/Kg	
	COBALT	J	6.0	21	MRL	mg/Kg	
	COPPER	J	11	29	MRL	mg/Kg	J (all detects)
	LEAD	J	15	34	MRL	mg/Kg	
	MOLYBDENUM	J	0.41	5.3	MRL	mg/Kg	
	NICKEL	J	12	29	MRL	mg/Kg	
	SILVER	J	0.25	0.80	MRL	mg/Kg	
	THALLIUM	J B	0.25	0.46	MRL	mg/Kg	
	VANADIUM	J	33	62	MRL	mg/Kg	
	ZINC	J	65	110	MRL	mg/Kg	
SL-596-SA6-SB-4.0-5.0	ANTIMONY	J	0.018	8.3	MRL	mg/Kg	
	ARSENIC	J	4.1	14	MRL	mg/Kg	
	BARIUM	J	66	130	MRL	mg/Kg	
	BERYLLIUM	J	0.42	1.0	MRL	mg/Kg	
	CADMIUM	J	0.14	0.95	MRL	mg/Kg	
	CHROMIUM	J	21	35	MRL	mg/Kg	
	COBALT	J	6.1	20	MRL	mg/Kg	
	COPPER	J	8.8	28	MRL	mg/Kg	J (all detects)
	LEAD	J	4.3	32	MRL	mg/Kg	
	MOLYBDENUM	J	0.28	5.0	MRL	mg/Kg	
	NICKEL	J	13	28	MRL	mg/Kg	
	THALLIUM	J B	0.23	0.44	MRL	mg/Kg	
	VANADIUM	J	36	59	MRL	mg/Kg	
	ZINC	J	49	100	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-598-SA6-SB-0.0-0.5	ANTIMONY	J	0.032	9.4	MRL	mg/Kg	
	ARSENIC	J	3.3	16	MRL	mg/Kg	
	BARIUM	J	110	150	MRL	mg/Kg	
	BERYLLIUM	J	0.56	1.2	MRL	mg/Kg	
	CADMIUM	J	0.49	1.1	MRL	mg/Kg	
	CHROMIUM	J	18	40	MRL	mg/Kg	
	COBALT	J	6.7	23	MRL	mg/Kg	J (all detects)
	COPPER	J	11	31	MRL	mg/Kg	
	LEAD	J	17	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.47	5.7	MRL	mg/Kg	
	NICKEL	J	13	31	MRL	mg/Kg	
	THALLIUM	J B	0.24	0.50	MRL	mg/Kg	
	VANADIUM	J	30	67	MRL	mg/Kg	
SL-598-SA6-SB-4.0-5.0	ARSENIC	J	4.1	15	MRL	mg/Kg	
	BARIUM	J	93	140	MRL	mg/Kg	
	BERYLLIUM	J	0.64	1.1	MRL	mg/Kg	
	CADMIUM	J	0.17	0.97	MRL	mg/Kg	
	CHROMIUM	J	20	36	MRL	mg/Kg	
	COBALT	J	6.0	20	MRL	mg/Kg	
	COPPER	J	8.7	28	MRL	mg/Kg	
	LEAD	J	5.8	33	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.41	5.2	MRL	mg/Kg	
	NICKEL	J	13	28	MRL	mg/Kg	
	SILVER	J	0.060	0.77	MRL	mg/Kg	
	THALLIUM	J B	0.26	0.45	MRL	mg/Kg	
	VANADIUM	J	38	60	MRL	mg/Kg	
	ZINC	J	51	110	MRL	mg/Kg	
SL-601-SA6-SB-0.0-0.5	ANTIMONY	J	0.022	8.7	MRL	mg/Kg	
	ARSENIC	J	3.1	15	MRL	mg/Kg	
	BARIUM	J	100	140	MRL	mg/Kg	
	BERYLLIUM	J	0.53	1.1	MRL	mg/Kg	
	CADMIUM	J	0.39	1.0	MRL	mg/Kg	
	CHROMIUM	J	17	37	MRL	mg/Kg	
	COBALT	J	5.7	21	MRL	mg/Kg	
	COPPER	J	10	29	MRL	mg/Kg	J (all detects)
	LEAD	J	10	34	MRL	mg/Kg	
	MOLYBDENUM	J	0.45	5.3	MRL	mg/Kg	
	NICKEL	J	13	29	MRL	mg/Kg	
	SILVER	J	0.30	0.79	MRL	mg/Kg	
	THALLIUM	J B	0.26	0.46	MRL	mg/Kg	
	VANADIUM	J	28	62	MRL	mg/Kg	
	ZINC	J	58	110	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-601-SA6-SB-4.0-5.0	ANTIMONY	J	0.016	7.8	MRL	mg/Kg	
	ARSENIC	J	4.2	13	MRL	mg/Kg	
	BARIUM	J	100	130	MRL	mg/Kg	
	BERYLLIUM	J	0.72	0.98	MRL	mg/Kg	
	CADMIUM	J	0.21	0.89	MRL	mg/Kg	
	CHROMIUM	J	20	33	MRL	mg/Kg	
	COBALT	J	6.2	19	MRL	mg/Kg	
	COPPER	J	9.6	26	MRL	mg/Kg	J (all detects)
	LEAD	J	6.0	30	MRL	mg/Kg	
	MOLYBDENUM	J	0.46	4.7	MRL	mg/Kg	
	NICKEL	J	13	26	MRL	mg/Kg	
	SILVER	J	0.047	0.71	MRL	mg/Kg	
	THALLIUM	J	0.30	0.41	MRL	mg/Kg	
	VANADIUM	J	36	55	MRL	mg/Kg	
	ZINC	J	51	98	MRL	mg/Kg	
SL-603-SA6-SB-0.0-0.5	ANTIMONY	J	0.021	9.6	MRL	mg/Kg	
	ARSENIC	J	5.9	16	MRL	mg/Kg	
	BARIUM	J	100	150	MRL	mg/Kg	
	BERYLLIUM	J	0.58	1.2	MRL	mg/Kg	
	CADMIUM	J	0.58	1.1	MRL	mg/Kg	
	CHROMIUM	J	19	40	MRL	mg/Kg	
	COBALT	J	6.7	23	MRL	mg/Kg	
	COPPER	J	15	32	MRL	mg/Kg	J (all detects)
	LEAD	J	7.7	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.41	5.8	MRL	mg/Kg	
	NICKEL	J	14	32	MRL	mg/Kg	
	SILVER	J	0.060	0.87	MRL	mg/Kg	
	THALLIUM	J B	0.28	0.51	MRL	mg/Kg	
	VANADIUM	J	35	68	MRL	mg/Kg	
	ZINC	J	71	120	MRL	mg/Kg	
SL-603-SA6-SB-4.0-5.0	ARSENIC	J	5.2	15	MRL	mg/Kg	
	BARIUM	J	75	140	MRL	mg/Kg	
	BERYLLIUM	J	0.80	1.1	MRL	mg/Kg	
	CADMIUM	J	0.15	0.99	MRL	mg/Kg	
	CHROMIUM	J	21	37	MRL	mg/Kg	
	COBALT	J	5.0	21	MRL	mg/Kg	
	COPPER	J	8.3	29	MRL	mg/Kg	
	LEAD	J	6.8	34	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.17	5.3	MRL	mg/Kg	
	NICKEL	J	11	29	MRL	mg/Kg	
	SILVER	J	0.085	0.79	MRL	mg/Kg	
	THALLIUM	J B	0.25	0.46	MRL	mg/Kg	
	VANADIUM	J	37	62	MRL	mg/Kg	
	ZINC	J	62	110	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **6020A**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-604-SA6-SB-0.0-0.5	ARSENIC	J	4.7	14	MRL	mg/Kg	
	BARIUM	J	86	130	MRL	mg/Kg	
	BERYLLIUM	J	0.72	1.0	MRL	mg/Kg	
	CADMIUM	J	0.15	0.93	MRL	mg/Kg	
	CHROMIUM	J	18	34	MRL	mg/Kg	
	COBALT	J	8.5	20	MRL	mg/Kg	
	COPPER	J	12	27	MRL	mg/Kg	
	LEAD	J	7.4	32	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.36	4.9	MRL	mg/Kg	
	NICKEL	J	12	27	MRL	mg/Kg	
	SILVER	J	0.031	0.73	MRL	mg/Kg	
	THALLIUM	J B	0.26	0.43	MRL	mg/Kg	
	VANADIUM	J	41	58	MRL	mg/Kg	
	ZINC	J	52	100	MRL	mg/Kg	
SL-604-SA6-SB-3.5-4.5	ANTIMONY	J	0.014	8.7	MRL	mg/Kg	
	ARSENIC	J	6.9	15	MRL	mg/Kg	
	CADMIUM	J	0.31	1.0	MRL	mg/Kg	
	COBALT	J	13	21	MRL	mg/Kg	
	COPPER	J	27	29	MRL	mg/Kg	
	LEAD	J	17	34	MRL	mg/Kg	J (all detects)
	MOLYBDENUM	J	0.52	5.3	MRL	mg/Kg	
	NICKEL	J	24	29	MRL	mg/Kg	
	SILVER	J	0.047	0.79	MRL	mg/Kg	
	THALLIUM	J B	0.41	0.46	MRL	mg/Kg	
SL-608-SA6-SB-0.0-0.5	ANTIMONY	J	0.023	8.2	MRL	mg/Kg	
	ARSENIC	J	3.7	14	MRL	mg/Kg	
	BARIUM	J	100	130	MRL	mg/Kg	
	BERYLLIUM	J	0.56	1.0	MRL	mg/Kg	
	CADMIUM	J	0.47	0.94	MRL	mg/Kg	
	CHROMIUM	J	19	35	MRL	mg/Kg	
	COBALT	J	5.9	20	MRL	mg/Kg	
	COPPER	J	12	27	MRL	mg/Kg	J (all detects)
	LEAD	J	12	32	MRL	mg/Kg	
	MOLYBDENUM	J	0.44	5.0	MRL	mg/Kg	
	NICKEL	J	14	27	MRL	mg/Kg	
	SILVER	J	0.14	0.74	MRL	mg/Kg	
	THALLIUM	J	0.28	0.43	MRL	mg/Kg	
	VANADIUM	J	31	58	MRL	mg/Kg	
	ZINC	J	73	100	MRL	mg/Kg	
SL-653-SA6-SB-0.0-0.5	ANTIMONY	J	0.015	9.5	MRL	mg/Kg	
	ARSENIC	J	5.5	16	MRL	mg/Kg	
	BARIUM	J	110	150	MRL	mg/Kg	
	BERYLLIUM	J	0.81	1.2	MRL	mg/Kg	
	CADMIUM	J	0.42	1.1	MRL	mg/Kg	
	CHROMIUM	J	28	40	MRL	mg/Kg	
	COBALT	J	9.9	23	MRL	mg/Kg	
	COPPER	J	15	32	MRL	mg/Kg	J (all detects)
	LEAD	J	9.8	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.27	5.8	MRL	mg/Kg	
	NICKEL	J	22	32	MRL	mg/Kg	
	SILVER	J	0.048	0.87	MRL	mg/Kg	
	THALLIUM	J B	0.33	0.50	MRL	mg/Kg	
	VANADIUM	J	53	68	MRL	mg/Kg	
	ZINC	J	81	120	MRL	mg/Kg	

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-654A-SA6-SB-0.0-0.5	ARSENIC	J	5.1	17	MRL	mg/Kg	
	BARIUM	J	110	160	MRL	mg/Kg	
	BERYLLIUM	J	0.78	1.3	MRL	mg/Kg	
	CADMIUM	J	0.49	1.1	MRL	mg/Kg	
	CHROMIUM	J	27	42	MRL	mg/Kg	
	COBALT	J	8.6	24	MRL	mg/Kg	
	COPPER	J	15	33	MRL	mg/Kg	J (all detects)
	LEAD	J	20	39	MRL	mg/Kg	
	MOLYBDENUM	J	0.29	6.1	MRL	mg/Kg	
	NICKEL	J	18	33	MRL	mg/Kg	
	SILVER	J	0.23	0.90	MRL	mg/Kg	
	THALLIUM	J B	0.30	0.53	MRL	mg/Kg	
	VANADIUM	J	48	71	MRL	mg/Kg	
	ZINC	J	86	130	MRL	mg/Kg	
SL-666-SA6-SB-0.0-0.5	ANTIMONY	J	0.021	9.2	MRL	mg/Kg	
	ARSENIC	J	2.5	16	MRL	mg/Kg	
	BARIUM	J	100	150	MRL	mg/Kg	
	BERYLLIUM	J	0.52	1.2	MRL	mg/Kg	
	CADMIUM	J	0.34	1.1	MRL	mg/Kg	
	CHROMIUM	J	14	39	MRL	mg/Kg	
	COBALT	J	5.0	22	MRL	mg/Kg	
	COPPER	J	8.3	31	MRL	mg/Kg	J (all detects)
	LEAD	J	9.1	36	MRL	mg/Kg	
	MOLYBDENUM	J	0.41	5.6	MRL	mg/Kg	
	NICKEL	J	10	31	MRL	mg/Kg	
	SILVER	J	0.054	0.84	MRL	mg/Kg	
	THALLIUM	J	0.25	0.49	MRL	mg/Kg	
	VANADIUM	J	26	66	MRL	mg/Kg	
	ZINC	J	51	120	MRL	mg/Kg	
SL-667-SA6-SB-0.0-0.5	ANTIMONY	J	0.023	8.5	MRL	mg/Kg	
	ARSENIC	J	2.6	15	MRL	mg/Kg	
	BARIUM	J	100	140	MRL	mg/Kg	
	BERYLLIUM	J	0.52	1.1	MRL	mg/Kg	
	CADMIUM	J	0.40	0.98	MRL	mg/Kg	
	CHROMIUM	J	14	36	MRL	mg/Kg	
	COBALT	J	5.0	20	MRL	mg/Kg	
	COPPER	J	9.3	28	MRL	mg/Kg	J (all detects)
	LEAD	J	14	33	MRL	mg/Kg	
	MOLYBDENUM	J	0.40	5.2	MRL	mg/Kg	
	NICKEL	J	11	28	MRL	mg/Kg	
	SILVER	J	0.14	0.77	MRL	mg/Kg	
	THALLIUM	J	0.24	0.45	MRL	mg/Kg	
	VANADIUM	J	25	61	MRL	mg/Kg	
	ZINC	J	65	110	MRL	mg/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 6020A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-668-SA6-SB-0.0-0.5	ANTIMONY	J	0.027	9.5	MRL	mg/Kg	
	ARSENIC	J	5.2	16	MRL	mg/Kg	
	BARIUM	J	120	150	MRL	mg/Kg	
	BERYLLIUM	J	0.96	1.2	MRL	mg/Kg	
	CADMIUM	J	0.58	1.1	MRL	mg/Kg	
	CHROMIUM	J	31	40	MRL	mg/Kg	
	COBALT	J	11	23	MRL	mg/Kg	
	COPPER	J	17	32	MRL	mg/Kg	J (all detects)
	LEAD	J	9.8	37	MRL	mg/Kg	
	MOLYBDENUM	J	0.22	5.8	MRL	mg/Kg	
	NICKEL	J	21	32	MRL	mg/Kg	
	SILVER	J	0.051	0.86	MRL	mg/Kg	
	THALLIUM	J	0.35	0.50	MRL	mg/Kg	
	VANADIUM	J	54	67	MRL	mg/Kg	
	ZINC	J	74	120	MRL	mg/Kg	
SL-684-SA6-SB-0.0-0.5	ANTIMONY	J	0.021	8.9	MRL	mg/Kg	
	ARSENIC	J	3.5	15	MRL	mg/Kg	
	BARIUM	J	100	140	MRL	mg/Kg	
	BERYLLIUM	J	0.52	1.1	MRL	mg/Kg	
	CADMIUM	J	0.28	1.0	MRL	mg/Kg	
	CHROMIUM	J	18	38	MRL	mg/Kg	
	COBALT	J	5.8	22	MRL	mg/Kg	
	COPPER	J	9.1	30	MRL	mg/Kg	J (all detects)
	LEAD	J	9.6	35	MRL	mg/Kg	
	MOLYBDENUM	J	0.46	5.4	MRL	mg/Kg	
	NICKEL	J	12	30	MRL	mg/Kg	
	SILVER	J	0.071	0.81	MRL	mg/Kg	
	THALLIUM	J	0.25	0.47	MRL	mg/Kg	
	VANADIUM	J	32	64	MRL	mg/Kg	
	ZINC	J	58	110	MRL	mg/Kg	

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-5.5-6.5	MERCURY	J	0.011	0.026	MRL	mg/Kg	J (all detects)
SL-596-SA6-SB-0.0-0.5	MERCURY	J	0.022	0.025	MRL	mg/Kg	J (all detects)
SL-601-SA6-SB-0.0-0.5	MERCURY	J	0.020	0.025	MRL	mg/Kg	J (all detects)
SL-601-SA6-SB-4.0-5.0	MERCURY	J	0.010	0.025	MRL	mg/Kg	J (all detects)
SL-603-SA6-SB-0.0-0.5	MERCURY	J	0.021	0.024	MRL	mg/Kg	J (all detects)
SL-604-SA6-SB-0.0-0.5	MERCURY	J	0.018	0.024	MRL	mg/Kg	J (all detects)
SL-604-SA6-SB-3.5-4.5	MERCURY	J	0.011	0.026	MRL	mg/Kg	J (all detects)
SL-608-SA6-SB-0.0-0.5	MERCURY	J	0.025	0.026	MRL	mg/Kg	J (all detects)
SL-653-SA6-SB-0.0-0.5	MERCURY	J	0.017	0.026	MRL	mg/Kg	J (all detects)
SL-654A-SA6-SB-0.0-0.5	MERCURY	J	0.023	0.025	MRL	mg/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 7471B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-668-SA6-SB-0.0-0.5	MERCURY	J	0.0095	0.025	MRL	mg/Kg	J (all detects)
SL-684-SA6-SB-0.0-0.5	MERCURY	J	0.015	0.024	MRL	mg/Kg	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-5.5-6.5	TOTAL EFH(C8-C40)	J B	1.7	4.3	MRL	mg/Kg	J (all detects)
SL-596-SA6-SB-0.0-0.5	EFH(C15-C20)	J	1.7	5.4	MRL	mg/Kg	J (all detects)
SL-596-SA6-SB-4.0-5.0	TOTAL EFH(C8-C40)	J B	1.0	4.1	MRL	mg/Kg	J (all detects)
SL-598-SA6-SB-0.0-0.5	EFH(C15-C20)	J	2.3	5.5	MRL	mg/Kg	J (all detects)
SL-598-SA6-SB-4.0-5.0	TOTAL EFH(C8-C40)	J B	2.1	4.1	MRL	mg/Kg	J (all detects)
SL-601-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.4	5.3	MRL	mg/Kg	J (all detects)
SL-601-SA6-SB-4.0-5.0	EFH(C30-C40) TOTAL EFH(C8-C40)	J J B	1.1 2.5	10 4.0	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-603-SA6-SB-0.0-0.5	EFH(C15-C20)	J	6.6	28	MRL	mg/Kg	J (all detects)
SL-604-SA6-SB-3.5-4.5	EFH(C21-C30)	J	1.8	5.5	MRL	mg/Kg	J (all detects)
SL-608-SA6-SB-0.0-0.5	EFH(C15-C20)	J	2.1	5.4	MRL	mg/Kg	J (all detects)
SL-653-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.7	5.3	MRL	mg/Kg	J (all detects)
SL-666-SA6-SB-0.0-0.5	EFH(C30-C40) TOTAL EFH(C8-C40)	J J B	1.1 2.7	11 4.2	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-667-SA6-SB-0.0-0.5	EFH(C12-C14)	J	1.9	5.1	MRL	mg/Kg	J (all detects)
SL-668-SA6-SB-0.0-0.5	EFH(C15-C20) EFH(C21-C30)	J J	1.4 3.9	5.6 5.6	MRL MRL	mg/Kg mg/Kg	J (all detects)
SL-684-SA6-SB-0.0-0.5	EFH(C15-C20)	J	1.3	5.0	MRL	mg/Kg	J (all detects)

Method: 8082A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-0.0-0.5	Aroclor 5460	J	31	53	MRL	ug/Kg	J (all detects)
SL-598-SA6-SB-0.0-0.5	AROCLOR 1254	J	17	18	MRL	ug/Kg	J (all detects)
SL-684-SA6-SB-0.0-0.5	AROCLOR 1254	J	15	18	MRL	ug/Kg	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	3.5	110	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J	5.0	110	MRL	ug/Kg	
	ACENAPHTHENE	J	6.0	110	MRL	ug/Kg	
	ACENAPHTHYLENE	J	6.1	110	MRL	ug/Kg	
	ANTHRACENE	J	26	110	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	87	110	MRL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	86	110	MRL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	22	110	MRL	ug/Kg	
	FLUORENE	J	7.3	110	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	96	110	MRL	ug/Kg	
	NAPHTHALENE	J	6.5	110	MRL	ug/Kg	
SL-596-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.81	11	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J	1.3	11	MRL	ug/Kg	
	ACENAPHTHENE	J	0.53	11	MRL	ug/Kg	
	ACENAPHTHYLENE	J	0.88	11	MRL	ug/Kg	
	ANTHRACENE	J	1.6	11	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	2.4	11	MRL	ug/Kg	
	BENZO(A)PYRENE	J	2.3	11	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	6.4	11	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	2.9	11	MRL	ug/Kg	J (all detects)
	BENZO(K)FLUORANTHENE	J	2.1	11	MRL	ug/Kg	
	CHRYSENE	J	9.5	11	MRL	ug/Kg	
	FLUORANTHENE	J	9.8	11	MRL	ug/Kg	
	FLUORENE	J	2.8	11	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	2.7	11	MRL	ug/Kg	
	NAPHTHALENE	J	1.6	11	MRL	ug/Kg	
	PHENANTHRENE	J	5.9	11	MRL	ug/Kg	
	PYRENE	J	7.5	11	MRL	ug/Kg	
SL-598-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	0.85	11	MRL	ug/Kg	
	2-METHYLNAPHTHALENE	J	1.2	11	MRL	ug/Kg	
	ACENAPHTHENE	J	0.73	11	MRL	ug/Kg	
	ACENAPHTHYLENE	J	1.1	11	MRL	ug/Kg	
	ANTHRACENE	J	1.7	11	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	3.7	11	MRL	ug/Kg	
	BENZO(A)PYRENE	J	4.0	11	MRL	ug/Kg	J (all detects)
	BENZO(B)FLUORANTHENE	J	9.3	11	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	4.5	11	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	2.6	11	MRL	ug/Kg	
	FLUORENE	J	2.9	11	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	3.7	11	MRL	ug/Kg	
	NAPHTHALENE	J	1.8	11	MRL	ug/Kg	
	PHENANTHRENE	J	7.4	11	MRL	ug/Kg	
SL-598-SA6-SB-4.0-5.0	2-METHYLNAPHTHALENE	J	0.35	10	MRL	ug/Kg	
	ACENAPHTHENE	J	0.60	10	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.6	10	MRL	ug/Kg	
	BENZO(A)PYRENE	J	1.0	10	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	1.2	10	MRL	ug/Kg	J (all detects)
	CHRYSENE	J	1.7	10	MRL	ug/Kg	
	FLUORANTHENE	J	1.9	10	MRL	ug/Kg	
	NAPHTHALENE	J	0.44	10	MRL	ug/Kg	
	PHENANTHRENE	J	1.6	10	MRL	ug/Kg	
	PYRENE	J	2.4	10	MRL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-601-SA6-SB-0.0-0.5	CHRYSENE	J	17	100	MRL	ug/Kg	J (all detects)
	FLUORANTHENE	J	24	100	MRL	ug/Kg	
	PHENANTHRENE	J	14	100	MRL	ug/Kg	
	PYRENE	J	24	100	MRL	ug/Kg	
SL-603-SA6-SB-0.0-0.5	ACENAPHTHENE	J	4.9	210	MRL	ug/Kg	J (all detects)
	ACENAPHTHYLENE	J	3.8	210	MRL	ug/Kg	
	ANTHRACENE	J	24	210	MRL	ug/Kg	
	BENZO(A)PYRENE	J	190	210	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	100	210	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	97	210	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	110	210	MRL	ug/Kg	
	PHENANTHRENE	J	130	210	MRL	ug/Kg	
SL-603-SA6-SB-4.0-5.0	CHRYSENE	J	51	220	MRL	ug/Kg	J (all detects)
	PYRENE	J	24	220	MRL	ug/Kg	
SL-608-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	4.4	11	MRL	ug/Kg	J (all detects)
	2-METHYLNAPHTHALENE	J	3.8	11	MRL	ug/Kg	
	ACENAPHTHENE	J	4.1	11	MRL	ug/Kg	
	ACENAPHTHYLENE	J	3.9	11	MRL	ug/Kg	
	DIBENZO(A,H)ANTHRACENE	J	6.8	11	MRL	ug/Kg	
	FLUORENE	J	3.9	11	MRL	ug/Kg	
	NAPHTHALENE	J	4.2	11	MRL	ug/Kg	
SL-667-SA6-SB-0.0-0.5	ACENAPHTHENE	J	2.7	11	MRL	ug/Kg	J (all detects)
	ACENAPHTHYLENE	J	1.7	11	MRL	ug/Kg	
	ANTHRACENE	J	3.8	11	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	4.5	11	MRL	ug/Kg	
	BENZO(A)PYRENE	J	4.1	11	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	7.2	11	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	3.5	11	MRL	ug/Kg	
	BENZO(K)FLUORANTHENE	J	2.0	11	MRL	ug/Kg	
	CHRYSENE	J	8.9	11	MRL	ug/Kg	
	FLUORANTHENE	J	10	11	MRL	ug/Kg	
	FLUORENE	J	5.7	11	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	2.7	11	MRL	ug/Kg	
	NAPHTHALENE	J	6.3	11	MRL	ug/Kg	
SL-684-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	1.5	10	MRL	ug/Kg	J (all detects)
	2-METHYLNAPHTHALENE	J	2.1	10	MRL	ug/Kg	
	ACENAPHTHENE	J	0.20	10	MRL	ug/Kg	
	ACENAPHTHYLENE	J	0.18	10	MRL	ug/Kg	
	BENZO(A)ANTHRACENE	J	1.1	10	MRL	ug/Kg	
	BENZO(A)PYRENE	J	1.3	10	MRL	ug/Kg	
	BENZO(B)FLUORANTHENE	J	2.5	10	MRL	ug/Kg	
	BENZO(G,H,I)PERYLENE	J	2.8	10	MRL	ug/Kg	
	CHRYSENE	J	2.8	10	MRL	ug/Kg	
	FLUORANTHENE	J	2.9	10	MRL	ug/Kg	
	INDENO(1,2,3-CD)PYRENE	J	1.1	10	MRL	ug/Kg	
	NAPHTHALENE	J	1.8	10	MRL	ug/Kg	
	PHENANTHRENE	J	2.8	10	MRL	ug/Kg	
	PYRENE	J	2.8	10	MRL	ug/Kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-1 **Laboratory: TA DEN**

EDD Filename: 280-36846-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **8315A**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-547-SA6-SB-0.0-0.5	FORMALDEHYDE	J	1100	1800	MRL	ug/Kg	J (all detects)
SL-547-SA6-SB-4.0-5.0	FORMALDEHYDE	J	780	1900	MRL	ug/Kg	J (all detects)

LDC #: 29423O4
SDG #: 280-36846-1
Laboratory: Test America, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/3/13
Page: 1 of 1
Reviewer: CR
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	—	Sampling dates: 12/10/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	SW	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	see below
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	
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= EB1-121312 + *EB2-121312 (12L106) EB= EB-121212 (12L093) FB= FB-111412 (280-35930-1)

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

Validated Samples:

1	SL-557-SA6-SB-0.0-0.5 2	11	SL-598-SA6-SB-0.0-0.5 2	21	SL-557-SA6-SB-0.0-0.5MSD	31	
2	SL-557-SA6-SB-5.5-6.5 1	12	SL-598-SA6-SB-4.0-5.0 1	22	SL-598-SA6-SB-4.0-5.0MS 6020	32	
3	SL-603-SA6-SB-0.0-0.5 2	13	SL-601-SA6-SB-0.0-0.5 2	23	SL-598-SA6-SB-4.0-5.0MSD	33	
4	SL-603-SA6-SB-4.0-5.0 1	14	SL-601-SA6-SB-4.0-5.0 1	24	SL-601-SA6-SB-0.0-0.5MS 6010	34	
5	SL-604-SA6-SB-0.0-0.5 2	15	SL-608-SA6-SB-0.0-0.5 2	25	SL-601-SA6-SB-0.0-0.5MSD 19	35	
6	SL-604-SA6-SB-3.5-4.5 1	16	SL-666-SA6-SB-0.0-0.5 3	26	SL-601-SA6-SB-4.0-5.0MS 45	36	
7	SL-653-SA6-SB-0.0-0.5 3	17	SL-667-SA6-SB-0.0-0.5 3	27	SL-601-SA6-SB-4.0-5.0MSD	37	
8	SL-654A-SA6-SB-0.0-0.5 3B	18	SL-668-SA6-SB-0.0-0.5 3	28	SL-684-SA6-SB-0.0-0.5MS 6010 6020	38	
9	SL-596-SA6-SB-0.0-0.5 2	19	SL-684-SA6-SB-0.0-0.5 3	29	SL-684-SA6-SB-0.0-0.5MSD	39	
10	SL-596-SA6-SB-4.0-5.0 1	20	SL-557-SA6-SB-0.0-0.5MS OK: 45	30		40	

Notes: 22/23: Ba >4X Sb RS= 104% (J/UJ)
24/25: Al, Fe, Mn, Ti >4X
28/29: Al, Fe, Mn, Ti, Ba >4X Sb RS= 103% (J/UJ)

LDC #: 29423O4

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

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

METHOD: Trace metals (EPA SW 864 Method 6010B/6020/7000) Soil preparation factor applied: 100x Reason: B

Sample Concentration units, unless otherwise noted: mg/Kg Associated Samples: 19

Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Action Level	19								
Na			282	141	110								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 29423O4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010C/6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/12/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / (Other: EB) Associated Samples: 7-8, 16-19

Analyte	Blank ID	Sample Identification										
	EB-121212	Action Limit	No Qualifiers									
Ca	0.0268	13.4										
Ni	0.000247	0.124										

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 #: 29423O4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6010C/6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412	Action Limit	1	2	3	4	5	6	7	8	9	11
B	0.024	12	1.2				1.5		2.2	3.4		1.6
Na	0.17	85							81		81	80
Ag	0.00078	0.39		0.033	0.060	0.085	0.031	0.047	0.048	0.23	0.25	

Sampling date: mg/L Soil factor applied 100x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412	Action Limit	12	13	14	15	16	17	18	19		
B	0.024	12			1.4	3.1	2.4	2.4	6.0	1.6		
Na	0.17	85		74								
Ag	0.00078	0.39	0.060	0.30	0.047	0.14	0.054	0.14	0.051	0.071		

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

280-36846-2

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-Dec-2012	SL-654A-SA6-SB-0.0-0.5	280-36846-20	N	1613	1613B	III
10-Dec-2012	SL-603-SA6-SB-0.0-0.5	280-36846-8	N	1613	1613B	III
10-Dec-2012	SL-603-SA6-SB-4.0-5.0	280-36846-10	N	1613	1613B	III
10-Dec-2012	SL-604-SA6-SB-0.0-0.5	280-36846-13	N	1613	1613B	III
10-Dec-2012	SL-604-SA6-SB-3.5-4.5	280-36846-15	N	1613	1613B	III
10-Dec-2012	SL-653-SA6-SB-0.0-0.5	280-36846-18	N	1613	1613B	III
10-Dec-2012	SL-557-SA6-SB-0.0-0.5	280-36846-3	N	1613	1613B	III
10-Dec-2012	SL-557-SA6-SB-5.5-6.5	280-36846-5	N	1613	1613B	III
10-Dec-2012	SL-608-SA6-SB-0.0-0.5	280-36846-40	N	1613	1613B	III
10-Dec-2012	SL-666-SA6-SB-0.0-0.5	280-36846-42	N	1613	1613B	III
10-Dec-2012	SL-601-SA6-SB-0.0-0.5	280-36846-35	N	1613	1613B	III
10-Dec-2012	SL-601-SA6-SB-4.0-5.0	280-36846-37	N	1613	1613B	III
10-Dec-2012	SL-668-SA6-SB-0.0-0.5	280-36846-46	N	1613	1613B	III
10-Dec-2012	SL-598-SA6-SB-0.0-0.5	280-36846-30	N	1613	1613B	III
10-Dec-2012	SL-598-SA6-SB-4.0-5.0	280-36846-32	N	1613	1613B	III
10-Dec-2012	SL-667-SA6-SB-0.0-0.5	280-36846-44	N	1613	1613B	III
10-Dec-2012	SL-596-SA6-SB-0.0-0.5	280-36846-25	N	1613	1613B	III
10-Dec-2012	SL-596-SA6-SB-4.0-5.0	280-36846-27	N	1613	1613B	III
10-Dec-2012	SL-684-SA6-SB-0.0-0.5	280-36846-48	N	1613	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: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-557-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.5	J	0.15	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.7	J	0.13	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.2	J	0.070	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	3.9	Q J	0.065	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.18	Q J	0.087	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.48	Q J	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.44	J	0.096	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.86	Q J	0.071	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.65	J	0.093	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.88	J	0.20	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: **SL-557-SA6-SB-5.5-6.5** ***Collected:*** **12/10/2012 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-HPCDD	1.0	Q J	0.11	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.25	J	0.060	MDL	5.4	MRL	ng/kg	J	Z
OCDF	1.3	Q B J	0.23	MDL	11	MRL	ng/kg	J	Z

Sample ID: **SL-596-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 2:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.54	J	0.13	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.60	J	0.10	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.50	Q J	0.067	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.8	J	0.10	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.81	Q J	0.059	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.6	J	0.093	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.30	J	0.080	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.37	Q J	0.11	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.19	Q J	0.079	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	J	0.062	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.23	J	0.077	MDL	5.4	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-596-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 2:25:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.52	J	0.17	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-596-SA6-SB-4.0-5.0** *Collected:* **12/10/2012 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
1,2,3,4,6,7,8-HPCDD	0.55	Q J	0.086	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.18	Q J	0.063	MDL	5.0	MRL	ng/kg	J	Z
OCDF	0.30	Q B J	0.070	MDL	9.9	MRL	ng/kg	U	B

Sample ID: **SL-598-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 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
1,2,3,4,7,8,9-HPCDF	1.3	Q J	0.17	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.9	J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.6	J C	0.072	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	3.0	Q J	0.075	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.087	Q J	0.088	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.6	Q J	0.17	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.62	J	0.078	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.67	J	0.10	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.76	J	0.21	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-598-SA6-SB-4.0-5.0** *Collected:* **12/10/2012 1:50:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.1	J	0.084	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.17	J	0.055	MDL	5.0	MRL	ng/kg	J	Z
OCDF	0.41	B J	0.063	MDL	10	MRL	ng/kg	U	B

Sample ID: **SL-601-SA6-SB-0.0-0.5** *Collected:* **12/10/2012 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
1,2,3,4,7,8,9-HPCDF	2.9	J	0.15	MDL	5.3	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-601-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
1,2,3,4,7,8-HxCDD	2.6	J	0.099	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.3	Q J	0.067	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	5.0	J	0.10	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.18	J	0.077	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.0	Q J	0.11	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.092	Q J	0.096	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	1.2	J	0.064	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.28	Q J	0.087	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.25	Q J	0.15	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-601-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.7	J	0.10	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.38	Q J	0.076	MDL	5.1	MRL	ng/kg	J	Z
OCDF	1.8	B J	0.072	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-603-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.2	J	0.075	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.32	J	0.082	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.11	J	0.055	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.53	J	0.092	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.15	J	0.054	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.26	Q S J	0.080	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.22	J	0.10	MDL	5.8	MRL	ng/kg	J	Z
OCDF	3.1	B J	0.11	MDL	12	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-603-SA6-SB-4.0-5.0 *Collected:* 12/10/2012 8:40:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.25	Q J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.11	Q J	0.066	MDL	5.6	MRL	ng/kg	J	Z
OCDD	5.6	S B J	0.19	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-604-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
1,2,3,4,6,7,8-HPCDD	0.88	J	0.19	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.44	J	0.10	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.089	Q J	0.064	MDL	5.6	MRL	ng/kg	J	Z
OCDD	7.8	B J	0.25	MDL	11	MRL	ng/kg	J	Z
OCDF	1.2	Q B J	0.22	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-604-SA6-SB-3.5-4.5 *Collected:* 12/10/2012 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
OCDD	4.2	B J	0.24	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-608-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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
1,2,3,4,7,8,9-HPCDF	1.0	J	0.20	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.8	J	0.19	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.94	Q J	0.095	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	4.6	J	0.19	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.2	Q J	0.085	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	5.1	C J	0.18	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.60	Q J	0.17	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.25	J	0.12	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.53	J	0.094	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.44	Q J	0.11	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.70	Q J	0.21	MDL	1.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-653-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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	4.5	S J	0.80	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.85	J	0.29	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.9	Q J	0.72	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	2.0	Q J	0.55	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.58	Q J	0.22	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.67	Q J	0.38	MDL	1.1	MRL	ng/kg	J	Z
OCDD	590	B	1.9	MDL	11	MRL	ng/kg	J	I
OCDF	14	Q B	1.8	MDL	11	MRL	ng/kg	J	I

Sample ID: SL-654A-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:15:00 *Analysis Type:* RE2 *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	1.4	J	0.21	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.66	J	0.17	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.79	J	0.083	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	3.1	Q J	0.18	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.73	Q J	0.082	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.3	Q J	0.16	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.29	Q J	0.12	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.28	J	0.11	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.18	Q J	0.087	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.83	J	0.093	MDL	5.7	MRL	ng/kg	J	Z

Sample ID: SL-654A-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 8:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.60	Q J	0.14	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-666-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.5	Q J	0.091	MDL	5.6	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-666-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 12:30:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	0.20	J	0.063	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.50	J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.22	Q J	0.057	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.68	J	0.099	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.19	J	0.078	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.17	J	0.083	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.72	J	0.18	MDL	1.1	MRL	ng/kg	J	Z
OCDF	2.6	B J	0.083	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-667-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 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	4.6	Q J	0.087	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.1	J	0.12	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.46	J	0.079	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.0	J	0.13	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.50	Q J	0.069	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	2.2	J C	0.11	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.71	J	0.15	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.27	J	0.12	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.21	Q J	0.077	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.33	J	0.11	MDL	5.7	MRL	ng/kg	J	Z
OCDF	7.7	B J	0.089	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-668-SA6-SB-0.0-0.5 *Collected:* 12/10/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.8	J	0.087	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.51	Q J	0.065	MDL	5.8	MRL	ng/kg	J	Z
OCDF	1.1	Q B J	0.10	MDL	12	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-684-SA6-SB-0.0-0.5** ***Collected:*** **12/10/2012 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*
1,2,3,4,7,8,9-HPCDF	0.28	Q J	0.095	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.42	Q J	0.067	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.22	Q J	0.043	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.3	J	0.070	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.53	Q J	0.042	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.3	J	0.063	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.14	J	0.049	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.44	Q J	0.094	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.13	Q J	0.045	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.16	Q J	0.15	MDL	1.0	MRL	ng/kg	J	Z

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
I	Internal Standard Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

280-36846-2/ H2L150409

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L170000021B	12/28/2012 5:00:00 PM	OCDD OCDF	0.64 ng/kg 0.22 ng/kg	SL-557-SA6-SB-0.0-0.5 SL-557-SA6-SB-5.5-6.5 SL-596-SA6-SB-0.0-0.5 SL-596-SA6-SB-4.0-5.0 SL-598-SA6-SB-0.0-0.5 SL-598-SA6-SB-4.0-5.0 SL-601-SA6-SB-0.0-0.5 SL-601-SA6-SB-4.0-5.0 SL-603-SA6-SB-0.0-0.5 SL-603-SA6-SB-4.0-5.0 SL-604-SA6-SB-0.0-0.5 SL-604-SA6-SB-3.5-4.5 SL-608-SA6-SB-0.0-0.5 SL-653-SA6-SB-0.0-0.5 SL-654A-SA6-SB-0.0-0.5 SL-666-SA6-SB-0.0-0.5 SL-667-SA6-SB-0.0-0.5 SL-668-SA6-SB-0.0-0.5 SL-684-SA6-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-596-SA6-SB-4.0-5.0(RES)	OCDF	0.30 ng/kg	0.30U ng/kg
SL-598-SA6-SB-4.0-5.0(RES)	OCDF	0.41 ng/kg	0.41U ng/kg
SL-668-SA6-SB-0.0-0.5(RES)	OCDF	1.1 ng/kg	1.1U ng/kg

TestAmerica Denver

Client Sample ID: SL-653-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L150409 - 007	Work Order #....:	MXLMM1AC	Matrix.....:	SO
Date Sampled....:	12/10/12	Date Received....:	12/15/12	Units....:	ng/kg
Prep Date....:	12/17/12			Dilution Factor:	1
Prep Batch # ....:	2352021			Percent Moisture:	13
Initial Wgt/Vol :	10 g	Instrument ID....:	M1A	Method....:	EPA-5 1613B
Analyst ID....:	Jon M. Nordquist				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	12/31/12	1	ND	1.1	0.50	1.0	0
1,2,3,7,8-PeCDD	12/31/12	1	ND	5.7	0.29	1.0	0
1,2,3,4,7,8-HxCDD	12/31/12	1	ND	5.7	0.50	0.1	0
1,2,3,6,7,8-HxCDD	**12/31/12**	**1**	**1.9 Q J**	**5.7**	**0.72**	**0.1**	**0.19**
1,2,3,7,8,9-HxCDD	**12/31/12**	**1**	**2.0 Q J**	**5.7**	**0.55**	**0.1**	**0.20**
1,2,3,4,6,7,8-HpCDD	**12/31/12**	**1**	**85**	**5.7**	**1.8**	**0.01**	**0.85**
OCDD	**12/31/12**	**1**	**590 B**	**11**	**1.9**	**0.0003**	**0.18**
2,3,7,8-TCDF	**12/31/12**	**1**	**0.67 Q J**	**1.1**	**0.38**	**0.1**	**0.067**
1,2,3,7,8-PeCDF	12/31/12	1	ND	5.7	0.23	0.03	0
2,3,4,7,8-PeCDF	**12/31/12**	**1**	**0.58 Q J**	**5.7**	**0.22**	**0.3**	**0.17**
1,2,3,4,7,8-HxCDF	**12/31/12**	**1**	**0.85 J**	**5.7**	**0.29**	**0.1**	**0.085**
1,2,3,6,7,8-HxCDF	12/31/12	1	ND	5.7	0.30	0.1	0
2,3,4,6,7,8-HxCDF	12/31/12	1	ND	5.7	0.41	0.1	0
1,2,3,7,8,9-HxCDF	12/31/12	1	ND	5.7	0.46	0.1	0
1,2,3,4,6,7,8-HpCDF	**12/31/12**	**1**	**4.5 S J**	**5.7**	**0.80**	**0.01**	**0.045**
1,2,3,4,7,8,9-HpCDF	12/31/12	1	ND	5.7	0.68	0.01	0
OCDF	**12/31/12**	**1**	**14 Q B**	**11**	**1.8**	**0.0003**	**0.0042**
Total TEQ Concentration							**1.8**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	64	(25 - 164)
13C-1,2,3,7,8-PeCDD	58	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	72	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	44	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	25	(23 - 140)
13C-OCDD	13 *	(17 - 157) J/UJ/P*
13C-2,3,7,8-TCDF	59	(24 - 169)
13C-1,2,3,7,8-PeCDF	58	(24 - 185)
13C-2,3,4,7,8-PeCDF	55	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	79	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	57	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	56	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	58	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	32	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	32	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	77	(35 - 197)

* 13C-OCDD applies to OCDD and OCDF

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-557-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	2.5	5.9	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.7	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	2.2	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	3.9	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.18	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.48	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.44	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.86	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.65	5.9	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.88	1.2	MRL	ng/kg	
SL-557-SA6-SB-5.5-6.5	1,2,3,4,6,7,8-HPCDD	Q J	1.0	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	0.25	5.4	MRL	ng/kg	
	OCDF	Q B J	1.3	11	MRL	ng/kg	
SL-596-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	0.54	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.60	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.50	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.8	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.81	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	1.6	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.30	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.37	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.19	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.23	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.23	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.52	1.1	MRL	ng/kg	
SL-596-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q J	0.55	5.0	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q J	0.18	5.0	MRL	ng/kg	
	OCDF	Q B J	0.30	9.9	MRL	ng/kg	
SL-598-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q J	1.3	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.9	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J C	1.6	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	3.0	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.087	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	1.6	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.62	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.67	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.76	1.1	MRL	ng/kg	
SL-598-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	J	1.1	5.0	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	0.17	5.0	MRL	ng/kg	
	OCDF	B J	0.41	10	MRL	ng/kg	
SL-601-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	2.9	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	2.6	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	1.3	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	5.0	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.18	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	1.0	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.092	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	1.2	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.28	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.25	1.1	MRL	ng/kg	
SL-601-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	J	1.7	5.1	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q J	0.38	5.1	MRL	ng/kg	
	OCDF	B J	1.8	10	MRL	ng/kg	

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-603-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	2.2	5.8	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.32	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.11	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.53	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.15	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q S J	0.26	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	0.22	5.8	MRL	ng/kg	
	OCDF	B J	3.1	12	MRL	ng/kg	
SL-603-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q J	0.25	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	0.11	5.6	MRL	ng/kg	
	OCDD	S B J	5.6	11	MRL	ng/kg	
SL-604-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	0.88	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	0.44	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.089	5.6	MRL	ng/kg	
	OCDD	B J	7.8	11	MRL	ng/kg	
	OCDF	Q B J	1.2	11	MRL	ng/kg	
SL-604-SA6-SB-3.5-4.5	OCDD	B J	4.2	11	MRL	ng/kg	J (all detects)
SL-608-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	1.0	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	1.8	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.94	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	4.6	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	1.2	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C J	5.1	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.60	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.25	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.53	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.44	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.70	1.1	MRL	ng/kg	
SL-653-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	S J	4.5	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	J	0.85	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	1.9	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	2.0	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.58	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.67	1.1	MRL	ng/kg	
SL-654A-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	J	1.4	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.66	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.79	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	3.1	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.73	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	1.3	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.29	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.28	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.18	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.83	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.60	1.1	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36846-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36846-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-666-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	1.5	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.20	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.50	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.22	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.68	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.19	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.17	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.72	1.1	MRL	ng/kg	
	OCDF	B J	2.6	11	MRL	ng/kg	
SL-667-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	4.6	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	1.1	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.46	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.0	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.50	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J C	2.2	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.71	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.27	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.21	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.33	5.7	MRL	ng/kg	
	OCDF	B J	7.7	11	MRL	ng/kg	
SL-668-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	J	1.8	5.8	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q J	0.51	5.8	MRL	ng/kg	J (all detects)
	OCDF	Q B J	1.1	12	MRL	ng/kg	
SL-684-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q J	0.28	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.42	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.22	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.3	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.53	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	1.3	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.14	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.44	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.13	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.16	1.0	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-36889-1

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-Dec-2012	SL-548-SA6-SB-0.0-0.5	280-36889-5	N	8315A Prep	8315A	III
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	280-36889-5MS	MS	8315A Prep	8315A	III
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	280-36889-5MSD	MSD	8315A Prep	8315A	III
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	280-36889-6	FD	8315A Prep	8315A	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: 280-36889-1 **Laboratory: TA NSH**

EDD Filename: 280-36889-1 **eQAPP Name: CDM_SSFL_120907_TA**

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36889-1

(No Outliers)

SAMPLE DELIVERY GROUP

280-36889-2

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-Dec-2012	SL-512-SA6-SB-0.0-0.5	280-36889-1	N	1613	1613B	III
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	280-36889-2	N	1613	1613B	III
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	280-36889-2 MS	MS	1613	1613B	III
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	280-36889-2 MSD	MSD	1613	1613B	III
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	280-36889-3	FD	1613	1613B	III
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	280-36889-4	N	1613	1613B	III
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	280-36889-5	N	1613	1613B	III
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	280-36889-5 MS	MS	1613	1613B	III
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	280-36889-5 MSD	MSD	1613	1613B	III
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	280-36889-6	FD	1613	1613B	III
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	280-36889-8	N	1613	1613B	III
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	280-36889-10	N	1613	1613B	III
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	280-36889-11	N	1613	1613B	III
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	280-36889-7	N	1613	1613B	III
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	280-36889-9	N	1613	1613B	III
11-Dec-2012	SL-556-SA6-SB-0.0-0.5	280-36889-12	N	1613	1613B	III
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	280-36889-14	N	1613	1613B	III
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	280-36889-15	N	1613	1613B	III
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	280-36889-13	N	1613	1613B	III
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	280-36889-16	N	1613	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: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-512-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 7:50:00** ***Analysis Type:*** **RE2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.95	B J	0.15	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-512-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	6.8	B	0.090	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.75	Q B J	0.11	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.41	J	0.086	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.7	J	0.061	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.4	J	0.088	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.79	Q B J	0.059	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	1.2	B J	0.082	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.41	Q J	0.080	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.42	Q J	0.084	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.42	B J	0.065	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.66	J	0.078	MDL	5.3	MRL	ng/kg	J	Z
OCDF	10	B J	0.046	MDL	11	MRL	ng/kg	J	Z

Sample ID: **SL-548-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 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	200	B	0.15	MDL	5.4	MRL	ng/kg	J	Q, Q, FD
1,2,3,4,6,7,8-HPCDF	28	B	0.068	MDL	5.4	MRL	ng/kg	J	FD
1,2,3,4,7,8,9-HPCDF	3.1	B J	0.099	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,4,7,8-HxCDD	0.25	Q J	0.083	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.4	Q J	0.044	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDD	10		0.086	MDL	5.4	MRL	ng/kg	J	FD
1,2,3,6,7,8-HXCDF	2.0	Q B J	0.045	MDL	5.4	MRL	ng/kg	UJ	B, FD
1,2,3,7,8,9-HXCDD	0.89	Q B J	0.079	MDL	5.4	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDD	0.17	Q J	0.047	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.050	U	0.050	MDL	5.4	MRL	ng/kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.35	B J	0.047	MDL	5.4	MRL	ng/kg	J	Z, FD
2,3,4,7,8-PECDF	0.17	Q J	0.046	MDL	5.4	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.035	J	0.026	MDL	1.1	MRL	ng/kg	J	Z, FD
2,3,7,8-TCDF	0.23	B J	0.035	MDL	1.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-548-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 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
OCDD	5400	B E	0.20	MDL	11	MRL	ng/kg	J	FD, *XI
OCDF	18	B	0.032	MDL	11	MRL	ng/kg	J	Q, Q, FD

Sample ID: **SL-555-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 10:25:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	5.6	B J	0.046	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.72	Q B J	0.022	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.14	Q J	0.047	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.34	J	0.051	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.051	Q B J	0.024	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.51	B J	0.046	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.14	J	0.031	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.15	Q J	0.023	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.057	Q J	0.022	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.073	Q B J	0.025	MDL	5.7	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.053	Q J	0.022	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.032	Q J	0.027	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.076	B Q J	0.022	MDL	1.1	MRL	ng/kg	U	B
OCDF	1.5	B J	0.020	MDL	11	MRL	ng/kg	U	B

Sample ID: **SL-556-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 12:40:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	11	B	0.10	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	1.4	B J	0.062	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.4	J	0.092	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.4	J	0.059	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	4.2	J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.85	B J	0.068	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	4.1	B J	0.096	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.13	Q J	0.049	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.59	Q J	0.050	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.20	Q J	0.051	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.41	Q B J	0.041	MDL	5.5	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-556-SA6-SB-0.0-0.5 **Collected:** 12/11/2012 12:40:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,7,8-PECDF	0.30	Q J	0.046	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.24	Q B J	0.035	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-593-SA6-SB-0.0-0.5 **Collected:** 12/11/2012 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	17	B	0.20	MDL	5.5	MRL	ng/kg	J	I
1,2,3,4,7,8,9-HPCDF	1.0	B J	0.055	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.3	J	0.14	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.0	C J	0.089	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	3.2	Q J	0.21	MDL	5.5	MRL	ng/kg	J	Z, I
1,2,3,6,7,8-HXCDF	0.39	Q B J	0.14	MDL	5.5	MRL	ng/kg	UJ	B, I
1,2,3,7,8,9-HXCDD	7.2	B	0.16	MDL	5.5	MRL	ng/kg	J	I
1,2,3,7,8,9-HXCDF	0.18	Q J	0.040	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.68	J	0.048	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.17	Q J	0.037	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	Q B J	0.034	MDL	5.5	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.16	Q J	0.034	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.13	Q B J	0.031	MDL	1.1	MRL	ng/kg	U	B

Sample ID: SL-594-SA6-SB-0.0-0.5 **Collected:** 12/11/2012 2:20:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.8	B J	0.094	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.8	J	0.079	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.2	J	0.046	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.1	Q B J	0.050	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	1.2	Q J	0.076	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.22	Q J	0.065	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.56	Q B J	0.049	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.28	J	0.057	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.091	Q J	0.044	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.38	Q B J	0.048	MDL	1.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-595-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 1:10:00** ***Analysis Type:*** **RE2** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.96	B J	0.14	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: **SL-595-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 1:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	27	Q B	1.6	MDL	5.8	MRL	ng/kg	J	I
1,2,3,4,7,8,9-HPCDF	1.1	B J	0.069	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.5	J	0.25	MDL	5.8	MRL	ng/kg	J	Z, I
1,2,3,4,7,8-HXCDF	2.3	J	0.19	MDL	5.8	MRL	ng/kg	J	Z, I
1,2,3,6,7,8-HXCDD	5.9		0.69	MDL	5.8	MRL	ng/kg	J	I
1,2,3,6,7,8-HXCDF	1.6	Q B J	0.82	MDL	5.8	MRL	ng/kg	UJ	B, I
1,2,3,7,8,9-HXCDD	28	B	0.35	MDL	5.8	MRL	ng/kg	J	I
1,2,3,7,8,9-HXCDF	0.28	Q J	0.047	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.4	J	0.071	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.47	Q J	0.060	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.57	Q B J	0.041	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.75	J	0.055	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.16	Q J	0.065	MDL	1.2	MRL	ng/kg	J	Z

Sample ID: **SL-595-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 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-HPCDF	1.7	Q B J	0.070	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.13	Q B J	0.031	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.26	J	0.057	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.21	J	0.031	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.73	J	0.088	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.15	Q B J	0.050	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	1.1	B J	0.065	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.057	Q J	0.022	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.22	J	0.032	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.094	Q J	0.026	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.088	Q B J	0.020	MDL	5.2	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.15	J	0.023	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.14	Q B J	0.025	MDL	1.0	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-595-SA6-SB-2.0-3.0 **Collected: 12/11/2012 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
OCDF	5.8	B J	0.037	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-597-SA6-SB-3.5-4.5 **Collected: 12/11/2012 9:20:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	14	Q B	1.0	MDL	5.2	MRL	ng/kg	J	I
1,2,3,4,7,8,9-HPCDF	1.6	B J	0.041	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	1.4	J	0.27	MDL	5.2	MRL	ng/kg	J	Z, I
1,2,3,4,7,8-HXCDF	1.3	J	0.24	MDL	5.2	MRL	ng/kg	J	Z, I
1,2,3,6,7,8-HXCDD	4.5	J	0.65	MDL	5.2	MRL	ng/kg	J	Z, I
1,2,3,6,7,8-HXCDF	1.0	U	1.0	MDL	5.2	MRL	ng/kg	UJ	I
1,2,3,7,8,9-HXCDD	13	B	0.36	MDL	5.2	MRL	ng/kg	J	I
1,2,3,7,8,9-HXCDF	0.071	Q J	0.035	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.52	J	0.045	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.18	Q J	0.030	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.47	B J	0.030	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.25	Q J	0.027	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.060	Q J	0.036	MDL	1.0	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.99	Q B J	0.050	MDL	1.0	MRL	ng/kg	J	Z

Sample ID: SL-599-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1800	B	0.26	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,4,6,7,8-HPCDF	260	B	0.13	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,4,7,8,9-HPCDF	22	B	0.25	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,4,7,8-HxCDD	18		0.14	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,6,7,8-HXCDD	73		0.14	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,6,7,8-HXCDF	21	Q B	0.057	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,7,8,9-HXCDD	46	C B	0.13	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,7,8,9-HXCDF	0.70	Q J	0.083	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	9.3		0.12	MDL	5.7	MRL	ng/kg	J	FD
1,2,3,7,8-PECDF	1.9	J	0.13	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	7.8	B	0.062	MDL	5.7	MRL	ng/kg	J	FD
2,3,4,7,8-PECDF	2.0	J	0.13	MDL	5.7	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-599-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 7:50:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDD	2.2		0.15	MDL	1.1	MRL	ng/kg	J	Q, FD
OCDD	20000	B E	0.25	MDL	11	MRL	ng/kg	J	*XI
OCDF	230	B	0.12	MDL	11	MRL	ng/kg	J	Q

Sample ID: **SL-599-SA6-SB-4.0-5.0** ***Collected:*** **12/11/2012 8:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.2	B J	0.048	MDL	5.0	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.53	Q B J	0.094	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.13	Q J	0.049	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.17	J	0.037	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.75	J	0.053	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.24	Q B J	0.034	MDL	5.0	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.57	B J	0.048	MDL	5.0	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.11	Q J	0.028	MDL	5.0	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.14	B J	0.031	MDL	5.0	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.031	Q B J	0.026	MDL	0.99	MRL	ng/kg	U	B
OCDF	5.6	B J	0.030	MDL	9.9	MRL	ng/kg	J	Z

Sample ID: **SL-605-SA6-SB-4.0-5.0** ***Collected:*** **12/11/2012 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
1,2,3,4,6,7,8-HPCDD	2.3	B J	0.068	MDL	6.0	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.51	Q B J	0.075	MDL	6.0	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.095	Q B J	0.038	MDL	6.0	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.22	Q B J	0.065	MDL	6.0	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.036	Q B J	0.026	MDL	6.0	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.057	Q J	0.028	MDL	6.0	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.37	Q B J	0.032	MDL	1.2	MRL	ng/kg	J	Z
OCDF	1.3	B J	0.036	MDL	12	MRL	ng/kg	U	B

Sample ID: **SL-609-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 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	3.8	Q B J	0.77	MDL	5.1	MRL	ng/kg	UJ	B, I

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-609-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 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
1,2,3,4,7,8,9-HPCDF	0.14	Q B J	0.030	MDL	5.1	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.088	U	0.088	MDL	5.1	MRL	ng/kg	UJ	I
1,2,3,6,7,8-HXCDD	0.25	U	0.25	MDL	5.1	MRL	ng/kg	UJ	I
1,2,3,6,7,8-HXCDF	0.37	Q B J	0.40	MDL	5.1	MRL	ng/kg	UJ	B, I
1,2,3,7,8,9-HXCDD	0.62	Q B J	0.13	MDL	5.1	MRL	ng/kg	UJ	B, I
1,2,3,7,8-PECDD	0.087	Q J	0.023	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.038	Q J	0.020	MDL	5.1	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.046	Q B J	0.019	MDL	5.1	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.076	J	0.019	MDL	5.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.12	B J	0.023	MDL	1.0	MRL	ng/kg	U	B
OCDF	5.2	B J	0.027	MDL	10	MRL	ng/kg	J	Z

Sample ID: **SL-610-SA6-SB-3.0-4.0** ***Collected:*** **12/11/2012 10:20:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.1	B J	0.055	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.52	Q B J	0.037	MDL	5.0	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.11	B J	0.031	MDL	5.0	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.043	Q J	0.022	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.13	J	0.049	MDL	5.0	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.14	B J	0.041	MDL	5.0	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.037	Q B J	0.018	MDL	5.0	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.022	Q B J	0.021	MDL	1.0	MRL	ng/kg	U	B
OCDF	1.0	Q B J	0.024	MDL	10	MRL	ng/kg	U	B

Sample ID: **SL-948-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 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
1,2,3,4,6,7,8-HPCDD	30	B	0.096	MDL	5.4	MRL	ng/kg	J	FD
1,2,3,4,6,7,8-HPCDF	3.5	Q B J	0.075	MDL	5.4	MRL	ng/kg	UJ	B, FD
1,2,3,4,7,8,9-HPCDF	0.42	B J	0.095	MDL	5.4	MRL	ng/kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.16	Q J	0.060	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.30	Q J	0.042	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDD	0.89	J	0.063	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDF	0.28	Q B J	0.040	MDL	5.4	MRL	ng/kg	UJ	B, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-948-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
1,2,3,7,8,9-HXCDD	0.43	B J	0.058	MDL	5.4	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDD	0.13	Q J	0.043	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.063	Q J	0.035	MDL	5.4	MRL	ng/kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.088	Q B J	0.043	MDL	5.4	MRL	ng/kg	UJ	B, FD
2,3,4,7,8-PECDF	0.16	J	0.034	MDL	5.4	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.038	U	0.038	MDL	1.1	MRL	ng/kg	UJ	FD
2,3,7,8-TCDF	0.19	Q B J	0.037	MDL	1.1	MRL	ng/kg	J	Z
OCDD	540	B	0.12	MDL	11	MRL	ng/kg	J	FD
OCDF	6.0	B J	0.036	MDL	11	MRL	ng/kg	J	Z, FD

Sample ID: SL-999-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
1,2,3,4,6,7,8-HPCDD	1000	B	0.29	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,4,6,7,8-HPCDF	140	B	0.10	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,4,7,8,9-HPCDF	12	B	0.14	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,4,7,8-HxCDD	10		0.14	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,6,7,8-HXCDD	43		0.15	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,6,7,8-HXCDF	11	Q B	0.064	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,7,8,9-HXCDD	27	C B	0.13	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,7,8,9-HXCDF	0.46	Q J	0.076	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	5.3	Q J	0.15	MDL	5.3	MRL	ng/kg	J	FD
1,2,3,7,8-PECDF	1.5	J	0.13	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	4.1	B J	0.064	MDL	5.3	MRL	ng/kg	J	Z, FD
2,3,4,7,8-PECDF	1.5	J	0.11	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDD	1.3	Q	0.12	MDL	1.1	MRL	ng/kg	J	FD
OCDD	12000	B E	0.30	MDL	11	MRL	ng/kg	J	*XI

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	Professional Judgment
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
I	Internal Standard Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Precision
Z	Reporting Limit Trace

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36889-2/
H2L150408

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L190000023B	1/4/2013 4:55:00 AM	1,2,3,4,6,7,8-HPCDD	0.25 ng/kg	SL-512-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	2.4 ng/kg	SL-548-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.091 ng/kg	SL-555-SA6-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.66 ng/kg	SL-556-SA6-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.38 ng/kg	SL-593-SA6-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.067 ng/kg	SL-594-SA6-SB-0.0-0.5
		2,3,7,8-TCDF	0.033 ng/kg	SL-595-SA6-SB-0.0-0.5
		OCDD	1.3 ng/kg	SL-595-SA6-SB-2.0-3.0
		OCDF	0.57 ng/kg	SL-597-SA6-SB-3.5-4.5
				SL-599-SA6-SB-0.0-0.5
				SL-599-SA6-SB-4.0-5.0
				SL-605-SA6-SB-4.0-5.0
				SL-609-SA6-SB-2.0-3.0
				SL-610-SA6-SB-3.0-4.0
				SL-948-SA6-SB-0.0-0.5
				SL-999-SA6-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-512-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	6.8 ng/kg	6.8U ng/kg
SL-512-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.79 ng/kg	0.79U ng/kg
SL-512-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	1.2 ng/kg	1.2U ng/kg
SL-548-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	2.0 ng/kg	2.0U ng/kg
SL-548-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.89 ng/kg	0.89U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.72 ng/kg	0.72U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.051 ng/kg	0.051U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.51 ng/kg	0.51U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.073 ng/kg	0.073U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.076 ng/kg	0.076U ng/kg
SL-555-SA6-SB-0.0-0.5(RES)	OCDF	1.5 ng/kg	1.5U ng/kg
SL-556-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	11 ng/kg	11U ng/kg
SL-556-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.85 ng/kg	0.85U ng/kg
SL-593-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.39 ng/kg	0.39U ng/kg
SL-593-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.23 ng/kg	0.23U ng/kg
SL-593-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.13 ng/kg	0.13U ng/kg
SL-594-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	1.1 ng/kg	1.1U ng/kg
SL-595-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	1.6 ng/kg	1.6U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	1.7 ng/kg	1.7U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.13 ng/kg	0.13U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	1.1 ng/kg	1.1U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.088 ng/kg	0.088U ng/kg
SL-595-SA6-SB-2.0-3.0(RES)	2,3,7,8-TCDF	0.14 ng/kg	0.14U ng/kg
SL-599-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	4.2 ng/kg	4.2U ng/kg
SL-599-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.24 ng/kg	0.24U ng/kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-599-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.57 ng/kg	0.57U ng/kg
SL-599-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.14 ng/kg	0.14U ng/kg
SL-599-SA6-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.031 ng/kg	0.031U ng/kg
SL-605-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.51 ng/kg	0.51U ng/kg
SL-605-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.095 ng/kg	0.095U ng/kg
SL-605-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.22 ng/kg	0.22U ng/kg
SL-605-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.036 ng/kg	0.036U ng/kg
SL-605-SA6-SB-4.0-5.0(RES)	OCDF	1.3 ng/kg	1.3U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	3.8 ng/kg	3.8U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.14 ng/kg	0.14U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDF	0.37 ng/kg	0.37U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	0.62 ng/kg	0.62U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.046 ng/kg	0.046U ng/kg
SL-609-SA6-SB-2.0-3.0(RES)	2,3,7,8-TCDF	0.12 ng/kg	0.12U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.52 ng/kg	0.52U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.11 ng/kg	0.11U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.14 ng/kg	0.14U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.037 ng/kg	0.037U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	2,3,7,8-TCDF	0.022 ng/kg	0.022U ng/kg
SL-610-SA6-SB-3.0-4.0(RES)	OCDF	1.0 ng/kg	1.0U ng/kg
SL-948-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	3.5 ng/kg	3.5U ng/kg
SL-948-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.42 ng/kg	0.42U ng/kg
SL-948-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.28 ng/kg	0.28U ng/kg
SL-948-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.43 ng/kg	0.43U ng/kg
SL-948-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.088 ng/kg	0.088U ng/kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: 280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-548-SA6-SB-0.0-0.5MS **SL-548-SA6-SB-0.0-0.5MSD** (SL-548-SA6-SB-0.0-0.5)	OCDD	0	0	40.00-135.00	-	OCDD	No Qual, >4X
SL-548-SA6-SB-0.0-0.5MSD (SL-548-SA6-SB-0.0-0.5)	1,2,3,4,6,7,8-HPCDD OCDF	- -	4.2 36	40.00-135.00 40.00-135.00	21 (20.00) 75 (20.00)	1,2,3,4,6,7,8-HPCDD OCDF	J(all detects) UJ(all non-detects)
SL-599-SA6-SB-0.0-0.5MSD (SL-599-SA6-SB-0.0-0.5)	OCDF	-	-	40.00-135.00	25 (20.00)	OCDF	J(all detects)
SL-599-SA6-SB-0.0-0.5MS **SL-599-SA6-SB-0.0-0.5MSD** (SL-599-SA6-SB-0.0-0.5)	1,2,3,4,6,7,8-HPCDD OCDD	0 0	0 0	40.00-135.00 40.00-135.00	- -	1,2,3,4,6,7,8-HPCDD OCDD	No Qual, >4X
SL-599-SA6-SB-0.0-0.5MS (SL-599-SA6-SB-0.0-0.5)	2,3,7,8-TCDD	26	-	40.00-135.00	-	2,3,7,8-TCDD	J(all detects) UJ(all non-detects)

TestAmerica Denver

Client Sample ID: SL-593-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L150408 - 016	Work Order #....:	MXLME1AC	Matrix.....:	SO
Date Sampled....:	12/11/12	Date Received....:	12/15/12	Units....:	ng/kg
Prep Date....:	12/19/12			Dilution Factor:	1
Prep Batch #....:	2354023			Percent Moisture:	8.9
Initial Wgt/Vol :	9.9 g	Instrument ID....:	D11A	Method....:	EPA-5 1613B
Analyst ID....:	Linda K. McWhirter				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/8/13	1	ND	1.1	0.044	1.0	0
1,2,3,7,8-PeCDD	**1/8/13**	**1**	**0.68 J**	**5.5**	**0.048**	**1.0**	**0.68**
1,2,3,4,7,8-HxCDD	**1/8/13**	**1**	**1.3 J**	**5.5**	**0.14**	**0.1**	**0.13**
1,2,3,6,7,8-HxCDD	**1/8/13**	**1**	**3.2 Q J**	**5.5**	**0.21**	**0.1**	**0.32**
1,2,3,7,8,9-HxCDD	**1/8/13**	**1**	**7.2 B**	**5.5**	**0.16**	**0.1**	**0.72**
1,2,3,4,6,7,8-HpCDD	**1/8/13**	**1**	**90 B**	**5.5**	**0.13**	**0.01**	**0.90**
OCDD	**1/8/13**	**1**	**1200 B**	**11**	**0.11**	**0.0003**	**0.36**
2,3,7,8-TCDF	**1/8/13**	**1**	**0.13 Q B J**	**1.1**	**0.031**	**0.1**	**0.013**
1,2,3,7,8-PeCDF	**1/8/13**	**1**	**0.17 Q J**	**5.5**	**0.037**	**0.03**	**0.0051**
2,3,4,7,8-PeCDF	**1/8/13**	**1**	**0.16 Q J**	**5.5**	**0.034**	**0.3**	**0.048**
1,2,3,4,7,8-HxCDF	**1/8/13**	**1**	**1.0 C J**	**5.5**	**0.089**	**0.1**	**0.10**
1,2,3,6,7,8-HxCDF	**1/8/13**	**1**	**0.39 Q B J**	**5.5**	**0.14**	**0.1**	**0.039**
2,3,4,6,7,8-HxCDF	**1/8/13**	**1**	**0.23 Q B J**	**5.5**	**0.034**	**0.1**	**0.023**
1,2,3,7,8,9-HxCDF	**1/8/13**	**1**	**0.18 Q J**	**5.5**	**0.040**	**0.1**	**0.018**
1,2,3,4,6,7,8-HpCDF	**1/8/13**	**1**	**17 B**	**5.5**	**0.20**	**0.01**	**0.17**
1,2,3,4,7,8,9-HpCDF	**1/8/13**	**1**	**1.0 B J**	**5.5**	**0.055**	**0.01**	**0.010**
OCDF	**1/8/13**	**1**	**47 B**	**11**	**0.062**	**0.0003**	**0.014**
Total TEQ Concentration							3.6

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	(25 - 164)
13C-1,2,3,7,8-PeCDD	85	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	34	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	20 *	(28 - 130) J/UJ/P*
13C-1,2,3,4,6,7,8-HpCDD	71	(23 - 140)
13C-OCDD	71	(17 - 157)
13C-2,3,7,8-TCDF	81	(24 - 169)
13C-1,2,3,7,8-PeCDF	85	(24 - 185)
13C-2,3,4,7,8-PeCDF	86	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	27	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	16 *	(26 - 123) J/UJ/P
13C-2,3,4,6,7,8-HxCDF	77	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	78	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	16 *	(28 - 143) J/UJ/P
13C-1,2,3,4,7,8,9-HpCDF	82	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	88	(35 - 197)

*Applies to 1,2,3,7,8,9-HxCDD

TestAmerica Denver

Client Sample ID: SL-595-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L150408 - 014	**Work Order #....:**	MXLMC1AC	**Matrix.....:**	SO
Date Sampled....:	12/11/12	**Date Received....:**	12/15/12	**Units....:**	ng/kg
Prep Date....:	12/19/12			**Dilution Factor:**	1
Prep Batch # ....:	2354023			**Percent Moisture:**	11
Initial Wgt/Vol :	9.7 g	**Instrument ID....:**	D11A	**Method....:**	EPA-5 1613B
Analyst ID....:	Linda K. McWhirter				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/8/13	1	**0.16 Q J**	1.2	0.065	1.0	0.16
1,2,3,7,8-PeCDD	1/8/13	1	**1.4 J**	5.8	0.071	1.0	1.4
1,2,3,4,7,8-HxCDD	1/8/13	1	**2.5 J**	5.8	0.25	0.1	0.25
1,2,3,6,7,8-HxCDD	1/8/13	1	**5.9**	5.8	0.69	0.1	0.59
1,2,3,7,8,9-HxCDD	1/8/13	1	**28 B**	5.8	0.35	0.1	2.8
1,2,3,4,6,7,8-HpCDD	1/8/13	1	**160 B**	5.8	0.17	0.01	1.6
OCDD	1/8/13	1	**2500 B**	12	0.17	0.0003	0.75
2,3,7,8-TCDF	1/9/13	1	**0.96 B J**	1.2	0.14	0.1	0.096
1,2,3,7,8-PeCDF	1/8/13	1	**0.47 Q J**	5.8	0.060	0.03	0.014
2,3,4,7,8-PeCDF	1/8/13	1	**0.75 J**	5.8	0.055	0.3	0.22
1,2,3,4,7,8-HxCDF	1/8/13	1	**2.3 J**	5.8	0.19	0.1	0.23
1,2,3,6,7,8-HxCDF	1/8/13	1	**1.6 Q B J**	5.8	0.82	0.1	0.16
2,3,4,6,7,8-HxCDF	1/8/13	1	**0.57 Q B J**	5.8	0.041	0.1	0.057
1,2,3,7,8,9-HxCDF	1/8/13	1	**0.28 Q J**	5.8	0.047	0.1	0.028
1,2,3,4,6,7,8-HpCDF	1/8/13	1	**27 Q B**	5.8	1.6	0.01	0.27
1,2,3,4,7,8,9-HpCDF	1/8/13	1	**1.1 B J**	5.8	0.069	0.01	0.011
OCDF	1/8/13	1	**52 B**	12	0.082	0.0003	0.016
Total TEQ Concentration							8.7

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	81	(25 - 164)
13C-1,2,3,7,8-PeCDD	93	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	27 *	(32 - 141) J/UJ/P*
13C-1,2,3,6,7,8-HxCDD	9.7 *	(28 - 130) J/UJ/P*
13C-1,2,3,4,6,7,8-HpCDD	85	(23 - 140)
13C-OCDD	88	(17 - 157)
13C-2,3,7,8-TCDF	92	(24 - 169)
13C-1,2,3,7,8-PeCDF	91	(24 - 185)
13C-2,3,4,7,8-PeCDF	94	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	18 *	(26 - 152) J/UJ/P
13C-1,2,3,6,7,8-HxCDF	3.9 *	(26 - 123) J/UJ/P
13C-2,3,4,6,7,8-HxCDF	86	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	86	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	3.4 *	(28 - 143) J/UJ/P
13C-1,2,3,4,7,8,9-HpCDF	95	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	90	(35 - 197)

* Applies to 1,2,3,7,8,9-HxCDD

TestAmerica Denver

Client Sample ID: SL-597-SA6-SB-3.5-4.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L150408 - 008	Work Order #....:	MXLL51AC	Matrix.....:	SO
Date Sampled....:	12/11/12	Date Received....:	12/15/12	Units....:	ng/kg
Prep Date....:	12/19/12			Dilution Factor:	1
Prep Batch # ....:	2354023			Percent Moisture:	4.2
Initial Wgt/Vol :	10 g	Instrument ID....:	D11A	Method....:	EPA-5 1613B
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/7/13	1	0.060 Q J	1.0	0.036	1.0	0.060
1,2,3,7,8-PeCDD	1/7/13	1	0.52 J	5.2	0.045	1.0	0.52
1,2,3,4,7,8-HxCDD	1/7/13	1	1.4 J	5.2	0.27	0.1	0.14
1,2,3,6,7,8-HxCDD	1/7/13	1	4.5 J	5.2	0.65	0.1	0.45
1,2,3,7,8,9-HxCDD	1/7/13	1	13 B	5.2	0.36	0.1	1.3
1,2,3,4,6,7,8-HpCDD	1/7/13	1	98 B	5.2	0.13	0.01	0.98
OCDD	1/7/13	1	1200 B	10	0.14	0.0003	0.36
2,3,7,8-TCDF	1/7/13	1	0.99 Q B J	1.0	0.050	0.1	0.099
1,2,3,7,8-PeCDF	1/7/13	1	0.18 Q J	5.2	0.030	0.03	0.0054
2,3,4,7,8-PeCDF	1/7/13	1	0.25 Q J	5.2	0.027	0.3	0.075
1,2,3,4,7,8-HxCDF	1/7/13	1	1.3 J	5.2	0.24	0.1	0.13
1,2,3,6,7,8-HxCDF	1/7/13	1	ND	5.2	1.0	0.1	0
2,3,4,6,7,8-HxCDF	1/7/13	1	0.47 B J	5.2	0.030	0.1	0.047
1,2,3,7,8,9-HxCDF	1/7/13	1	0.071 Q J	5.2	0.035	0.1	0.0071
1,2,3,4,6,7,8-HpCDF	1/7/13	1	14 Q B	5.2	1.0	0.01	0.14
1,2,3,4,7,8,9-HpCDF	1/7/13	1	1.6 B J	5.2	0.041	0.01	0.016
OCDF	1/7/13	1	37 B	10	0.040	0.0003	0.011
Total TEQ Concentration							4.3

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	79	(25 - 164)
13C-1,2,3,7,8-PeCDD	87	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	19 *	(32 - 141) J/UJ/P*
13C-1,2,3,6,7,8-HxCDD	7.5 *	(28 - 130) J/UJ/P*
13C-1,2,3,4,6,7,8-HpCDD	71	(23 - 140)
13C-OCDD	84	(17 - 157)
13C-2,3,7,8-TCDF	79	(24 - 169)
13C-1,2,3,7,8-PeCDF	85	(24 - 185)
13C-2,3,4,7,8-PeCDF	88	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	9.3 *	(26 - 152) J/UJ/P
13C-1,2,3,6,7,8-HxCDF	2.1 *	(26 - 123) J/UJ/P
13C-2,3,4,6,7,8-HxCDF	77	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	78	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	2.5 *	(28 - 143) J/UJ/P
13C-1,2,3,4,7,8,9-HpCDF	89	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	86	(35 - 197)

*Applies to 1,2,3,7,8,9 HxCDD

TestAmerica Denver

Client Sample ID: SL-609-SA6-SB-2.0-3.0

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L150408 - 010	**Work Order #....:**	MXLL71AC	**Matrix.....:**	SO
Date Sampled....:	12/11/12	**Date Received....:**	12/15/12	**Units....:**	ng/kg
Prep Date.....:	12/19/12			**Dilution Factor:**	1
Prep Batch # ....:	2354023			**Percent Moisture:**	5.8
Initial Wgt/Vol :	10.4 g	**Instrument ID....:**	D11A	**Method....:**	EPA-5 1613B
Analyst ID.....:	Kenneya L. Wilson				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/7/13	1	ND	1.0	0.026	1.0	0
1,2,3,7,8-PeCDD	**1/7/13**	**1**	**0.087 Q J**	**5.1**	**0.023**	**1.0**	**0.087**
1,2,3,4,7,8-HxCDD	1/7/13	1	ND	5.1	0.093	0.1	0
1,2,3,6,7,8-HxCDD	1/7/13	1	ND	5.1	0.25	0.1	0
1,2,3,7,8,9-HxCDD	**1/7/13**	**1**	**0.62 Q B J**	**5.1**	**0.13**	**0.1**	**0.062**
1,2,3,4,6,7,8-HpCDD	**1/7/13**	**1**	**5.6 B**	**5.1**	**0.063**	**0.01**	**0.056**
OCDD	**1/7/13**	**1**	**56 B**	**10**	**0.047**	**0.0003**	**0.017**
2,3,7,8-TCDF	**1/7/13**	**1**	**0.12 B J**	**1.0**	**0.023**	**0.1**	**0.012**
1,2,3,7,8-PeCDF	**1/7/13**	**1**	**0.038 Q J**	**5.1**	**0.020**	**0.03**	**0.0011**
2,3,4,7,8-PeCDF	**1/7/13**	**1**	**0.076 J**	**5.1**	**0.019**	**0.3**	**0.023**
1,2,3,4,7,8-HxCDF	1/7/13	1	ND	5.1	0.088	0.1	0
1,2,3,6,7,8-HxCDF	**1/7/13**	**1**	**0.37 Q B J**	**5.1**	**0.40**	**0.1**	**0.037**
2,3,4,6,7,8-HxCDF	**1/7/13**	**1**	**0.046 Q B J**	**5.1**	**0.019**	**0.1**	**0.0046**
1,2,3,7,8,9-HxCDF	1/7/13	1	ND	5.1	0.023	0.1	0
1,2,3,4,6,7,8-HpCDF	**1/7/13**	**1**	**3.8 Q B J**	**5.1**	**0.77**	**0.01**	**0.038**
1,2,3,4,7,8,9-HpCDF	**1/7/13**	**1**	**0.14 Q B J**	**5.1**	**0.030**	**0.01**	**0.0014**
OCDF	**1/7/13**	**1**	**5.2 B J**	**10**	**0.027**	**0.0003**	**0.0016**
Total TEQ Concentration							**0.34**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	(25 - 164)
13C-1,2,3,7,8-PeCDD	89	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	35	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	13 *	(28 - 130) J/UJ/P*
13C-1,2,3,4,6,7,8-HpCDD	84	(23 - 140)
13C-OCDD	76	(17 - 157)
13C-2,3,7,8-TCDF	79	(24 - 169)
13C-1,2,3,7,8-PeCDF	87	(24 - 185)
13C-2,3,4,7,8-PeCDF	86	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	17 *	(26 - 152) J/UJ/P
13C-1,2,3,6,7,8-HxCDF	3.8 *	(26 - 123) J/UJ/P
13C-2,3,4,6,7,8-HxCDF	86	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	83	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	2.5 *	(28 - 143) J/UJ/P
13C-1,2,3,4,7,8,9-HpCDF	87	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	88	(35 - 197)

* Applies to 1,2,3,7,8,9-HxCDD

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
1,2,3,4,7,8-HxCDD	0.25	0.16	44	50.00	No Qualifiers Applied
1,2,3,7,8-PECDD	0.17	0.13	27	50.00	
2,3,4,7,8-PECDF	0.17	0.16	6	50.00	
2,3,7,8-TCDF	0.23	0.19	19	50.00	
1,2,3,4,6,7,8-HPCDD	200	30	148	50.00	J(all detects) UJ(all non-detects)
1,2,3,4,6,7,8-HPCDF	28	3.5	156	50.00	
1,2,3,4,7,8,9-HPCDF	3.1	0.42	152	50.00	
1,2,3,4,7,8-HXCDF	1.4	0.30	129	50.00	
1,2,3,6,7,8-HXCDD	10	0.89	167	50.00	
1,2,3,6,7,8-HXCDF	2.0	0.28	151	50.00	
1,2,3,7,8,9-HXCDD	0.89	0.43	70	50.00	
1,2,3,7,8-PECDF	5.4 U	0.063	200	50.00	
2,3,4,6,7,8-HXCDF	0.35	0.088	120	50.00	
2,3,7,8-TCDD	0.035	1.1 U	200	50.00	
OCDD	5400	540	164	50.00	
OCDF	18	6.0	100	50.00	

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
1,2,3,4,7,8-HXCDF	11	6.7	49	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDF	0.70	0.46	41	50.00	
1,2,3,7,8-PECDF	1.9	1.5	24	50.00	
2,3,4,7,8-PECDF	2.0	1.5	29	50.00	
2,3,7,8-TCDF	2.4	2.2	9	50.00	
OCDD	20000	12000	50	50.00	
OCDF	230	260	12	50.00	
1,2,3,4,6,7,8-HPCDD	1800	1000	57	50.00	J(all detects)
1,2,3,4,6,7,8-HPCDF	260	140	60	50.00	
1,2,3,4,7,8,9-HPCDF	22	12	59	50.00	
1,2,3,4,7,8-HxCDD	18	10	57	50.00	
1,2,3,6,7,8-HXCDD	73	43	52	50.00	
1,2,3,6,7,8-HXCDF	21	11	62	50.00	
1,2,3,7,8,9-HXCDD	46	27	52	50.00	
1,2,3,7,8-PECDD	9.3	5.3	55	50.00	
2,3,4,6,7,8-HXCDF	7.8	4.1	62	50.00	
2,3,7,8-TCDD	2.2	1.3	51	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-512-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.75	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.41	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	1.7	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.4	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.79	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	1.2	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.41	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.42	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.42	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.66	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.95	1.1	MRL	ng/kg	
	OCDF	B J	10	11	MRL	ng/kg	
SL-548-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	3.1	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	Q J	0.25	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	1.4	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	2.0	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.89	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.17	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.35	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.17	5.4	MRL	ng/kg	
	2,3,7,8-TCDD	J	0.035	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.23	1.1	MRL	ng/kg	
SL-555-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	B J	5.6	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.72	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.14	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.34	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.051	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.51	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.14	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.15	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.057	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.073	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.053	5.7	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.032	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	B Q J	0.076	1.1	MRL	ng/kg	
	OCDF	B J	1.5	11	MRL	ng/kg	
SL-556-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.4	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	1.4	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	1.4	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	4.2	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	B J	0.85	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	4.1	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.13	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.59	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.20	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.41	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.30	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.24	1.1	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-593-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.0	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	1.3	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	1.0	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	3.2	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.39	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.18	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.68	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.17	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.23	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.16	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.13	1.1	MRL	ng/kg	
SL-594-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.8	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.8	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	1.2	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.1	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	1.2	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.22	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.56	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.28	5.3	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.091	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.38	1.1	MRL	ng/kg	
SL-595-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.1	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.5	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	2.3	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.6	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.28	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	1.4	5.8	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.47	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.57	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.75	5.8	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.16	1.2	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.96	1.2	MRL	ng/kg	
SL-595-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	Q B J	1.7	5.2	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.13	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.26	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.21	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.73	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.15	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	1.1	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.057	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.22	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.094	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.088	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.15	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.14	1.0	MRL	ng/kg	
	OCDF	B J	5.8	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-597-SA6-SB-3.5-4.5	1,2,3,4,7,8,9-HPCDF	B J	1.6	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	1.4	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	1.3	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	4.5	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q J	0.071	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	0.52	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.18	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.47	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.25	5.2	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.060	1.0	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.99	1.0	MRL	ng/kg	
SL-599-SA6-SB-0.0-0.5	1,2,3,7,8,9-HXCDF	Q J	0.70	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	1.9	5.7	MRL	ng/kg	J (all detects)
	2,3,4,7,8-PECDF	J	2.0	5.7	MRL	ng/kg	
SL-599-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	B J	4.2	5.0	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.53	5.0	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.13	5.0	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.17	5.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.75	5.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.24	5.0	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	B J	0.57	5.0	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.11	5.0	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.14	5.0	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.031	0.99	MRL	ng/kg	
	OCDF	B J	5.6	9.9	MRL	ng/kg	
SL-605-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	B J	2.3	6.0	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.51	6.0	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.095	6.0	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.22	6.0	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	Q B J	0.036	6.0	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.057	6.0	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.37	1.2	MRL	ng/kg	
	OCDF	B J	1.3	12	MRL	ng/kg	
SL-609-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	Q B J	3.8	5.1	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.14	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.37	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.62	5.1	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.087	5.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.038	5.1	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.046	5.1	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.076	5.1	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.12	1.0	MRL	ng/kg	
	OCDF	B J	5.2	10	MRL	ng/kg	
SL-610-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	B J	2.1	5.0	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.52	5.0	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.11	5.0	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.043	5.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.13	5.0	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	B J	0.14	5.0	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.037	5.0	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.022	1.0	MRL	ng/kg	
	OCDF	Q B J	1.0	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36889-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36889-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-948-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	3.5	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.42	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.16	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.30	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.89	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.28	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.43	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.13	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.063	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.088	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.16	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.19	1.1	MRL	ng/kg	
	OCDF	B J	6.0	11	MRL	ng/kg	
SL-999-SA6-SB-0.0-0.5	1,2,3,7,8,9-HXCDF	Q J	0.46	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	1.5	5.3	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	B J	4.1	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	1.5	5.3	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-36945-1

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-Dec-2012	EB-121212	280-36945-14	EB	8315_W_Prep	8315A	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: 280-36945-1 **Laboratory: TA NSH**

EDD Filename: 280-36945-1 **eQAPP Name: CDM_SSFL_120907_TA**

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36945-1

(No Outliers)

SAMPLE DELIVERY GROUP

280-36945-2

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-Dec-2012	SL-614-SA6-SB-0.0-0.5	280-36945-3	N	1613	1613B	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	280-36945-3 MS	MS	1613	1613B	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	280-36945-3 MSD	MSD	1613	1613B	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	280-36945-4	FD	1613	1613B	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	280-36945-1	N	1613	1613B	III
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	280-36945-2	N	1613	1613B	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	280-36945-7	N	1613	1613B	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	280-36945-5	N	1613	1613B	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	280-36945-6	N	1613	1613B	III
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	280-36945-8	N	1613	1613B	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	280-36945-9	N	1613	1613B	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	280-36945-12	N	1613	1613B	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	280-36945-13	N	1613	1613B	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	280-36945-10	N	1613	1613B	III
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	280-36945-11	N	1613	1613B	III
12-Dec-2012	EB-121212	280-36945-14	EB	1613	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: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB-121212 *Collected:* 12/12/2012 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
OCDD	3.6	B J	0.67	MDL	100	MRL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-1014-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 8:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.9	Q B J	0.059	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.20	Q B J	0.073	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.18	Q B J	0.068	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.21	Q B J	0.036	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.47	B J	0.071	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.22	Q B J	0.038	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.71	B J	0.065	MDL	5.2	MRL	ng/kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.19	B J	0.048	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.14	Q B J	0.048	MDL	5.2	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDF	0.044	U	0.044	MDL	5.2	MRL	ng/kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.21	Q B J	0.038	MDL	5.2	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.13	Q B J	0.041	MDL	5.2	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.22	Q J	0.046	MDL	1.0	MRL	ng/kg	J	Z
OCDF	7.6	B J	0.033	MDL	10	MRL	ng/kg	J	Z, FD

Sample ID: SL-602-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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	0.88	B J	0.068	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.59	B J	0.067	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.57	B J	0.035	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.4	Q B J	0.067	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.8	Q B J	0.036	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.7	C B J	0.063	MDL	5.4	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-602-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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
1,2,3,7,8,9-HXCDF	0.20	Q B J	0.048	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.31	Q B J	0.038	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.17	Q J	0.041	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.22	Q B J	0.037	MDL	5.4	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.12	Q B J	0.037	MDL	5.4	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.25	J	0.034	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-602-SA6-SB-4.0-5.0 *Collected:* 12/12/2012 10:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.62	B J	0.044	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.36	Q B J	0.058	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.33	Q B J	0.025	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.77	B J	0.062	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.0	Q B J	0.024	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.88	B J	0.056	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.17	Q B J	0.031	MDL	5.2	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.19	Q B J	0.025	MDL	5.2	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.073	Q B J	0.029	MDL	5.2	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.049	Q J	0.026	MDL	1.0	MRL	ng/kg	J	Z

Sample ID: SL-611-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.6	Q B J	0.049	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.39	Q B J	0.027	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.055	Q B J	0.033	MDL	5.4	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.14	B J	0.047	MDL	5.4	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.12	Q B J	0.027	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.20	B J	0.042	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.070	Q B J	0.026	MDL	5.4	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.054	Q B J	0.025	MDL	5.4	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-611-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 8:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.077	Q J	0.024	MDL	1.1	MRL	ng/kg	J	Z
OCDF	1.0	B J	0.023	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-611-SA6-SB-3.0-4.0 *Collected:* 12/12/2012 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
1,2,3,4,6,7,8-HPCDD	0.13	Q B J	0.037	MDL	5.1	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.055	Q B J	0.013	MDL	5.1	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.045	B J	0.016	MDL	5.1	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.097	B J	0.032	MDL	5.1	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.081	Q B J	0.019	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.10	Q B J	0.029	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.052	Q B J	0.024	MDL	5.1	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.054	Q B J	0.020	MDL	5.1	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.026	Q B J	0.016	MDL	5.1	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.021	Q J	0.016	MDL	1.0	MRL	ng/kg	J	Z
OCDD	1.1	B J	0.022	MDL	10	MRL	ng/kg	U	B
OCDF	0.25	B J	0.016	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-613-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.7	B J	0.031	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.30	B J	0.041	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.19	Q B J	0.053	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.32	B J	0.030	MDL	5.4	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.67	B J	0.055	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.36	Q B J	0.031	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.69	C B J	0.051	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.21	Q B J	0.040	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.19	Q B J	0.034	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.12	J	0.034	MDL	5.4	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-613-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.18	B J	0.032	MDL	5.4	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.12	B J	0.033	MDL	5.4	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.12	Q J	0.031	MDL	1.1	MRL	ng/kg	J	Z
OCDF	8.3	B J	0.031	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-614-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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
1,2,3,4,6,7,8-HPCDF	1.9	B J	0.035	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.12	Q B J	0.050	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.15	J	0.046	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.24	C J	0.030	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.44	J	0.044	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.23	Q B J	0.030	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.41	Q J	0.042	MDL	5.3	MRL	ng/kg	J	Z, FD
1,2,3,7,8,9-HXCDF	0.16	Q B J	0.042	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.037	U	0.037	MDL	5.3	MRL	ng/kg	UJ	FD
1,2,3,7,8-PECDF	0.081	Q J	0.040	MDL	5.3	MRL	ng/kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.15	Q B J	0.033	MDL	5.3	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.18	J	0.039	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.30	B J	0.044	MDL	1.1	MRL	ng/kg	U	B
OCDF	2.8	B J	0.028	MDL	11	MRL	ng/kg	J	Z, L, FD

Sample ID: SL-615-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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	5.3	B J	0.034	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.48	B J	0.046	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.33	Q B J	0.062	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.26	Q B J	0.032	MDL	5.5	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	1.0	B J	0.067	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.93	Q B J	0.031	MDL	5.5	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-615-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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
1,2,3,7,8,9-HXCDD	1.2	Q C B J	0.060	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.15	Q B J	0.041	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.21	Q B J	0.041	MDL	5.5	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.21	Q B J	0.032	MDL	5.5	MRL	ng/kg	U	B
2,3,7,8-TCDD	0.054	Q J	0.030	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-615-SA6-SB-4.0-5.0 *Collected:* 12/12/2012 11:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.28	Q B J	0.044	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.073	Q B J	0.017	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.036	Q B J	0.023	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.038	Q B J	0.023	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.032	Q B J	0.018	MDL	5.2	MRL	ng/kg	U	B
OCDD	3.3	B J	0.032	MDL	10	MRL	ng/kg	U	B
OCDF	0.20	Q B J	0.019	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-616-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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	2.8	B J	0.12	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.46	B J	0.047	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.12	Q B J	0.046	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.26	Q B J	0.069	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.15	Q B J	0.045	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.13	Q B J	0.060	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.16	Q B J	0.047	MDL	5.3	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.079	Q J	0.037	MDL	1.1	MRL	ng/kg	J	Z
OCDF	1.5	B J	0.033	MDL	11	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-616-SA6-SB-4.0-5.0 *Collected:* 12/12/2012 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-HPCDD	0.18	Q B J	0.040	MDL	5.0	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.068	Q B J	0.014	MDL	5.0	MRL	ng/kg	U	B
1,2,3,4,7,8,9-HPCDF	0.042	Q B J	0.019	MDL	5.0	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.036	Q B J	0.021	MDL	5.0	MRL	ng/kg	U	B
2,3,7,8-TCDD	0.018	Q J	0.020	MDL	0.99	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.45	Q J	0.027	MDL	0.99	MRL	ng/kg	J	Z
OCDD	1.6	B J	0.016	MDL	9.9	MRL	ng/kg	U	B
OCDF	0.13	Q B J	0.017	MDL	9.9	MRL	ng/kg	U	B

Sample ID: SL-621-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	0.050	Q B J	0.017	MDL	5.2	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.030	Q B J	0.020	MDL	5.2	MRL	ng/kg	U	B
OCDD	1.3	B J	0.030	MDL	10	MRL	ng/kg	U	B
OCDF	0.13	Q B J	0.016	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-621-SA6-SB-2.5-3.5 *Collected:* 12/12/2012 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	2.8	B J	0.050	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.58	B J	0.023	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.078	Q B J	0.021	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.15	B J	0.036	MDL	5.3	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.070	Q B J	0.021	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.11	Q B J	0.033	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.069	Q B J	0.020	MDL	5.3	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.057	B J	0.021	MDL	5.3	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.024	Q J	0.020	MDL	1.1	MRL	ng/kg	J	Z
OCDF	1.5	B J	0.021	MDL	11	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
FD	Field Duplicate Precision
L	Laboratory Control Spike Lower Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-36945-2/
H2L180417

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H3A030000018B	1/14/2013 11:50:00 AM	1,2,3,4,6,7,8-HPCDD	5.5 pg/L	EB-121212
		1,2,3,4,6,7,8-HPCDF	5.9 pg/L	
		1,2,3,4,7,8,9-HPCDF	6.8 pg/L	
		1,2,3,4,7,8-HxCDD	2.7 pg/L	
		1,2,3,4,7,8-HXCDF	4.3 pg/L	
		1,2,3,6,7,8-HXCDD	4.2 pg/L	
		1,2,3,7,8,9-HXCDD	3.5 pg/L	
		1,2,3,7,8,9-HXCDF	2.5 pg/L	
		1,2,3,7,8-PECDD	1.7 pg/L	
		1,2,3,7,8-PECDF	1.6 pg/L	
		2,3,4,6,7,8-HXCDF	2.5 pg/L	
		2,3,4,7,8-PECDF	1.9 pg/L	
		OCDD	19 pg/L	
		OCDF	14 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-121212(RES)	OCDD	3.6 pg/L	3.6U pg/L

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L200000033B	1/8/2013 12:02:00 AM	1,2,3,4,6,7,8-HPCDD	0.20 ng/kg	SL-1014-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.16 ng/kg	SL-602-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.10 ng/kg	SL-602-SA6-SB-4.0-5.0
		1,2,3,4,7,8-HxCDD	0.073 ng/kg	SL-611-SA6-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.068 ng/kg	SL-611-SA6-SB-3.0-4.0
		1,2,3,6,7,8-HXCDD	0.057 ng/kg	SL-613-SA6-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.083 ng/kg	SL-615-SA6-SB-0.0-0.5
		1,2,3,7,8,9-HXCDD	0.12 ng/kg	SL-615-SA6-SB-4.0-5.0
		1,2,3,7,8,9-HXCDF	0.098 ng/kg	SL-616-SA6-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.072 ng/kg	SL-616-SA6-SB-4.0-5.0
		2,3,4,6,7,8-HXCDF	0.058 ng/kg	SL-621-SA6-SB-0.0-0.5
		2,3,4,7,8-PECDF	0.069 ng/kg	SL-621-SA6-SB-2.5-3.5
		OCDD	1.7 ng/kg	
		OCDF	0.51 ng/kg	
H3A100000024B	1/17/2013 5:27:00 PM	1,2,3,4,6,7,8-HPCDF	0.083 ng/kg	SL-614-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.077 ng/kg	
		1,2,3,6,7,8-HXCDF	0.060 ng/kg	
		1,2,3,7,8,9-HXCDF	0.062 ng/kg	
		2,3,4,6,7,8-HXCDF	0.044 ng/kg	
		2,3,7,8-TCDF	0.19 ng/kg	
		OCDD	0.87 ng/kg	
		OCDF	0.11 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-1014-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.20 ng/kg	0.20U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.18 ng/kg	0.18U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.21 ng/kg	0.21U ng/kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-1014-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.22 ng/kg	0.22U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.19 ng/kg	0.19U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.14 ng/kg	0.14U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.21 ng/kg	0.21U ng/kg
SL-1014-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.13 ng/kg	0.13U ng/kg
SL-602-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.20 ng/kg	0.20U ng/kg
SL-602-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.31 ng/kg	0.31U ng/kg
SL-602-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.22 ng/kg	0.22U ng/kg
SL-602-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.12 ng/kg	0.12U ng/kg
SL-602-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.36 ng/kg	0.36U ng/kg
SL-602-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.33 ng/kg	0.33U ng/kg
SL-602-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.17 ng/kg	0.17U ng/kg
SL-602-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.19 ng/kg	0.19U ng/kg
SL-602-SA6-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.073 ng/kg	0.073U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.39 ng/kg	0.39U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.055 ng/kg	0.055U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.14 ng/kg	0.14U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.12 ng/kg	0.12U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.20 ng/kg	0.20U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.070 ng/kg	0.070U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.054 ng/kg	0.054U ng/kg
SL-611-SA6-SB-0.0-0.5(RES)	OCDF	1.0 ng/kg	1.0U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.13 ng/kg	0.13U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.055 ng/kg	0.055U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.045 ng/kg	0.045U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.097 ng/kg	0.097U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.081 ng/kg	0.081U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.10 ng/kg	0.10U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.052 ng/kg	0.052U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.054 ng/kg	0.054U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.026 ng/kg	0.026U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	OCDD	1.1 ng/kg	1.1U ng/kg
SL-611-SA6-SB-3.0-4.0(RES)	OCDF	0.25 ng/kg	0.25U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.30 ng/kg	0.30U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.19 ng/kg	0.19U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.32 ng/kg	0.32U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.36 ng/kg	0.36U ng/kg

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-613-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.21 ng/kg	0.21U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.19 ng/kg	0.19U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.18 ng/kg	0.18U ng/kg
SL-613-SA6-SB-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.12 ng/kg	0.12U ng/kg
SL-614-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.12 ng/kg	0.12U ng/kg
SL-614-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.23 ng/kg	0.23U ng/kg
SL-614-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.16 ng/kg	0.16U ng/kg
SL-614-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-614-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.30 ng/kg	0.30U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.48 ng/kg	0.48U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.33 ng/kg	0.33U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.26 ng/kg	0.26U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.21 ng/kg	0.21U ng/kg
SL-615-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.21 ng/kg	0.21U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.28 ng/kg	0.28U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.073 ng/kg	0.073U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.036 ng/kg	0.036U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.038 ng/kg	0.038U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.032 ng/kg	0.032U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	OCDD	3.3 ng/kg	3.3U ng/kg
SL-615-SA6-SB-4.0-5.0(RES)	OCDF	0.20 ng/kg	0.20U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.46 ng/kg	0.46U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.12 ng/kg	0.12U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.26 ng/kg	0.26U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.13 ng/kg	0.13U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.16 ng/kg	0.16U ng/kg
SL-616-SA6-SB-0.0-0.5(RES)	OCDF	1.5 ng/kg	1.5U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.18 ng/kg	0.18U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.068 ng/kg	0.068U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.042 ng/kg	0.042U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.036 ng/kg	0.036U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	OCDD	1.6 ng/kg	1.6U ng/kg
SL-616-SA6-SB-4.0-5.0(RES)	OCDF	0.13 ng/kg	0.13U ng/kg
SL-621-SA6-SB-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.050 ng/kg	0.050U ng/kg
SL-621-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.030 ng/kg	0.030U ng/kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Method Blank Outlier Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

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-621-SA6-SB-0.0-0.5(RES)	OCDD	1.3 ng/kg	1.3U ng/kg
SL-621-SA6-SB-0.0-0.5(RES)	OCDF	0.13 ng/kg	0.13U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.58 ng/kg	0.58U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.078 ng/kg	0.078U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.15 ng/kg	0.15U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.070 ng/kg	0.070U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.11 ng/kg	0.11U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.069 ng/kg	0.069U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.057 ng/kg	0.057U ng/kg
SL-621-SA6-SB-2.5-3.5(RES)	OCDF	1.5 ng/kg	1.5U ng/kg

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
H3A100000024C (SL-614-SA6-SB-0.0-0.5)	OCDF	56	-	63.00-170.00	-	OCDF	J (all detects) UJ (all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-614-SA6-SB-0.0-0.5	SL-1014-SA6-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	9.1	13	35	50.00	
1,2,3,4,6,7,8-HPCDF	1.9	2.9	42	50.00	
1,2,3,4,7,8,9-HPCDF	0.12	0.20	50	50.00	
1,2,3,4,7,8-HxCDD	0.15	0.18	18	50.00	
1,2,3,4,7,8-HXCDF	0.24	0.21	13	50.00	
1,2,3,6,7,8-HXCDD	0.44	0.47	7	50.00	No Qualifiers Applied
1,2,3,6,7,8-HXCDF	0.23	0.22	4	50.00	
1,2,3,7,8,9-HXCDF	0.16	0.19	17	50.00	
2,3,4,6,7,8-HXCDF	0.15	0.21	33	50.00	
2,3,4,7,8-PECDF	0.18	0.13	32	50.00	
2,3,7,8-TCDF	0.30	0.22	31	50.00	
OCDD	84	140	50	50.00	
1,2,3,7,8,9-HXCDD	0.41	0.71	54	50.00	
1,2,3,7,8-PECDD	5.3 U	0.14	200	50.00	J(all detects)
1,2,3,7,8-PECDF	0.081	5.2 U	200	50.00	UJ(all non-detects)
OCDF	2.8	7.6	92	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-121212	OCDD	B J	3.6	100	MRL	pg/L	J (all detects)

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1014-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	2.9	5.2	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.20	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.18	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.21	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.47	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.22	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.71	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	B J	0.19	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.14	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.21	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.13	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.22	1.0	MRL	ng/kg	
	OCDF	B J	7.6	10	MRL	ng/kg	
SL-602-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.88	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	B J	0.59	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.57	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q B J	1.4	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.8	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.7	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.20	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.31	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.17	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.22	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.12	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.25	1.1	MRL	ng/kg	
SL-602-SA6-SB-4.0-5.0	1,2,3,4,7,8,9-HPCDF	B J	0.62	5.2	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	Q B J	0.36	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.33	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.77	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.0	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.88	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.17	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.19	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.073	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.049	1.0	MRL	ng/kg	
SL-611-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	Q B J	1.6	5.4	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.39	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.055	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.14	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.12	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.20	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.070	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.054	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.077	1.1	MRL	ng/kg	
	OCDF	B J	1.0	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-611-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.13	5.1	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.055	5.1	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.045	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.097	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.081	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.10	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.052	5.1	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	Q B J	0.054	5.1	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q B J	0.026	5.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.021	1.0	MRL	ng/kg	
	OCDD	B J	1.1	10	MRL	ng/kg	
	OCDF	B J	0.25	10	MRL	ng/kg	
SL-613-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	2.7	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.30	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.19	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.32	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.67	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.36	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.69	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.21	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.19	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.12	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.18	5.4	MRL	ng/kg	
	2,3,4,7,8-PECDF	B J	0.12	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.12	1.1	MRL	ng/kg	
	OCDF	B J	8.3	11	MRL	ng/kg	
SL-614-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	1.9	5.3	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.12	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.15	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C J	0.24	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.44	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.23	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.41	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.16	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.081	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.15	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.18	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.30	1.1	MRL	ng/kg	
	OCDF	B J	2.8	11	MRL	ng/kg	
SL-615-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	5.3	5.5	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.48	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q B J	0.33	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.26	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	1.0	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.93	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q C B	1.2	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.15	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.21	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.21	5.5	MRL	ng/kg	
	2,3,7,8-TCDD	Q B J	0.054	1.1	MRL	ng/kg	
		Q J					

Reporting Limit Outliers

Lab Reporting Batch ID: 280-36945-2 **Laboratory: TA DEN**

EDD Filename: Prep280-36945-2 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-615-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.28	5.2	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.073	5.2	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.036	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.038	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.032	5.2	MRL	ng/kg	
	OCDD	B J	3.3	10	MRL	ng/kg	
	OCDF	Q B J	0.20	10	MRL	ng/kg	
SL-616-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDD	B J	2.8	5.3	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.46	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.12	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q B J	0.26	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.15	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.13	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.16	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.079	1.1	MRL	ng/kg	
	OCDF	B J	1.5	11	MRL	ng/kg	
SL-616-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.18	5.0	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.068	5.0	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.042	5.0	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.036	5.0	MRL	ng/kg	J (all detects)
	2,3,7,8-TCDD	Q J	0.018	0.99	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.45	0.99	MRL	ng/kg	
	OCDD	B J	1.6	9.9	MRL	ng/kg	
	OCDF	Q B J	0.13	9.9	MRL	ng/kg	
SL-621-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	0.050	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.030	5.2	MRL	ng/kg	J (all detects)
	OCDD	B J	1.3	10	MRL	ng/kg	
	OCDF	Q B J	0.13	10	MRL	ng/kg	
SL-621-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	B J	2.8	5.3	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.58	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.078	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	B J	0.15	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.070	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q B J	0.11	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.069	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.057	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.024	1.1	MRL	ng/kg	
	OCDF	B J	1.5	11	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-37012-1

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-Dec-2012	SL-585-SA6-SB-0.0-0.5	280-37012-1	N	1613	1613B	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	280-37012-1 MS	MS	1613	1613B	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	280-37012-1 MSD	MSD	1613	1613B	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	280-37012-2	FD	1613	1613B	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	280-37012-3	N	1613	1613B	III
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	280-37012-6	N	1613	1613B	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	280-37012-4	N	1613	1613B	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	280-37012-5	N	1613	1613B	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	280-37012-7	N	1613	1613B	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	280-37012-8	N	1613	1613B	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	280-37012-8 MS	MS	1613	1613B	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	280-37012-8 MSD	MSD	1613	1613B	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	280-37012-10	FD	1613	1613B	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	280-37012-9	N	1613	1613B	III
13-Dec-2012	EB1-121312	280-37012-11	EB	1613	1613B	III
13-Dec-2012	EB2-121312	280-37012-12	EB	1613	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: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-121312 *Collected:* 12/13/2012 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
OCDD	2.6	Q B J	0.85	MDL	110	MRL	pg/L	U	B

Sample ID: EB2-121312 *Collected:* 12/13/2012 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
2,3,4,7,8-PECDF	0.54	Q B J	0.53	MDL	52	MRL	pg/L	U	B
OCDD	3.0	Q B J	0.65	MDL	100	MRL	pg/L	U	B
OCDF	1.2	Q B J	0.55	MDL	100	MRL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-1085-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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	5.8	B	0.069	MDL	5.5	MRL	ng/kg	J	FD
1,2,3,4,7,8,9-HPCDF	0.34	B J	0.091	MDL	5.5	MRL	ng/kg	UJ	B, FD
1,2,3,4,7,8-HxCDD	0.42	Q J	0.078	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.48	Q B J	0.045	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDD	2.1	Q J	0.081	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.46	Q B J	0.045	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,7,8,9-HXCDD	1.5	C B J	0.075	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.17	Q B J	0.059	MDL	5.5	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDD	0.20	Q B J	0.060	MDL	5.5	MRL	ng/kg	UJ	B, FD
1,2,3,7,8-PECDF	0.18	Q J	0.076	MDL	5.5	MRL	ng/kg	J	Z, FD
2,3,4,6,7,8-HXCDF	0.35	Q J	0.048	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.25	J	0.067	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.17	Q J	0.063	MDL	1.1	MRL	ng/kg	J	Z, FD

Sample ID: SL-582-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
1,2,3,4,6,7,8-HPCDF	4.9	Q B J	0.054	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.55	B J	0.059	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.66	J	0.070	MDL	5.5	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-582-SA6-SB-0.0-0.5 **Collected:** 12/13/2012 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
1,2,3,4,7,8-HXCDF	0.49	Q B J	0.038	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.0	J	0.077	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.44	Q B J	0.036	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.9	Q B J	0.069	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.21	B J	0.044	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.43	B J	0.049	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.23	J	0.044	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.21	Q J	0.036	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.18	Q J	0.039	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.52	J	0.045	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-584-SA6-SB-0.0-0.5 **Collected:** 12/13/2012 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
1,2,3,4,7,8,9-HPCDF	0.56	Q B J	0.074	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.65	J	0.12	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.55	B J	0.058	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.2	Q J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.54	Q B J	0.059	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	2.2	C B J	0.11	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.14	B Q J	0.074	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.26	Q B J	0.054	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.076	Q J	0.050	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.39	J	0.057	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.099	J	0.051	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.076	Q J	0.036	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-585-SA6-SB-0.0-0.5 **Collected:** 12/13/2012 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
1,2,3,4,7,8,9-HPCDF	2.0	B J	0.089	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.3	J	0.089	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.7	C B J	0.063	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	4.9	J	0.092	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.6	Q B J	0.063	MDL	5.7	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-585-SA6-SB-0.0-0.5** ***Collected:*** **12/13/2012 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
1,2,3,7,8,9-HXCDD	5.6	C B J	0.085	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.28	Q B J	0.076	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	1.2	Q B J	0.079	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.37	J	0.084	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.73	J	0.062	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.47	J	0.073	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.16	J	0.052	MDL	1.1	MRL	ng/kg	J	Z, FD
2,3,7,8-TCDF	0.51	J	0.076	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-593-SA6-SB-4.5-5.5** ***Collected:*** **12/13/2012 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-HPCDD	4.2	B J	0.063	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.88	B J	0.025	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.059	Q B J	0.031	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.090	Q J	0.040	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.079	Q B J	0.022	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.17	J	0.043	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.063	Q B J	0.022	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.21	B J	0.039	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.053	Q B J	0.030	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.072	B J	0.019	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.051	Q J	0.019	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.038	Q J	0.023	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.043	Q J	0.017	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.048	Q J	0.016	MDL	1.0	MRL	ng/kg	J	Z
OCDF	1.3	B J	0.019	MDL	10	MRL	ng/kg	U	B

Sample ID: **SL-682-SA6-SB-0.0-0.5** ***Collected:*** **12/13/2012 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	1.3	B J	0.053	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.30	J	0.10	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.18	Q B J	0.050	MDL	5.9	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.51	J	0.099	MDL	5.9	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-682-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
1,2,3,7,8,9-HXCDD	0.85	C B J	0.093	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.19	B J	0.063	MDL	5.9	MRL	ng/kg	U	B
2,3,4,7,8-PECDF	0.20	Q J	0.067	MDL	5.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.98	J	0.051	MDL	1.2	MRL	ng/kg	J	Z
OCDF	3.0	B J	0.039	MDL	12	MRL	ng/kg	J	Z

Sample ID: SL-682-SA6-SB-3.0-4.0 *Collected:* 12/13/2012 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	0.024	Q B J	0.017	MDL	5.1	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.11	Q J	0.049	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.10	Q B J	0.045	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.14	Q B J	0.023	MDL	5.1	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.096	Q J	0.034	MDL	1.0	MRL	ng/kg	J	Z
OCDD	2.0	B J	0.046	MDL	10	MRL	ng/kg	U	B
OCDF	0.093	Q B J	0.018	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-685-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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	10	B	0.091	MDL	5.5	MRL	ng/kg	J	FD
1,2,3,4,7,8,9-HPCDF	0.61	Q B J	0.11	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,4,7,8-HxCDD	0.62	Q J	0.091	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.87	B J	0.069	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDD	3.0	J	0.091	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.1	Q B J	0.070	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,7,8,9-HXCDD	2.3	C B J	0.085	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.089	U	0.089	MDL	5.5	MRL	ng/kg	UJ	FD
1,2,3,7,8-PECDD	0.36	Q B J	0.073	MDL	5.5	MRL	ng/kg	J	Z, FD
1,2,3,7,8-PECDF	0.099	U	0.099	MDL	5.5	MRL	ng/kg	UJ	FD
2,3,4,6,7,8-HXCDF	0.49	J	0.075	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.37	J	0.091	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.40	J	0.078	MDL	1.1	MRL	ng/kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-685-SA6-SB-4.0-5.0 **Collected:** 12/13/2012 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
1,2,3,4,7,8,9-HPCDF	2.9	B J	0.13	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	3.7	J	0.11	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.7	B J	0.062	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	3.3	B J	0.061	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.35	Q B J	0.076	MDL	5.8	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	2.0	Q B J	0.11	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.49	Q J	0.11	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	1.1	J	0.060	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.98	J	0.10	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.18	Q J	0.063	MDL	1.2	MRL	ng/kg	J	Z
OCDD	5300	B E	0.45	MDL	12	MRL	ng/kg	J	*XI

Sample ID: SL-985-SA6-SB-0.0-0.5 **Collected:** 12/13/2012 8:10:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	2.5	B J	0.13	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.9	J	0.11	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.4	C B J	0.068	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.7	Q B J	0.065	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.34	Q B J	0.078	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	1.5	Q B J	0.077	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.44	J	0.090	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.89	J	0.065	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.68	J	0.086	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.094	Q J	0.055	MDL	1.1	MRL	ng/kg	J	Z, FD
2,3,7,8-TCDF	0.54	Q J	0.093	MDL	1.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	Professional Judgment
B	Method Blank Contamination
FD	Field Duplicate Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control Outlier Reports

280-37012-1/ H2L190409

Method Blank Outlier Report

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H3A030000018B	1/14/2013 11:50:00 AM	1,2,3,4,6,7,8-HPCDD	5.5 pg/L	EB1-121312
		1,2,3,4,6,7,8-HPCDF	5.9 pg/L	EB2-121312
		1,2,3,4,7,8,9-HPCDF	6.8 pg/L	
		1,2,3,4,7,8-HxCDD	2.7 pg/L	
		1,2,3,4,7,8-HXCDF	4.3 pg/L	
		1,2,3,6,7,8-HXCDD	4.2 pg/L	
		1,2,3,7,8,9-HXCDD	3.5 pg/L	
		1,2,3,7,8,9-HXCDF	2.5 pg/L	
		1,2,3,7,8-PECDD	1.7 pg/L	
		1,2,3,7,8-PECDF	1.6 pg/L	
		2,3,4,6,7,8-HXCDF	2.5 pg/L	
		2,3,4,7,8-PECDF	1.9 pg/L	
		OCDD	19 pg/L	
		OCDF	14 pg/L	

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-121312(RES)	OCDD	2.6 pg/L	2.6U pg/L
EB2-121312(RES)	2,3,4,7,8-PECDF	0.54 pg/L	0.54U pg/L
EB2-121312(RES)	OCDD	3.0 pg/L	3.0U pg/L
EB2-121312(RES)	OCDF	1.2 pg/L	1.2U pg/L

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L270000024B	1/11/2013 4:11:00 PM	1,2,3,4,6,7,8-HPCDD	0.38 ng/kg	SL-1085-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.078 ng/kg	SL-582-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.11 ng/kg	SL-584-SA6-SB-0.0-0.5
		1,2,3,4,7,8-HXCDF	0.095 ng/kg	SL-585-SA6-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.069 ng/kg	SL-593-SA6-SB-4.5-5.5
		1,2,3,7,8,9-HXCDD	0.16 ng/kg	SL-682-SA6-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.12 ng/kg	SL-682-SA6-SB-3.0-4.0
		1,2,3,7,8-PECDD	0.062 ng/kg	SL-685-SA6-SB-0.0-0.5
		OCDD	8.5 ng/kg	SL-685-SA6-SB-4.0-5.0
		OCDF	0.29 ng/kg	SL-985-SA6-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-1085-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.34 ng/kg	0.34U ng/kg
SL-1085-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.17 ng/kg	0.17U ng/kg
SL-1085-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.20 ng/kg	0.20U ng/kg
SL-582-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.55 ng/kg	0.55U ng/kg
SL-582-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.21 ng/kg	0.21U ng/kg
SL-584-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.14 ng/kg	0.14U ng/kg
SL-584-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.26 ng/kg	0.26U ng/kg
SL-585-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.28 ng/kg	0.28U ng/kg

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Method Blank Outlier Report

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

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-593-SA6-SB-4.5-5.5(RES)	1,2,3,4,7,8,9-HPCDF	0.059 ng/kg	0.059U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	1,2,3,4,7,8-HXCDF	0.079 ng/kg	0.079U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	1,2,3,6,7,8-HXCDF	0.063 ng/kg	0.063U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	1,2,3,7,8,9-HXCDD	0.21 ng/kg	0.21U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	1,2,3,7,8,9-HXCDF	0.053 ng/kg	0.053U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	1,2,3,7,8-PECDD	0.072 ng/kg	0.072U ng/kg
SL-593-SA6-SB-4.5-5.5(RES)	OCDF	1.3 ng/kg	1.3U ng/kg
SL-682-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.18 ng/kg	0.18U ng/kg
SL-682-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.19 ng/kg	0.19U ng/kg
SL-682-SA6-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.024 ng/kg	0.024U ng/kg
SL-682-SA6-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.10 ng/kg	0.10U ng/kg
SL-682-SA6-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.14 ng/kg	0.14U ng/kg
SL-682-SA6-SB-3.0-4.0(RES)	OCDD	2.0 ng/kg	2.0U ng/kg
SL-682-SA6-SB-3.0-4.0(RES)	OCDF	0.093 ng/kg	0.093U ng/kg
SL-685-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.35 ng/kg	0.35U ng/kg
SL-985-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.34 ng/kg	0.34U ng/kg

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: 280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-685-SA6-SB-0.0-0.5MS SL-685-SA6-SB-0.0-0.5MSD (SL-685-SA6-SB-0.0-0.5)	OCDD	213	28	40.00-135.00	-	OCDD	No Qual, >4X
SL-585-SA6-SB-0.0-0.5MS SL-585-SA6-SB-0.0-0.5MSD (SL-585-SA6-SB-0.0-0.5)	OCDD	16	0	40.00-135.00	-	OCDD	No Qual, >4X

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-585-SA6-SB-0.0-0.5	SL-985-SA6-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	130	170	27	50.00	
1,2,3,4,6,7,8-HPCDF	24	30	22	50.00	
1,2,3,4,7,8,9-HPCDF	2.0	2.5	22	50.00	
1,2,3,4,7,8-HxCDD	2.3	2.9	23	50.00	
1,2,3,4,7,8-HXCDF	1.7	2.4	34	50.00	
1,2,3,6,7,8-HXCDD	4.9	6.6	30	50.00	
1,2,3,6,7,8-HXCDF	1.6	1.7	6	50.00	
1,2,3,7,8,9-HXCDD	5.6	7.4	28	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDF	0.28	0.34	19	50.00	
1,2,3,7,8-PECDD	1.2	1.5	22	50.00	
1,2,3,7,8-PECDF	0.37	0.44	17	50.00	
2,3,4,6,7,8-HXCDF	0.73	0.89	20	50.00	
2,3,4,7,8-PECDF	0.47	0.68	37	50.00	
2,3,7,8-TCDF	0.51	0.54	6	50.00	
OCDD	2200	2500	13	50.00	
OCDF	53	69	26	50.00	
2,3,7,8-TCDD	0.16	0.094	52	50.00	J(all detects)

Analyte	Concentration (ng/kg)		Sample RPD	eQAPP RPD	Flag
	SL-685-SA6-SB-0.0-0.5	SL-1085-SA6-SB-0.0-0.5			
1,2,3,4,6,7,8-HPCDD	95	77	21	50.00	
1,2,3,4,7,8-HxCDD	0.62	0.42	38	50.00	
1,2,3,6,7,8-HXCDD	3.0	2.1	35	50.00	
1,2,3,7,8,9-HXCDD	2.3	1.5	42	50.00	No Qualifiers Applied
2,3,4,6,7,8-HXCDF	0.49	0.35	33	50.00	
2,3,4,7,8-PECDF	0.37	0.25	39	50.00	
OCDD	2100	2300	9	50.00	
OCDF	29	21	32	50.00	
1,2,3,4,6,7,8-HPCDF	10	5.8	53	50.00	
1,2,3,4,7,8,9-HPCDF	0.61	0.34	57	50.00	
1,2,3,4,7,8-HXCDF	0.87	0.48	58	50.00	
1,2,3,6,7,8-HXCDF	1.1	0.46	82	50.00	J(all detects)
1,2,3,7,8,9-HXCDF	5.5 U	0.17	200	50.00	UJ(all non-detects)
1,2,3,7,8-PECDD	0.36	0.20	57	50.00	
1,2,3,7,8-PECDF	5.5 U	0.18	200	50.00	
2,3,7,8-TCDF	0.40	0.17	81	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121312	OCDD	Q B J	2.6	110	MRL	pg/L	J (all detects)
EB2-121312	2,3,4,7,8-PECDF	Q B J	0.54	52	MRL	pg/L	
	OCDD	Q B J	3.0	100	MRL	pg/L	J (all detects)
	OCDF	Q B J	1.2	100	MRL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1085-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.34	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.42	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.48	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	2.1	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.46	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.5	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.17	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.20	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.18	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.35	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.25	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.17	1.1	MRL	ng/kg	
SL-582-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	4.9	5.5	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.55	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.66	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.49	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.0	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.44	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	1.9	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	B J	0.21	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	B J	0.43	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.23	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.21	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.18	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.52	1.1	MRL	ng/kg	
SL-584-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.56	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.65	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.55	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	1.2	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.54	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	2.2	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	B Q J	0.14	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.26	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.076	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.39	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.099	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.076	1.1	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-585-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	2.0	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.3	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	1.7	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	4.9	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.6	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	5.6	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.28	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	1.2	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.37	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.73	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.47	5.7	MRL	ng/kg	
	2,3,7,8-TCDD	J	0.16	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.51	1.1	MRL	ng/kg	
SL-593-SA6-SB-4.5-5.5	1,2,3,4,6,7,8-HPCDD	B J	4.2	5.2	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.88	5.2	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.059	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.090	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.079	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.17	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.063	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.21	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.053	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	B J	0.072	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.051	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.038	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.043	5.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.048	1.0	MRL	ng/kg	
	OCDF	B J	1.3	10	MRL	ng/kg	
SL-682-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	1.3	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.30	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.18	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.51	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	0.85	5.9	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	B J	0.19	5.9	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.20	5.9	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.98	1.2	MRL	ng/kg	
	OCDF	B J	3.0	12	MRL	ng/kg	
SL-682-SA6-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDF	Q B J	0.024	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.11	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.10	5.1	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.14	5.1	MRL	ng/kg	J (all detects)
	2,3,7,8-TCDF	Q J	0.096	1.0	MRL	ng/kg	
	OCDD	B J	2.0	10	MRL	ng/kg	
	OCDF	Q B J	0.093	10	MRL	ng/kg	
SL-685-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.61	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.62	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.87	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	3.0	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.1	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	2.3	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.36	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.49	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.37	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.40	1.1	MRL	ng/kg	

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37012-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37012-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-685-SA6-SB-4.0-5.0	1,2,3,4,7,8,9-HPCDF	B J	2.9	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	3.7	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	2.7	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	B J	3.3	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.35	5.8	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	2.0	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.49	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	1.1	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.98	5.8	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.18	1.2	MRL	ng/kg	
SL-985-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	2.5	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.9	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	2.4	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.7	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.34	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	1.5	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	J	0.44	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.89	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.68	5.7	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.094	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.54	1.1	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-37060-1

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-Dec-2012	SL-690-SA6-SB-0.0-0.5	280-37060-3	N	1613	1613B	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	280-37060-4	N	1613	1613B	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	280-37060-1	N	1613	1613B	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	280-37060-2	N	1613	1613B	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	280-37060-5	N	1613	1613B	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	280-37060-6	N	1613	1613B	III
14-Dec-2012	SL-558-SA6-SB-0.0-0.5	280-37060-7	N	1613	1613B	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	280-37060-8	N	1613	1613B	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: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-558-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 2:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.1	Q B J	0.16	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.6	J	0.17	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.9	C B J	0.078	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.4	Q B J	0.075	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.5	Q B J	0.14	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.95	J	0.14	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.77	Q J	0.077	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	1.2	J	0.12	MDL	5.7	MRL	ng/kg	J	Z

Sample ID: SL-607-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 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
1,2,3,4,7,8,9-HPCDF	0.44	B J	0.074	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.39	Q J	0.10	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.57	B J	0.052	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.2	J	0.097	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.43	Q B J	0.047	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.4	C B J	0.092	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.16	Q B J	0.063	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.29	Q B J	0.077	MDL	5.3	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.26	J	0.070	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.31	Q J	0.052	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.33	J	0.068	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.39	Q J	0.059	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: SL-607-SA6-SB-4.0-5.0 *Collected:* 12/14/2012 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	0.95	Q B J	0.089	MDL	5.2	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.21	B J	0.027	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.080	Q B J	0.035	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.062	B J	0.041	MDL	5.2	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-607-SA6-SB-4.0-5.0 *Collected:* 12/14/2012 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
OCDD	17	B	0.092	MDL	10	MRL	ng/kg	U	B
OCDF	0.69	B J	0.046	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-660-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 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
1,2,3,4,7,8,9-HPCDF	0.82	Q B J	0.071	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.90	J	0.092	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	2.6	B J	0.059	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	2.9	J	0.095	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.8	Q B J	0.059	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	3.4	C B J	0.088	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.34	Q B J	0.074	MDL	5.2	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.57	Q B J	0.11	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	3.2	J	0.12	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.83	Q J	0.058	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	2.6	J	0.13	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.15	Q J	0.076	MDL	1.0	MRL	ng/kg	J	Z

Sample ID: SL-660-SA6-SB-4.0-5.0 *Collected:* 12/14/2012 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.5	B J	0.042	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.20	Q B J	0.030	MDL	5.1	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.38	J	0.056	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.17	Q B J	0.031	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.42	B J	0.052	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDF	0.096	Q B J	0.037	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.16	Q B J	0.037	MDL	5.1	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.29	J	0.048	MDL	5.1	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.094	Q J	0.031	MDL	5.1	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.22	Q J	0.046	MDL	5.1	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-660-SA6-SB-4.0-5.0 *Collected:* 12/14/2012 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.68	J	0.058	MDL	1.0	MRL	ng/kg	J	Z
OCDF	4.3	B J	0.041	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-689-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 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	0.96	B J	0.055	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.098	Q B J	0.051	MDL	5.5	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.64	Q J	0.10	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.17	Q B J	0.047	MDL	5.5	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.82	B J	0.094	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.23	Q B J	0.060	MDL	5.5	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.15	Q J	0.051	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.033	Q J	0.034	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.067	Q J	0.044	MDL	1.1	MRL	ng/kg	J	Z
OCDF	2.9	B J	0.12	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-690-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.1	B J	0.056	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.19	Q B J	0.075	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.34	B J	0.056	MDL	5.7	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.98	J	0.093	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.34	Q B J	0.052	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	1.1	C B J	0.088	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.22	B J	0.060	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8-PECDF	0.26	Q J	0.071	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.14	Q J	0.057	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.18	Q J	0.073	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.30	Q J	0.058	MDL	1.1	MRL	ng/kg	J	Z
OCDF	4.1	B J	0.054	MDL	11	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: **SVOA**

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

Sample ID: **SL-690-SA6-SB-2.5-3.5** ***Collected:*** **12/14/2012 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
1,2,3,4,6,7,8-HPCDD	5.0	B J	0.14	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.56	Q B J	0.056	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.30	Q J	0.080	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.16	B J	0.058	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.32	Q B J	0.071	MDL	5.6	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.086	Q B J	0.056	MDL	5.6	MRL	ng/kg	U	B
2,3,4,6,7,8-HXCDF	0.089	Q J	0.052	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.064	Q J	0.046	MDL	1.1	MRL	ng/kg	J	Z
OCDF	1.2	B J	0.091	MDL	11	MRL	ng/kg	U	B

* denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-37060-1/
H2L190408

Method Blank Outlier Report

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H2L270000024B	1/11/2013 4:11:00 PM	1,2,3,4,6,7,8-HPCDD	0.38 ng/kg	SL-558-SA6-SB-0.0-0.5
		1,2,3,4,6,7,8-HPCDF	0.078 ng/kg	SL-607-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.11 ng/kg	SL-607-SA6-SB-4.0-5.0
		1,2,3,4,7,8-HXCDF	0.095 ng/kg	SL-660-SA6-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.069 ng/kg	SL-660-SA6-SB-4.0-5.0
		1,2,3,7,8,9-HXCDD	0.16 ng/kg	SL-689-SA6-SB-0.0-0.5
		1,2,3,7,8,9-HXCDF	0.12 ng/kg	SL-690-SA6-SB-0.0-0.5
		1,2,3,7,8-PECDD	0.062 ng/kg	SL-690-SA6-SB-2.5-3.5
		OCDD	8.5 ng/kg	
		OCDF	0.29 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-607-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.44 ng/kg	0.44U ng/kg
SL-607-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.16 ng/kg	0.16U ng/kg
SL-607-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.29 ng/kg	0.29U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.95 ng/kg	0.95U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.21 ng/kg	0.21U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.080 ng/kg	0.080U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.062 ng/kg	0.062U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	OCDD	17 ng/kg	17U ng/kg
SL-607-SA6-SB-4.0-5.0(RES)	OCDF	0.69 ng/kg	0.69U ng/kg
SL-660-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.34 ng/kg	0.34U ng/kg
SL-660-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.20 ng/kg	0.20U ng/kg
SL-660-SA6-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.17 ng/kg	0.17U ng/kg
SL-660-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.42 ng/kg	0.42U ng/kg
SL-660-SA6-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.096 ng/kg	0.096U ng/kg
SL-660-SA6-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.16 ng/kg	0.16U ng/kg
SL-689-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.098 ng/kg	0.098U ng/kg
SL-689-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.17 ng/kg	0.17U ng/kg
SL-689-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.23 ng/kg	0.23U ng/kg
SL-690-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.19 ng/kg	0.19U ng/kg
SL-690-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.34 ng/kg	0.34U ng/kg
SL-690-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.34 ng/kg	0.34U ng/kg
SL-690-SA6-SB-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.22 ng/kg	0.22U ng/kg
SL-690-SA6-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.16 ng/kg	0.16U ng/kg
SL-690-SA6-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.32 ng/kg	0.32U ng/kg
SL-690-SA6-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.086 ng/kg	0.086U ng/kg
SL-690-SA6-SB-2.5-3.5(RES)	OCDF	1.2 ng/kg	1.2U ng/kg

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-558-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	1.1	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.6	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	C B J	1.9	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.4	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	1.5	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.95	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.77	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	1.2	5.7	MRL	ng/kg	
SL-607-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.44	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.39	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.57	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.2	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.43	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.4	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.16	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.29	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.26	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.31	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.33	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.39	1.1	MRL	ng/kg	
SL-607-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.95	5.2	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	B J	0.21	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.080	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	B J	0.062	5.2	MRL	ng/kg	
	OCDF	B J	0.69	10	MRL	ng/kg	
SL-660-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.82	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.90	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	2.6	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	2.9	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.8	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	3.4	5.2	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.34	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.57	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	3.2	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.83	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	2.6	5.2	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.15	1.0	MRL	ng/kg	
SL-660-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	B J	1.5	5.1	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.20	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.38	5.1	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.17	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.42	5.1	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.096	5.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q B J	0.16	5.1	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.29	5.1	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.094	5.1	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.22	5.1	MRL	ng/kg	
	2,3,7,8-TCDF	J	0.68	1.0	MRL	ng/kg	
	OCDF	B J	4.3	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37060-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37060-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: **1613B**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-689-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	0.96	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HXCDF	Q B J	0.098	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.64	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.17	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	B J	0.82	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.23	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.15	5.5	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.033	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.067	1.1	MRL	ng/kg	
	OCDF	B J	2.9	11	MRL	ng/kg	
SL-690-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	2.1	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.19	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.34	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.98	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.34	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	C B J	1.1	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	B J	0.22	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.26	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.14	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.18	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.30	1.1	MRL	ng/kg	
	OCDF	B J	4.1	11	MRL	ng/kg	
SL-690-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	B J	5.0	5.6	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	Q B J	0.56	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.30	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	B J	0.16	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q B J	0.32	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q B J	0.086	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.089	5.6	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.064	1.1	MRL	ng/kg	
	OCDF	B J	1.2	11	MRL	ng/kg	

SAMPLE DELIVERY GROUP

280-37202-1

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-Dec-2012	SL-518-SA6-SB-0.0-0.5	280-37202-22	N	1613	1613B	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	280-37202-22 MS	MS	1613	1613B	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	280-37202-22 MSD	MSD	1613	1613B	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	280-37202-23	FD	1613	1613B	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	280-37202-21	N	1613	1613B	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	280-37202-19	N	1613	1613B	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	280-37202-4	N	1613	1613B	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	280-37202-5	N	1613	1613B	III
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	280-37202-16	N	1613	1613B	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	280-37202-9	N	1613	1613B	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	280-37202-13	N	1613	1613B	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	280-37202-10	N	1613	1613B	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	280-37202-20	N	1613	1613B	III
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	280-37202-8	N	1613	1613B	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	280-37202-11	N	1613	1613B	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	280-37202-2	N	1613	1613B	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	280-37202-18	N	1613	1613B	III
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	280-37202-3	N	1613	1613B	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	280-37202-15	N	1613	1613B	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	280-37202-6	N	1613	1613B	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	280-37202-17	N	1613	1613B	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	280-37202-7	N	1613	1613B	III
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	280-37202-14	N	1613	1613B	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	280-37202-12	N	1613	1613B	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	280-37202-1	N	1613	1613B	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	280-37202-24	N	1613	1613B	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	280-37202-24 MS	MS	1613	1613B	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	280-37202-24 MSD	MSD	1613	1613B	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	280-37202-25	FD	1613	1613B	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	280-37202-26	N	1613	1613B	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	280-37202-27	N	1613	1613B	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	280-37202-28	N	1613	1613B	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	280-37202-29	N	1613	1613B	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	280-37202-30	N	1613	1613B	III
19-Dec-2012	EB1-121912	280-37202-31	EB	1613	1613B	III
19-Dec-2012	EB2-121912	280-37202-32	EB	1613	1613B	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: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: AQ**

Sample ID: EB1-121912 *Collected:* 12/19/2012 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
1,2,3,7,8,9-HXCDD	0.43	Q B J	0.55	MDL	52	MRL	pg/L	U	B
OCDD	1.9	Q B J	0.75	MDL	100	MRL	pg/L	U	B

Sample ID: EB2-121912 *Collected:* 12/19/2012 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-HPCDD	0.67	B J	0.29	MDL	56	MRL	pg/L	U	B
OCDD	1.8	B J	0.40	MDL	110	MRL	pg/L	U	B
OCDF	0.70	Q B J	0.42	MDL	110	MRL	pg/L	U	B

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-1022-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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
1,2,3,4,7,8,9-HPCDF	0.55	Q B J	0.078	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.60	J	0.076	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.56	Q J	0.049	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.3	J	0.080	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	2.2	Q B J	0.051	MDL	5.7	MRL	ng/kg	J	Z, FD
1,2,3,7,8,9-HXCDD	1.5	J	0.073	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.26	Q B J	0.068	MDL	5.7	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.34	Q J	0.060	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.49	Q B J	0.054	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.35	J	0.087	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.043	U	0.043	MDL	1.1	MRL	ng/kg	UJ	FD
2,3,7,8-TCDF	0.78	B J	0.094	MDL	1.1	MRL	ng/kg	UJ	B, FD
OCDF	17	B	0.027	MDL	11	MRL	ng/kg	J	L

Sample ID: SL-514-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.7	Q J	0.13	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.29	Q B J	0.25	MDL	5.5	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-514-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 9:45:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.21	J	0.078	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.17	J	0.062	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.66	J	0.089	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.24	J	0.060	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.43	J	0.078	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.10	Q J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.053	Q J	0.085	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.071	Q J	0.084	MDL	5.5	MRL	ng/kg	J	Z
OCDF	10	B J	0.13	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-514-SA6-SB-4.0-5.0 **Collected:** 12/17/2012 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	3.1	Q B J	0.16	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	3.1	J	0.10	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.1	B J	0.070	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.43	J	0.070	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.54	J	0.11	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.65	Q J	0.071	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.59	Q J	0.11	MDL	5.3	MRL	ng/kg	J	Z
OCDF	1.6	Q J	0.20	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-514-SA6-SB-7.0-8.0 **Collected:** 12/17/2012 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
1,2,3,4,6,7,8-HPCDD	0.16	B J	0.088	MDL	5.1	MRL	ng/kg	U	B
1,2,3,4,6,7,8-HPCDF	0.079	J	0.062	MDL	5.1	MRL	ng/kg	J	Z
OCDD	0.84	Q B J	0.092	MDL	10	MRL	ng/kg	U	B

Sample ID: SL-515-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 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	2.3	J	0.052	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.21	Q B J	0.072	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.16	J	0.043	MDL	5.4	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-515-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 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
1,2,3,4,7,8-HXCDF	0.12	Q J	0.030	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.53	J	0.044	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.062	Q J	0.031	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.24	J	0.041	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.13	Q J	0.067	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.034	Q J	0.044	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.075	Q J	0.031	MDL	5.4	MRL	ng/kg	J	Z
OCDF	5.0	B J	0.052	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-518-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 7:55:00 **Analysis Type:** RES **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	2.4	Q J	0.095	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.14	J	0.057	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,6,7,8-HXCDD	0.44	J	0.080	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.17	Q J	0.073	MDL	5.4	MRL	ng/kg	J	Z, FD
OCDF	6.2	B J	0.13	MDL	11	MRL	ng/kg	J	Z, FD

Sample ID: SL-575-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 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
1,2,3,4,7,8,9-HPCDF	0.98	B J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	2.3	J	0.087	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.77	J	0.056	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.23	Q J	0.053	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.11	J	0.059	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.2	J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.18	Q J	0.085	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.40	J	0.052	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.16	Q J	0.082	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.12	Q J	0.12	MDL	1.1	MRL	ng/kg	J	Z
OCDD	4500	B E	0.11	MDL	11	MRL	ng/kg	J	*XI

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-575-SA6-SB-2.0-3.0** *Collected:* **12/17/2012 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
OCDD	1.0	Q B J	0.17	MDL	9.7	MRL	ng/kg	U	B

Sample ID: **SL-576-SA6-SB-0.0-0.5** *Collected:* **12/17/2012 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
1,2,3,4,7,8,9-HPCDF	0.73	B J	0.17	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	4.7	J	0.12	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	1.0	J	0.058	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.43	J	0.060	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	2.8	J	0.12	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.18	Q J	0.093	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.51	J	0.064	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.23	Q J	0.094	MDL	5.2	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.30	Q J	0.20	MDL	1.0	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.26	Q J	0.12	MDL	1.0	MRL	ng/kg	J	Z
OCDD	6200	B E	0.22	MDL	10	MRL	ng/kg	J	*XI

Sample ID: **SL-576-SA6-SB-2.0-3.0** *Collected:* **12/17/2012 3:40:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.3	J	0.073	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.17	Q J	0.13	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.77	J	0.057	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.24	Q B J	0.048	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.9	J	0.061	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.17	Q J	0.048	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.5	Q J	0.055	MDL	4.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.41	J	0.076	MDL	4.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.12	Q J	0.052	MDL	4.9	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.081	Q J	0.097	MDL	0.99	MRL	ng/kg	J	Z
OCDF	9.2	J	0.13	MDL	9.9	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-588-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 12:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.9	J	0.080	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.18	Q B J	0.13	MDL	5.7	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.22	J	0.085	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.24	Q J	0.047	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.45	J	0.086	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.26	Q J	0.046	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.51	Q J	0.080	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.12	Q J	0.067	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.25	Q J	0.097	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.21	J	0.050	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.082	Q J	0.077	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.26	Q J	0.11	MDL	1.1	MRL	ng/kg	J	Z
OCDF	4.9	B J	0.13	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-588-SA6-SB-2.0-3.0 *Collected:* 12/18/2012 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.9	J	0.086	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.084	Q B J	0.057	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.087	Q J	0.055	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.27	Q J	0.092	MDL	5.2	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.15	Q J	0.057	MDL	5.2	MRL	ng/kg	J	Z
OCDF	5.9	J	0.14	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-589-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 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	3.4	J	0.089	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.41	Q B J	0.14	MDL	5.8	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.42	J	0.082	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.25	Q J	0.058	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.1	J	0.092	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.26	Q J	0.057	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.94	J	0.081	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.18	J	0.068	MDL	5.8	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-589-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 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
1,2,3,7,8-PECDD	0.31	Q J	0.12	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.23	J	0.059	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.11	Q J	0.097	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.21	Q J	0.14	MDL	1.2	MRL	ng/kg	J	Z
OCDF	4.9	B J	0.12	MDL	12	MRL	ng/kg	J	Z

Sample ID: SL-590-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
1,2,3,6,7,8-HXCDF	0.24	Q J	0.097	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.49	J	0.15	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.30	J	0.11	MDL	5.7	MRL	ng/kg	J	Z
OCDF	8.7	B J	0.31	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-590-SA6-SB-4.0-5.0 *Collected:* 12/17/2012 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
OCDD	1.5	B Q J	0.11	MDL	11	MRL	ng/kg	U	B

Sample ID: SL-591-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	1.2	B J	0.14	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.52	J	0.11	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.49	Q J	0.072	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.79	Q J	0.11	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.98	J	0.073	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.93	Q J	0.11	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.22	J	0.082	MDL	5.9	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.28	Q J	0.13	MDL	5.9	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.63	J	0.071	MDL	5.9	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-591-SA6-SB-4.0-5.0 *Collected:* 12/17/2012 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-HPCDD	4.8	B J	0.13	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	2.6	J	0.11	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.16	B J	0.063	MDL	5.5	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.065	Q J	0.062	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.13	J	0.069	MDL	5.5	MRL	ng/kg	J	Z
OCDF	2.7	J	0.15	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-592-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 12:35:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDF	1.6	J	0.11	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	1.6	J	0.14	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	5.1	J	0.095	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	2.2	J	0.14	MDL	5.4	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.84	Q J	0.22	MDL	1.1	MRL	ng/kg	J	Z
OCDD	6200	B E	0.15	MDL	11	MRL	ng/kg	J	*XI

Sample ID: SL-592-SA6-SB-2.5-3.5 *Collected:* 12/17/2012 12:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	1.3	B J	0.078	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.30	Q J	0.074	MDL	5.1	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.16	J	0.063	MDL	5.1	MRL	ng/kg	J	Z
OCDF	0.43	J	0.097	MDL	10	MRL	ng/kg	J	Z

Sample ID: SL-600-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 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	4.4	B J	0.099	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	5.7	Q J	0.033	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.52	J	0.042	MDL	5.8	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	1.5	J	0.070	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	3.5	J	0.033	MDL	5.8	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	1.9	J	0.068	MDL	5.8	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.45	Q J	0.098	MDL	1.2	MRL	ng/kg	J	Z

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: **SL-600-SA6-SB-0.0-0.5** *Collected:* **12/18/2012 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
2,3,7,8-TCDF	0.84	Q J	0.065	MDL	1.2	MRL	ng/kg	J	Z
OCDD	5600	B E	0.12	MDL	12	MRL	ng/kg	J	*XI

Sample ID: **SL-617-SA6-SB-0.0-0.5** *Collected:* **12/18/2012 1:10:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.47	Q B J	0.20	MDL	5.3	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.53	Q J	0.12	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.80	J	0.069	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	1.9	J	0.13	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.54	J	0.069	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	1.8	J	0.12	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.43	Q J	0.14	MDL	5.3	MRL	ng/kg	J	Z
1,2,3,7,8-PECDF	0.20	Q J	0.11	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.35	Q J	0.071	MDL	5.3	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.60	Q J	0.11	MDL	5.3	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.61	Q J	0.14	MDL	1.1	MRL	ng/kg	J	Z

Sample ID: **SL-617-SA6-SB-4.0-5.0** *Collected:* **12/18/2012 1:20:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.13	Q B J	0.13	MDL	5.4	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDD	0.19	J	0.11	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.13	Q J	0.081	MDL	5.4	MRL	ng/kg	J	Z
OCDD	2.6	B J	0.16	MDL	11	MRL	ng/kg	U	B

Sample ID: **SL-622-SA6-SB-0.0-0.5** *Collected:* **12/19/2012 7:55:00** *Analysis Type:* **RES** *Dilution:* **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	4.1	B J	0.040	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.46	Q B J	0.061	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HxCDD	0.38	Q J	0.055	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.34	Q J	0.036	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.94	J	0.056	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	1.3	Q B J	0.037	MDL	5.6	MRL	ng/kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDD	1.1	J	0.052	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.32	Q B J	0.051	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.31	Q J	0.045	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.36	B J	0.041	MDL	5.6	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.23	J	0.051	MDL	5.6	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.041	Q J	0.036	MDL	1.1	MRL	ng/kg	J	Z, FD
2,3,7,8-TCDF	0.29	B J	0.052	MDL	1.1	MRL	ng/kg	UJ	B, FD
OCDD	300	B	0.027	MDL	11	MRL	ng/kg	J	I
OCDF	11	B J	0.017	MDL	11	MRL	ng/kg	J	Q, L, I

Sample ID: SL-622-SA6-SB-3.5-4.5 *Collected:* 12/19/2012 8:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.22	J	0.039	MDL	5.2	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.062	Q B J	0.035	MDL	5.2	MRL	ng/kg	U	B
1,2,3,6,7,8-HXCDF	0.055	Q B J	0.023	MDL	5.2	MRL	ng/kg	U	B
2,3,7,8-TCDD	0.016	Q J	0.019	MDL	1.0	MRL	ng/kg	J	Z
OCDD	5.8	B J	0.026	MDL	10	MRL	ng/kg	J	Z
OCDF	0.23	Q B J	0.020	MDL	10	MRL	ng/kg	UJ	L, B

Sample ID: SL-623-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.2	Q B J	0.041	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.12	Q B J	0.059	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.16	Q J	0.033	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.24	Q J	0.047	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.30	Q B J	0.034	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8,9-HXCDD	0.37	J	0.043	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.13	Q B J	0.044	MDL	5.4	MRL	ng/kg	U	B
1,2,3,7,8-PECDD	0.12	Q J	0.038	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.15	Q B J	0.035	MDL	5.4	MRL	ng/kg	U	B
2,3,7,8-TCDF	0.11	Q B J	0.045	MDL	1.1	MRL	ng/kg	U	B
OCDF	2.4	B J	0.036	MDL	11	MRL	ng/kg	J	Z, L

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix: SO**

Sample ID: SL-624-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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
1,2,3,4,7,8-HxCDD	3.8	J	0.061	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	4.4	J	0.086	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.54	Q B J	0.12	MDL	5.7	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	1.4	J	0.078	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	3.1	B J	0.092	MDL	5.7	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.33	Q J	0.11	MDL	5.7	MRL	ng/kg	J	Z
2,3,7,8-TCDD	0.062	Q J	0.054	MDL	1.1	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.062	Q B J	0.078	MDL	1.1	MRL	ng/kg	U	B
OCDD	8600	B E	0.090	MDL	11	MRL	ng/kg	J	*XI, I
OCDF	370	B	0.047	MDL	11	MRL	ng/kg	J	L, I

Sample ID: SL-624-SA6-SB-4.0-5.0 *Collected:* 12/19/2012 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
1,2,3,4,6,7,8-HPCDF	2.8	B J	0.062	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.37	B J	0.080	MDL	5.4	MRL	ng/kg	U	B
1,2,3,4,7,8-HXCDF	0.16	Q J	0.039	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.23	J	0.052	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.89	Q B J	0.038	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.23	Q J	0.048	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8-PECDD	0.13	Q J	0.022	MDL	5.4	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.15	Q B J	0.042	MDL	5.4	MRL	ng/kg	U	B
OCDF	17	B	0.028	MDL	11	MRL	ng/kg	J	L

Sample ID: SL-625-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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
1,2,3,4,6,7,8-HPCDF	2.7	B J	0.044	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.28	B J	0.060	MDL	5.5	MRL	ng/kg	U	B
1,2,3,4,7,8-HxCDD	0.18	Q J	0.056	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,4,7,8-HXCDF	0.37	Q J	0.045	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDD	0.58	Q J	0.059	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,6,7,8-HXCDF	0.61	Q B J	0.041	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.71	Q J	0.054	MDL	5.5	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDF	0.21	Q B J	0.056	MDL	5.5	MRL	ng/kg	U	B

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method Category: SVOA

Method: 1613B **Matrix:** SO

Sample ID: SL-625-SA6-SB-0.0-0.5 **Collected:** 12/19/2012 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
1,2,3,7,8-PECDD	0.27	J	0.053	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,6,7,8-HXCDF	0.24	B J	0.045	MDL	5.5	MRL	ng/kg	J	Z
2,3,4,7,8-PECDF	0.15	Q J	0.049	MDL	5.5	MRL	ng/kg	J	Z
2,3,7,8-TCDF	0.22	Q B J	0.058	MDL	1.1	MRL	ng/kg	U	B
OCDF	5.2	B J	0.018	MDL	11	MRL	ng/kg	J	Z, L

Sample ID: SL-685-SA6-SB-6.5-7.5 **Collected:** 12/18/2012 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	3.3	Q B J	0.14	MDL	5.6	MRL	ng/kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.24	J	0.12	MDL	5.6	MRL	ng/kg	J	Z
OCDF	1.1	Q J	0.20	MDL	11	MRL	ng/kg	J	Z

Sample ID: SL-918-SA6-SB-0.0-0.5 **Collected:** 12/17/2012 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
1,2,3,4,6,7,8-HPCDF	1.1	Q J	0.095	MDL	5.4	MRL	ng/kg	J	Z, FD
1,2,3,4,7,8-HXCDF	0.046	U	0.046	MDL	5.4	MRL	ng/kg	UJ	FD
1,2,3,6,7,8-HXCDD	0.28	Q J	0.084	MDL	5.4	MRL	ng/kg	J	Z
1,2,3,7,8,9-HXCDD	0.079	U	0.079	MDL	5.4	MRL	ng/kg	UJ	FD
OCDF	3.2	B J	0.13	MDL	11	MRL	ng/kg	J	Z, FD

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Data Qualifier Summary

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Reason Code Legend

Reason Code	*Description*
*XI	Exceeded Calibration Range
A	Professional Judgment
B	Method Blank Contamination
E	Matrix Spike Precision
FD	Field Duplicate Precision
I	Internal Standard Estimation
L	Laboratory Control Spike Lower Estimation
Q	Matrix Spike Precision
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

280-37202-1/
H2L270408

Method Blank Outlier Report

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H3A030000018B	1/14/2013 11:50:00 AM	1,2,3,4,6,7,8-HPCDD	5.5 pg/L	EB1-121912
		1,2,3,4,6,7,8-HPCDF	5.9 pg/L	EB2-121912
		1,2,3,4,7,8,9-HPCDF	6.8 pg/L	
		1,2,3,4,7,8-HxCDD	2.7 pg/L	
		1,2,3,4,7,8-HXCDF	4.3 pg/L	
		1,2,3,6,7,8-HXCDD	4.2 pg/L	
		1,2,3,7,8,9-HXCDD	3.5 pg/L	
		1,2,3,7,8,9-HXCDF	2.5 pg/L	
		1,2,3,7,8-PECDD	1.7 pg/L	
		1,2,3,7,8-PECDF	1.6 pg/L	
		2,3,4,6,7,8-HXCDF	2.5 pg/L	
		2,3,4,7,8-PECDF	1.9 pg/L	
		OCDD	19 pg/L	
		OCDF	14 pg/L	

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

Sample ID	Analyte	Reported Result	Modified Final Result
EB1-121912(RES)	1,2,3,7,8,9-HXCDD	0.43 pg/L	0.43U pg/L
EB1-121912(RES)	OCDD	1.9 pg/L	1.9U pg/L
EB2-121912(RES)	1,2,3,4,6,7,8-HPCDD	0.67 pg/L	0.67U pg/L
EB2-121912(RES)	OCDD	1.8 pg/L	1.8U pg/L
EB2-121912(RES)	OCDF	0.70 pg/L	0.70U pg/L

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H3A040000018B	1/23/2013 1:00:00 PM	1,2,3,4,6,7,8-HPCDD	0.13 ng/kg	SL-514-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.13 ng/kg	SL-515-SA6-SB-0.0-0.5
		OCDD	0.61 ng/kg	SL-518-SA6-SB-0.0-0.5
		OCDF	0.27 ng/kg	SL-575-SA6-SB-0.0-0.5
				SL-576-SA6-SB-0.0-0.5
				SL-588-SA6-SB-0.0-0.5
				SL-589-SA6-SB-0.0-0.5
				SL-590-SA6-SB-0.0-0.5
				SL-591-SA6-SB-0.0-0.5
				SL-592-SA6-SB-0.0-0.5
				SL-600-SA6-SB-0.0-0.5
				SL-617-SA6-SB-0.0-0.5
				SL-918-SA6-SB-0.0-0.5
H3A100000024B	1/17/2013 5:27:00 PM	1,2,3,4,6,7,8-HPCDF	0.083 ng/kg	SL-1022-SA6-SB-0.0-0.5
		1,2,3,4,7,8,9-HPCDF	0.077 ng/kg	SL-622-SA6-SB-0.0-0.5
		1,2,3,6,7,8-HXCDF	0.060 ng/kg	SL-622-SA6-SB-3.5-4.5
		1,2,3,7,8,9-HXCDF	0.062 ng/kg	SL-623-SA6-SB-0.0-0.5
		2,3,4,6,7,8-HXCDF	0.044 ng/kg	SL-624-SA6-SB-0.0-0.5
		2,3,7,8-TCDF	0.19 ng/kg	SL-624-SA6-SB-4.0-5.0
		OCDD	0.87 ng/kg	SL-625-SA6-SB-0.0-0.5
		OCDF	0.11 ng/kg	

Method Blank Outlier Report

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
H3A210000015B	1/25/2013 12:16:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,7,8-HXCDF OCDD	0.053 ng/kg 0.035 ng/kg 0.84 ng/kg	SL-514-SA6-SB-4.0-5.0 SL-514-SA6-SB-7.0-8.0 SL-575-SA6-SB-2.0-3.0 SL-576-SA6-SB-2.0-3.0 SL-588-SA6-SB-2.0-3.0 SL-590-SA6-SB-4.0-5.0 SL-591-SA6-SB-4.0-5.0 SL-592-SA6-SB-2.5-3.5 SL-617-SA6-SB-4.0-5.0 SL-685-SA6-SB-6.5-7.5

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-1022-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.26 ng/kg	0.26U ng/kg
SL-1022-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.78 ng/kg	0.78U ng/kg
SL-514-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.29 ng/kg	0.29U ng/kg
SL-514-SA6-SB-7.0-8.0(RES)	1,2,3,4,6,7,8-HPCDD	0.16 ng/kg	0.16U ng/kg
SL-514-SA6-SB-7.0-8.0(RES)	OCDD	0.84 ng/kg	0.84U ng/kg
SL-515-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.21 ng/kg	0.21U ng/kg
SL-575-SA6-SB-2.0-3.0(RES)	OCDD	1.0 ng/kg	1.0U ng/kg
SL-588-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.18 ng/kg	0.18U ng/kg
SL-588-SA6-SB-2.0-3.0(RES)	1,2,3,4,7,8-HXCDF	0.084 ng/kg	0.084U ng/kg
SL-589-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.41 ng/kg	0.41U ng/kg
SL-590-SA6-SB-4.0-5.0(RES)	OCDD	1.5 ng/kg	1.5U ng/kg
SL-591-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.16 ng/kg	0.16U ng/kg
SL-617-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.47 ng/kg	0.47U ng/kg
SL-617-SA6-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.13 ng/kg	0.13U ng/kg
SL-617-SA6-SB-4.0-5.0(RES)	OCDD	2.6 ng/kg	2.6U ng/kg
SL-622-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.29 ng/kg	0.29U ng/kg
SL-622-SA6-SB-3.5-4.5(RES)	1,2,3,4,6,7,8-HPCDF	0.062 ng/kg	0.062U ng/kg
SL-622-SA6-SB-3.5-4.5(RES)	1,2,3,6,7,8-HXCDF	0.055 ng/kg	0.055U ng/kg
SL-622-SA6-SB-3.5-4.5(RES)	OCDF	0.23 ng/kg	0.23U ng/kg
SL-623-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.12 ng/kg	0.12U ng/kg
SL-623-SA6-SB-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.30 ng/kg	0.30U ng/kg
SL-623-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.13 ng/kg	0.13U ng/kg
SL-623-SA6-SB-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-623-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.11 ng/kg	0.11U ng/kg
SL-624-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.062 ng/kg	0.062U ng/kg
SL-624-SA6-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.37 ng/kg	0.37U ng/kg
SL-624-SA6-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.15 ng/kg	0.15U ng/kg
SL-625-SA6-SB-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.28 ng/kg	0.28U ng/kg
SL-625-SA6-SB-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.21 ng/kg	0.21U ng/kg
SL-625-SA6-SB-0.0-0.5(RES)	2,3,7,8-TCDF	0.22 ng/kg	0.22U ng/kg

TestAmerica Denver

Client Sample ID: SL-624-SA6-SB-0.0-0.5

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L270408 - 027	Work Order #....:	MXQC21AC	Matrix.....:	SO
Date Sampled....:	12/19/12	Date Received....:	12/27/12	Units....:	ng/kg
Prep Date....:	01/10/13			Dilution Factor:	1
Prep Batch # ....:	3010024			Percent Moisture:	12
Initial Wgt/Vol :	10 g	Instrument ID....:	D11A	Method....:	EPA-5 1613B
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/23/13	1	0.062 Q J	1.1	0.054	1.0	0.062
1,2,3,7,8-PeCDD	1/23/13	1	1.4 J	5.7	0.078	1.0	1.4
1,2,3,4,7,8-HxCDD	1/23/13	1	3.8 J	5.7	0.061	0.1	0.38
1,2,3,6,7,8-HxCDD	1/23/13	1	9.1	5.7	0.063	0.1	0.91
1,2,3,7,8,9-HxCDD	1/23/13	1	8.9	5.7	0.058	0.1	0.89
1,2,3,4,6,7,8-HpCDD	1/23/13	1	520	5.7	0.29	0.01	5.2
OCDD	1/23/13	1	8600 B E	11	0.090	0.0003	2.6
2,3,7,8-TCDF	1/23/13	1	0.062 Q B J	1.1	0.078	0.1	0.0062
1,2,3,7,8-PeCDF	1/23/13	1	ND	5.7	0.10	0.03	0
2,3,4,7,8-PeCDF	1/23/13	1	0.33 Q J	5.7	0.11	0.3	0.099
1,2,3,4,7,8-HxCDF	1/23/13	1	4.4 J	5.7	0.086	0.1	0.44
1,2,3,6,7,8-HxCDF	1/23/13	1	66 Q B	5.7	0.087	0.1	6.6
2,3,4,6,7,8-HxCDF	1/23/13	1	3.1 B J	5.7	0.092	0.1	0.31
1,2,3,7,8,9-HxCDF	1/23/13	1	0.54 Q B J	5.7	0.12	0.1	0.054
1,2,3,4,6,7,8-HpCDF	1/23/13	1	110 B	5.7	0.11	0.01	1.1
1,2,3,4,7,8,9-HpCDF	1/23/13	1	12 B	5.7	0.16	0.01	0.12
OCDF	1/23/13	1	370 B	11	0.047	0.0003	0.11
Total TEQ Concentration							20

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	(25 - 164)
13C-1,2,3,7,8-PeCDD	95	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	81	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	80	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	93	(23 - 140)
13C-OCDD	203 *	(17 - 157) Jdet/P*
13C-2,3,7,8-TCDF	81	(24 - 169)
13C-1,2,3,7,8-PeCDF	93	(24 - 185)
13C-2,3,4,7,8-PeCDF	89	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	81	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	78	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	80	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	75	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	84	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	84	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	92	(35 - 197)

* Applies to OCDD and OCDF

TestAmerica Denver

Client Sample ID: SL-622-SA6-SB-0.0-0.5MS

Dioxins/Furans, HRGC/HRMS (1613B)

Lot - Sample #....:	H2L270408 - 024	Work Order #....:	MXQCX1AC	Matrix.....:	SO
Date Sampled....:	12/19/12	Date Received....:	12/27/12	Units....:	ng/kg
Prep Date....:	01/10/13			Dilution Factor:	1
Prep Batch # ....:	3010024			Percent Moisture:	12
Initial Wgt/Vol :	10.1 g	Instrument ID....:	D11A	Method....:	EPA-5 1613B
Analyst ID....:	Kenneya L. Wilson				

PARAMETER	ANALYSIS DATE	DILUTION FACTOR	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	WHO 2005 TEF FACTOR	TEQ CONC.
2,3,7,8-TCDD	1/23/13	1	0.041 Q J	1.1	0.036	1.0	0.041
1,2,3,7,8-PeCDD	1/23/13	1	0.31 Q J	5.6	0.045	1.0	0.31
1,2,3,4,7,8-HxCDD	1/23/13	1	0.38 Q J	5.6	0.055	0.1	0.038
1,2,3,6,7,8-HxCDD	1/23/13	1	0.94 J	5.6	0.056	0.1	0.094
1,2,3,7,8,9-HxCDD	1/23/13	1	1.1 J	5.6	0.052	0.1	0.11
1,2,3,4,6,7,8-HpCDD	1/23/13	1	21	5.6	0.090	0.01	0.21
OCDD	1/23/13	1	300 B	11	0.027	0.0003	0.090
2,3,7,8-TCDF	1/23/13	1	0.29 B J	1.1	0.052	0.1	0.029
1,2,3,7,8-PeCDF	1/23/13	1	ND	5.6	0.054	0.03	0
2,3,4,7,8-PeCDF	1/23/13	1	0.23 J	5.6	0.051	0.3	0.069
1,2,3,4,7,8-HxCDF	1/23/13	1	0.34 Q J	5.6	0.036	0.1	0.034
1,2,3,6,7,8-HxCDF	1/23/13	1	1.3 Q B J	5.6	0.037	0.1	0.13
2,3,4,6,7,8-HxCDF	1/23/13	1	0.36 B J	5.6	0.041	0.1	0.036
1,2,3,7,8,9-HxCDF	1/23/13	1	0.32 Q B J	5.6	0.051	0.1	0.032
1,2,3,4,6,7,8-HpCDF	1/23/13	1	4.1 B J	5.6	0.040	0.01	0.041
1,2,3,4,7,8,9-HpCDF	1/23/13	1	0.46 Q B J	5.6	0.061	0.01	0.0046
OCDF	1/23/13	1	11 B J	11	0.017	0.0003	0.0033
Total TEQ Concentration							1.3

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	80	(25 - 164)
13C-1,2,3,7,8-PeCDD	91	(25 - 181)
13C-1,2,3,4,7,8-HxCDD	84	(32 - 141)
13C-1,2,3,6,7,8-HxCDD	85	(28 - 130)
13C-1,2,3,4,6,7,8-HpCDD	99	(23 - 140)
13C-OCDD	163 *	(17 - 157) Jdet/p*
13C-2,3,7,8-TCDF	84	(24 - 169)
13C-1,2,3,7,8-PeCDF	87	(24 - 185)
13C-2,3,4,7,8-PeCDF	86	(21 - 178)
13C-1,2,3,4,7,8-HxCDF	89	(26 - 152)
13C-1,2,3,6,7,8-HxCDF	81	(26 - 123)
13C-2,3,4,6,7,8-HxCDF	85	(28 - 136)
13C-1,2,3,7,8,9-HxCDF	81	(29 - 147)
13C-1,2,3,4,6,7,8-HpCDF	93	(28 - 143)
13C-1,2,3,4,7,8,9-HpCDF	93	(26 - 138)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	94	(35 - 197)

*APPLIES TO OCDD and OCDF

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-622-SA6-SB-0.0-0.5MSD (SL-622-SA6-SB-0.0-0.5)	OCDF	-	-	40.00-135.00	37 (20.00)	OCDF	J (all detects)

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

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

QC Sample ID (Associated Samples)	*Compound*	*LCS %R*	*LCSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
H3A100000024C (SL-1022-SA6-SB-0.0-0.5 SL-622-SA6-SB-0.0-0.5 SL-622-SA6-SB-3.5-4.5 SL-623-SA6-SB-0.0-0.5 SL-624-SA6-SB-0.0-0.5 SL-624-SA6-SB-4.0-5.0 SL-625-SA6-SB-0.0-0.5)	OCDF	56	-	63.00-170.00	-	OCDF	J (all detects) UJ (all non-detects)

Project Name and Number: CDM_SSFL_120730_TA - CDM, Santa Susana Field Lab

Field Duplicate RPD Report

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B
Matrix: SO

Analyte	Concentration (ng/kg) SL-622-SA6-SB-0.0-0.5	Concentration (ng/kg) SL-1022-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
1,2,3,4,6,7,8-HPCDD	21	34	47	50.00	
1,2,3,4,6,7,8-HPCDF	4.1	6.3	42	50.00	
1,2,3,4,7,8,9-HPCDF	0.46	0.55	18	50.00	
1,2,3,4,7,8-HxCDD	0.38	0.60	45	50.00	
1,2,3,4,7,8-HXCDF	0.34	0.56	49	50.00	
1,2,3,6,7,8-HXCDD	0.94	1.3	32	50.00	
1,2,3,7,8,9-HXCDD	1.1	1.5	31	50.00	No Qualifiers Applied
1,2,3,7,8,9-HXCDF	0.32	0.26	21	50.00	
1,2,3,7,8-PECDD	0.31	0.34	9	50.00	
2,3,4,6,7,8-HXCDF	0.36	0.49	31	50.00	
2,3,4,7,8-PECDF	0.23	0.35	41	50.00	
OCDD	300	420	33	50.00	
OCDF	11	17	43	50.00	
1,2,3,6,7,8-HXCDF	1.3	2.2	51	50.00	J(all detects)
2,3,7,8-TCDD	0.041	1.1 U	200	50.00	UJ(all non-detects)
2,3,7,8-TCDF	0.29	0.78	92	50.00	

Analyte	Concentration (ng/kg) SL-518-SA6-SB-0.0-0.5	Concentration (ng/kg) SL-918-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
1,2,3,4,6,7,8-HPCDD	16	10	46	50.00	
1,2,3,6,7,8-HXCDD	0.44	0.28	44	50.00	No Qualifiers Applied
OCDD	180	120	40	50.00	
1,2,3,4,6,7,8-HPCDF	2.4	1.1	74	50.00	
1,2,3,4,7,8-HXCDF	0.14	5.4 U	200	50.00	J(all detects)
1,2,3,7,8,9-HXCDD	0.17	5.4 U	200	50.00	UJ(all non-detects)
OCDF	6.2	3.2	64	50.00	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	1,2,3,7,8,9-HXCDD	Q B J	0.43	52	MRL	pg/L	J (all detects)
	OCDD	Q B J	1.9	100	MRL	pg/L	
EB2-121912	1,2,3,4,6,7,8-HPCDD	B J	0.67	56	MRL	pg/L	J (all detects)
	OCDD	B J	1.8	110	MRL	pg/L	
	OCDF	Q B J	0.70	110	MRL	pg/L	

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1022-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.55	5.7	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8-HxCDD	J	0.60	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.56	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.3	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	2.2	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	1.5	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.26	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.34	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.49	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.35	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.78	1.1	MRL	ng/kg	
SL-514-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	2.7	5.5	MRL	ng/kg	J (all detects)
	1,2,3,4,7,8,9-HPCDF	Q B J	0.29	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.21	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.17	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.66	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.24	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.43	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.10	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.053	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.071	5.5	MRL	ng/kg	
	OCDF	B J	10	11	MRL	ng/kg	
SL-514-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	3.1	5.3	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	3.1	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	1.1	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.43	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	0.54	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.65	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.59	5.3	MRL	ng/kg	
	OCDF	Q J	1.6	11	MRL	ng/kg	
SL-514-SA6-SB-7.0-8.0	1,2,3,4,6,7,8-HPCDD	B J	0.16	5.1	MRL	ng/kg	J (all detects)
	1,2,3,4,6,7,8-HPCDF	J	0.079	5.1	MRL	ng/kg	
	OCDD	Q B J	0.84	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	2.3	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.21	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.16	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.12	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.53	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.062	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	0.24	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.13	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.034	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.075	5.4	MRL	ng/kg	
	OCDF	B J	5.0	11	MRL	ng/kg	
SL-518-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	2.4	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.14	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.44	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	0.17	5.4	MRL	ng/kg	
	OCDF	B J	6.2	11	MRL	ng/kg	
SL-575-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.98	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	2.3	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.77	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.23	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.11	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	1.2	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDF	Q J	0.18	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.40	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.16	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.12	1.1	MRL	ng/kg	
SL-575-SA6-SB-2.0-3.0	OCDD	Q B J	1.0	9.7	MRL	ng/kg	J (all detects)
SL-576-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	0.73	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	4.7	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	1.0	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.43	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	2.8	5.2	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.18	5.2	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	J	0.51	5.2	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.23	5.2	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.30	1.0	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.26	1.0	MRL	ng/kg	
SL-576-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	J	3.3	4.9	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q J	0.17	4.9	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.77	4.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.24	4.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.9	4.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.17	4.9	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	1.5	4.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	0.41	4.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.12	4.9	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.081	0.99	MRL	ng/kg	
	OCDF	J	9.2	9.9	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-588-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	3.9	5.7	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.18	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.22	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.24	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.45	5.7	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.26	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.51	5.7	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q J	0.12	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.25	5.7	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.21	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.082	5.7	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.26	1.1	MRL	ng/kg	
	OCDF	B J	4.9	11	MRL	ng/kg	
SL-588-SA6-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDF	J	4.9	5.2	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q B J	0.084	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.087	5.2	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	0.27	5.2	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.15	5.2	MRL	ng/kg	
	OCDF	J	5.9	10	MRL	ng/kg	
SL-589-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	J	3.4	5.8	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.41	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.42	5.8	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.25	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.1	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	0.26	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.94	5.8	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.18	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.31	5.8	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.23	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.11	5.8	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.21	1.2	MRL	ng/kg	
	OCDF	B J	4.9	12	MRL	ng/kg	
SL-590-SA6-SB-0.0-0.5	1,2,3,6,7,8-HXCDF	Q J	0.24	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.49	5.7	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	J	0.30	5.7	MRL	ng/kg	
	OCDF	B J	8.7	11	MRL	ng/kg	
SL-590-SA6-SB-4.0-5.0	OCDD	B Q J	1.5	11	MRL	ng/kg	J (all detects)
SL-591-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	1.2	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	J	0.52	5.9	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.49	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.79	5.9	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.98	5.9	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	Q J	0.93	5.9	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.22	5.9	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.28	5.9	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.63	5.9	MRL	ng/kg	
SL-591-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	B J	4.8	5.5	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	J	2.6	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	B J	0.16	5.5	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDF	Q J	0.065	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	0.13	5.5	MRL	ng/kg	
	OCDF	J	2.7	11	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-592-SA6-SB-0.0-0.5	1,2,3,7,8,9-HXCDF	J	1.6	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	1.6	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	J	5.1	5.4	MRL	ng/kg	J (all detects)
	2,3,4,7,8-PECDF	J	2.2	5.4	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.84	1.1	MRL	ng/kg	
SL-592-SA6-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	B J	1.3	5.1	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q J	0.30	5.1	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDD	J	0.16	5.1	MRL	ng/kg	
	OCDF	J	0.43	10	MRL	ng/kg	
SL-600-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	B J	4.4	5.8	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q J	5.7	5.8	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	J	0.52	5.8	MRL	ng/kg	
	1,2,3,7,8-PECDF	J	1.5	5.8	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	J	3.5	5.8	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	1.9	5.8	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.45	1.2	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.84	1.2	MRL	ng/kg	
SL-617-SA6-SB-0.0-0.5	1,2,3,4,7,8,9-HPCDF	Q B J	0.47	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.53	5.3	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	0.80	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	1.9	5.3	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	J	0.54	5.3	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	1.8	5.3	MRL	ng/kg	J (all detects)
	1,2,3,7,8-PECDD	Q J	0.43	5.3	MRL	ng/kg	
	1,2,3,7,8-PECDF	Q J	0.20	5.3	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q J	0.35	5.3	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.60	5.3	MRL	ng/kg	
	2,3,7,8-TCDF	Q J	0.61	1.1	MRL	ng/kg	
SL-617-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	Q B J	0.13	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.19	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q J	0.13	5.4	MRL	ng/kg	
	OCDD	B J	2.6	11	MRL	ng/kg	
SL-622-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	4.1	5.6	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.46	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.38	5.6	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.34	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.94	5.6	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	1.3	5.6	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	1.1	5.6	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.32	5.6	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.31	5.6	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.36	5.6	MRL	ng/kg	
	2,3,4,7,8-PECDF	J	0.23	5.6	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.041	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	B J	0.29	1.1	MRL	ng/kg	
SL-622-SA6-SB-3.5-4.5	1,2,3,4,6,7,8-HPCDD	J	0.22	5.2	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	Q B J	0.062	5.2	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.055	5.2	MRL	ng/kg	J (all detects)
	2,3,7,8-TCDD	Q J	0.016	1.0	MRL	ng/kg	
	OCDD	B J	5.8	10	MRL	ng/kg	
	OCDF	Q B J	0.23	10	MRL	ng/kg	

Reporting Limit Outliers

Lab Reporting Batch ID: 280-37202-1 **Laboratory: TA DEN**

EDD Filename: Prep280-37202-1 **eQAPP Name: CDM_SSFL_120907_TA**

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-623-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q B J	1.2	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	Q B J	0.12	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.16	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.24	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.30	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	J	0.37	5.4	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.13	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.12	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.15	5.4	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.11	1.1	MRL	ng/kg	
	OCDF	B J	2.4	11	MRL	ng/kg	
SL-624-SA6-SB-0.0-0.5	1,2,3,4,7,8-HxCDD	J	3.8	5.7	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	J	4.4	5.7	MRL	ng/kg	
	1,2,3,7,8,9-HXCDF	Q B J	0.54	5.7	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	1.4	5.7	MRL	ng/kg	J (all detects)
	2,3,4,6,7,8-HXCDF	B J	3.1	5.7	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.33	5.7	MRL	ng/kg	
	2,3,7,8-TCDD	Q J	0.062	1.1	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.062	1.1	MRL	ng/kg	
SL-624-SA6-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDF	B J	2.8	5.4	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.37	5.4	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.16	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	J	0.23	5.4	MRL	ng/kg	J (all detects)
	1,2,3,6,7,8-HXCDF	Q B J	0.89	5.4	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.23	5.4	MRL	ng/kg	
	1,2,3,7,8-PECDD	Q J	0.13	5.4	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	Q B J	0.15	5.4	MRL	ng/kg	
SL-625-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	B J	2.7	5.5	MRL	ng/kg	
	1,2,3,4,7,8,9-HPCDF	B J	0.28	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HxCDD	Q J	0.18	5.5	MRL	ng/kg	
	1,2,3,4,7,8-HXCDF	Q J	0.37	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.58	5.5	MRL	ng/kg	
	1,2,3,6,7,8-HXCDF	Q B J	0.61	5.5	MRL	ng/kg	
	1,2,3,7,8,9-HXCDD	Q J	0.71	5.5	MRL	ng/kg	J (all detects)
	1,2,3,7,8,9-HXCDF	Q B J	0.21	5.5	MRL	ng/kg	
	1,2,3,7,8-PECDD	J	0.27	5.5	MRL	ng/kg	
	2,3,4,6,7,8-HXCDF	B J	0.24	5.5	MRL	ng/kg	
	2,3,4,7,8-PECDF	Q J	0.15	5.5	MRL	ng/kg	
	2,3,7,8-TCDF	Q B J	0.22	1.1	MRL	ng/kg	
	OCDF	B J	5.2	11	MRL	ng/kg	
SL-685-SA6-SB-6.5-7.5	1,2,3,4,6,7,8-HPCDD	Q B J	3.3	5.6	MRL	ng/kg	
	1,2,3,4,6,7,8-HPCDF	J	0.24	5.6	MRL	ng/kg	J (all detects)
	OCDF	Q J	1.1	11	MRL	ng/kg	
SL-918-SA6-SB-0.0-0.5	1,2,3,4,6,7,8-HPCDF	Q J	1.1	5.4	MRL	ng/kg	
	1,2,3,6,7,8-HXCDD	Q J	0.28	5.4	MRL	ng/kg	J (all detects)
	OCDF	B J	3.2	11	MRL	ng/kg	

SAMPLE DELIVERY GROUP

12L046

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8015B EFH	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8082	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8270C SIM	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	7471A	7471A	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	TOTAL	6020	III
06-Dec-2012	TB-120612	L046-01	TB	5030B	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-4.5	L046-06	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	7471A	7471A	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	7471A	7471A	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	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
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-9.5	L046-08	N	5035	8015B GRO	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8015B EFH	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8082	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8270C SIM	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	7471A	7471A	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-14.5	L046-10	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-19.5	L046-12	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0RE	L046-11N	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-24.5	L046-14	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
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0RE	L046-13N	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-30.5	L046-16	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0RE	L046-15N	N	TOTAL	6020	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8015B EFH	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8082	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8270C SIM	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	7471A	7471A	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	TOTAL	6020	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5RE	L046-20N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8015B EFH	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8082	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8270C SIM	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	7471A	7471A	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5RE	L046-17N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	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
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	3550B	8082	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	3550B	8270C SIM	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	7471A	7471A	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0RE	L046-18N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.5	L046-19	N	5035	8015B GRO	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8015B EFH	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8082	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8270C SIM	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	7471A	7471A	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5RE	L046-21N	N	TOTAL	6020	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8015B EFH	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8082	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8270C SIM	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	7471A	7471A	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	TOTAL	6020	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5RE	L046-24N	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-4.5	L046-23	N	5035	8015B GRO	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8015B EFH	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8082	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8270C SIM	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	7471A	7471A	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0RE	L046-22N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	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
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	3550B	8082	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	3550B	8270C SIM	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	7471A	7471A	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5RE	L046-25N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8015B EFH	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8082	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8270C SIM	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	7471A	7471A	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0RE	L046-26N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.5	L046-27	N	5035	8015B GRO	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8015B EFH	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8082	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8270C SIM	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	7471A	7471A	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5RE	L046-28N	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28R	N	NONE	6850	IV
06-Dec-2012	SL-516-SA6-SB-3.5	L046-30	N	5035	8015B GRO	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8015B EFH	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8082	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8270C SIM	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	7471A	7471A	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0RE	L046-29N	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
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29R	N	NONE	6850	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: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-1018-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 8:30:00** ***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	0.255	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
BARIUM	89.8		0.224	MDL	0.560	PQL	MG/KG	J	Q
BERYLLIUM	0.550	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.207	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
MOLYBDENUM	0.532	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
SILVER	0.0728	J	0.0560	MDL	0.560	PQL	MG/KG	U	F
SODIUM	61.8	J	56.0	MDL	112	PQL	MG/KG	U	F
THALLIUM	0.252	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID: **SL-516-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 2:05:00** ***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	0.263	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BARIUM	87.1		0.215	MDL	0.536	PQL	MG/KG	J	Q
BERYLLIUM	0.462	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.269	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
MOLYBDENUM	0.467	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z
Zirconium	5.36	U	2.68	MDL	5.36	PQL	MG/KG	UJ	Q

Sample ID: **SL-516-SA6-SB-0.0-0.5RE** ***Collected:*** **12/6/2012 2:05:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	70.7	J	53.6	MDL	107	PQL	MG/KG	J	Z

Sample ID: **SL-516-SA6-SB-3.0-4.0** ***Collected:*** **12/6/2012 2:20:00** ***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	0.155	J	0.101	MDL	0.507	PQL	MG/KG	J	Z
BARIUM	68.4		0.203	MDL	0.507	PQL	MG/KG	J	Q
BERYLLIUM	0.409	J	0.0507	MDL	0.507	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-516-SA6-SB-3.0-4.0 *Collected:* 12/6/2012 2:20:00 *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	0.116	J	0.0507	MDL	0.507	PQL	MG/KG	J	Z
THALLIUM	0.205	J	0.0507	MDL	0.405	PQL	MG/KG	J	Z
Zirconium	5.07	U	2.53	MDL	5.07	PQL	MG/KG	UJ	Q

Sample ID: SL-516-SA6-SB-3.0-4.0RE *Collected:* 12/6/2012 2:20:00 *Analysis Type:* RES/TOT *Dilution:* 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	86.6	J	50.7	MDL	101	PQL	MG/KG	J	Z

Sample ID: SL-520-SA6-SB-14.0-15.0 *Collected:* 12/6/2012 8:35:00 *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	0.156	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
BARIUM	59.1		0.223	MDL	0.558	PQL	MG/KG	J	Q
CADMIUM	0.136	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
THALLIUM	0.254	J	0.0558	MDL	0.446	PQL	MG/KG	J	Z
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-19.0-20.0 *Collected:* 12/6/2012 8:40:00 *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	0.114	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BARIUM	49.4		0.216	MDL	0.540	PQL	MG/KG	J	Q
BERYLLIUM	0.519	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.107	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
MOLYBDENUM	0.483	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.232	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-520-SA6-SB-19.0-20.0RE *Collected:* 12/6/2012 8:40:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	76.3	J	54.0	MDL	108	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-520-SA6-SB-24.0-25.0** ***Collected:*** **12/6/2012 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	0.165	J	0.112	MDL	0.562	PQL	MG/KG	J	Z
BARIUM	59.9		0.225	MDL	0.562	PQL	MG/KG	J	Q
CADMIUM	0.125	J	0.0562	MDL	0.562	PQL	MG/KG	J	Z
THALLIUM	0.203	J	0.0562	MDL	0.450	PQL	MG/KG	J	Z
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	UJ	Q

Sample ID: **SL-520-SA6-SB-24.0-25.0RE** ***Collected:*** **12/6/2012 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
SODIUM	99.5	J	56.2	MDL	112	PQL	MG/KG	J	Z

Sample ID: **SL-520-SA6-SB-30.0-31.0** ***Collected:*** **12/6/2012 8:50:00** ***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	0.321	J	0.113	MDL	0.567	PQL	MG/KG	J	Z
BARIUM	92.4		0.227	MDL	0.567	PQL	MG/KG	J	Q
CADMIUM	0.171	J	0.0567	MDL	0.567	PQL	MG/KG	J	Z
Zirconium	5.67	U	2.83	MDL	5.67	PQL	MG/KG	UJ	Q

Sample ID: **SL-520-SA6-SB-30.0-31.0RE** ***Collected:*** **12/6/2012 8:50:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.995**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.269	J	0.227	MDL	0.567	PQL	MG/KG	J	Z

Sample ID: **SL-520-SA6-SB-4.0-5.0** ***Collected:*** **12/6/2012 8:20:00** ***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	0.177	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	106		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.224	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-520-SA6-SB-9.0-10.0 ***Collected:*** 12/6/2012 8:30:00 ***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	0.119	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	92.7		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.108	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
THALLIUM	0.269	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID: SL-521-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 11:00:00 ***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	0.163	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
BARIUM	80.0		0.208	MDL	0.519	PQL	MG/KG	J	Q
CADMIUM	0.150	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.250	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-521-SA6-SB-4.0-5.0 ***Collected:*** 12/6/2012 1:10:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	80.1		0.202	MDL	0.505	PQL	MG/KG	J	Q
BERYLLIUM	0.366	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
CADMIUM	0.118	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
THALLIUM	0.218	J	0.0505	MDL	0.404	PQL	MG/KG	J	Z
Zirconium	5.05	U	2.52	MDL	5.05	PQL	MG/KG	UJ	Q

Sample ID: SL-566-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 12:55:00 ***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	0.155	J	0.112	MDL	0.561	PQL	MG/KG	J	Z
BARIUM	76.7		0.224	MDL	0.561	PQL	MG/KG	J	Q
BERYLLIUM	0.338	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
CADMIUM	0.223	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
MOLYBDENUM	0.492	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-566-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 12:55:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.187	J	0.0561	MDL	0.449	PQL	MG/KG	J	Z
Zirconium	5.61	U	2.81	MDL	5.61	PQL	MG/KG	UJ	Q

Sample ID: SL-567-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 1:30:00 ***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	0.109	MDL	0.544	PQL	MG/KG	J	Z
BARIUM	92.2		0.218	MDL	0.544	PQL	MG/KG	J	Q
BERYLLIUM	0.424	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
CADMIUM	0.206	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
MOLYBDENUM	0.437	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
THALLIUM	0.224	J	0.0544	MDL	0.435	PQL	MG/KG	J	Z
Zirconium	5.44	U	2.72	MDL	5.44	PQL	MG/KG	UJ	Q

Sample ID: SL-567-SA6-SB-2.0-3.0 ***Collected:*** 12/6/2012 1:45:00 ***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	0.172	J	0.106	MDL	0.532	PQL	MG/KG	J	Z
BARIUM	95.1		0.213	MDL	0.532	PQL	MG/KG	J	Q
CADMIUM	0.139	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
MOLYBDENUM	0.523	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
THALLIUM	0.256	J	0.0532	MDL	0.425	PQL	MG/KG	J	Z
Zirconium	5.32	U	2.66	MDL	5.32	PQL	MG/KG	UJ	Q

Sample ID: SL-567-SA6-SB-2.0-3.0RE ***Collected:*** 12/6/2012 1:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.219	J	0.213	MDL	0.532	PQL	MG/KG	J	Z
SODIUM	65.8	J	53.2	MDL	106	PQL	MG/KG	U	F

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-612-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 10:10:00** ***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	0.218	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
BARIUM	118		0.223	MDL	0.558	PQL	MG/KG	J	Q
CADMIUM	0.381	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
SILVER	0.140	J	0.0558	MDL	0.558	PQL	MG/KG	U	F
THALLIUM	0.274	J	0.0558	MDL	0.447	PQL	MG/KG	J	Z
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

Sample ID: **SL-612-SA6-SB-2.0-3.0** ***Collected:*** **12/6/2012 10:30:00** ***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	0.178	J	0.106	MDL	0.529	PQL	MG/KG	J	Z
BARIUM	108		0.211	MDL	0.529	PQL	MG/KG	J	Q
CADMIUM	0.225	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
SILVER	0.0635	J	0.0529	MDL	0.529	PQL	MG/KG	U	F
THALLIUM	0.256	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-612-SA6-SB-2.0-3.0RE** ***Collected:*** **12/6/2012 10:30:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	60.5	J	52.9	MDL	106	PQL	MG/KG	U	F

Sample ID: **SL-618-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 8:25:00** ***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	0.236	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BARIUM	91.0		0.224	MDL	0.559	PQL	MG/KG	J	Q
BERYLLIUM	0.541	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
CADMIUM	0.211	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
MOLYBDENUM	0.535	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
SILVER	0.0780	J	0.0559	MDL	0.559	PQL	MG/KG	U	F
SODIUM	62.0	J	55.9	MDL	112	PQL	MG/KG	U	F

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-618-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 8:25:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.247	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z
Zirconium	5.59	U	2.80	MDL	5.59	PQL	MG/KG	UJ	Q

Sample ID: SL-619-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 7:45:00 ***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	0.380	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	104		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.255	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
SELENIUM	0.246	J	0.219	MDL	0.548	PQL	MG/KG	J	Z
SILVER	0.123	J	0.0548	MDL	0.548	PQL	MG/KG	U	F
SODIUM	61.7	J	54.8	MDL	110	PQL	MG/KG	U	F
THALLIUM	0.281	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID: SL-620-SA6-SB-0.0-0.5 ***Collected:*** 12/6/2012 9:40:00 ***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	0.213	J	0.112	MDL	0.562	PQL	MG/KG	J	Z
BARIUM	98.7		0.225	MDL	0.562	PQL	MG/KG	J	Q
BERYLLIUM	0.460	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
CADMIUM	0.266	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
MOLYBDENUM	0.540	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
SILVER	0.129	J	0.0563	MDL	0.562	PQL	MG/KG	U	F
THALLIUM	0.217	J	0.0563	MDL	0.450	PQL	MG/KG	J	Z
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-1018-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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)	3.3	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-567-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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
EFH(C21-C30)	4.2	J	2.8	MDL	5.5	PQL	MG/KG	J	Z

Sample ID: SL-618-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.3	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.6	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-516-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	3.3	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-566-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 12:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	3.6	J	2.8	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z

Method Category: VOA

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

Sample ID: TB-120612 *Collected:* 12/6/2012 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)	36	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
F	Equipment Blank Contamination
F	Field Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L046

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: 12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-618-SA6-SB-0.0-0.5MSD	ALUMINUM	-	128	75.00-125.00	-	ALUMINUM	
(TOT)	BARIUM	-	129	75.00-125.00	-	BARIUM	
(SL-1018-SA6-SB-0.0-0.5	TITANIUM	-	182	75.00-125.00	-	TITANIUM	
SL -516-SA6-SB-0.0-0.5							
SL -516-SA6-SB-0.0-0.5RE							
SL -516-SA6-SB-3.0-4.0							
SL -516-SA6-SB-3.0-4.0RE							
SL -520-SA6-SB-14.0-15.0							
SL -520-SA6-SB-19.0-20.0							
SL -520-SA6-SB-19.0-20.0RE							
SL -520-SA6-SB-24.0-25.0							
SL -520-SA6-SB-24.0-25.0RE							J (all detects)
SL -520-SA6-SB-30.0-31.0							
SL -520-SA6-SB-30.0-31.0RE							
SL -520-SA6-SB-4.0-5.0							
SL -520-SA6-SB-9.0-10.0							
SL -521-SA6-SB-0.0-0.5							
SL -521-SA6-SB-0.0-0.5RE							
SL -521-SA6-SB-4.0-5.0							
SL -521-SA6-SB-4.0-5.0RE							Al, Ti
SL -566-SA6-SB-0.0-0.5							No Qual, >4X
SL -566-SA6-SB-0.0-0.5RE							
SL -567-SA6-SB-0.0-0.5							
SL -567-SA6-SB-0.0-0.5RE							
SL -567-SA6-SB-2.0-3.0							
SL -567-SA6-SB-2.0-3.0RE							
SL -612-SA6-SB-0.0-0.5							
SL -612-SA6-SB-0.0-0.5RE							
SL -612-SA6-SB-2.0-3.0							
SL -612-SA6-SB-2.0-3.0RE							
SL -618-SA6-SB-0.0-0.5							
SL -619-SA6-SB-0.0-0.5							
SL -620-SA6-SB-0.0-0.5							
SL -620-SA6-SB-0.0-0.5RE)							

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: 12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-618-SA6-SB-0.0-0.5MS (TOT) **SL-618-SA6-SB-0.0-0.5MSD (TOT)** (SL-1018-SA6-SB-0.0-0.5 SL -516-SA6-SB-0.0-0.5 SL -516-SA6-SB-0.0-0.5RE SL -516-SA6-SB-3.0-4.0 SL -516-SA6-SB-3.0-4.0RE SL -520-SA6-SB-14.0-15.0 SL -520-SA6-SB-19.0-20.0 SL -520-SA6-SB-19.0-20.0RE SL -520-SA6-SB-24.0-25.0 SL -520-SA6-SB-24.0-25.0RE SL -520-SA6-SB-30.0-31.0 SL -520-SA6-SB-30.0-31.0RE SL -520-SA6-SB-4.0-5.0 SL -520-SA6-SB-9.0-10.0 SL -521-SA6-SB-0.0-0.5 SL -521-SA6-SB-0.0-0.5RE SL -521-SA6-SB-4.0-5.0 SL -521-SA6-SB-4.0-5.0RE SL -566-SA6-SB-0.0-0.5 SL -566-SA6-SB-0.0-0.5RE SL -567-SA6-SB-0.0-0.5 SL -567-SA6-SB-0.0-0.5RE SL -567-SA6-SB-2.0-3.0 SL -567-SA6-SB-2.0-3.0RE SL -612-SA6-SB-0.0-0.5 SL -612-SA6-SB-0.0-0.5RE SL -612-SA6-SB-2.0-3.0 SL -612-SA6-SB-2.0-3.0RE SL -618-SA6-SB-0.0-0.5 SL -619-SA6-SB-0.0-0.5 SL -620-SA6-SB-0.0-0.5 SL -620-SA6-SB-0.0-0.5RE)	Zirconium	61	60	75.00-125.00	-	Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5 (TOT)	SL-1018-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	13000	13000	0	50.00	No Qualifiers Applied
ANTIMONY	0.236	0.255	8	50.00	
ARSENIC	4.39	4.49	2	50.00	
BARIUM	91.0	89.8	1	50.00	
BERYLLIUM	0.541	0.550	2	50.00	
CADMIUM	0.211	0.207	2	50.00	
CALCIUM	2310	2280	1	50.00	
CHROMIUM	19.4	18.9	3	50.00	
COBALT	5.71	5.71	0	50.00	
COPPER	8.62	8.63	0	50.00	
IRON	19500	20000	3	50.00	
LEAD	9.73	10.2	5	50.00	
LITHIUM	24.1	23.8	1	50.00	
MAGNESIUM	4470	4550	2	50.00	
MANGANESE	280	279	0	50.00	
MOLYBDENUM	0.535	0.532	1	50.00	
NICKEL	12.5	12.1	3	50.00	
PHOSPHORUS	320	322	1	50.00	
POTASSIUM	3750	3780	1	50.00	
SILVER	0.0780	0.0728	7	50.00	
SODIUM	62.0	61.8	0	50.00	
STRONTIUM	15.4	15.2	1	50.00	
THALLIUM	0.247	0.252	2	50.00	
TITANIUM	922	908	2	50.00	
VANADIUM	34.6	34.8	1	50.00	
ZINC	47.9	48.3	1	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5	SL-1018-SA6-SB-0.0-0.5			
EFH(C21-C30)	3.3	3.3	0	50.00	No Qualifiers Applied
EFH(C30-C40)	15	13	14	50.00	
TOTAL EFH(C8-C40)	18	16	12	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5	SL-1018-SA6-SB-0.0-0.5			
PH	6.65	6.19	7		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO
Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-120612	GASOLINE RANGE ORGANICS (C5-C12)	J	36	50	PQL	UG/L	J (all detects)

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1018-SA6-SB-0.0-0.5	ANTIMONY	J	0.255	0.560	PQL	MG/KG	
	BERYLLIUM	J	0.550	0.560	PQL	MG/KG	
	CADMIUM	J	0.207	0.560	PQL	MG/KG	
	MOLYBDENUM	J	0.532	0.560	PQL	MG/KG	J (all detects)
	SILVER	J	0.0728	0.560	PQL	MG/KG	
	SODIUM	J	61.8	112	PQL	MG/KG	
	THALLIUM	J	0.252	0.448	PQL	MG/KG	
SL-516-SA6-SB-0.0-0.5	ANTIMONY	J	0.263	0.536	PQL	MG/KG	
	BERYLLIUM	J	0.462	0.536	PQL	MG/KG	
	CADMIUM	J	0.269	0.536	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.467	0.536	PQL	MG/KG	
	THALLIUM	J	0.271	0.429	PQL	MG/KG	
SL-516-SA6-SB-0.0-0.5RE	SODIUM	J	70.7	107	PQL	MG/KG	J (all detects)
SL-516-SA6-SB-3.0-4.0	ANTIMONY	J	0.155	0.507	PQL	MG/KG	
	BERYLLIUM	J	0.409	0.507	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.116	0.507	PQL	MG/KG	
	THALLIUM	J	0.205	0.405	PQL	MG/KG	
SL-516-SA6-SB-3.0-4.0RE	SODIUM	J	86.6	101	PQL	MG/KG	J (all detects)
SL-520-SA6-SB-14.0-15.0	ANTIMONY	J	0.156	0.558	PQL	MG/KG	
	CADMIUM	J	0.136	0.558	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.254	0.446	PQL	MG/KG	
SL-520-SA6-SB-19.0-20.0	ANTIMONY	J	0.114	0.540	PQL	MG/KG	
	BERYLLIUM	J	0.519	0.540	PQL	MG/KG	
	CADMIUM	J	0.107	0.540	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.483	0.540	PQL	MG/KG	
	THALLIUM	J	0.232	0.432	PQL	MG/KG	
SL-520-SA6-SB-19.0-20.0RE	SODIUM	J	76.3	108	PQL	MG/KG	J (all detects)
SL-520-SA6-SB-24.0-25.0	ANTIMONY	J	0.165	0.562	PQL	MG/KG	
	CADMIUM	J	0.125	0.562	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.203	0.450	PQL	MG/KG	
SL-520-SA6-SB-24.0-25.0RE	SODIUM	J	99.5	112	PQL	MG/KG	J (all detects)
SL-520-SA6-SB-30.0-31.0	ANTIMONY	J	0.321	0.567	PQL	MG/KG	
	CADMIUM	J	0.171	0.567	PQL	MG/KG	J (all detects)
SL-520-SA6-SB-30.0-31.0RE	SELENIUM	J	0.269	0.567	PQL	MG/KG	J (all detects)
SL-520-SA6-SB-4.0-5.0	ANTIMONY	J	0.177	0.548	PQL	MG/KG	
	CADMIUM	J	0.224	0.548	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.255	0.438	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-520-SA6-SB-9.0-10.0	ANTIMONY	J	0.119	0.548	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.108	0.548	PQL	MG/KG	
	THALLIUM	J	0.269	0.438	PQL	MG/KG	
SL-521-SA6-SB-0.0-0.5	ANTIMONY	J	0.163	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.150	0.519	PQL	MG/KG	
	THALLIUM	J	0.250	0.415	PQL	MG/KG	
SL-521-SA6-SB-4.0-5.0	BERYLLIUM	J	0.366	0.505	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.118	0.505	PQL	MG/KG	
	THALLIUM	J	0.218	0.404	PQL	MG/KG	
SL-566-SA6-SB-0.0-0.5	ANTIMONY	J	0.155	0.561	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.338	0.561	PQL	MG/KG	
	CADMIUM	J	0.223	0.561	PQL	MG/KG	
	MOLYBDENUM	J	0.492	0.561	PQL	MG/KG	
	THALLIUM	J	0.187	0.449	PQL	MG/KG	
SL-567-SA6-SB-0.0-0.5	ANTIMONY	J	0.159	0.544	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.424	0.544	PQL	MG/KG	
	CADMIUM	J	0.206	0.544	PQL	MG/KG	
	MOLYBDENUM	J	0.437	0.544	PQL	MG/KG	
	THALLIUM	J	0.224	0.435	PQL	MG/KG	
SL-567-SA6-SB-2.0-3.0	ANTIMONY	J	0.172	0.532	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.139	0.532	PQL	MG/KG	
	MOLYBDENUM	J	0.523	0.532	PQL	MG/KG	
	THALLIUM	J	0.256	0.425	PQL	MG/KG	
SL-567-SA6-SB-2.0-3.0RE	SELENIUM	J	0.219	0.532	PQL	MG/KG	J (all detects)
	SODIUM	J	65.8	106	PQL	MG/KG	
SL-612-SA6-SB-0.0-0.5	ANTIMONY	J	0.218	0.558	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.381	0.558	PQL	MG/KG	
	SILVER	J	0.140	0.558	PQL	MG/KG	
	THALLIUM	J	0.274	0.447	PQL	MG/KG	
SL-612-SA6-SB-2.0-3.0	ANTIMONY	J	0.178	0.529	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.225	0.529	PQL	MG/KG	
	SILVER	J	0.0635	0.529	PQL	MG/KG	
	THALLIUM	J	0.256	0.423	PQL	MG/KG	
SL-612-SA6-SB-2.0-3.0RE	SODIUM	J	60.5	106	PQL	MG/KG	J (all detects)
SL-618-SA6-SB-0.0-0.5	ANTIMONY	J	0.236	0.559	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.541	0.559	PQL	MG/KG	
	CADMIUM	J	0.211	0.559	PQL	MG/KG	
	MOLYBDENUM	J	0.535	0.559	PQL	MG/KG	
	SILVER	J	0.0780	0.559	PQL	MG/KG	
	SODIUM	J	62.0	112	PQL	MG/KG	
	THALLIUM	J	0.247	0.447	PQL	MG/KG	
SL-619-SA6-SB-0.0-0.5	ANTIMONY	J	0.380	0.548	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.255	0.548	PQL	MG/KG	
	SELENIUM	J	0.246	0.548	PQL	MG/KG	
	SILVER	J	0.123	0.548	PQL	MG/KG	
	SODIUM	J	61.7	110	PQL	MG/KG	
	THALLIUM	J	0.281	0.438	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-620-SA6-SB-0.0-0.5	ANTIMONY	J	0.213	0.562	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.460	0.562	PQL	MG/KG	
	CADMIUM	J	0.266	0.562	PQL	MG/KG	
	MOLYBDENUM	J	0.540	0.562	PQL	MG/KG	
	SILVER	J	0.129	0.562	PQL	MG/KG	
	THALLIUM	J	0.217	0.450	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1018-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.3	5.6	PQL	MG/KG	J (all detects)
SL-567-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.2	5.5	PQL	MG/KG	J (all detects)
SL-618-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.3	5.6	PQL	MG/KG	J (all detects)
SL-619-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.6	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-516-SA6-SB-0.0-0.5	BENZO(G,H,I)PERYLENE	J	3.3	11	PQL	UG/KG	J (all detects)
SL-566-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.1	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	4.1	11	PQL	UG/KG	
	PYRENE	J	3.6	11	PQL	UG/KG	
SL-619-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.6	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	4.0	11	PQL	UG/KG	
	PYRENE	J	4.0	11	PQL	UG/KG	

LDC #: 29414A4
SDG #: 12L046
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: ar
2nd Reviewer: [signature]

METHOD: Metals (EPA SW 846 Method 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: 12/6/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, 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	—	1 + 2
XV	Field Blanks	SW	EB = [1]EB1-120612 (280-36711-1) [2]EB = EB1-120512 ~~EB = EB1-120712 (280-36788-1)~~ (280-36640-1) FB = FB-111412 (280-35930-1)

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	SL-618-SA6-SB-0.0-0.5 2	11	SL-612-SA6-SB-2.0-3.0 2	21	SL-618-SA6-SB-0.0-0.5MSD	31		
2	SL-1018-SA6-SB-0.0-0.5 2	12	SL-620-SA6-SB-0.0-0.5 2	22		32		
3	SL-619-SA6-SB-0.0-0.5 2	13	SL-521-SA6-SB-0.0-0.5 3	23		33		
4	SL-520-SA6-SB-4.0-5.0 1	14	SL-521-SA6-SB-4.0-5.0 1	24		34		
5	SL-520-SA6-SB-9.0-10.0 1	15	SL-566-SA6-SB-0.0-0.5 2	25		35		
6	SL-520-SA6-SB-14.0-15.0 1	16	SL-567-SA6-SB-0.0-0.5 2	26		36		
7	SL-520-SA6-SB-19.0-20.0 1	17	SL-567-SA6-SB-2.0-3.0 2	27		37		
8	SL-520-SA6-SB-24.0-25.0 1	18	SL-516-SA6-SB-0.0-0.5 3	28		38		
9	SL-520-SA6-SB-30.0-31.0 1	19	SL-516-SA6-SB-3.0-4.0 1	29		39		
10	SL-612-SA6-SB-0.0-0.5 2	20	SL-618-SA6-SB-0.0-0.5MS	30		40		

Notes: _____

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: [signature]
2nd Reviewer: [signature]

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 4-9, 14, 19

Analyte	Blank ID	Sample Identification										
	EB1-120612 (SDG:280-36711-1)	Action Limit										
B	0.0044	1.1										
Mn	0.00038	0.095										
Na	0.19	47.5										

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".

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 13, 18

Analyte	Blank ID	Sample Identification										
	EB2-120612 (SDG:280-36711-1)	Action Limit										
Na	0.15	37.5										

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".

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 3 of 3
Reviewer: SM
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/05/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 1-3, 10-12, 15-17

Analyte	Blank ID	Sample Identification										
	EB-120512 (SDG:280-36640-1)	Action Limit	2	17	11	1	3					
B	0.0059	1.475										
Mg	0.012	3										
Mn	0.00051	0.1275										
Na	0.27	67.5	61.8	65.8	60.5	62.0	61.7					

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 #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	1	2	3	10	11	12				
Ag	0.00078	0.195	0.0780	0.0728	0.123	0.140	0.0635	0.129				

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".

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 6, 2012
LDC Report Date:	April 16, 2013
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	12L046

Sample Identification

SL-516-SA6-SB-0.0-0.5
SL-516-SA6-SB-3.0-4.0

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 30.0% 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 30.0% 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.

Samples EB2-120712 and EB1-120712 (both from SDG 280-36788-1) were identified as equipment blanks. No perchlorate was found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No perchlorate was found.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L046	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Perchlorate - Data Qualification Summary - SDG 12L046

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L046	SL-516-SA6-SB-0.0-0.5 SL-516-SA6-SB-3.0-4.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG 12L046

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG 12L046

No Sample Data Qualified in this SDG

LDC #: 29414A87 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L046 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FT
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: ~~12/11/12~~ 12/6/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/30 LODV ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/LD
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	EB= EB2-120712 (~~SDG# 280-36711-1~~) & EB1-120712 (SDG# 280-36788-1) FB= FB-111412 (SDG# 280-35930-1)

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: 8012

1	SL-516-SA6-SB-0.0-0.5	11		21		31	
2	SL-516-SA6-SB-3.0-4.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 29414A87

VALIDATION FINDINGS CHECKLIST

Reviewer: F7
2nd Reviewer: A

Method: ✓ GC _____ LC/MS

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%? F7	✓			
Was a curve fit used for evaluation?	✓	✓	F7	
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
XIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 29414A87

VALIDATION FINDINGS CHECKLIST

Reviewer: EM
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
IX. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
X. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	NA	✓	
Target compounds were detected in the field blanks.		✓	NA	
Target compounds were detected in the field blanks.		✓	NA	

LDC # 29414A87

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F7
2nd Reviewer: [signature]

METHOD: 6850

Parameter: perchlorate

weighted

Date	Instrument	Compound	Y	X	
12/07/2012	NS	perchlorate	0.05951	0.05	
			0.11897	0.10	
			0.29669	0.25	
			0.60384	0.50	
			1.25958	1.00	
			3.01001	2.50	
			5.80417	5.00	

Regression Output:	Regression Output:	Reported	
Constant	0.03047		
Std Err of Y Est	0.05203		
R Squared	0.99950		0.99990
No. of Observations	7.00000		
Degrees of Freedom	5.00000		
X Coefficient(s)	1.164E+000		

LDC #: 29414A87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: F
2nd Reviewer:

METHOD: LCMS Perchlorate (EPA SW 846 Method 6850)

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

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 %R	Recalculated %R
1	ccv 7:53	12/20/12	Perchlorate	2.0	2.197	2.197	110	110
2	ccv 13:22	12/20/12	↓	2.0	2.191	2.191	110	110
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 #: 29414A87

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

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

METHOD: LC/MS Perchlorate (EPA SW 846 Method 6850/6860)

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

% Recovery = 100 * (SC/SA

Where: SSC = Spike concentration
SA = Spike added

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

LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: 1es1D

Compound	Spike Added (1 ug/kg)		Spike Concentration (1 ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalc
Perchlorate	25.0	25.0	28.2	27.8	113	113	111	111	1	1

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 #: 29414A87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: LCMS Perchlorate (EPA SW 846 Method 6850/6860)

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

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

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

Example:

Sample I.D. _____, _____:

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

=

ND

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

SAMPLE DELIVERY GROUP

12L046

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8015B EFH	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8082	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	3550B	8270C SIM	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	7471A	7471A	III
06-Dec-2012	SL-619-SA6-SB-0.0-0.5	L046-04	N	TOTAL	6020	III
06-Dec-2012	TB-120612	L046-01	TB	5030B	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-4.5	L046-06	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-4.0-5.0	L046-05	N	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	7471A	7471A	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5	L046-02	N	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	7471A	7471A	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MS	L046-02M	MS	TOTAL	6020	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8015B EFH	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8082	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	3550B	8270C SIM	III
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	7471A	7471A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
06-Dec-2012	SL-618-SA6-SB-0.0-0.5MSD	L046-02S	MSD	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-9.5	L046-08	N	5035	8015B GRO	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8015B EFH	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8082	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	3550B	8270C SIM	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	7471A	7471A	III
06-Dec-2012	SL-1018-SA6-SB-0.0-0.5	L046-03	FD	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-9.0-10.0	L046-07	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-14.5	L046-10	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-14.0-15.0	L046-09	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-19.5	L046-12	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-19.0-20.0	L046-11N	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-24.5	L046-14	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
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-24.0-25.0	L046-13N	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-30.5	L046-16	N	5035	8015B GRO	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8015B EFH	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8082	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	3550B	8270C SIM	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	7471A	7471A	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15	N	TOTAL	6020	III
06-Dec-2012	SL-520-SA6-SB-30.0-31.0	L046-15N	N	TOTAL	6020	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8015B EFH	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8082	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	3550B	8270C SIM	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	7471A	7471A	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20	N	TOTAL	6020	III
06-Dec-2012	SL-620-SA6-SB-0.0-0.5	L046-20N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8015B EFH	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8082	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	3550B	8270C SIM	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	7471A	7471A	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-0.0-0.5	L046-17N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	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
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	3550B	8082	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	3550B	8270C SIM	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	7471A	7471A	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.0-3.0	L046-18N	N	TOTAL	6020	III
06-Dec-2012	SL-612-SA6-SB-2.5	L046-19	N	5035	8015B GRO	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8015B EFH	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8082	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	3550B	8270C SIM	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	7471A	7471A	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-0.0-0.5	L046-21N	N	TOTAL	6020	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8015B EFH	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8082	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	3550B	8270C SIM	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	7471A	7471A	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24	N	TOTAL	6020	III
06-Dec-2012	SL-566-SA6-SB-0.0-0.5	L046-24N	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-4.5	L046-23	N	5035	8015B GRO	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8015B EFH	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8082	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	3550B	8270C SIM	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	7471A	7471A	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22	N	TOTAL	6020	III
06-Dec-2012	SL-521-SA6-SB-4.0-5.0	L046-22N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	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
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	3550B	8082	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	3550B	8270C SIM	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	7471A	7471A	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-0.0-0.5	L046-25N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8015B EFH	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8082	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	3550B	8270C SIM	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	7471A	7471A	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.0-3.0	L046-26N	N	TOTAL	6020	III
06-Dec-2012	SL-567-SA6-SB-2.5	L046-27	N	5035	8015B GRO	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8015B EFH	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8082	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	3550B	8270C SIM	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	7471A	7471A	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28N	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-0.0-0.5	L046-28R	N	NONE	6850	III
06-Dec-2012	SL-516-SA6-SB-3.5	L046-30	N	5035	8015B GRO	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8015B EFH	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8082	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	3550B	8270C SIM	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	7471A	7471A	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29	N	TOTAL	6020	III
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29N	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
06-Dec-2012	SL-516-SA6-SB-3.0-4.0	L046-29R	N	NONE	6850	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: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-1018-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 8:30:00** ***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	0.255	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
BARIUM	89.8		0.224	MDL	0.560	PQL	MG/KG	J	Q
BERYLLIUM	0.550	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.207	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
MOLYBDENUM	0.532	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
SILVER	0.0728	J	0.0560	MDL	0.560	PQL	MG/KG	U	F
SODIUM	61.8	J	56.0	MDL	112	PQL	MG/KG	U	F
THALLIUM	0.252	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID: **SL-516-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 2:05:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **0.976**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	70.7	J	53.6	MDL	107	PQL	MG/KG	J	Z

Sample ID: **SL-516-SA6-SB-0.0-0.5** ***Collected:*** **12/6/2012 2:05:00** ***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	0.263	J	0.107	MDL	0.536	PQL	MG/KG	J	Z
BARIUM	87.1		0.215	MDL	0.536	PQL	MG/KG	J	Q
BERYLLIUM	0.462	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
CADMIUM	0.269	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
MOLYBDENUM	0.467	J	0.0536	MDL	0.536	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0536	MDL	0.429	PQL	MG/KG	J	Z
Zirconium	5.36	U	2.68	MDL	5.36	PQL	MG/KG	UJ	Q

Sample ID: **SL-516-SA6-SB-3.0-4.0** ***Collected:*** **12/6/2012 2:20:00** ***Analysis Type:*** **RE/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	86.6	J	50.7	MDL	101	PQL	MG/KG	J	Z

Sample ID: **SL-516-SA6-SB-3.0-4.0** ***Collected:*** **12/6/2012 2:20:00** ***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	0.155	J	0.101	MDL	0.507	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 *Matrix:* SO

Sample ID: SL-516-SA6-SB-3.0-4.0 *Collected:* 12/6/2012 2:20:00 *Analysis Type:* RES/TOT *Dilution:* 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	68.4		0.203	MDL	0.507	PQL	MG/KG	J	Q
BERYLLIUM	0.409	J	0.0507	MDL	0.507	PQL	MG/KG	J	Z
CADMIUM	0.116	J	0.0507	MDL	0.507	PQL	MG/KG	J	Z
THALLIUM	0.205	J	0.0507	MDL	0.405	PQL	MG/KG	J	Z
Zirconium	5.07	U	2.53	MDL	5.07	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-14.0-15.0 *Collected:* 12/6/2012 8:35:00 *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	0.156	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
BARIUM	59.1		0.223	MDL	0.558	PQL	MG/KG	J	Q
CADMIUM	0.136	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
THALLIUM	0.254	J	0.0558	MDL	0.446	PQL	MG/KG	J	Z
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-19.0-20.0 *Collected:* 12/6/2012 8:40:00 *Analysis Type:* RE/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	76.3	J	54.0	MDL	108	PQL	MG/KG	J	Z

Sample ID: SL-520-SA6-SB-19.0-20.0 *Collected:* 12/6/2012 8:40:00 *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	0.114	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BARIUM	49.4		0.216	MDL	0.540	PQL	MG/KG	J	Q
BERYLLIUM	0.519	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.107	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
MOLYBDENUM	0.483	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
THALLIUM	0.232	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-520-SA6-SB-24.0-25.0 *Collected:* 12/6/2012 8:45:00 *Analysis Type:* RE/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	99.5	J	56.2	MDL	112	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-520-SA6-SB-24.0-25.0 *Collected:* 12/6/2012 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	0.165	J	0.112	MDL	0.562	PQL	MG/KG	J	Z
BARIUM	59.9		0.225	MDL	0.562	PQL	MG/KG	J	Q
CADMIUM	0.125	J	0.0562	MDL	0.562	PQL	MG/KG	J	Z
THALLIUM	0.203	J	0.0562	MDL	0.450	PQL	MG/KG	J	Z
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-30.0-31.0 *Collected:* 12/6/2012 8:50:00 *Analysis Type:* RE/TOT *Dilution:* 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.269	J	0.227	MDL	0.567	PQL	MG/KG	J	Z

Sample ID: SL-520-SA6-SB-30.0-31.0 *Collected:* 12/6/2012 8:50:00 *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	0.321	J	0.113	MDL	0.567	PQL	MG/KG	J	Z
BARIUM	92.4		0.227	MDL	0.567	PQL	MG/KG	J	Q
CADMIUM	0.171	J	0.0567	MDL	0.567	PQL	MG/KG	J	Z
Zirconium	5.67	U	2.83	MDL	5.67	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-4.0-5.0 *Collected:* 12/6/2012 8:20:00 *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	0.177	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	106		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.224	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID: SL-520-SA6-SB-9.0-10.0 *Collected:* 12/6/2012 8:30:00 *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	0.119	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	92.7		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.108	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
THALLIUM	0.269	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-520-SA6-SB-9.0-10.0 *Collected:* 12/6/2012 8:30:00 *Analysis Type:* RES/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID: SL-521-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 11:00:00 *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	0.163	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
BARIUM	80.0		0.208	MDL	0.519	PQL	MG/KG	J	Q
CADMIUM	0.150	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.250	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-521-SA6-SB-4.0-5.0 *Collected:* 12/6/2012 1:10:00 *Analysis Type:* RES/TOT *Dilution:* 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	80.1		0.202	MDL	0.505	PQL	MG/KG	J	Q
BERYLLIUM	0.366	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
CADMIUM	0.118	J	0.0505	MDL	0.505	PQL	MG/KG	J	Z
THALLIUM	0.218	J	0.0505	MDL	0.404	PQL	MG/KG	J	Z
Zirconium	5.05	U	2.52	MDL	5.05	PQL	MG/KG	UJ	Q

Sample ID: SL-566-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 12:55:00 *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	0.155	J	0.112	MDL	0.561	PQL	MG/KG	J	Z
BARIUM	76.7		0.224	MDL	0.561	PQL	MG/KG	J	Q
BERYLLIUM	0.338	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
CADMIUM	0.223	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
MOLYBDENUM	0.492	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
THALLIUM	0.187	J	0.0561	MDL	0.449	PQL	MG/KG	J	Z
Zirconium	5.61	U	2.81	MDL	5.61	PQL	MG/KG	UJ	Q

Sample ID: SL-567-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 1:30:00 *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	0.109	MDL	0.544	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-567-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 1:30:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	92.2		0.218	MDL	0.544	PQL	MG/KG	J	Q
BERYLLIUM	0.424	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
CADMIUM	0.206	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
MOLYBDENUM	0.437	J	0.0544	MDL	0.544	PQL	MG/KG	J	Z
THALLIUM	0.224	J	0.0544	MDL	0.435	PQL	MG/KG	J	Z
Zirconium	5.44	U	2.72	MDL	5.44	PQL	MG/KG	UJ	Q

Sample ID: SL-567-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 1:45:00 *Analysis Type:* RE/TOT *Dilution:* 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.219	J	0.213	MDL	0.532	PQL	MG/KG	J	Z
SODIUM	65.8	J	53.2	MDL	106	PQL	MG/KG	U	F

Sample ID: SL-567-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 1:45:00 *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	0.172	J	0.106	MDL	0.532	PQL	MG/KG	J	Z
BARIUM	95.1		0.213	MDL	0.532	PQL	MG/KG	J	Q
CADMIUM	0.139	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
MOLYBDENUM	0.523	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
THALLIUM	0.256	J	0.0532	MDL	0.425	PQL	MG/KG	J	Z
Zirconium	5.32	U	2.66	MDL	5.32	PQL	MG/KG	UJ	Q

Sample ID: SL-612-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 10:10:00 *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	0.218	J	0.112	MDL	0.558	PQL	MG/KG	J	Z
BARIUM	118		0.223	MDL	0.558	PQL	MG/KG	J	Q
CADMIUM	0.381	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
SILVER	0.140	J	0.0558	MDL	0.558	PQL	MG/KG	U	F
THALLIUM	0.274	J	0.0558	MDL	0.447	PQL	MG/KG	J	Z
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-612-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 10:30:00 *Analysis Type:* RE/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	60.5	J	52.9	MDL	106	PQL	MG/KG	U	F

Sample ID: SL-612-SA6-SB-2.0-3.0 *Collected:* 12/6/2012 10:30:00 *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	0.178	J	0.106	MDL	0.529	PQL	MG/KG	J	Z
BARIUM	108		0.211	MDL	0.529	PQL	MG/KG	J	Q
CADMIUM	0.225	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
SILVER	0.0635	J	0.0529	MDL	0.529	PQL	MG/KG	U	F
THALLIUM	0.256	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-618-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 8:25:00 *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	0.236	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BARIUM	91.0		0.224	MDL	0.559	PQL	MG/KG	J	Q
BERYLLIUM	0.541	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
CADMIUM	0.211	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
MOLYBDENUM	0.535	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
SILVER	0.0780	J	0.0559	MDL	0.559	PQL	MG/KG	U	F
SODIUM	62.0	J	55.9	MDL	112	PQL	MG/KG	U	F
THALLIUM	0.247	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z
Zirconium	5.59	U	2.80	MDL	5.59	PQL	MG/KG	UJ	Q

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *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	0.380	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BARIUM	104		0.219	MDL	0.548	PQL	MG/KG	J	Q
CADMIUM	0.255	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
SELENIUM	0.246	J	0.219	MDL	0.548	PQL	MG/KG	J	Z
SILVER	0.123	J	0.0548	MDL	0.548	PQL	MG/KG	U	F
SODIUM	61.7	J	54.8	MDL	110	PQL	MG/KG	U	F
THALLIUM	0.281	J	0.0548	MDL	0.438	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID: SL-620-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 9:40:00 *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	0.213	J	0.112	MDL	0.562	PQL	MG/KG	J	Z
BARIUM	98.7		0.225	MDL	0.562	PQL	MG/KG	J	Q
BERYLLIUM	0.460	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
CADMIUM	0.266	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
MOLYBDENUM	0.540	J	0.0563	MDL	0.562	PQL	MG/KG	J	Z
SILVER	0.129	J	0.0563	MDL	0.562	PQL	MG/KG	U	F
THALLIUM	0.217	J	0.0563	MDL	0.450	PQL	MG/KG	J	Z
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	UJ	Q

Method Category: SVOA

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

Sample ID: SL-1018-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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)	3.3	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-567-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 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
EFH(C21-C30)	4.2	J	2.8	MDL	5.5	PQL	MG/KG	J	Z

Sample ID: SL-618-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 8:25:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.3	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.6	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-516-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 2:05:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	3.3	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-566-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 12:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	3.6	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-619-SA6-SB-0.0-0.5 *Collected:* 12/6/2012 7:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	3.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z

Method Category: VOA

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

Sample ID: TB-120612 *Collected:* 12/6/2012 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)	36	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
B	Method Blank Contamination
F	Equipment Blank Contamination
F	Field Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L046

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-618-SA6-SB-0.0-0.5MSD (TOT) (SL-1018-SA6-SB-0.0-0.5 SL -516-SA6-SB-0.0-0.5 SL -516-SA6-SB-3.0-4.0 SL -520-SA6-SB-14.0-15.0 SL -520-SA6-SB-19.0-20.0 SL -520-SA6-SB-24.0-25.0 SL -520-SA6-SB-30.0-31.0 SL -520-SA6-SB-4.0-5.0 SL -520-SA6-SB-9.0-10.0 SL -521-SA6-SB-0.0-0.5 SL -521-SA6-SB-4.0-5.0 SL -566-SA6-SB-0.0-0.5 SL -567-SA6-SB-0.0-0.5 SL -567-SA6-SB-2.0-3.0 SL -612-SA6-SB-0.0-0.5 SL -612-SA6-SB-2.0-3.0 SL -618-SA6-SB-0.0-0.5 SL -619-SA6-SB-0.0-0.5 SL -620-SA6-SB-0.0-0.5)	ALUMINUM BARIUM TITANIUM	- - -	128 129 182	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ALUMINUM BARIUM TITANIUM	J (all detects) Al, Ti, No Qual >4X
SL-618-SA6-SB-0.0-0.5MS (TOT) **SL-618-SA6-SB-0.0-0.5MSD (TOT)** (SL-1018-SA6-SB-0.0-0.5 SL -516-SA6-SB-0.0-0.5 SL -516-SA6-SB-3.0-4.0 SL -520-SA6-SB-14.0-15.0 SL -520-SA6-SB-19.0-20.0 SL -520-SA6-SB-24.0-25.0 SL -520-SA6-SB-30.0-31.0 SL -520-SA6-SB-4.0-5.0 SL -520-SA6-SB-9.0-10.0 SL -521-SA6-SB-0.0-0.5 SL -521-SA6-SB-4.0-5.0 SL -566-SA6-SB-0.0-0.5 SL -567-SA6-SB-0.0-0.5 SL -567-SA6-SB-2.0-3.0 SL -612-SA6-SB-0.0-0.5 SL -612-SA6-SB-2.0-3.0 SL -618-SA6-SB-0.0-0.5 SL -619-SA6-SB-0.0-0.5 SL -620-SA6-SB-0.0-0.5)	Zirconium	61	60	75.00-125.00	-	Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5 (TOT)	SL-1018-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	13000	13000	0	50.00	
ANTIMONY	0.236	0.255	8	50.00	
ARSENIC	4.39	4.49	2	50.00	
BARIUM	91.0	89.8	1	50.00	
BERYLLIUM	0.541	0.550	2	50.00	
CADMIUM	0.211	0.207	2	50.00	
CALCIUM	2310	2280	1	50.00	
CHROMIUM	19.4	18.9	3	50.00	
COBALT	5.71	5.71	0	50.00	
COPPER	8.62	8.63	0	50.00	
IRON	19500	20000	3	50.00	
LEAD	9.73	10.2	5	50.00	
LITHIUM	24.1	23.8	1	50.00	
MAGNESIUM	4470	4550	2	50.00	No Qualifiers Applied
MANGANESE	280	279	0	50.00	
MOLYBDENUM	0.535	0.532	1	50.00	
NICKEL	12.5	12.1	3	50.00	
PHOSPHORUS	320	322	1	50.00	
POTASSIUM	3750	3780	1	50.00	
SILVER	0.0780	0.0728	7	50.00	
SODIUM	62.0	61.8	0	50.00	
STRONTIUM	15.4	15.2	1	50.00	
THALLIUM	0.247	0.252	2	50.00	
TITANIUM	922	908	2	50.00	
VANADIUM	34.6	34.8	1	50.00	
ZINC	47.9	48.3	1	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5	SL-1018-SA6-SB-0.0-0.5			
EFH(C21-C30)	3.3	3.3	0	50.00	
EFH(C30-C40)	15	13	14	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	18	16	12	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-618-SA6-SB-0.0-0.5	SL-1018-SA6-SB-0.0-0.5			
PH	6.65	6.19	7		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-120612	GASOLINE RANGE ORGANICS (C5-C12)	J	36	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1018-SA6-SB-0.0-0.5	ANTIMONY	J	0.255	0.560	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.550	0.560	PQL	MG/KG	
	CADMIUM	J	0.207	0.560	PQL	MG/KG	
	MOLYBDENUM	J	0.532	0.560	PQL	MG/KG	
	SILVER	J	0.0728	0.560	PQL	MG/KG	
	SODIUM	J	61.8	112	PQL	MG/KG	
	THALLIUM	J	0.252	0.448	PQL	MG/KG	
SL-516-SA6-SB-0.0-0.5	ANTIMONY	J	0.263	0.536	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.462	0.536	PQL	MG/KG	
	CADMIUM	J	0.269	0.536	PQL	MG/KG	
	MOLYBDENUM	J	0.467	0.536	PQL	MG/KG	
	SODIUM	J	70.7	107	PQL	MG/KG	
	THALLIUM	J	0.271	0.429	PQL	MG/KG	
SL-516-SA6-SB-3.0-4.0	ANTIMONY	J	0.155	0.507	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.409	0.507	PQL	MG/KG	
	CADMIUM	J	0.116	0.507	PQL	MG/KG	
	SODIUM	J	86.6	101	PQL	MG/KG	
	THALLIUM	J	0.205	0.405	PQL	MG/KG	
SL-520-SA6-SB-14.0-15.0	ANTIMONY	J	0.156	0.558	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.136	0.558	PQL	MG/KG	
	THALLIUM	J	0.254	0.446	PQL	MG/KG	
SL-520-SA6-SB-19.0-20.0	ANTIMONY	J	0.114	0.540	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.519	0.540	PQL	MG/KG	
	CADMIUM	J	0.107	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.483	0.540	PQL	MG/KG	
	SODIUM	J	76.3	108	PQL	MG/KG	
	THALLIUM	J	0.232	0.432	PQL	MG/KG	
SL-520-SA6-SB-24.0-25.0	ANTIMONY	J	0.165	0.562	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.125	0.562	PQL	MG/KG	
	SODIUM	J	99.5	112	PQL	MG/KG	
	THALLIUM	J	0.203	0.450	PQL	MG/KG	
SL-520-SA6-SB-30.0-31.0	ANTIMONY	J	0.321	0.567	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.171	0.567	PQL	MG/KG	
	SELENIUM	J	0.269	0.567	PQL	MG/KG	
SL-520-SA6-SB-4.0-5.0	ANTIMONY	J	0.177	0.548	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.224	0.548	PQL	MG/KG	
	THALLIUM	J	0.255	0.438	PQL	MG/KG	
SL-520-SA6-SB-9.0-10.0	ANTIMONY	J	0.119	0.548	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.108	0.548	PQL	MG/KG	
	THALLIUM	J	0.269	0.438	PQL	MG/KG	
SL-521-SA6-SB-0.0-0.5	ANTIMONY	J	0.163	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.150	0.519	PQL	MG/KG	
	THALLIUM	J	0.250	0.415	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-521-SA6-SB-4.0-5.0	BERYLLIUM	J	0.366	0.505	PQL	MG/KG	
	CADMIUM	J	0.118	0.505	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.218	0.404	PQL	MG/KG	
SL-566-SA6-SB-0.0-0.5	ANTIMONY	J	0.155	0.561	PQL	MG/KG	
	BERYLLIUM	J	0.338	0.561	PQL	MG/KG	
	CADMIUM	J	0.223	0.561	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.492	0.561	PQL	MG/KG	
	THALLIUM	J	0.187	0.449	PQL	MG/KG	
SL-567-SA6-SB-0.0-0.5	ANTIMONY	J	0.159	0.544	PQL	MG/KG	
	BERYLLIUM	J	0.424	0.544	PQL	MG/KG	
	CADMIUM	J	0.206	0.544	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.437	0.544	PQL	MG/KG	
	THALLIUM	J	0.224	0.435	PQL	MG/KG	
SL-567-SA6-SB-2.0-3.0	ANTIMONY	J	0.172	0.532	PQL	MG/KG	
	CADMIUM	J	0.139	0.532	PQL	MG/KG	
	MOLYBDENUM	J	0.523	0.532	PQL	MG/KG	J (all detects)
	SELENIUM	J	0.219	0.532	PQL	MG/KG	
	SODIUM	J	65.8	106	PQL	MG/KG	
	THALLIUM	J	0.256	0.425	PQL	MG/KG	
SL-612-SA6-SB-0.0-0.5	ANTIMONY	J	0.218	0.558	PQL	MG/KG	
	CADMIUM	J	0.381	0.558	PQL	MG/KG	J (all detects)
	SILVER	J	0.140	0.558	PQL	MG/KG	
	THALLIUM	J	0.274	0.447	PQL	MG/KG	
SL-612-SA6-SB-2.0-3.0	ANTIMONY	J	0.178	0.529	PQL	MG/KG	
	CADMIUM	J	0.225	0.529	PQL	MG/KG	
	SILVER	J	0.0635	0.529	PQL	MG/KG	J (all detects)
	SODIUM	J	60.5	106	PQL	MG/KG	
	THALLIUM	J	0.256	0.423	PQL	MG/KG	
SL-618-SA6-SB-0.0-0.5	ANTIMONY	J	0.236	0.559	PQL	MG/KG	
	BERYLLIUM	J	0.541	0.559	PQL	MG/KG	
	CADMIUM	J	0.211	0.559	PQL	MG/KG	
	MOLYBDENUM	J	0.535	0.559	PQL	MG/KG	J (all detects)
	SILVER	J	0.0780	0.559	PQL	MG/KG	
	SODIUM	J	62.0	112	PQL	MG/KG	
	THALLIUM	J	0.247	0.447	PQL	MG/KG	
SL-619-SA6-SB-0.0-0.5	ANTIMONY	J	0.380	0.548	PQL	MG/KG	
	CADMIUM	J	0.255	0.548	PQL	MG/KG	
	SELENIUM	J	0.246	0.548	PQL	MG/KG	J (all detects)
	SILVER	J	0.123	0.548	PQL	MG/KG	
	SODIUM	J	61.7	110	PQL	MG/KG	
	THALLIUM	J	0.281	0.438	PQL	MG/KG	
SL-620-SA6-SB-0.0-0.5	ANTIMONY	J	0.213	0.562	PQL	MG/KG	
	BERYLLIUM	J	0.460	0.562	PQL	MG/KG	
	CADMIUM	J	0.266	0.562	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.540	0.562	PQL	MG/KG	
	SILVER	J	0.129	0.562	PQL	MG/KG	
	THALLIUM	J	0.217	0.450	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L046 **Laboratory: EMXT**

EDD Filename: Prep12L046RV1 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1018-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.3	5.6	PQL	MG/KG	J (all detects)
SL-567-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.2	5.5	PQL	MG/KG	J (all detects)
SL-618-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.3	5.6	PQL	MG/KG	J (all detects)
SL-619-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.6	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-516-SA6-SB-0.0-0.5	BENZO(G,H,I)PERYLENE	J	3.3	11	PQL	UG/KG	J (all detects)
SL-566-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.1	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	4.1	11	PQL	UG/KG	
	PYRENE	J	3.6	11	PQL	UG/KG	
SL-619-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	3.6	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	4.0	11	PQL	UG/KG	
	PYRENE	J	4.0	11	PQL	UG/KG	

LDC #: 29414A4
SDG #: 12L046
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: AV
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 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: 12/6/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Al, 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	—	1 + 2
XV	Field Blanks	SW	EB = [1]EB1-120612 (280-36711-1) [2]EB = EB1-120512 ~~EB = EB1-120612 (280-36788-1)~~ (280-36640-1) FB = FB-111412 (280-35930-1)

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-618-SA6-SB-0.0-0.5 2	11	SL-612-SA6-SB-2.0-3.0 2	21	SL-618-SA6-SB-0.0-0.5MSD	31		
2	SL-1018-SA6-SB-0.0-0.5 2	12	SL-620-SA6-SB-0.0-0.5 2	22		32		
3	SL-619-SA6-SB-0.0-0.5 2	13	SL-521-SA6-SB-0.0-0.5 3	23		33		
4	SL-520-SA6-SB-4.0-5.0 1	14	SL-521-SA6-SB-4.0-5.0 1	24		34		
5	SL-520-SA6-SB-9.0-10.0 1	15	SL-566-SA6-SB-0.0-0.5 2	25		35		
6	SL-520-SA6-SB-14.0-15.0 1	16	SL-567-SA6-SB-0.0-0.5 2	26		36		
7	SL-520-SA6-SB-19.0-20.0 1	17	SL-567-SA6-SB-2.0-3.0 2	27		37		
8	SL-520-SA6-SB-24.0-25.0 1	18	SL-516-SA6-SB-0.0-0.5 3	28		38		
9	SL-520-SA6-SB-30.0-31.0 1	19	SL-516-SA6-SB-3.0-4.0 1	29		39		
10	SL-612-SA6-SB-0.0-0.5 2	20	SL-618-SA6-SB-0.0-0.5MS	30		40		

Notes: _____

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 4-9, 14, 19

Analyte	Blank ID	Sample Identification										
	EB1-120612 (SDG:280-36711-1)	Action Limit										
B	0.0044	1.1										
Mn	0.00038	0.095										
Na	0.19	47.5										

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".

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 13, 18

Analyte	Blank ID	Sample Identification										
	EB2-120612 (SDG:280-36711-1)	Action Limit										
Na	0.15	37.5										

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".

LDC #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/05/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: 1-3, 10-12, 15-17

Analyte	Blank ID	Sample Identification										
	EB-120512 (SDG:280-36640-1)	Action Limit	2	17	11	1	3					
B	0.0059	1.475										
Mg	0.012	3										
Mn	0.00051	0.1275										
Na	0.27	67.5	61.8	65.8	60.5	62.0	61.7					

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 #: 29414A4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	1	2	3	10	11	12				
Ag	0.00078	0.195	0.0780	0.0728	0.123	0.140	0.0635	0.129				

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".

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 6, 2012
LDC Report Date:	April 16, 2013
Matrix:	Soil
Parameters:	Perchlorate
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	12L046

Sample Identification

SL-516-SA6-SB-0.0-0.5
SL-516-SA6-SB-3.0-4.0

Introduction

This data review covers 2 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6850 for Perchlorate.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 15.0% for unlabeled compounds and less than or equal to 30.0% 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 30.0% 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.

Samples EB2-120712 and EB1-120712 (both from SDG 280-36788-1) were identified as equipment blanks. No perchlorate was found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No perchlorate was found.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L046	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory
Perchlorate - Data Qualification Summary - SDG 12L046

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L046	SL-516-SA6-SB-0.0-0.5 SL-516-SA6-SB-3.0-4.0	All compounds reported below the RL.	J (all detects)	A	Compound quantitation (Z)

Santa Susana Field Laboratory
Perchlorate - Laboratory Blank Data Qualification Summary - SDG 12L046

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Perchlorate - Field Blank Data Qualification Summary - SDG 12L046

No Sample Data Qualified in this SDG

LDC #: 29414A87 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L046 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: ~~12/11/12~~ 12/6/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	r^2
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 15/30 LODV ≤ 50
V.	Blanks	A	
VI.	Surrogate spikes	N	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	LCS/LD
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	ND	EB= EB2-120~~7~~12 & EB1-120712 (SDG# ~~280-36711-1~~) (SDG# 280-36788-1) FB= FB-111412 (SDG# ~~280-36~~ 280-36730-1)

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: 8012

1	SL-516-SA6-SB-0.0-0.5	11		21		31	
2	SL-516-SA6-SB-3.0-4.0	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 29414A87

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ LC/MS

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20%? FT	✓			
Was a curve fit used for evaluation?	✓	✓	FT	
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
XIII. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 29414A87

VALIDATION FINDINGS CHECKLIST

Reviewer: EM
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
IX. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds from the associated calibration standard?	✓			
X. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?			✓	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?			✓	
Were chromatogram peaks verified and accounted for?	✓			
XI. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XV. Field blanks				
Field blanks were identified in this SDG.	✓	✓	✓	
Target compounds were detected in the field blanks.		✓	✓	
Target compounds were detected in the field blanks.		✓	✓	

LDC # 29414A87

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F7
2nd Reviewer: [illegible]

METHOD: 6850

Parameter: perchlorate

weighted

Date	Instrument	Compound	Y	X	
12/07/2012	NS	perchlorate	0.05951	0.05	
			0.11897	0.10	
			0.29669	0.25	
			0.60384	0.50	
			1.25958	1.00	
			3.01001	2.50	
			5.80417	5.00	

Regression Output:	Regression Output:	Reported	
Constant	0.03047		
Std Err of Y Est	0.05203		
R Squared	0.99950		0.99990
No. of Observations	7.00000		
Degrees of Freedom	5.00000		
X Coefficient(s)	1.164E+000		

LDC #: 29414A87

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

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

METHOD: LCMS Perchlorate (EPA SW 846 Method 6850)

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

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 %R	Recalculated %R
1	ccv 7:53	12/20/12	Perchlorate	2.0	2.197	2.197	110	110
2	ccv 13:22	12/20/12	↓	2.0	2.191	2.191	110	110
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 #: 29414A87

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

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

METHOD: LC/MS Perchlorate (EPA SW 846 Method 6850/6860)

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

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

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

LCS/LCSD samples: 1 es 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	Recalc
Perchlorate	25.0	25.0	28.2	27.8	113	113	111	111	1	1

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 #: 29414A87

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: LCMS Perchlorate (EPA SW 846 Method 6850/6860)

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

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

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

Example:

Sample I.D. _____, _____:

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

=

ND

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

SAMPLE DELIVERY GROUP

12L053

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
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	3550B	8015B EFH	III
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	3550B	8082	III
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	3550B	8270C SIM	III
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	7471A	7471A	III
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	NONE	7199	III
07-Dec-2012	SL-542-SA6-SB-0.0-0.5	L053-02	N	TOTAL	6020	III
07-Dec-2012	TB-120712	L053-01	TB	5030B	8015B GRO	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	3550B	8015B EFH	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	3550B	8082	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	3550B	8270C SIM	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	7471A	7471A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	NONE	7199	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0	L053-03	N	TOTAL	6020	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	3550B	8015B EFH	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	3550B	8082	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	3550B	8270C SIM	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	7471A	7471A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	NONE	7199	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MS	L053-03M	MS	TOTAL	6020	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	3550B	8015B EFH	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	3550B	8082	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	3550B	8270C SIM	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	7471A	7471A	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	NONE	7199	III
07-Dec-2012	SL-542-SA6-SB-3.0-4.0MSD	L053-03S	MSD	TOTAL	6020	III
07-Dec-2012	SL-542-SA6-SB-3.5	L053-05	N	5035	8015B GRO	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Dec-2012	SL-542-SA6-SB-3.5MS	L053-05M	MS	5035	8015B GRO	III
07-Dec-2012	SL-542-SA6-SB-3.5MSD	L053-05S	MSD	5035	8015B GRO	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	3550B	8015B EFH	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	3550B	8082	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	3550B	8270C SIM	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	7471A	7471A	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	NONE	7199	III
07-Dec-2012	SL-942-SA6-SB-3.0-4.0	L053-04	FD	TOTAL	6020	III
07-Dec-2012	SL-942-SA6-SB-3.5	L053-06	FD	5035	8015B GRO	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	3550B	8015B EFH	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	3550B	8082	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	3550B	8270C SIM	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	7471A	7471A	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	NONE	7199	III
07-Dec-2012	SL-545-SA6-SB-0.0-0.5	L053-07	N	TOTAL	6020	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	3550B	8015B EFH	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	3550B	8082	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	3550B	8270C SIM	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	7471A	7471A	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	NONE	7199	III
07-Dec-2012	SL-545-SA6-SB-4.0-5.0	L053-08	N	TOTAL	6020	III
07-Dec-2012	SL-545-SA6-SB-4.5	L053-10	N	5035	8015B GRO	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	3550B	8015B EFH	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	3550B	8082	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	3550B	8270C SIM	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	7471A	7471A	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	NONE	7199	III
07-Dec-2012	SL-545-SA6-SB-9.0-10.0	L053-09	N	TOTAL	6020	III
07-Dec-2012	SL-545-SA6-SB-9.5	L053-11	N	5035	8015B GRO	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	3550B	8015B EFH	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	3550B	8082	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	3550B	8270C SIM	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	7471A	7471A	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	NONE	7199	III
07-Dec-2012	SL-547-SA6-SB-0.0-0.5	L053-12	N	TOTAL	6020	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	3550B	8015B EFH	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	3550B	8082	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	3550B	8270C SIM	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	7471A	7471A	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	NONE	7199	III
07-Dec-2012	SL-547-SA6-SB-4.0-5.0	L053-13	N	TOTAL	6020	III
07-Dec-2012	SL-547-SA6-SB-4.5	L053-15	N	5035	8015B GRO	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	3550B	8015B EFH	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	3550B	8082	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	3550B	8270C SIM	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	7471A	7471A	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	NONE	7199	III
07-Dec-2012	SL-547-SA6-SB-9.0-10.0	L053-14	N	TOTAL	6020	III
07-Dec-2012	SL-547-SA6-SB-9.5	L053-16	N	5035	8015B GRO	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: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-542-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 7:50:00** ***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	0.183	J	0.116	MDL	0.578	PQL	MG/KG	J	Z, Q
BARIUM	110		0.231	MDL	0.578	PQL	MG/KG	J	Q
CADMIUM	0.345	J	0.0578	MDL	0.578	PQL	MG/KG	J	Z
CHROMIUM	25.1		0.231	MDL	0.578	PQL	MG/KG	J	Q
COBALT	8.16		0.0578	MDL	0.578	PQL	MG/KG	J	*XI
IRON	26800		11.6	MDL	116	PQL	MG/KG	J	*XI
MAGNESIUM	6380		5.78	MDL	11.6	PQL	MG/KG	J	*XI
MOLYBDENUM	0.360	J	0.0578	MDL	0.578	PQL	MG/KG	J	Z
SELENIUM	0.235	J	0.231	MDL	0.578	PQL	MG/KG	J	Z
STRONTIUM	138		0.289	MDL	0.578	PQL	MG/KG	J	Q
THALLIUM	0.318	J	0.0578	MDL	0.462	PQL	MG/KG	J	Z
Zirconium	5.78	U	2.89	MDL	5.78	PQL	MG/KG	UJ	Q

Sample ID: **SL-542-SA6-SB-3.0-4.0** ***Collected:*** **12/7/2012 8:45:00** ***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	0.194	J	0.109	MDL	0.546	PQL	MG/KG	J	Z, Q
BARIUM	86.7		0.218	MDL	0.546	PQL	MG/KG	J	Q
BORON	4.36	J	2.73	MDL	5.46	PQL	MG/KG	J	Z
CADMIUM	0.297	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
CHROMIUM	19.3		0.218	MDL	0.546	PQL	MG/KG	J	Q
COBALT	5.47		0.0546	MDL	0.546	PQL	MG/KG	J	*XI
IRON	20700		10.9	MDL	109	PQL	MG/KG	J	*XI
MAGNESIUM	4770		5.46	MDL	10.9	PQL	MG/KG	J	*XI
STRONTIUM	84.3		0.273	MDL	0.546	PQL	MG/KG	J	Q
THALLIUM	0.245	J	0.0546	MDL	0.437	PQL	MG/KG	J	Z
Zirconium	5.46	U	2.73	MDL	5.46	PQL	MG/KG	UJ	Q

Sample ID: **SL-545-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 9:40:00** ***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	0.187	J	0.111	MDL	0.553	PQL	MG/KG	J	Z, Q
BARIUM	112		0.221	MDL	0.553	PQL	MG/KG	J	Q
CADMIUM	0.412	J	0.0553	MDL	0.553	PQL	MG/KG	J	Z
CHROMIUM	17.0		0.221	MDL	0.553	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-545-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 9:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1.00**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
COBALT	5.33		0.0553	MDL	0.553	PQL	MG/KG	J	*XI
IRON	21600		11.1	MDL	111	PQL	MG/KG	J	*XI
MAGNESIUM	4370		5.53	MDL	11.1	PQL	MG/KG	J	*XI
STRONTIUM	28.5		0.277	MDL	0.553	PQL	MG/KG	J	Q
THALLIUM	0.287	J	0.0553	MDL	0.442	PQL	MG/KG	J	Z
Zirconium	5.53	U	2.77	MDL	5.53	PQL	MG/KG	UJ	Q

Sample ID: **SL-545-SA6-SB-4.0-5.0** ***Collected:*** **12/7/2012 10:20:00** ***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	0.140	J	0.104	MDL	0.522	PQL	MG/KG	J	Z, Q
BARIUM	91.4		0.209	MDL	0.522	PQL	MG/KG	J	Q
CADMIUM	0.169	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
CHROMIUM	17.0		0.209	MDL	0.522	PQL	MG/KG	J	Q
COBALT	4.80		0.0522	MDL	0.522	PQL	MG/KG	J	*XI
IRON	18500		10.4	MDL	104	PQL	MG/KG	J	*XI
MAGNESIUM	3860		5.22	MDL	10.4	PQL	MG/KG	J	*XI
STRONTIUM	16.9		0.261	MDL	0.522	PQL	MG/KG	J	Q
THALLIUM	0.255	J	0.0522	MDL	0.417	PQL	MG/KG	J	Z
Zirconium	5.22	U	2.61	MDL	5.22	PQL	MG/KG	UJ	Q

Sample ID: **SL-545-SA6-SB-9.0-10.0** ***Collected:*** **12/7/2012 10:30:00** ***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	0.128	J	0.104	MDL	0.522	PQL	MG/KG	J	Z, Q
BARIUM	84.7		0.209	MDL	0.522	PQL	MG/KG	J	Q
CADMIUM	0.156	J	0.0522	MDL	0.522	PQL	MG/KG	J	Z
CHROMIUM	15.2		0.209	MDL	0.522	PQL	MG/KG	J	Q
COBALT	4.73		0.0522	MDL	0.522	PQL	MG/KG	J	*XI
IRON	19200		10.4	MDL	104	PQL	MG/KG	J	*XI
MAGNESIUM	4130		5.22	MDL	10.4	PQL	MG/KG	J	*XI
STRONTIUM	17.9		0.261	MDL	0.522	PQL	MG/KG	J	Q
THALLIUM	0.246	J	0.0522	MDL	0.417	PQL	MG/KG	J	Z
Zirconium	5.22	U	2.61	MDL	5.22	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-547-SA6-SB-0.0-0.5** ***Collected:*** **12/7/2012 12:40:00** ***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	0.535	U	0.107	MDL	0.535	PQL	MG/KG	UJ	Q
BARIUM	98.1		0.214	MDL	0.535	PQL	MG/KG	J	Q
BERYLLIUM	0.375	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
CADMIUM	0.0994	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
CHROMIUM	12.1		0.214	MDL	0.535	PQL	MG/KG	J	Q
COBALT	4.22		0.0535	MDL	0.535	PQL	MG/KG	J	*XI
IRON	15700		10.7	MDL	107	PQL	MG/KG	J	*XI
MAGNESIUM	3940		5.35	MDL	10.7	PQL	MG/KG	J	*XI
STRONTIUM	20.1		0.268	MDL	0.535	PQL	MG/KG	J	Q
THALLIUM	0.164	J	0.0535	MDL	0.428	PQL	MG/KG	J	Z
Zirconium	5.35	U	2.68	MDL	5.35	PQL	MG/KG	UJ	Q

Sample ID: **SL-547-SA6-SB-4.0-5.0** ***Collected:*** **12/7/2012 1:40:00** ***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	0.144	J	0.108	MDL	0.538	PQL	MG/KG	J	Z, Q
BARIUM	106		0.215	MDL	0.538	PQL	MG/KG	J	Q
CADMIUM	0.159	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z
CHROMIUM	16.0		0.215	MDL	0.538	PQL	MG/KG	J	Q
COBALT	5.50		0.0538	MDL	0.538	PQL	MG/KG	J	*XI
IRON	20000		10.8	MDL	108	PQL	MG/KG	J	*XI
MAGNESIUM	4350		5.38	MDL	10.8	PQL	MG/KG	J	*XI
SILVER	0.0621	J	0.0538	MDL	0.538	PQL	MG/KG	U	F
STRONTIUM	24.7		0.269	MDL	0.538	PQL	MG/KG	J	Q
THALLIUM	0.250	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-547-SA6-SB-9.0-10.0** ***Collected:*** **12/7/2012 1:50:00** ***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	0.549	U	0.110	MDL	0.549	PQL	MG/KG	UJ	Q
BARIUM	74.4		0.220	MDL	0.549	PQL	MG/KG	J	Q
BERYLLIUM	0.487	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
CADMIUM	0.0866	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
CHROMIUM	7.75		0.220	MDL	0.549	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-547-SA6-SB-9.0-10.0 **Collected: 12/7/2012 1:50:00** **Analysis Type: RES/TOT** **Dilution: 0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COBALT	3.45		0.0549	MDL	0.549	PQL	MG/KG	J	*XI
IRON	21200		11.0	MDL	110	PQL	MG/KG	J	*XI
MAGNESIUM	3750		5.49	MDL	11.0	PQL	MG/KG	J	*XI
MOLYBDENUM	0.389	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
STRONTIUM	18.1		0.275	MDL	0.549	PQL	MG/KG	J	Q
THALLIUM	0.290	J	0.0549	MDL	0.439	PQL	MG/KG	J	Z
Zirconium	5.49	U	2.75	MDL	5.49	PQL	MG/KG	UJ	Q

Sample ID: SL-942-SA6-SB-3.0-4.0 **Collected: 12/7/2012 8:55:00** **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	0.183	J	0.112	MDL	0.558	PQL	MG/KG	J	Z, Q
BARIUM	97.8		0.223	MDL	0.558	PQL	MG/KG	J	Q
BORON	5.24	J	2.79	MDL	5.58	PQL	MG/KG	J	Z
CADMIUM	0.353	J	0.0558	MDL	0.558	PQL	MG/KG	J	Z
CHROMIUM	20.7		0.223	MDL	0.558	PQL	MG/KG	J	Q
COBALT	6.42		0.0558	MDL	0.558	PQL	MG/KG	J	*XI
IRON	22600		11.2	MDL	112	PQL	MG/KG	J	*XI
MAGNESIUM	5270		5.58	MDL	11.2	PQL	MG/KG	J	*XI
STRONTIUM	101		0.279	MDL	0.558	PQL	MG/KG	J	Q
THALLIUM	0.273	J	0.0558	MDL	0.447	PQL	MG/KG	J	Z
Zirconium	5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q

Method Category: SVOA

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

Sample ID: SL-545-SA6-SB-0.0-0.5 **Collected: 12/7/2012 9:40:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(K)FLUORANTHENE	5.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	8.6	J	2.8	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-547-SA6-SB-0.0-0.5 *Collected:* 12/7/2012 12:40:00 *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(K)FLUORANTHENE	23	J	8.0	MDL	32	PQL	UG/KG	J	Z
FLUORANTHENE	12	J	8.0	MDL	32	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	23	J	8.0	MDL	32	PQL	UG/KG	J	Z
PHENANTHRENE	19	J	8.0	MDL	32	PQL	UG/KG	J	Z
PYRENE	29	J	8.0	MDL	32	PQL	UG/KG	J	Z

Method Category: VOA

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

Sample ID: TB-120712 *Collected:* 12/7/2012 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)	17	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
*XI	ICP Serial Dilution
A	Professional Judgment
F	Field Blank Contamination
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 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L053

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: 12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

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

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-542-SA6-SB-3.0-4.0MS (TOT) **SL-542-SA6-SB-3.0-4.0MSD (TOT)** (SL-542-SA6-SB-0.0-0.5 SL -542-SA6-SB-3.0-4.0 SL -545-SA6-SB-0.0-0.5 SL -545-SA6-SB-4.0-5.0 SL -545-SA6-SB-9.0-10.0 SL -547-SA6-SB-0.0-0.5 SL -547-SA6-SB-4.0-5.0 SL -547-SA6-SB-9.0-10.0 SL -942-SA6-SB-3.0-4.0)	BARIUM CALCIUM CHROMIUM IRON MANGANESE STRONTIUM	147 300 130 154 126 140	139 397 - - 128 159	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - - - -	BARIUM CALCIUM CHROMIUM IRON MANGANESE STRONTIUM	J (all detects) Ca, Fe, Mn No Qual, >4X
SL-542-SA6-SB-3.0-4.0MS (TOT) **SL-542-SA6-SB-3.0-4.0MSD (TOT)** (SL-542-SA6-SB-0.0-0.5 SL -542-SA6-SB-3.0-4.0 SL -545-SA6-SB-0.0-0.5 SL -545-SA6-SB-4.0-5.0 SL -545-SA6-SB-9.0-10.0 SL -547-SA6-SB-0.0-0.5 SL -547-SA6-SB-4.0-5.0 SL -547-SA6-SB-9.0-10.0 SL -942-SA6-SB-3.0-4.0)	TITANIUM	184	-43	75.00-125.00	-	TITANIUM	No Qual, >4X
SL-542-SA6-SB-3.0-4.0MS (TOT) **SL-542-SA6-SB-3.0-4.0MSD (TOT)** (SL-542-SA6-SB-0.0-0.5 SL -542-SA6-SB-3.0-4.0 SL -545-SA6-SB-0.0-0.5 SL -545-SA6-SB-4.0-5.0 SL -545-SA6-SB-9.0-10.0 SL -547-SA6-SB-0.0-0.5 SL -547-SA6-SB-4.0-5.0 SL -547-SA6-SB-9.0-10.0 SL -942-SA6-SB-3.0-4.0)	ANTIMONY Zirconium	62 59	64 53	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 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-542-SA6-SB-3.0-4.0 (TOT)	SL-942-SA6-SB-3.0-4.0 (TOT)			
ALUMINUM	16200	16700	3	50.00	No Qualifiers Applied
ANTIMONY	0.194	0.183	6	50.00	
ARSENIC	4.29	4.98	15	50.00	
BARIUM	86.7	97.8	12	50.00	
BERYLLIUM	0.675	0.755	11	50.00	
BORON	4.36	5.24	18	50.00	
CADMIUM	0.297	0.353	17	50.00	
CALCIUM	36600	45500	22	50.00	
CHROMIUM	19.3	20.7	7	50.00	
COBALT	5.47	6.42	16	50.00	
COPPER	9.15	10.3	12	50.00	
IRON	20700	22600	9	50.00	
LEAD	6.98	7.60	9	50.00	
LITHIUM	20.5	21.1	3	50.00	
MAGNESIUM	4770	5270	10	50.00	
MANGANESE	237	256	8	50.00	
MOLYBDENUM	0.608	0.604	1	50.00	
NICKEL	10.6	12.0	12	50.00	
PHOSPHORUS	296	346	16	50.00	
POTASSIUM	2810	3150	11	50.00	
SODIUM	183	195	6	50.00	
STRONTIUM	84.3	101	18	50.00	
THALLIUM	0.245	0.273	11	50.00	
TITANIUM	847	825	3	50.00	
VANADIUM	36.7	40.1	9	50.00	
ZINC	62.5	66.0	5	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-542-SA6-SB-3.0-4.0	SL-942-SA6-SB-3.0-4.0			
EFH(C21-C30)	6.7	11	49	50.00	No Qualifiers Applied
EFH(C30-C40)	12	11	9	50.00	
TOTAL EFH(C8-C40)	19	22	15	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-542-SA6-SB-3.0-4.0	SL-942-SA6-SB-3.0-4.0			
PH	8.38	8.21	2		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-120712	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-542-SA6-SB-0.0-0.5	ANTIMONY	J	0.183	0.578	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.345	0.578	PQL	MG/KG	
	MOLYBDENUM	J	0.360	0.578	PQL	MG/KG	
	SELENIUM	J	0.235	0.578	PQL	MG/KG	
	THALLIUM	J	0.318	0.462	PQL	MG/KG	
SL-542-SA6-SB-3.0-4.0	ANTIMONY	J	0.194	0.546	PQL	MG/KG	J (all detects)
	BORON	J	4.36	5.46	PQL	MG/KG	
	CADMIUM	J	0.297	0.546	PQL	MG/KG	
	THALLIUM	J	0.245	0.437	PQL	MG/KG	
SL-545-SA6-SB-0.0-0.5	ANTIMONY	J	0.187	0.553	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.412	0.553	PQL	MG/KG	
	THALLIUM	J	0.287	0.442	PQL	MG/KG	
SL-545-SA6-SB-4.0-5.0	ANTIMONY	J	0.140	0.522	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.169	0.522	PQL	MG/KG	
	THALLIUM	J	0.255	0.417	PQL	MG/KG	
SL-545-SA6-SB-9.0-10.0	ANTIMONY	J	0.128	0.522	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.156	0.522	PQL	MG/KG	
	THALLIUM	J	0.246	0.417	PQL	MG/KG	
SL-547-SA6-SB-0.0-0.5	BERYLLIUM	J	0.375	0.535	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.0994	0.535	PQL	MG/KG	
	THALLIUM	J	0.164	0.428	PQL	MG/KG	
SL-547-SA6-SB-4.0-5.0	ANTIMONY	J	0.144	0.538	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.159	0.538	PQL	MG/KG	
	SILVER	J	0.0621	0.538	PQL	MG/KG	
	THALLIUM	J	0.250	0.430	PQL	MG/KG	
SL-547-SA6-SB-9.0-10.0	BERYLLIUM	J	0.487	0.549	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.0866	0.549	PQL	MG/KG	
	MOLYBDENUM	J	0.389	0.549	PQL	MG/KG	
	THALLIUM	J	0.290	0.439	PQL	MG/KG	
SL-942-SA6-SB-3.0-4.0	ANTIMONY	J	0.183	0.558	PQL	MG/KG	J (all detects)
	BORON	J	5.24	5.58	PQL	MG/KG	
	CADMIUM	J	0.353	0.558	PQL	MG/KG	
	THALLIUM	J	0.273	0.447	PQL	MG/KG	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-545-SA6-SB-0.0-0.5	BENZO(K)FLUORANTHENE	J	5.0	11	PQL	UG/KG	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	8.6	11	PQL	UG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L053 **Laboratory: EMXT**

EDD Filename: Prep12L053 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8270C SIM**

Matrix: **SO**

SampleID	*Analyte*	*Lab Qual*	*Result*	*Reporting Limit*	*RL Type*	*Units*	*Flag*
SL-547-SA6-SB-0.0-0.5	BENZO(K)FLUORANTHENE	J	23	32	PQL	UG/KG	
	FLUORANTHENE	J	12	32	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	23	32	PQL	UG/KG	J (all detects)
	PHENANTHRENE	J	19	32	PQL	UG/KG	
	PYRENE	J	29	32	PQL	UG/KG	

LDC #: 29414B4
SDG #: 12L053
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: CL
2nd Reviewer: V

METHOD: Metals (EPA SW 846 Method 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: 12/7/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Ca, Fe, Mn, Ti 7x)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	2+3
XV	Field Blanks	SW	EB = EB1-120612 (280-36711-1) FB = FB-111412 (280-35930-1) EB2-120612 ↓

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

Validated Samples:

1	SL-542-SA6-SB-0.0-0.5 2	11	SL-542-SA6-SB-3.0-4.0MSD	21		31	
2	SL-542-SA6-SB-3.0-4.0 1	12		22		32	
3	SL-942-SA6-SB-3.0-4.0 1	13		23		33	
4	SL-545-SA6-SB-0.0-0.5 2	14		24		34	
5	SL-545-SA6-SB-4.0-5.0 1	15		25		35	
6	SL-545-SA6-SB-9.0-10.0 1	16		26		36	
7	SL-547-SA6-SB-0.0-0.5 2	17		27		37	
8	SL-547-SA6-SB-4.0-5.0 1	18		28		38	
9	SL-547-SA6-SB-9.0-10.0 1	19		29		39	
10	SL-542-SA6-SB-3.0-4.0MS	20		30		40	

Notes: _____

LDC #: 29414B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: [signature]

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	8									
Ag	0.00078	0.195	0.0621									

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 #: 29414B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 2-3, 5-6, 8-9

Analyte	Blank ID	Sample Identification											
	EB1-120612 (SDG:280-36711-1)	Action Limit											
B	0.0044	1.1											
Mn	0.00038	0.095											
Na	0.19	47.5											

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".

LDC #: 29414B4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/06/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1, 4, 7,

Analyte	Blank ID	Sample Identification											
	EB2-120612 (SDG:280-36711-1)	Action Limit											
Na	0.15	37.5											

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".

LDC #: 29414B7

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

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

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

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

(Y) N N/A 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
		3	S	Co	12	All	J (UJ/A) (A)
				Fe	11	↓	↓
				Mg	11		

Comments: Cu, Ni, K <100x MDL

SDILICPMS.wpd

SAMPLE DELIVERY GROUP

12L076

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-Dec-2012	SL-512-SA6-SB-0.0-0.5	L076-02	N	3550B	8015B EFH	IV
11-Dec-2012	SL-512-SA6-SB-0.0-0.5	L076-02	N	3550B	8082	IV
11-Dec-2012	SL-512-SA6-SB-0.0-0.5	L076-02	N	3550B	8270C SIM	IV
11-Dec-2012	SL-512-SA6-SB-0.0-0.5	L076-02	N	7471A	7471A	IV
11-Dec-2012	SL-512-SA6-SB-0.0-0.5	L076-02	N	TOTAL	6020	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	3550B	8015B EFH	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	3550B	8082	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	3550B	8270C SIM	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	7471A	7471A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	GEN PREP	8151A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03	N	TOTAL	6020	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5	L076-03I	N	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	3550B	8015B EFH	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	3550B	8082	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	3550B	8270C SIM	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	7471A	7471A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	GEN PREP	8151A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MS	L076-03M	MS	TOTAL	6020	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	3550B	8015B EFH	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	3550B	8082	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	3550B	8270C SIM	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	7471A	7471A	IV
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	GEN PREP	8151A	IV

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Dec-2012	SL-599-SA6-SB-0.0-0.5MSD	L076-03S	MSD	TOTAL	6020	IV
11-Dec-2012	TB-121112	L076-01	TB	5030B	8015B GRO	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	3550B	8015B EFH	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	3550B	8081A	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	3550B	8082	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	3550B	8270C SIM	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	7471A	7471A	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	GEN PREP	8151A	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06	FD	TOTAL	6020	IV
11-Dec-2012	SL-999-SA6-SB-0.0-0.5	L076-06I	FD	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	3550B	8015B EFH	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	3550B	8081A	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	3550B	8082	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	3550B	8270C SIM	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	7471A	7471A	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	GEN PREP	8151A	IV
11-Dec-2012	SL-599-SA6-SB-4.0-5.0	L076-04	N	TOTAL	6020	IV
11-Dec-2012	SL-599-SA6-SB-4.5	L076-05	N	5035	8015B GRO	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	3550B	8015B EFH	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	3550B	8082	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	3550B	8270C SIM	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	7471A	7471A	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	NONE	7199	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5	L076-07	N	TOTAL	6020	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	3550B	8015B EFH	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	3550B	8082	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
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	3550B	8270C SIM	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	7471A	7471A	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	NONE	7199	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MS	L076-07M	MS	TOTAL	6020	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	3550B	8015B EFH	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	3550B	8082	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	3550B	8270C SIM	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	7471A	7471A	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	NONE	7199	IV
11-Dec-2012	SL-548-SA6-SB-0.0-0.5MSD	L076-07S	MSD	TOTAL	6020	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	3550B	8015B EFH	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	3550B	8082	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	3550B	8270C SIM	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	7471A	7471A	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	NONE	7199	IV
11-Dec-2012	SL-948-SA6-SB-0.0-0.5	L076-08	FD	TOTAL	6020	IV
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	L076-10	N	3550B	8015B EFH	IV
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	L076-10	N	3550B	8082	IV
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	L076-10	N	3550B	8270C SIM	IV
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	L076-10	N	7471A	7471A	IV
11-Dec-2012	SL-597-SA6-SB-3.5-4.5	L076-10	N	TOTAL	6020	IV
11-Dec-2012	SL-597-SA6-SB-4.0	L076-11	N	5035	8015B GRO	IV
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	L076-14	N	3550B	8015B EFH	IV
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	L076-14	N	3550B	8082	IV
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	L076-14	N	3550B	8270C SIM	IV
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	L076-14	N	7471A	7471A	IV

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Dec-2012	SL-609-SA6-SB-2.0-3.0	L076-14	N	TOTAL	6020	IV
11-Dec-2012	SL-609-SA6-SB-2.5	L076-15	N	5035	8015B GRO	IV
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	L076-16	N	3550B	8015B EFH	IV
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	L076-16	N	3550B	8082	IV
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	L076-16	N	3550B	8270C SIM	IV
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	L076-16	N	7471A	7471A	IV
11-Dec-2012	SL-610-SA6-SB-3.0-4.0	L076-16	N	TOTAL	6020	IV
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	L076-09	N	3550B	8015B EFH	IV
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	L076-09	N	3550B	8082	IV
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	L076-09	N	3550B	8270C SIM	IV
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	L076-09	N	7471A	7471A	IV
11-Dec-2012	SL-555-SA6-SB-0.0-0.5	L076-09	N	TOTAL	6020	IV
11-Dec-2012	SL-610-SA6-SB-3.5	L076-17	N	5035	8015B GRO	IV
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	L076-12	N	3550B	8015B EFH	IV
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	L076-12	N	3550B	8082	IV
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	L076-12	N	3550B	8270C SIM	IV
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	L076-12	N	7471A	7471A	IV
11-Dec-2012	SL-605-SA6-SB-4.0-5.0	L076-12	N	TOTAL	6020	IV
11-Dec-2012	SL-605-SA6-SB-4.5	L076-13	N	5035	8015B GRO	IV
11-Dec-2012	SL-556-SA6-SB-0.0-0.5	L076-18	N	3550B	8270C SIM	IV
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	L076-20	N	3550B	8015B EFH	IV
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	L076-20	N	3550B	8082	IV
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	L076-20	N	3550B	8270C SIM	IV
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	L076-20	N	7471A	7471A	IV
11-Dec-2012	SL-595-SA6-SB-0.0-0.5	L076-20	N	TOTAL	6020	IV
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	L076-21	N	3550B	8015B EFH	IV

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	L076-21	N	3550B	8082	IV
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	L076-21	N	3550B	8270C SIM	IV
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	L076-21	N	7471A	7471A	IV
11-Dec-2012	SL-595-SA6-SB-2.0-3.0	L076-21	N	TOTAL	6020	IV
11-Dec-2012	SL-595-SA6-SB-2.5	L076-22	N	5035	8015B GRO	IV
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	L076-19	N	3550B	8015B EFH	IV
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	L076-19	N	3550B	8082	IV
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	L076-19	N	3550B	8270C SIM	IV
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	L076-19	N	7471A	7471A	IV
11-Dec-2012	SL-594-SA6-SB-0.0-0.5	L076-19	N	TOTAL	6020	IV
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	L076-23	N	3550B	8015B EFH	IV
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	L076-23	N	3550B	8082	IV
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	L076-23	N	3550B	8270C SIM	IV
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	L076-23	N	7471A	7471A	IV
11-Dec-2012	SL-593-SA6-SB-0.0-0.5	L076-23	N	TOTAL	6020	IV

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: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-512-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **Analysis Type: RES/TOT** **Dilution: 0.995**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	98.3		0.210	MDL	0.525	PQL	MG/KG	J	*XI
BERYLLIUM	0.546		0.0525	MDL	0.525	PQL	MG/KG	J	I
BORON	2.77	J	2.63	MDL	5.25	PQL	MG/KG	J	Z, I
LITHIUM	21.3		1.05	MDL	2.10	PQL	MG/KG	J	I
SILVER	0.0654	J	0.0525	MDL	0.525	PQL	MG/KG	U	F
SODIUM	94.8	J	52.5	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.225	J	0.0525	MDL	0.420	PQL	MG/KG	J	Z
Zirconium	5.25	U	2.63	MDL	5.25	PQL	MG/KG	UJ	Q

Sample ID: SL-548-SA6-SB-0.0-0.5 **Collected: 12/11/2012 8:55:00** **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	0.158	J	0.113	MDL	0.563	PQL	MG/KG	J	Z, Q
BARIUM	101		0.225	MDL	0.563	PQL	MG/KG	J	*XI
CADMIUM	0.317	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
CALCIUM	47800		11.3	MDL	22.5	PQL	MG/KG	J	I
CHROMIUM	21.6		0.225	MDL	0.563	PQL	MG/KG	J	I
COBALT	6.97		0.0563	MDL	0.563	PQL	MG/KG	J	*XI
IRON	22400		11.3	MDL	113	PQL	MG/KG	J	I
MOLYBDENUM	0.557	J	0.0563	MDL	0.563	PQL	MG/KG	J	Z
NICKEL	13.4		1.13	MDL	2.82	PQL	MG/KG	J	Q
POTASSIUM	3420		33.8	MDL	113	PQL	MG/KG	J	I, *XI
SODIUM	129		56.3	MDL	113	PQL	MG/KG	J	I
STRONTIUM	101		0.281	MDL	0.563	PQL	MG/KG	J	Q
THALLIUM	0.278	J	0.0563	MDL	0.450	PQL	MG/KG	J	Z
VANADIUM	40.5		0.0563	MDL	0.563	PQL	MG/KG	J	I
Zirconium	5.63	U	2.81	MDL	5.63	PQL	MG/KG	UJ	Q

Sample ID: SL-555-SA6-SB-0.0-0.5 **Collected: 12/11/2012 10:25:00** **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	0.206	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BARIUM	130		0.217	MDL	0.542	PQL	MG/KG	J	*XI
BERYLLIUM	0.459	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
CADMIUM	0.199	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-555-SA6-SB-0.0-0.5 **Collected: 12/11/2012 10:25:00** **Analysis Type: RES/TOT** **Dilution: 1.00**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHROMIUM	14.5		0.217	MDL	0.542	PQL	MG/KG	J	I
COPPER	20.0		0.217	MDL	0.542	PQL	MG/KG	J	I
MOLYBDENUM	0.493	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
NICKEL	9.65		0.217	MDL	0.542	PQL	MG/KG	J	I
POTASSIUM	3770		32.5	MDL	108	PQL	MG/KG	J	I
THALLIUM	0.224	J	0.0542	MDL	0.434	PQL	MG/KG	J	Z
VANADIUM	34.2		0.0542	MDL	0.542	PQL	MG/KG	J	I
Zirconium	5.42	U	2.71	MDL	5.42	PQL	MG/KG	UJ	Q

Sample ID: SL-593-SA6-SB-0.0-0.5 **Collected: 12/11/2012 3:00:00** **Analysis Type: RES/TOT** **Dilution: 0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	13900		13.0	MDL	108	PQL	MG/KG	J	I
ANTIMONY	0.166	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BARIUM	114		0.217	MDL	0.542	PQL	MG/KG	J	*XI
BERYLLIUM	0.531	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z, I
BORON	5.42	U	2.71	MDL	5.42	PQL	MG/KG	UJ	I
CADMIUM	0.266	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
COBALT	5.26		0.0542	MDL	0.542	PQL	MG/KG	J	I
LITHIUM	17.7		1.08	MDL	2.17	PQL	MG/KG	J	I
MAGNESIUM	4080		5.42	MDL	10.8	PQL	MG/KG	J	I
MANGANESE	295		0.271	MDL	0.542	PQL	MG/KG	J	I
PHOSPHORUS	419		6.50	MDL	13.0	PQL	MG/KG	J	I
SILVER	0.0857	J	0.0542	MDL	0.542	PQL	MG/KG	U	F
SODIUM	63.3	J	54.2	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.254	J	0.0542	MDL	0.434	PQL	MG/KG	J	Z
TITANIUM	927		0.542	MDL	1.08	PQL	MG/KG	J	I
Zirconium	5.42	U	2.71	MDL	5.42	PQL	MG/KG	UJ	Q

Sample ID: SL-594-SA6-SB-0.0-0.5 **Collected: 12/11/2012 2:20:00** **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	0.222	J	0.106	MDL	0.530	PQL	MG/KG	J	Z
BARIUM	96.2		0.212	MDL	0.530	PQL	MG/KG	J	*XI
BERYLLIUM	0.463	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z, I

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-594-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 2:20:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.971**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BORON	5.30	U	2.65	MDL	5.30	PQL	MG/KG	UJ	I
CADMIUM	0.311	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
LITHIUM	19.0		1.06	MDL	2.12	PQL	MG/KG	J	I
SILVER	0.376	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
SODIUM	70.5	J	53.0	MDL	106	PQL	MG/KG	J	Z
THALLIUM	0.239	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

Sample ID: **SL-595-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 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	0.188	J	0.108	MDL	0.538	PQL	MG/KG	J	Z
BARIUM	119		0.215	MDL	0.538	PQL	MG/KG	J	*XI
BERYLLIUM	0.484	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z, I
BORON	5.38	U	2.69	MDL	5.38	PQL	MG/KG	UJ	I
CADMIUM	0.325	J	0.0538	MDL	0.538	PQL	MG/KG	J	Z
LITHIUM	15.5		1.08	MDL	2.15	PQL	MG/KG	J	I
SODIUM	71.1	J	53.8	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.247	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-595-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 1:40:00** ***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	0.180	J	0.107	MDL	0.533	PQL	MG/KG	J	Z
BARIUM	98.3		0.213	MDL	0.533	PQL	MG/KG	J	*XI
BERYLLIUM	0.815		0.0533	MDL	0.533	PQL	MG/KG	J	I
BORON	5.33	U	2.66	MDL	5.33	PQL	MG/KG	UJ	I
CADMIUM	0.131	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
CHROMIUM	22.1		0.213	MDL	0.533	PQL	MG/KG	J	I
COPPER	7.08		0.213	MDL	0.533	PQL	MG/KG	J	I
LITHIUM	26.2		1.07	MDL	2.13	PQL	MG/KG	J	I
MOLYBDENUM	0.531	J	0.0533	MDL	0.533	PQL	MG/KG	J	Z
NICKEL	9.57		0.213	MDL	0.533	PQL	MG/KG	J	I
POTASSIUM	1920		32.0	MDL	107	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-595-SA6-SB-2.0-3.0 **Collected: 12/11/2012 1:40:00** **Analysis Type: RES/TOT** **Dilution: 0.990**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0670	J	0.0533	MDL	0.533	PQL	MG/KG	U	F
THALLIUM	0.280	J	0.0533	MDL	0.426	PQL	MG/KG	J	Z
VANADIUM	41.3		0.0533	MDL	0.533	PQL	MG/KG	J	I
Zirconium	5.33	U	2.66	MDL	5.33	PQL	MG/KG	UJ	Q

Sample ID: SL-597-SA6-SB-3.5-4.5 **Collected: 12/11/2012 9:20:00** **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	104		0.208	MDL	0.519	PQL	MG/KG	J	*XI
CADMIUM	0.139	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
CHROMIUM	17.1		0.208	MDL	0.519	PQL	MG/KG	J	I
COPPER	5.90		0.208	MDL	0.519	PQL	MG/KG	J	I
MOLYBDENUM	0.338	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
NICKEL	9.76		0.208	MDL	0.519	PQL	MG/KG	J	I
POTASSIUM	2040		31.2	MDL	104	PQL	MG/KG	J	I
THALLIUM	0.220	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z
VANADIUM	30.5		0.0519	MDL	0.519	PQL	MG/KG	J	I
Zirconium	5.19	U	2.60	MDL	5.19	PQL	MG/KG	UJ	Q

Sample ID: SL-599-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **Analysis Type: RES/TOT** **Dilution: 0.995**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	11000		13.2	MDL	110	PQL	MG/KG	J	Q
ANTIMONY	0.223	J	0.110	MDL	0.549	PQL	MG/KG	J	Z
BARIUM	102		0.219	MDL	0.549	PQL	MG/KG	J	Q, *XI
BERYLLIUM	0.500	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
BORON	3.05	J	2.74	MDL	5.49	PQL	MG/KG	J	Z
MOLYBDENUM	0.506	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
SILVER	0.539	J	0.0549	MDL	0.549	PQL	MG/KG	J	Z
SODIUM	70.4	J	54.9	MDL	110	PQL	MG/KG	J	Z
THALLIUM	0.226	J	0.0549	MDL	0.439	PQL	MG/KG	J	Z
Zirconium	5.49	U	2.74	MDL	5.49	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-599-SA6-SB-4.0-5.0** ***Collected:*** **12/11/2012 8:20:00** ***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	0.116	J	0.102	MDL	0.509	PQL	MG/KG	J	Z
BARIUM	84.2		0.204	MDL	0.509	PQL	MG/KG	J	*XI
CADMIUM	0.113	J	0.0509	MDL	0.509	PQL	MG/KG	J	Z
MOLYBDENUM	0.370	J	0.0509	MDL	0.509	PQL	MG/KG	J	Z
THALLIUM	0.196	J	0.0509	MDL	0.408	PQL	MG/KG	J	Z
Zirconium	5.09	U	2.55	MDL	5.09	PQL	MG/KG	UJ	Q

Sample ID: **SL-605-SA6-SB-4.0-5.0** ***Collected:*** **12/11/2012 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	0.194	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BARIUM	119		0.223	MDL	0.559	PQL	MG/KG	J	*XI
CADMIUM	0.188	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
CALCIUM	2980		11.2	MDL	22.3	PQL	MG/KG	J	I
CHROMIUM	27.2		0.223	MDL	0.559	PQL	MG/KG	J	I
COPPER	14.9		0.223	MDL	0.559	PQL	MG/KG	J	I
IRON	28100		11.2	MDL	112	PQL	MG/KG	J	I
MOLYBDENUM	0.490	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
NICKEL	15.1		0.223	MDL	0.559	PQL	MG/KG	J	I
POTASSIUM	2320		33.5	MDL	112	PQL	MG/KG	J	I
SILVER	0.0904	J	0.0559	MDL	0.559	PQL	MG/KG	U	F
SODIUM	274		55.9	MDL	112	PQL	MG/KG	J	I
THALLIUM	0.343	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z
VANADIUM	49.3		0.0559	MDL	0.559	PQL	MG/KG	J	I
Zirconium	5.59	U	2.79	MDL	5.59	PQL	MG/KG	UJ	Q

Sample ID: **SL-609-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 9:40:00** ***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	0.127	J	0.105	MDL	0.526	PQL	MG/KG	J	Z
BARIUM	97.9		0.210	MDL	0.526	PQL	MG/KG	J	*XI
BERYLLIUM	0.619		0.0526	MDL	0.526	PQL	MG/KG	J	I
BORON	5.26	U	2.63	MDL	5.26	PQL	MG/KG	UJ	I
CADMIUM	0.145	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
CHROMIUM	16.0		0.210	MDL	0.526	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: **SL-609-SA6-SB-2.0-3.0** ***Collected:*** **12/11/2012 9:40:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **1.00**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	6.26		0.210	MDL	0.526	PQL	MG/KG	J	I
LITHIUM	19.7		1.05	MDL	2.10	PQL	MG/KG	J	I
MOLYBDENUM	0.493	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
NICKEL	9.35		0.210	MDL	0.526	PQL	MG/KG	J	I
POTASSIUM	2400		31.5	MDL	105	PQL	MG/KG	J	I
THALLIUM	0.240	J	0.0526	MDL	0.421	PQL	MG/KG	J	Z
VANADIUM	30.3		0.0526	MDL	0.526	PQL	MG/KG	J	I
Zirconium	5.26	U	2.63	MDL	5.26	PQL	MG/KG	UJ	Q

Sample ID: **SL-610-SA6-SB-3.0-4.0** ***Collected:*** **12/11/2012 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	0.119	J	0.103	MDL	0.515	PQL	MG/KG	J	Z
BARIUM	108		0.206	MDL	0.515	PQL	MG/KG	J	*XI
BERYLLIUM	0.609		0.0515	MDL	0.515	PQL	MG/KG	J	I
BORON	5.15	U	2.57	MDL	5.15	PQL	MG/KG	UJ	I
CADMIUM	0.118	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
CHROMIUM	17.1		0.206	MDL	0.515	PQL	MG/KG	J	I
COPPER	5.83		0.206	MDL	0.515	PQL	MG/KG	J	I
LITHIUM	19.0		1.03	MDL	2.06	PQL	MG/KG	J	I
MOLYBDENUM	0.501	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
NICKEL	9.00		0.206	MDL	0.515	PQL	MG/KG	J	I
POTASSIUM	1950		30.9	MDL	103	PQL	MG/KG	J	I
THALLIUM	0.224	J	0.0515	MDL	0.412	PQL	MG/KG	J	Z
VANADIUM	30.9		0.0515	MDL	0.515	PQL	MG/KG	J	I
Zirconium	5.15	U	2.57	MDL	5.15	PQL	MG/KG	UJ	Q

Sample ID: **SL-948-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 9:10:00** ***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	0.170	J	0.111	MDL	0.554	PQL	MG/KG	J	Z
BARIUM	97.7		0.221	MDL	0.554	PQL	MG/KG	J	*XI
CADMIUM	0.297	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
CALCIUM	43300		11.1	MDL	22.1	PQL	MG/KG	J	I
CHROMIUM	20.7		0.221	MDL	0.554	PQL	MG/KG	J	I

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-948-SA6-SB-0.0-0.5 **Collected: 12/11/2012 9:10:00** **Analysis Type: RES/TOT** **Dilution: 0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
COPPER	9.60		0.221	MDL	0.554	PQL	MG/KG	J	I
IRON	23000		11.1	MDL	111	PQL	MG/KG	J	I
NICKEL	11.7		0.221	MDL	0.554	PQL	MG/KG	J	I
POTASSIUM	3450		33.2	MDL	111	PQL	MG/KG	J	I
SODIUM	114		55.4	MDL	111	PQL	MG/KG	J	I
THALLIUM	0.275	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z
VANADIUM	41.1		0.0554	MDL	0.554	PQL	MG/KG	J	I
Zirconium	5.54	U	2.77	MDL	5.54	PQL	MG/KG	UJ	Q

Sample ID: SL-999-SA6-SB-0.0-0.5 **Collected: 12/11/2012 8:00:00** **Analysis Type: RES/TOT** **Dilution: 0.980**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.220	J	0.109	MDL	0.543	PQL	MG/KG	J	Z
BARIUM	108		0.217	MDL	0.543	PQL	MG/KG	J	*XI
BERYLLIUM	0.491	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z, I
BORON	2.78	J	2.72	MDL	5.43	PQL	MG/KG	J	Z, I
LITHIUM	20.4		1.09	MDL	2.17	PQL	MG/KG	J	I
MOLYBDENUM	0.531	J	0.0543	MDL	0.543	PQL	MG/KG	J	Z
SODIUM	70.3	J	54.3	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.238	J	0.0543	MDL	0.435	PQL	MG/KG	J	Z
Zirconium	5.43	U	2.72	MDL	5.43	PQL	MG/KG	UJ	Q

Method Category: SVOA

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

Sample ID: SL-548-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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)	4.4	J	2.8	MDL	5.7	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	4.4	J	2.8	MDL	5.7	PQL	MG/KG	J	Z

Sample ID: SL-555-SA6-SB-0.0-0.5 **Collected: 12/11/2012 10:25:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	7.1	J	5.4	MDL	11	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-593-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
EFH(C30-C40)	9.5	J	5.5	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-594-SA6-SB-0.0-0.5 **Collected: 12/11/2012 2:20:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	7.7	J	5.5	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-599-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **Analysis Type: RES** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	11	U	5.5	MDL	11	PQL	MG/KG	UJ	FD
TOTAL EFH(C8-C40)	8.9		2.8	MDL	5.5	PQL	MG/KG	J	FD

Sample ID: SL-948-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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(C21-C30)	3.8	J	2.8	MDL	5.6	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.8	J	2.8	MDL	5.6	PQL	MG/KG	J	Z

Sample ID: SL-999-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
EFH(C30-C40)	8.2	J	5.5	MDL	11	PQL	MG/KG	J	Z, FD
TOTAL EFH(C8-C40)	16		2.8	MDL	5.5	PQL	MG/KG	J	FD

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-548-SA6-SB-0.0-0.5 **Collected: 12/11/2012 8:55:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	18	J	11	MDL	23	PQL	UG/KG	J	Z, FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-594-SA6-SB-0.0-0.5 **Collected: 12/11/2012 2:20:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	16	J	11	MDL	22	PQL	UG/KG	J	Z

Sample ID: SL-599-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	54		11	MDL	22	PQL	UG/KG	J	*XIII
Aroclor 5460	28	J	22	MDL	44	PQL	UG/KG	J	Z, FD

Sample ID: SL-948-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
AROCLOR 1260	23	U	11	MDL	23	PQL	UG/KG	UJ	FD

Sample ID: SL-999-SA6-SB-0.0-0.5 **Collected: 12/11/2012 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
Aroclor 5460	44	U	22	MDL	44	PQL	UG/KG	UJ	FD

Method Category: SVOA

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

Sample ID: SL-512-SA6-SB-0.0-0.5 **Collected: 12/11/2012 7:50:00** **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	22	J	7.9	MDL	32	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	8.1	J	7.9	MDL	32	PQL	UG/KG	J	Z
CHRYSENE	30	J	7.9	MDL	32	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	17	J	7.9	MDL	32	PQL	UG/KG	J	Z
PHENANTHRENE	14	J	7.9	MDL	32	PQL	UG/KG	J	Z

Sample ID: SL-548-SA6-SB-0.0-0.5 **Collected: 12/11/2012 8:55:00** **Analysis Type: RES-BASE/NEUTRAL** **Dilution: 1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
BENZO(A)PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

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

Sample ID: **SL-548-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 8:55:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
PYRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD

Sample ID: **SL-556-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 12:40:00** ***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(A)ANTHRACENE	3.5	J	2.6	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	4.9	J	2.6	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	6.7	J	2.6	MDL	11	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	5.4	J	2.6	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	3.4	J	2.6	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.2	J	2.6	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.4	J	2.6	MDL	11	PQL	UG/KG	J	Z
PYRENE	4.4	J	2.6	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-593-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 3:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
DIBENZO(A,H)ANTHRACENE	9.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORENE	8.2	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-594-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 2:20:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	5.6	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	6.6	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	4.2	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	3.0	J	2.7	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	10	J	2.7	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	4.2	J	2.7	MDL	11	PQL	UG/KG	J	Z
PHENANTHRENE	7.4	J	2.7	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

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

Sample ID: **SL-595-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 1:10:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	4.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	6.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	3.8	J	2.8	MDL	5.5	PQL	UG/KG	J	Z
CHRYSENE	4.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	7.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
PHENANTHRENE	3.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	6.8	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-599-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 7:50:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	5.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	6.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	4.2	J	2.8	MDL	5.5	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	2.9	J	2.8	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	5.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	5.6	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: **SL-948-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 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	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	4.3	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(B)FLUORANTHENE	4.3	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
FLUORANTHENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
PYRENE	3.1	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

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

Sample ID: **SL-999-SA6-SB-0.0-0.5** ***Collected:*** **12/11/2012 8:00:00** ***Analysis Type:*** **RES-BASE/NEUTRAL** ***Dilution:*** **1**

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
BENZO(A)ANTHRACENE	2.9	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	4.3	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	7.8	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	5.1	J	2.8	MDL	5.5	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	4.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	4.8	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	5.2	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	4.3	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	5.2	J	2.8	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
*XI	ICP Serial Dilution
*XIII	RPD Between Two Columns
F	Field Blank Contamination
FD	Field Duplicate Precision
I	Internal Standard Estimation
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 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L076

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: 12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8081A
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-599-SA6-SB-0.0-0.5MS **SL-599-SA6-SB-0.0-0.5MSD** (SL-599-SA6-SB-0.0-0.5)	4,4'-DDT	245	177	30.00-160.00	-	4,4'-DDT	No Qual, >4X
SL-599-SA6-SB-0.0-0.5MSD (SL-599-SA6-SB-0.0-0.5)	4,4'-DDE	-	-136	50.00-150.00	-	4,4'-DDE	No Qual, >4X

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-548-SA6-SB-0.0-0.5MS **(TOT)** **SL-548-SA6-SB-0.0-0.5MSD** **(TOT)** (SL-512-SA6-SB-0.0-0.5 SL -548-SA6-SB-0.0-0.5 SL -555-SA6-SB-0.0-0.5 SL -593-SA6-SB-0.0-0.5 SL -594-SA6-SB-0.0-0.5 SL -595-SA6-SB-0.0-0.5 SL -595-SA6-SB-2.0-3.0 SL -597-SA6-SB-3.5-4.5 SL -599-SA6-SB-0.0-0.5 SL -599-SA6-SB-4.0-5.0 SL -605-SA6-SB-4.0-5.0 SL -609-SA6-SB-2.0-3.0 SL -610-SA6-SB-3.0-4.0 SL -948-SA6-SB-0.0-0.5 SL -999-SA6-SB-0.0-0.5)	ALUMINUM IRON TITANIUM	162 175 614	- - 370	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ALUMINUM IRON TITANIUM	No Qual >4X
SL-548-SA6-SB-0.0-0.5MS **(TOT)** **SL-548-SA6-SB-0.0-0.5MSD** **(TOT)** (SL-512-SA6-SB-0.0-0.5 SL -548-SA6-SB-0.0-0.5 SL -555-SA6-SB-0.0-0.5 SL -593-SA6-SB-0.0-0.5 SL -594-SA6-SB-0.0-0.5 SL -595-SA6-SB-0.0-0.5 SL -595-SA6-SB-2.0-3.0 SL -597-SA6-SB-3.5-4.5 SL -599-SA6-SB-0.0-0.5 SL -599-SA6-SB-4.0-5.0 SL -605-SA6-SB-4.0-5.0 SL -609-SA6-SB-2.0-3.0 SL -610-SA6-SB-3.0-4.0 SL -948-SA6-SB-0.0-0.5 SL -999-SA6-SB-0.0-0.5)	CALCIUM MANGANESE	-212 11	-165 1	75.00-125.00 75.00-125.00	- -	CALCIUM MANGANESE	No Qual >4X

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: 12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-548-SA6-SB-0.0-0.5MS	ANTIMONY	61	62	75.00-125.00	-	ANTIMONY*	
(TOT)	NICKEL	-	74	75.00-125.00	-	NICKEL*	
SL-548-SA6-SB-0.0-0.5MSD	STRONTIUM	59	66	75.00-125.00	-	STRONTIUM*	
(TOT)	Zirconium	55	57	75.00-125.00	-	Zirconium	
(SL-512-SA6-SB-0.0-0.5							
SL -548-SA6-SB-0.0-0.5							
SL -555-SA6-SB-0.0-0.5							
SL -593-SA6-SB-0.0-0.5							J(all detects)
SL -594-SA6-SB-0.0-0.5							UJ(all non-detects
SL -595-SA6-SB-0.0-0.5							
SL -595-SA6-SB-2.0-3.0							*Qual parent only
SL -597-SA6-SB-3.5-4.5							
SL -599-SA6-SB-0.0-0.5							
SL -599-SA6-SB-4.0-5.0							
SL -605-SA6-SB-4.0-5.0							
SL -609-SA6-SB-2.0-3.0							
SL -610-SA6-SB-3.0-4.0							
SL -948-SA6-SB-0.0-0.5							
SL -999-SA6-SB-0.0-0.5)							
SL-599-SA6-SB-0.0-0.5MS	ALUMINUM	138	149	75.00-125.00	-	ALUMINUM	
(TOT)	BARIUM	142	138	75.00-125.00	-	BARIUM	
SL-599-SA6-SB-0.0-0.5MSD	IRON	129	126	75.00-125.00	-	IRON	
(TOT)	MANGANESE	143	156	75.00-125.00	-	MANGANESE	
(SL-599-SA6-SB-0.0-0.5	TITANIUM	278	311	75.00-125.00	-	TITANIUM	
							J(all detects)
							Fe, Mn, Ti
							No Qual, >4X
SL-599-SA6-SB-0.0-0.5MS	Zirconium	70	71	75.00-125.00	-	Zirconium	
(TOT)							
SL-599-SA6-SB-0.0-0.5MSD							
(TOT)							
(SL-512-SA6-SB-0.0-0.5							
SL -548-SA6-SB-0.0-0.5							
SL -555-SA6-SB-0.0-0.5							
SL -593-SA6-SB-0.0-0.5							
SL -594-SA6-SB-0.0-0.5							J(all detects)
SL -595-SA6-SB-0.0-0.5							UJ(all non-detects)
SL -595-SA6-SB-2.0-3.0							
SL -597-SA6-SB-3.5-4.5							
SL -599-SA6-SB-0.0-0.5							
SL -599-SA6-SB-4.0-5.0							
SL -605-SA6-SB-4.0-5.0							
SL -609-SA6-SB-2.0-3.0							
SL -610-SA6-SB-3.0-4.0							
SL -948-SA6-SB-0.0-0.5							
SL -999-SA6-SB-0.0-0.5)							

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-548-SA6-SB-0.0-0.5 (TOT)	SL-948-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	16600	16500	1	50.00	
ANTIMONY	0.158	0.170	7	50.00	
ARSENIC	4.53	4.61	2	50.00	
BARIUM	101	97.7	3	50.00	
BERYLLIUM	0.718	0.724	1	50.00	
BORON	5.71	5.60	2	50.00	
CADMIUM	0.317	0.297	7	50.00	
CALCIUM	47800	43300	10	50.00	
CHROMIUM	21.6	20.7	4	50.00	
COBALT	6.97	6.48	7	50.00	
COPPER	10.9	9.60	13	50.00	
IRON	22400	23000	3	50.00	
LEAD	7.73	7.54	2	50.00	No Qualifiers Applied
LITHIUM	22.0	22.0	0	50.00	
MAGNESIUM	5220	5190	1	50.00	
MANGANESE	289	263	9	50.00	
MOLYBDENUM	0.557	0.588	5	50.00	
NICKEL	13.4	11.7	14	50.00	
PHOSPHORUS	363	380	5	50.00	
POTASSIUM	3420	3450	1	50.00	
SODIUM	129	114	12	50.00	
STRONTIUM	101	92.9	8	50.00	
THALLIUM	0.278	0.275	1	50.00	
TITANIUM	840	839	0	50.00	
VANADIUM	40.5	41.1	1	50.00	
ZINC	62.5	64.4	3	50.00	

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-599-SA6-SB-0.0-0.5 (TOT)	SL-999-SA6-SB-0.0-0.5 (TOT)			

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

ALUMINUM	11000	11800	7	50.00	
ANTIMONY	0.223	0.220	1	50.00	
ARSENIC	3.10	3.20	3	50.00	
BARIUM	102	108	6	50.00	
BERYLLIUM	0.500	0.491	2	50.00	
BORON	3.05	2.78	9	50.00	
CADMIUM	0.619	0.671	8	50.00	
CALCIUM	2790	2780	0	50.00	
CHROMIUM	16.6	16.7	1	50.00	
COBALT	4.77	4.91	3	50.00	
COPPER	11.8	12.6	7	50.00	
IRON	16500	17000	3	50.00	
LEAD	21.4	23.9	11	50.00	
LITHIUM	18.9	20.4	8	50.00	No Qualifiers Applied
MAGNESIUM	3600	3930	9	50.00	
MANGANESE	291	292	0	50.00	
MOLYBDENUM	0.506	0.531	5	50.00	
NICKEL	11.3	11.6	3	50.00	
PHOSPHORUS	422	439	4	50.00	
POTASSIUM	3440	3520	2	50.00	
SILVER	0.539	0.571	6	50.00	
SODIUM	70.4	70.3	0	50.00	
STRONTIUM	23.1	23.3	1	50.00	
THALLIUM	0.226	0.238	5	50.00	
TITANIUM	795	803	1	50.00	
VANADIUM	27.3	27.1	1	50.00	
ZINC	77.2	86.6	11	50.00	

Method: 8015B EFH
Matrix: SO

	Concentration (MG/KG)				
Analyte	**SL-548-SA6-SB-0.0-0.5**	**SL-948-SA6-SB-0.0-0.5**	***Sample RPD***	***eQAPP RPD***	***Flag***
EFH(C21-C30)	4.4	3.8	15	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	4.4	3.8	15	50.00	

	Concentration (MG/KG)				
Analyte	**SL-599-SA6-SB-0.0-0.5**	**SL-999-SA6-SB-0.0-0.5**	***Sample RPD***	***eQAPP RPD***	***Flag***
EFH(C21-C30)	8.9	7.5	17	50.00	No Qualifiers Applied
EFH(C30-C40)	11 U	8.2	200	50.00	J(all detects)
TOTAL EFH(C8-C40)	8.9	16	57	50.00	UJ(all non-detects)

Method: 8081A
Matrix: SO

	Concentration (UG/KG)				
Analyte	**SL-599-SA6-SB-0.0-0.5**	**SL-999-SA6-SB-0.0-0.5**	***Sample RPD***	***eQAPP RPD***	***Flag***
4,4'-DDE	280	210	29	50.00	No Qualifiers Applied
4,4'-DDT	120	100	18	50.00	
DIELDRIN	7.0	6.7	4	50.00	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8082
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
AROCLOR 1260	18	23 U	200	50.00	J(all detects) UJ(all non-detects)

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
AROCLOR 1254	54	61	12	50.00	No Qualifiers Applied
AROCLOR 1260	30	35	15	50.00	
Aroclor 5460	28	44 U	200	50.00	J(all detects) UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
BENZO(A)ANTHRACENE	11 U	3.1	200	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	11 U	4.3	200	50.00	
BENZO(B)FLUORANTHENE	11 U	4.3	200	50.00	
FLUORANTHENE	11 U	4.0	200	50.00	
PYRENE	11 U	3.1	200	50.00	

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
BENZO(A)ANTHRACENE	3.4	2.9	16	50.00	No Qualifiers Applied
BENZO(A)PYRENE	5.0	4.3	15	50.00	
BENZO(B)FLUORANTHENE	6.6	7.8	17	50.00	
BENZO(E)PYRENE	4.2	5.1	19	50.00	
BENZO(G,H,I)PERYLENE	2.9	4.6	45	50.00	
CHRYSENE	4.0	4.8	18	50.00	
FLUORANTHENE	5.4	5.2	4	50.00	
INDENO(1,2,3-CD)PYRENE	3.1	4.3	32	50.00	
PYRENE	5.6	5.2	7	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
PH	8.24	8.1	2		No Qualifiers Applied

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
PH	7.58	7.61	0		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-512-SA6-SB-0.0-0.5	BORON	J	2.77	5.25	PQL	MG/KG	J (all detects)
	SILVER	J	0.0654	0.525	PQL	MG/KG	
	SODIUM	J	94.8	105	PQL	MG/KG	
	THALLIUM	J	0.225	0.420	PQL	MG/KG	
SL-548-SA6-SB-0.0-0.5	ANTIMONY	J	0.158	0.563	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.317	0.563	PQL	MG/KG	
	MOLYBDENUM	J	0.557	0.563	PQL	MG/KG	
	THALLIUM	J	0.278	0.450	PQL	MG/KG	
SL-555-SA6-SB-0.0-0.5	ANTIMONY	J	0.206	0.542	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.459	0.542	PQL	MG/KG	
	CADMIUM	J	0.199	0.542	PQL	MG/KG	
	MOLYBDENUM	J	0.493	0.542	PQL	MG/KG	
	THALLIUM	J	0.224	0.434	PQL	MG/KG	
SL-593-SA6-SB-0.0-0.5	ANTIMONY	J	0.166	0.542	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.531	0.542	PQL	MG/KG	
	CADMIUM	J	0.266	0.542	PQL	MG/KG	
	SILVER	J	0.0857	0.542	PQL	MG/KG	
	SODIUM	J	63.3	108	PQL	MG/KG	
	THALLIUM	J	0.254	0.434	PQL	MG/KG	
SL-594-SA6-SB-0.0-0.5	ANTIMONY	J	0.222	0.530	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.463	0.530	PQL	MG/KG	
	CADMIUM	J	0.311	0.530	PQL	MG/KG	
	SILVER	J	0.376	0.530	PQL	MG/KG	
	SODIUM	J	70.5	106	PQL	MG/KG	
	THALLIUM	J	0.239	0.424	PQL	MG/KG	
SL-595-SA6-SB-0.0-0.5	ANTIMONY	J	0.188	0.538	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.484	0.538	PQL	MG/KG	
	CADMIUM	J	0.325	0.538	PQL	MG/KG	
	SODIUM	J	71.1	108	PQL	MG/KG	
	THALLIUM	J	0.247	0.430	PQL	MG/KG	
SL-595-SA6-SB-2.0-3.0	ANTIMONY	J	0.180	0.533	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.131	0.533	PQL	MG/KG	
	MOLYBDENUM	J	0.531	0.533	PQL	MG/KG	
	SILVER	J	0.0670	0.533	PQL	MG/KG	
	THALLIUM	J	0.280	0.426	PQL	MG/KG	
SL-597-SA6-SB-3.5-4.5	CADMIUM	J	0.139	0.519	PQL	MG/KG	J (all detects)
	MOLYBDENUM	J	0.338	0.519	PQL	MG/KG	
	THALLIUM	J	0.220	0.415	PQL	MG/KG	
SL-599-SA6-SB-0.0-0.5	ANTIMONY	J	0.223	0.549	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.500	0.549	PQL	MG/KG	
	BORON	J	3.05	5.49	PQL	MG/KG	
	MOLYBDENUM	J	0.506	0.549	PQL	MG/KG	
	SILVER	J	0.539	0.549	PQL	MG/KG	
	SODIUM	J	70.4	110	PQL	MG/KG	
	THALLIUM	J	0.226	0.439	PQL	MG/KG	
SL-599-SA6-SB-4.0-5.0	ANTIMONY	J	0.116	0.509	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.113	0.509	PQL	MG/KG	
	MOLYBDENUM	J	0.370	0.509	PQL	MG/KG	
	THALLIUM	J	0.196	0.408	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-605-SA6-SB-4.0-5.0	ANTIMONY	J	0.194	0.559	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.188	0.559	PQL	MG/KG	
	MOLYBDENUM	J	0.490	0.559	PQL	MG/KG	
	SILVER	J	0.0904	0.559	PQL	MG/KG	
	THALLIUM	J	0.343	0.447	PQL	MG/KG	
SL-609-SA6-SB-2.0-3.0	ANTIMONY	J	0.127	0.526	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.145	0.526	PQL	MG/KG	
	MOLYBDENUM	J	0.493	0.526	PQL	MG/KG	
	THALLIUM	J	0.240	0.421	PQL	MG/KG	
SL-610-SA6-SB-3.0-4.0	ANTIMONY	J	0.119	0.515	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.118	0.515	PQL	MG/KG	
	MOLYBDENUM	J	0.501	0.515	PQL	MG/KG	
	THALLIUM	J	0.224	0.412	PQL	MG/KG	
SL-948-SA6-SB-0.0-0.5	ANTIMONY	J	0.170	0.554	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.297	0.554	PQL	MG/KG	
	THALLIUM	J	0.275	0.443	PQL	MG/KG	
SL-999-SA6-SB-0.0-0.5	ANTIMONY	J	0.220	0.543	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.491	0.543	PQL	MG/KG	
	BORON	J	2.78	5.43	PQL	MG/KG	
	MOLYBDENUM	J	0.531	0.543	PQL	MG/KG	
	SODIUM	J	70.3	109	PQL	MG/KG	
	THALLIUM	J	0.238	0.435	PQL	MG/KG	

Method: 8015B EFH
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.4	5.7	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	4.4	5.7	PQL	MG/KG	
SL-555-SA6-SB-0.0-0.5	EFH(C30-C40)	J	7.1	11	PQL	MG/KG	J (all detects)
SL-593-SA6-SB-0.0-0.5	EFH(C30-C40)	J	9.5	11	PQL	MG/KG	J (all detects)
SL-594-SA6-SB-0.0-0.5	EFH(C30-C40)	J	7.7	11	PQL	MG/KG	J (all detects)
SL-948-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.8	5.6	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.8	5.6	PQL	MG/KG	
SL-999-SA6-SB-0.0-0.5	EFH(C30-C40)	J	8.2	11	PQL	MG/KG	J (all detects)

Method: 8082
Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-548-SA6-SB-0.0-0.5	AROCLOR 1260	J	18	23	PQL	UG/KG	J (all detects)
SL-594-SA6-SB-0.0-0.5	AROCLOR 1260	J	16	22	PQL	UG/KG	J (all detects)
SL-599-SA6-SB-0.0-0.5	Aroclor 5460	J	28	44	PQL	UG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-512-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	22	32	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	8.1	32	PQL	UG/KG	
	CHRYSENE	J	30	32	PQL	UG/KG	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	17	32	PQL	UG/KG	
	PHENANTHRENE	J	14	32	PQL	UG/KG	
SL-556-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.5	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	4.9	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	6.7	11	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	5.4	11	PQL	UG/KG	J (all detects)
	CHRYSENE	J	3.4	11	PQL	UG/KG	
	FLUORANTHENE	J	4.2	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.4	11	PQL	UG/KG	
	PYRENE	J	4.4	11	PQL	UG/KG	
SL-593-SA6-SB-0.0-0.5	DIBENZO(A,H)ANTHRACENE	J	9.0	11	PQL	UG/KG	J (all detects)
	FLUORENE	J	8.2	11	PQL	UG/KG	
SL-594-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	5.6	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	6.6	11	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	4.2	11	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	3.0	11	PQL	UG/KG	J (all detects)
	CHRYSENE	J	10	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.2	11	PQL	UG/KG	
	PHENANTHRENE	J	7.4	11	PQL	UG/KG	
SL-595-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.4	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	4.6	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	6.6	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	3.8	5.5	PQL	UG/KG	
	CHRYSENE	J	4.4	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	7.0	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.1	11	PQL	UG/KG	
	PHENANTHRENE	J	3.4	11	PQL	UG/KG	
	PYRENE	J	6.8	11	PQL	UG/KG	
SL-599-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.4	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	5.0	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	6.6	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	4.2	5.5	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	2.9	11	PQL	UG/KG	J (all detects)
	CHRYSENE	J	4.0	11	PQL	UG/KG	
	FLUORANTHENE	J	5.4	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.1	11	PQL	UG/KG	
	PYRENE	J	5.6	11	PQL	UG/KG	
SL-948-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.1	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	4.3	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	4.3	11	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	4.0	11	PQL	UG/KG	
	PYRENE	J	3.1	11	PQL	UG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L076 **Laboratory: EMXT**

EDD Filename: Prep12L076 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-999-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	2.9	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	4.3	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	7.8	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	5.1	5.5	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	4.6	11	PQL	UG/KG	J (all detects)
	CHRYSENE	J	4.8	11	PQL	UG/KG	
	FLUORANTHENE	J	5.2	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.3	11	PQL	UG/KG	
	PYRENE	J	5.2	11	PQL	UG/KG	

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 11, 2012

LDC Report Date: April 3, 2013

Matrix: Soil

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12L076

Sample Identification

SL-512-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-548-SA6-SB-0.0-0.5
SL-948-SA6-SB-0.0-0.5
SL-555-SA6-SB-0.0-0.5
SL-597-SA6-SB-3.5-4.5
SL-605-SA6-SB-4.0-5.0
SL-609-SA6-SB-2.0-3.0
SL-610-SA6-SB-3.0-4.0
SL-556-SA6-SB-0.0-0.5
SL-594-SA6-SB-0.0-0.5
SL-595-SA6-SB-0.0-0.5
SL-595-SA6-SB-2.0-3.0
SL-593-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD
SL-548-SA6-SB-0.0-0.5MS
SL-548-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 20 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Samples EB1-121312, EB2-121312 (both from SDG 12L106), and EB-121212 (from SDG 12L098) were identified as equipment blanks. No polynuclear aromatic hydrocarbon contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB1-121312	12/13/12	Naphthalene	0.11 ug/L	SL-599-SA6-SB-4.0-5.0 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-595-SA6-SB-2.0-3.0
EB2-121312	12/13/12	Naphthalene	0.12 ug/L	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-593-SA6-SB-0.0-0.5

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No polynuclear aromatic hydrocarbon contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
FB-111412	11/14/12	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene	0.010 ug/L 0.013 ug/L 0.054 ug/L 0.025 ug/L	All samples in SDG 12L076

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

VI. Surrogate Spikes

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

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

All compound quantitation were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

Samples SL-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 and samples SL-548-SA6-SB-0.0-0.5 and SL-948-SA6-SB-0.0-0.5 were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Fluoranthene	5.4	5.2	4 (≤50)	-	-
Pyrene	5.6	5.2	7 (≤50)	-	-
Benzo(a)anthracene	3.4	2.9	16 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Chrysene	4.0	4.8	18 (≤50)	-	-
Benzo(b)fluoranthene	6.6	7.8	17 (≤50)	-	-
Benzo(e)pyrene	4.2	5.1	19 (≤50)	-	-
Benzo(a)pyrene	5.0	4.3	15 (≤50)	-	-
Indeno(1,2,3-cd)pyrene	3.1	4.3	32 (≤50)	-	-
Benzo(g,h,i)perylene	2.9	4.6	45 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
Benzo(a)anthracene	11U	3.1	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(a)pyrene	11U	4.3	200 (≤50)	J (all detects) UJ (all non-detects)	A
Benzo(b)fluoranthene	11U	4.3	200 (≤50)	J (all detects) UJ (all non-detects)	A
Fluoranthene	11U	4.0	200 (≤50)	J (all detects) UJ (all non-detects)	A
Pyrene	11U	3.1	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-556-SA6-SB-0.0-0.5 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SA6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
12L076	SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Fluoranthene Pyrene	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C2b

SDG #: 12L076

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 4/2/13

Page: 1 of 1

Reviewer: F

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: 12/11/12
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 30, r²
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 25
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 2, 4 5, 6 (SDG 12L106)
XVII.	Field blanks	SW	FB= EB1-121312 (12L106), EB2-121312 FB= FB-111412 (AM) *EB-121212 (12L093) (280-39130-1)

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

Validated Samples:

1	SL-512-SA6-SB-0.0-0.5 3	11	SL-610-SA6-SB-3.0-4.0 1	21	MBLK15	31	
2	SL-599-SA6-SB-0.0-0.5 2 D	12	SL-556-SA6-SB-0.0-0.5 3	22		32	
3	SL-599-SA6-SB-4.0-5.0 1 F	13	SL-594-SA6-SB-0.0-0.5 2	23		33	
4	SL-999-SA6-SB-0.0-0.5 2 D	14	SL-595-SA6-SB-0.0-0.5 2	24		34	
5	SL-548-SA6-SB-0.0-0.5 2	15	SL-595-SA6-SB-2.0-3.0 1 F	25		35	
6	SL-948-SA6-SB-0.0-0.5 3	16	SL-593-SA6-SB-0.0-0.5 2	26		36	
7	SL-555-SA6-SB-0.0-0.5 3	17	SL-599-SA6-SB-0.0-0.5MS	27		37	
8	SL-597-SA6-SB-3.5-4.5 1	18	SL-599-SA6-SB-0.0-0.5MSD	28		38	
9	SL-605-SA6-SB-4.0-5.0 1	19	SL-548-SA6-SB-0.0-0.5MS	29		39	
10	SL-609-SA6-SB-2.0-3.0 1	20	SL-548-SA6-SB-0.0-0.5MSD	30		40	

SOIL

LDC #: 29414C2b

VALIDATION FINDINGS CHECKLIST

Reviewer: FR
2nd Reviewer: A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30%/15% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ~~≤ 20%~~ 25% (FR) 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 #: 29414C2b

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
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 SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 29414C2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: A

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

(Y) N N/A Were field blanks identified in this SDG?
(Y) N N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/Kg
Sampling date: 11/14/12
Field blank type: (circle one) Field Blank / Rinsate / Other: **FB** Associated Samples: All (ND or >5x)

Compound	Blank ID	Sample Identification								
	FB-111412 ~~FB-111412A~~	5X								
TTT	0.010	0.050								
W	0.013	0.065								
S	0.054	0.0108								
UU	0.025	0.125								

Blank units: ug/L **Associated sample units:** ug/Kg
Sampling date: 12/13/12
Field blank type: (circle one) Field Blank / Rinsate / Other: **EB** Associated Samples: 3, 8-11, 15

Compound	Blank ID	Sample Identification								
	FB1-121312	5X								
S	0.11	0.55								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC #: 29414 C2b

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer:
2nd Reviewer:

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

(Y) N N/A Were field blanks identified in this SDG?
Y (N) N/A Were target compounds detected in the field blanks?

Blank units: ug/L **Associated sample units:** ug/Kg
Sampling date: 12/13/12
Field blank type: (circle one) Field Blank / Rinsate / Other: **EB** Associated Samples: 2, 4, 13, 14, 16

Compound	Blank ID	Sample Identification								
	FB2-121312	5X								
S	0.12	0.60								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated field blank concentration were qualified as not detected, "U". Other contaminants within five times the field blank concentration were also qualified as not detected, "U".

LDC#: 29414c2b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: FT
2nd Reviewer: A

METHOD: GC/MS PAH (EPA SW 846 Method 8270C-SIM)

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

Compound	Concentration (ug/Kg)		≤ 50 RPD	
	2	4		
Fluoranthene	5.4	5.2	4	
Pyrene	5.6	5.2	7	
Benzo(a)anthracene	3.4	2.9	16	
Chrysene	4.0	4.8	18	
Benzo(b)fluoranthene	6.6	7.8	17	
Benzo(e)pyrene	4.2	5.1	19	
Benzo(a)pyrene	5.0	4.3	15	
Indeno(1,2,3-cd)pyrene	3.1	4.3	32	
Benzo(g,h,i)perylene	2.9	4.6	45	

V:\FIELD DUPLICATES\templates\29414C2b.wpd

LDC #: 12L076
SDG #: 29414C2D

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: AL
2nd reviewer: A

PAH 8270C-SIM
METHOD: GC/MS ~~VOA~~ (EPA SW 846 Method ~~8260B~~)

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

Percent only

Compound	Concentration (ug/kg) 5	6	RPD (≤50)
Benzo(a)anthracene	11U	3.1	200 J/UJ/A
Benzo(a)pyrene	11U	4.3	
Benzo(b)flouranthene	11U	4.3	
Flouranthene	11U	4.0	
Pyrene	11U	3.1	

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LDC #: 29414C2b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer:

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	SVE7K273	11/27/12	~~Phenol (1st internal standard)~~ P7						
			Naphthalene (2nd internal standard)	3.879	3.879	3.866	3.866	3.00	3.00
			~~Fluorene~~ Anthracene (3rd internal standard)	1.095	1.095	1.080	1.080	4.04	4.04
			~~Pentachlorophenol~~ Benzo(k) Fluoranthene (4th internal standard)	1.148	1.148	1.074	1.074	7.51	7.51
			~~Bis(2-ethylhexyl)phthalate (5th internal standard)~~						
			~~Benzo(a)pyrene (6th internal standard)~~						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
3			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						

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

LDC #: 29414C26

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	RLH100	12/13/12	~~Phenol (1st internal standard)~~					
			Naphthalene (2nd internal standard)	3.866	4.202	4.202	8.7	8.7
			~~Fluorene~~ Anthracene (3rd internal standard)	1.080	1.155	1.155	6.9	6.9
			~~Pentachlorophenol~~ Benzo(k) Fluoranthene (4th internal standard)	1.074	1.215	1.215	13.1	13.1
			~~Bis(2-ethylhexyl)phthalate (5th internal standard)~~					
			~~Benzo(a)pyrene (6th internal standard)~~					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

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

LDC #: 29414c26

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer:

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1 3X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	2.29	68.7	68.7	0
2-Fluorobiphenyl	↓	2.25	67.5	67.5	↓
Terphenyl-d14	↓	3.12	93.5	93.5	↓
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 #: 29414C4S

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer:

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

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

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

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

MS/MSD samples: 19 + 20

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	377	377	ND	313	303	83	83	80	80	3	3
Pentachlorophenol											
Pyrene	↓	↓	↓	348	331	92	92	88	88	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 #: 09414c26

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

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

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

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

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

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

LCS/LCSD samples: MBLK15 was 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	281	275	84	84	83	83	2	2
Pentachlorophenol										
Pyrene	↓	↓	302	280	91	91	84	84	8	8

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

LDC #: 29414c26

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd reviewer:

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

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

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

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

Example:

Sample I.D. #1, YY:

Conc. = $\frac{(18800)(40)(1000)(1)(\quad)}{(141462)(1.222)(0.947)(30.02)(\quad)}$

=

46 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:	December 11, 2012
LDC Report Date:	April 3, 2013
Matrix:	Soil
Parameters:	Chlorinated Pesticides
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	12L076

Sample Identification

SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5DL
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-999-SA6-SB-0.0-0.5DL
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 7 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

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

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

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

V. Blanks

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

Samples EB1-121312 and EB2-121312 (both from SDG 12L106) were identified as equipment blanks. No chlorinated pesticide contaminants were found in the method blanks.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No chlorinated pesticide contaminants were found in the method blanks.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) were not within QC limits. Since the sample concentration was greater than the spiked concentration, no data were qualified.

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	All compounds reported below the RL.	J (all detects)	A

XIV. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

Sample	Compound	Flag	A or P
SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	R R	A
SL-599-SA6-SB-0.0-0.5DL SL-999-SA6-SB-0.0-0.5DL	All TCL compounds except 4,4'-DDE 4,4'-DDT	R	A

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

XV. Field Duplicates

Samples SL-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 and samples SL-599-SA6-SB-0.0-0.5DL and SL-999-SA6-SB-0.0-0.5DL were identified as field duplicates. No chlorinated pesticides were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
4,4'-DDE	380	290	27 (≤50)	-	-
Dieldrin	7.0	6.7	4 (≤50)	-	-
4,4'-DDT	140	110	24 (≤50)	-	-

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5DL	SL-999-SA6-SB-0.0-0.5DL			
4,4'-DDE	280	210	29 (≤50)	-	-
4,4'-DDT	120	100	18 (≤50)	-	-

Santa Susana Field Laboratory
Chlorinated Pesticides - Data Qualification Summary - SDG 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	J (all detects) J (all detects)	A	Compound quantitation (exceeded range) (*XIII)
12L076	SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5DL SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5DL	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
12L076	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	4,4'-DDE 4,4'-DDT	R R	A	Overall assessment of data (D)
12L076	SL-599-SA6-SB-0.0-0.5DL SL-999-SA6-SB-0.0-0.5DL	All TCL compounds except 4,4'-DDE 4,4'-DDT	R	A	Overall assessment of data (D)

Santa Susana Field Laboratory
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C3a **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FT
2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW846 Method 8081A)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/11/12
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	%D RSD ≤20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS/LD
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	SW	
XV.	Field duplicates	SW	D = 1,4 2,5
XVI.	Field blanks	ND	FB = EB1-121312, EB2-121312 (12L106) FB = FB-111412 (280-35930-1)

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-599-SA6-SB-0.0-0.5 D	11		21		31	
2	SL-599-SA6-SB-0.0-0.5DL D_1	12		22		32	
3	SL-599-SA6-SB-4.0-5.0	13		23		33	
4	SL-999-SA6-SB-0.0-0.5 D	14		24		34	
5	SL-999-SA6-SB-0.0-0.5DL D_1	15		25		35	
6	SL-599-SA6-SB-0.0-0.5MS	16		26		36	
7	SL-599-SA6-SB-0.0-0.5MSD	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 29414 e3a

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

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

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

LDC #: 29414c3a

VALIDATION FINDINGS CHECKLIST

Reviewer: PT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions, dry weight factors, and clean-up activities applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target compounds were detected in the field duplicates.	✓			
XV. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

VALIDATION FINDINGS WORKSHEET

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

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

Notes:_____

LDC #: 29414C39

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?
Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	6+7	J	( )	-136 (50-150)	( )	1, 2	no qual parent 74x sp Amt
		D	245 (30-160)	177 (30-160)	( )	↓	↓
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )	

LDC #: 29414C3a

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

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

METHOD: ✓ GC ___ HPLC

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

Level IV/D Only

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

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

#	Compound Name	Finding	Associated Samples	Qualifications
	J, θ	x'd cal Range	1, 4	J/A det *x111

Comments: See sample calculation verification worksheet for recalculations

LDC #: 29414c3r

VALIDATION FINDINGS WORKSHEET
Overall Assessment of Data

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

METHOD: ✓ **GC** __ **HPLC**

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

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? Coole (D) F7 4/2/13 ~~* XIV~~

#	Compound Name	Finding	Associated Samples	Qualifications
	J, θ	x'ol cal Range	1, 4	R/A
	All except J, θ	diluted	2, 5	R/A

Comments: _____

OVRNew.wpd

LDC#: 29414C3a **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

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

METHOD: GC Chlorinated Pesticides (EPA SW 846 Method 8081)

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

Compound	Concentration (ug/Kg)		≤50 RPD
	1	4	
J	380	290	27
I	7.0	6.7	4
O	140	110	24

Compound	Concentration (ug/Kg)		RPD
	2	5	
J	280	210	29
O	120	100	18

V:\FIELD DUPLICATES\templates\29414C3a.wpd

LDC #: 294/4C3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: A

METHOD: GC ✓ HPLC ____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

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

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (20 std)	Recalculated CF (20 std)	Reported CF (initial)	Recalculated CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	12/13/12	Endosulfan I	49761	49761	51675.1	51675.1	2.7	2.7
	STK CLPEST		Methoxychlor	28543	28543	28981.9	28981.9	10.5	10.5
2	ICAL	12/13/12	↓	126023	126023	130237.4	130237.4	6.2	6.2
	STK CLPEST II		↓	54065	54065	56737.0	56737.0	17.5	17.5
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 #: 29414C3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
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

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

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/ Conc. CCV	Recalculated CF/ Conc. CCV	Reported %D	Recalculated %D
1	ccv 15:04	12/17/13	endosulfan I	~~5675.1~~ 20.0 FT	22.14	22.14	11	11
	STX CLPEST		methoxychlor	200.0	210.27	210.27	5	5
2	↓		↓	↓	21.97	21.97	10	10
	STX CLPEST II	12/17/13			196.95	196.95	2	2
3								
4								

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

LDC #: 27414C3g

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: Q

METHOD: GC Pesticides (EPA SW 846 Method 8081)

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
TCMX	Sig A	40	49.36	123	123	0
DCB	↓	↓	40.527	101	101	0
	(STX- CLP)					

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 #: 29414C3a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW 846 Method 8081)

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

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

RPD =(({SSCMS - SSCMSD} * 2) / (SSCMS + SSCMSD))*100 MS = Matrix spike; MSD = Matrix spike duplicate

MS/MSD samples: 6 & 7

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gamma - BHC	7.35	7.35	ND	9.95	10.0	135	135	136	136	1	1
4,4'- DDT	7.35	7.35	140	158	153	245	245	177	177	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 #: 29414C39

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC Pesticides (EPA SW 846 method 8081)

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

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

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100 LCS = Laboratory Control Sample, LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS 10

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gamma-BHC	6.67	6.67	ND	8.65	7.92	130	130	119	119	9	9
4,4'-DDT	↓	↓	↓	8.63	8.15	129	129	122	122	6	6

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 #: 29414C3Q

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: F7
2nd Reviewer: A

METHOD: **GC** Pesticides (EPA SW 846 Method 8081)

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

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

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

Example:

Sample ID. #2 Compound Name 4,4'DDE

Concentration = $\frac{(168623 \text{ ~~43487~~ } F7)(10)(20)}{(43487.3)(30)(0.907)}$

= 285 ug/kg

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

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 11, 2012

LDC Report Date: April 3, 2013

Matrix: Soil

Parameters: Polychlorinated Biphenyls

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12L076

Sample Identification

SL-512-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-548-SA6-SB-0.0-0.5
SL-948-SA6-SB-0.0-0.5
SL-555-SA6-SB-0.0-0.5
SL-597-SA6-SB-3.5-4.5
SL-605-SA6-SB-4.0-5.0
SL-609-SA6-SB-2.0-3.0
SL-610-SA6-SB-3.0-4.0
SL-594-SA6-SB-0.0-0.5
SL-595-SA6-SB-0.0-0.5
SL-595-SAS6-SB-2.0-3.0
SL-593-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD
SL-548-SA6-SB-0.0-0.5MS
SL-548-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 19 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.

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

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

V. Blanks

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

Samples EB1-121312, EB2-121312 (both from SDG 12L106), and EB-121212 (from SDG 12L093) were identified as equipment blanks. No polychlorinated biphenyl contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) 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

All compound quantitations were within validation criteria.

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

Sample	Compound	RPD	Flag	A or P
SL-599-SA6-SB-0.0-0.5	Aroclor-1254	45	J (all detects)	A

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	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-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 and samples SL-548-SA6-SB-0.0-0.5 and SL-948-SA6-SB-0.0-0.5 were identified as field duplicates. No polychlorinated biphenyls were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Aroclor-1254	54	61	12 (≤50)	-	-
Aroclor-1260	30	35	15 (≤50)	-	-
Aroclor-5460	28	44U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Compound	Concentration (ug/Kg)		RPD (Limits)	Flag	A or P
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
Aroclor-1260	18	23U	200 (≤50)	J (all detects) UJ (all non-detects)	A

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Data Qualification Summary - SDG 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	SL-599-SA6-SB-0.0-0.5	Aroclor-1254	J (all detects)	A	Compound quantitation (RPD) (*XIII)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SAS6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
12L076	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	Aroclor-5460	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)
12L076	SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5	Aroclor-1260	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C3b **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: F?
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: 12/11/12
II.	GC/ECD Instrument Performance Check	NA	
III.	Initial calibration	A	%D PSD ≤ 20
IV.	Continuing calibration/ICV	A	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS ID
IX.	Regional quality assurance and quality control	N	
X.	Florisil cartridge check	N	
XI.	GPC Calibration	N	
XII.	Target compound identification	A	
XIII.	Compound quantitation/RL/LOQ/LODs	SW	
XIV.	Overall assessment of data	A	
XV.	Field duplicates	SW	ID = 2,4 5,6
XVI.	Field blanks	ND	EB= EB1-121312, EB2-121312 (12L106) FB= FB-111412 EB-121212 (12L093) (280-35930-1)

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

Validated Samples:

Soil

+ 1	SL-512-SA6-SB-0.0-0.5	- 11	SL-610-SA6-SB-3.0-4.0	21	MB LK1S	31	
+ 2	SL-599-SA6-SB-0.0-0.5	- 12	SL-594-SA6-SB-0.0-0.5	22		32	
- 3	SL-599-SA6-SB-4.0-5.0	- 13	SL-595-SA6-SB-0.0-0.5	23		33	
+ 4	SL-999-SA6-SB-0.0-0.5	- 14	SL-595-SAS6-SB-2.0-3.0	24		34	
+ 5	SL-548-SA6-SB-0.0-0.5	- 15	SL-593-SA6-SB-0.0-0.5	25		35	
- 6	SL-948-SA6-SB-0.0-0.5	16	SL-599-SA6-SB-0.0-0.5MS	26		36	
- 7	SL-555-SA6-SB-0.0-0.5	17	SL-599-SA6-SB-0.0-0.5MSD	27		37	
- 8	SL-597-SA6-SB-3.5-4.5	18	SL-548-SA6-SB-0.0-0.5MS	28		38	
- 9	SL-605-SA6-SB-4.0-5.0	19	SL-548-SA6-SB-0.0-0.5MSD	29		39	
- 10	SL-609-SA6-SB-2.0-3.0	20		30		40	

Notes: _____

LDC #: 29414c35

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

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

LDC #: 29414c36

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: A

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

VALIDATION FINDINGS WORKSHEET

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

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

Notes: _____

LDC #: 29414C3b

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

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

METHOD: ✓ GC __ HPLC

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

Level IV/D Only

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

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

code = * X111

#	Compound Name	% RPD Bet 2 col Finding ≤4U	Associated Samples	Qualifications
	AA	45 %	2	J/A det

Comments: See sample calculation verification worksheet for recalculations

COMQUANew.wpd

LDC #: 29414c36

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: PT
2nd reviewer: [illegible]

METHOD: ___ GC ___ HPLC

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

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

code = Fd

Compound	Concentration (ug/kg)		%RPD Limit 50	Qualification Parent only / All Samples
	2	4		
AA	54	61	12	-
BB	30	35	15	-
Aroclor 5460	28	44 M	200	J/UJ/A

Compound	Concentration (ug/kg)		%RPD Limit 50	Qualification Parent only / All Samples
	5	6		
Aroclor 1260	18	23U	200	J/UJ/A

LDC #: 29414C3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: FT
2nd Reviewer: [signature]

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

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

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported Ave CF (initial)	Recalculated Ave CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	10/3/12	1260-1	2257.75	2257.75	2373.170	2373.170	16.2	16.2
	RTX-cup1								
	RTX-cupII	10/3/12	1260-1	2450.95	2450.95	2578.826	2578.826	12.0	12.0
2									
3									
4									

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

LDC #: 29414c36

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: FD
2nd Reviewer: [signature]

METHOD: GC ✓ HPLC _____

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

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

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	SL17003A	12/17/12	PCB 1260	500.0	484.965	484.965	3	3
	STX CLP1							
	STX CLP2		↓	500.0	478.703	478.703	4	4
2								
3	SL17017A	12/17/12	↓	500.0	496.465	496.465	1	1
	STX CLP1							
	STX CLP2		↓	500.0	495.421	495.421	1	1
4								

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

LDC #: 29414C35

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: ✓ GC __ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
DCB	STX-CLPII	40	36.63	91.6	91.6	0
TCMX	↓	40	46.21	116	116	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 #: 29414C35

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: GC HPLC

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

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

MS/MSD samples: 16 + 17

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike Sample Concentration (ug/kg)		Matrix spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	---	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)											
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											
Aroclor 1260	184	184	29	210	210	98	98	98	98	0	0

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

LDC #: 29414C3b

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

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

METHOD: ✓ GC __HPLC

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

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

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory Control Sample
SC = Sample concentration
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS ID

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike 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	ND	168	170	101	101	102	102	1	1

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

LDC #: 29414C35

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: FZ
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= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

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

Example:

Sample ID. #1 Compound Name PCB - 1260

Concentration = $\frac{142.15 \quad (10)}{(30.02)(0.947)}$

= 50 ug/kg

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	1260-1 =	85395 / 2373.2	1260-1 =	35.97	
	=	35.97	-2 =	26.46	
			-3 =	34.30	
			-4 =	19.62	
			-5 =	25.81	
			Total	142.15	

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 11, 2012

LDC Report Date: April 9, 2013

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12L076

Sample Identification

SL-512-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-548-SA6-SB-0.0-0.5
SL-948-SA6-SB-0.0-0.5
SL-555-SA6-SB-0.0-0.5
SL-597-SA6-SB-3.5-4.5
SL-605-SA6-SB-4.0-5.0
SL-609-SA6-SB-2.0-3.0
SL-610-SA6-SB-3.0-4.0
SL-594-SA6-SB-0.0-0.5
SL-595-SA6-SB-0.0-0.5
SL-595-SA6-SB-2.0-3.0
SL-593-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD
SL-548-SA6-SB-0.0-0.5MS
SL-548-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 19 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.

Samples EB1-121312 and EB2-121312 (both from SDG 12L106) and EB-121212 (from SDG 12L093) was identified as equipment blanks. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-121212	12/12/12	Calcium Nickel	0.0268 mg/L 0.000247 mg/L	SL-512-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
FB-111412	11/14/12	Silver	0.00078 mg/L	All samples in SDG 12L076

Sample concentrations were compared to concentrations detected in the field blanks. The sample concentrations were not detected with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
SL-512-SA6-SB-0.0-0.5	Silver	0.0654 mg/Kg	0.0654U mg/Kg
SL-605-SA6-SB-4.0-5.0	Silver	0.0904 mg/Kg	0.0904U mg/Kg
SL-595-SA6-SB-2.0-3.0	Silver	0.0670 mg/Kg	0.0670U mg/Kg
SL-593-SA6-SB-0.0-0.5	Silver	0.0857 mg/Kg	0.0857U mg/Kg

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-548-SA6-SB-0.0-0.5MS/MSD (SL-548-SA6-SB-0.0-0.5)	Antimony Nickel Strontium	61 (75-125) - 59 (75-125)	62 (75-125) 74 (75-125) 66 (75-125)	- - -	J (all detects) UJ (all non-detects)	A
SL-548-SA6-SB-0.0-0.5MS/MSD (All samples in SDG 12L076)	Zirconium	55 (75-125)	57 (75-125)	-	J (all detects) UJ (all non-detects)	A
SL-599-SA6-SB-0.0-0.5MS/MSD (SL-599-SA6-SB-0.0-0.5)	Aluminum Barium	138 (75-125) 142 (75-125)	149 (75-125) 138 (75-125)	- -	J (all detects) J (all detects)	A
SL-599-SA6-SB-0.0-0.5MS/MSD (All samples in SDG 12L076)	Zirconium	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 with the following exceptions:

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
SL-512-SA6-SB-0.0-0.5	Lithium-6	123.3 (30-120)	Lithium Beryllium Boron	J (all detects) UJ (all non-detects)	P
SL-999-SA6-SB-0.0-0.5	Lithium-6	134.9 (30-120)	Lithium Beryllium Boron	J (all detects) UJ (all non-detects)	P
SL-548-SA6-SB-0.0-0.5	Scandium-45 (1) Scandium-45 (2)	123.8 (30-120) 125.1 (30-120)	Sodium Calcium Iron Potassium Vanadium Chromium	J (all detects) UJ (all non-detects)	P
SL-948-SA6-SB-0.0-0.5	Scandium-45 (1) Scandium-45 (2)	126.8 (30-120) 124.3 (30-120)	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-555-SA6-SB-0.0-0.5	Scandium-45 (2)	121.8 (30-120)	Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-597-SA6-SB-3.5-4.5	Scandium-45 (2)	121.0 (30-120)	Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-605-SA6-SB-4.0-5.0	Scandium-45 (1) Scandium-45 (2)	123.1 (30-120) 123.0 (30-120)	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
SL-609-SA6-SB-2.0-3.0	Lithium-6 Scandium-45 (2)	124.1 (30-120) 122.0 (30-120)	Lithium Beryllium Boron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-610-SA6-SB-3.0-4.0	Lithium-6 Scandium-45 (2)	127.3 (30-120) 120.5 (30-120)	Lithium Beryllium Boron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-594-SA6-SB-0.0-0.5	Lithium-6	134.3 (30-120)	Lithium Beryllium Boron	J (all detects) UJ (all non-detects)	P
SL-595-SA6-SB-0.0-0.5	Lithium-6	137.8 (30-120)	Lithium Beryllium Boron	J (all detects) UJ (all non-detects)	P
SL-595-SA6-SB-2.0-3.0	Lithium-6 Scandium-45 (2)	127.5 (30-120) 120.4 (30-120)	Lithium Beryllium Boron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P
SL-593-SA6-SB-0.0-0.5	Lithium-6 Scandium-45 (3)	144.1 (30-120) 120.8 (30-120)	Lithium Beryllium Boron Magnesium Aluminum Phosphorus Titanium Manganese Cobalt	J (all detects) UJ (all non-detects)	P

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
SL-599-SA6-SB-0.0-0.5	Barium	13 (≤10)	All samples in SDG 12L076	J (all detects) UJ (all non-detects)	A
SL-548-SA6-SB-0.0-0.5	Barium	11 (≤10)	All samples in SDG 12L076	J (all detects) UJ (all non-detects)	A
SL-548-SA6-SB-0.0-0.5	Cobalt Potassium	11 (≤10) 11 (≤10)	SL-548-SA6-SB-0.0-0.5	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

XII. Sample Result Verification

All sample result verifications were acceptable.

All metals reported below the RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 12L076	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-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 and samples SL-548-SA6-SB-0.0-0.5 and SL-948-SA6-SB-0.0-0.5 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-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Aluminum	11000	11800	7 (≤50)	-	-
Antimony	0.223	0.220	1 (≤50)	-	-
Arsenic	3.10	3.20	3 (≤50)	-	-
Barium	102	108	6 (≤50)	-	-
Beryllium	0.500	0.491	2 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Boron	3.05	2.78	9 (≤50)	-	-
Cadmium	0.619	0.671	8 (≤50)	-	-
Calcium	2790	2780	0 (≤50)	-	-
Chromium	16.6	16.7	1 (≤50)	-	-
Cobalt	4.77	4.91	3 (≤50)	-	-
Copper	11.8	12.6	7 (≤50)	-	-
Iron	16500	17000	3 (≤50)	-	-
Lead	21.4	23.9	11 (≤50)	-	-
Magnesium	3600	3930	9 (≤50)	-	-
Manganese	291	292	0 (≤50)	-	-
Molybdenum	0.506	0.531	5 (≤50)	-	-
Nickel	11.3	11.6	3 (≤50)	-	-
Potassium	3440	3520	2 (≤50)	-	-
Silver	0.539	0.571	6 (≤50)	-	-
Sodium	70.4	70.3	0 (≤50)	-	-
Strontium	23.1	23.3	1 (≤50)	-	-
Thallium	0.226	0.238	5 (≤50)	-	-
Titanium	795	803	1 (≤50)	-	-
Vanadium	27.3	27.1	1 (≤50)	-	-
Zinc	77.2	86.6	11 (≤50)	-	-
Lithium	18.9	20.4	8 (≤50)	-	-
Phosphorus	422	439	4 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
Aluminum	16600	16500	1 (≤50)	-	-
Antimony	0.158	0.170	7 (≤50)	-	-
Arsenic	4.53	4.61	2 (≤50)	-	-
Barium	101	97.7	3 (≤50)	-	-
Beryllium	0.718	0.724	1 (≤50)	-	-
Boron	5.71	5.60	2 (≤50)	-	-
Cadmium	0.317	0.297	7 (≤50)	-	-
Calcium	47800	43300	10 (≤50)	-	-
Chromium	21.6	20.7	4 (≤50)	-	-
Cobalt	6.97	6.48	7 (≤50)	-	-
Copper	10.9	9.60	13 (≤50)	-	-
Iron	22400	23000	3 (≤50)	-	-
Lead	7.73	7.54	2 (≤50)	-	-
Magnesium	5220	5190	1 (≤50)	-	-
Manganese	289	263	9 (≤50)	-	-
Molybdenum	0.557	0.588	5 (≤50)	-	-
Nickel	13.4	11.7	14 (≤50)	-	-
Potassium	3420	3450	1 (≤50)	-	-
Sodium	129	114	12 (≤50)	-	-
Strontium	101	92.9	8 (≤50)	-	-
Thallium	0.278	0.275	1 (≤50)	-	-
Titanium	840	839	0 (≤50)	-	-

Analyte	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
Vanadium	40.5	41.1	1 (≤50)	-	-
Zinc	62.5	64.4	3 (≤50)	-	-
Lithium	22.0	22.0	0 (≤50)	-	-
Phosphorus	363	380	5 (≤50)	-	-

Santa Susana Field Laboratory
Metals - Data Qualification Summary - SDG 12L076

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12L076	SL-548-SA6-SB-0.0-0.5	Antimony Nickel Strontium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SA6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	Zirconium	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
12L076	SL-599-SA6-SB-0.0-0.5	Aluminum Barium	J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicate (%R) (Q)
12L076	SL-512-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5	Lithium Beryllium Boron	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
12L076	SL-548-SA6-SB-0.0-0.5	Sodium Calcium Iron Potassium Vanadium Chromium	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
12L076	SL-948-SA6-SB-0.0-0.5 SL-605-SA6-SB-4.0-5.0	Sodium Calcium Iron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
12L076	SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5	Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12L076	SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-595-SA6-SB-2.0-3.0	Lithium Beryllium Boron Potassium Vanadium Chromium Nickel Copper	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
12L076	SL-593-SA6-SB-0.0-0.5	Lithium Beryllium Boron Magnesium Aluminum Phosphorus Titanium Manganese Cobalt	J (all detects) UJ (all non-detects)	P	Internal standards (%R) (I)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SA6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	Barium	J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
12L076	SL-548-SA6-SB-0.0-0.5	Cobalt Potassium	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	ICP serial dilution (%D) (A)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SA6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

SDG	Sample	Analyte	Modified Final Concentration	A or P	Code
12L076	SL-512-SA6-SB-0.0-0.5	Silver	0.0654U mg/Kg	A	F
12L076	SL-605-SA6-SB-4.0-5.0	Silver	0.0904U mg/Kg	A	F
12L076	SL-595-SA6-SB-2.0-3.0	Silver	0.0670U mg/Kg	A	F
12L076	SL-593-SA6-SB-0.0-0.5	Silver	0.0857U mg/Kg	A	F

LDC #: 29414C4

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 4-8-13

SDG #: 12L076

Page: 1 of 1

Laboratory: EMAX Laboratories, Inc.

MY

Reviewer: MG

2nd Reviewer: V

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

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: 12-11-12
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/MSD
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	A	LCS/LCSD
IX.	Internal Standard (ICP-MS)	SW	
X.	Furnace Atomic Absorption QC	N	not utilized
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	A	
XIII.	Overall Assessment of Data	A	
XIV.	Field Duplicates	SW	D = 3+4 D = 5+6
XV	Field Blanks	SW	EB = *EB1-121312 and *EB2-121312 (SDG 12L106) EB-121212 (12L093) FB = FB-111412 (280-35930-1)

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

Validated Samples: all soil

1	SL-512-SA6-SB-0.0-0.5 3	11	SL-610-SA6-SB-3.0-4.0 1	21		31	
2	SL-599-SA6-SB-0.0-0.5 2	12	SL-594-SA6-SB-0.0-0.5 2	22		32	
3	SL-599-SA6-SB-4.0-5.0 1	13	SL-595-SA6-SB-0.0-0.5 2	23		33	
4	SL-999-SA6-SB-0.0-0.5 2	14	SL-595-SA6-SB-2.0-3.0 D1	24	MY	34	
5	SL-548-SA6-SB-0.0-0.5 3	15	SL-593-SA6-SB-0.0-0.5 2	25		35	
6	SL-948-SA6-SB-0.0-0.5 3	16	SL-599-SA6-SB-0.0-0.5MS	26		36	
7	SL-555-SA6-SB-0.0-0.5 3	17	SL-599-SA6-SB-0.0-0.5MSD	27		37	
8	SL-597-SA6-SB-3.5-4.5 1	18	SL-548-SA6-SB-0.0-0.5MS	28		38	
9	SL-605-SA6-SB-4.0-5.0 1	19	SL-548-SA6-SB-0.0-0.5MSD	29		39	
10	SL-609-SA6-SB-2.0-3.0 1	20		30	PBS	40	

Notes: _____

LDC #: 29414C4

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: [illegible]

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

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

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 #: 29414C4
SDG #: —

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1→15	S	(Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B) Si, ___
QC 16→19	↓	(Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B) Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, ___
1→15		Nb, Pd, (P), Pt, (Sn, Sr, Ti), W, U, (Li), S, (Zr), ___
QC 16→19	↓	Nb, Pd, (P), Pt, (Sn, Sr, Ti), W, U, (Li), S, (Zr), ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___
		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Li, S, Zr, ___

Analysis Method

ICP-MS	S	(Li), S, (Al, B, Ca, Fe, Mg, Mn, P, K, Na, Sr, Sn, Ti, Zr)
ICP-MS	↓	Al, (Sb, As, Ba, Be, Cd), Ca, (Cr, Co, Cu), Fe, (Pb), Mg, Mn, (Ni), K, (Se, Ag), Na, (Tl, V, Zn, Mo), B, Si, ___
ICP-MS		Nb, Pd, P, Pt, Sn, Sr, Ti, W, U, Zr, ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN; ___

Comments: (Mercury by CVAA if performed)
Nb: Niobium, Pd: Palladium, P: Phosphorus, Pt: Platinum, S: Sulfur, W: Tungsten, U: Uranium, Zr: Zirconium

LDC #: 29414C4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: W

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

(Y) N N/A Field blanks were identified in this SDG.

(Y) N N/A Were target analytes detected in the field blanks?

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

Sampling date: 11/14/12 Soil factor applied 50x

Field blank type: (circle one) Field Blank / Rinsate / Other: FB Associated Samples: All

Analyte	Blank ID	Sample Identification									
	FB-111412	5x		1	9	14	15				
Ag	0.00078	0.195		0.0654	0.0904	0.0670	0.0857				

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

Sampling date: 12/12/12 Soil factor applied 50x

Field blank type: (circle one) Field Blank / Rinsate / Other: EB Associated Samples: 1, 5-7 (>5x)

Analyte	Blank ID	Sample Identification									
	EB-121212	5x									
Ca	0.0268	6.7									
Ni	0.000247	0.0618									

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 #: 29414C4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: MG
2nd Reviewer:

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

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

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

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

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

LEVEL IV ONLY:

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

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
1	18/19	Soil	Sb	61 (75-125)	62 (75-125)		5 *	J/UJ/A (Q)
	↓	↓	Ni		74 ( )		↓	↓
	↓	↓	Sr	59 ( )	66 ( )		↓	↓
	↓	↓	Zr	55 ( )	57 ( )		all soil	↓
2	16/17	↓	Al	138 ( )	149 ( )		2 *	J dets/A
	↓	↓	Ba	142 ( )	138 ( )		↓	↓
	↓	↓	Zr	70 ( )	71 ( )		all soil	J/UJ/A

Comments: 18/19: Al, Ca, Fe, Mn, Ti – 4x

16/17: Fe, Mn, Ti – 4x

* 2nd QC for this batch is in limit, so qual. parent only

LDC #: 29414C4
SDG #: —

VALIDATION FINDINGS WORKSHEET
Internal Standards (ICP-MS)

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6020)

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

Y (N) N/A Were all internal standard percent recoveries within 30-120% of the intensity of the internal standard in the initial calibration standard ?

Y (N) N/A If the response to either of the above questions is no, were the samples reanalyzed as required ?

#	Internal Standard	Associated Metals	%R (Limits)	Associated Samples	Qualifications
1	Li-6	Li, Be, B	123.3 (30-120)	1	J/UJ/P (I)
2	Li-6	Li, Be, B	134.9 ( )	4	
3	Sc-45 (1)	Na, Ca, Fe	123.8 ( )	5	
	Sc-45 (2)	K, V, Cr	125.1 ( )	↓	
4	Sc-45 (1)	Na, Ca, Fe	126.8 ( )	6	
	Sc-45 (2)	K, V, Cr, Ni, Cu	124.3 ( )	↓	
5	Sc-45 (2)	K, V, Cr, Ni, Cu	121.8 ( )	7	
6	Sc-45 (2)	K, V, Cr, Ni, Cu	121.0 ( )	8	
7	Sc-45 (1)	Na, Ca, Fe	123.1 ( )	9	
	Sc-45 (2)	K, V, Cr, Ni, Cu	123.0 ( )	↓	
8	Li-6	Li, Be, B	124.1 ( )	10	
	Sc-45 (2)	K, V, Cr, Ni, Cu	122.0 ( )	↓	
9	Li-6	Li, Be, B	127.3 ( )	11	
	Sc-45 (2)	K, V, Cr, Ni, Cu	120.5 ( )	↓	
10	Li-6	Li, Be, B	134.3 ( )	12	

LDC #: 29414C4
SDG #: —

VALIDATION FINDINGS WORKSHEET
Internal Standards (ICP-MS)

Reviewer: MG
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6020)

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

Y (N) N/A Were all internal standard percent recoveries within 30-120% of the intensity of the internal standard in the initial calibration standard ?

Y (N) N/A If the response to either of the above questions is no, were the samples reanalyzed as required ?

#	Internal Standard	Associated Metals	%R (Limits)	Associated Samples	Qualifications
11	Li-6	Li, Be, B	137.8 (30-120)	13	J/UJ/P (I)
	~~Li-6~~		42		
12	Li-6	Li, Be, B	127.5 ( )	14	
	Sc-45 (2)	K, V, Cr, Ni, Cu	120.4 ( )	↓	
13	Li-6	Li, Be, B	144.1 ( )	15	
	Sc-45 (3)	Mg, Al, P, Ti, Mn, Co	120.8 ( )	↓	

LDC #: 29414C4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Reviewer: MG
2nd Reviewer: ✓

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

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

(Y) N N/A If analyte concentrations were > 50X the MDL (ICP) ,or >100X the MDL (ICP/MS), was a serial dilution analyzed?

Y (N) N/A Were ICP serial dilution percent differences (%D) ≤10%?

Y (N) N/A Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

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

#	Date	Diluted Sample ID	Matrix	Analyte	%D (Limits)	Associated Samples	Qualifications
1		2	soil	Ba	13 (≤10)	all	J/UJ/A (A)
2		5	↓	Ba	11 ( )	↓	↓ ↓
		↓		Co	11 ( )	* 5	
				K	11 (↓)	↓	

Comments: * 2nd QC for this batch is in limit, so qual. parent only.

LDC#: 29414C4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: MG
2nd Reviewer:

METHOD: Metals (EPA Method 6010B/7000)

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

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qual. Parent Only
	2	4		
Aluminum	11000	11800	7	
Antimony	0.223	0.220	1	
Arsenic	3.10	3.20	3	
Barium	102	108	6	
Beryllium	0.500	0.491	2	
Boron	3.05	2.78	9	
Cadmium	0.619	0.671	8	
Calcium	2790	2780	0	
Chromium	16.6	16.7	1	
Cobalt	4.77	4.91	3	
Copper	11.8	12.6	7	
Iron	16500	17000	3	
Lead	21.4	23.9	11	
Magnesium	3600	3930	9	
Manganese	291	292	0	
Molybdenum	0.506	0.531	5	
Nickel	11.3	11.6	3	
Potassium	3440	3520	2	
Silver	0.539	0.571	6	

VALIDATION FINDINGS WORKSHEET
Field Duplicates

METHOD: Metals (EPA Method 6010B/7000)

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

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qual. Parent Only
	2	4		
Sodium	70.4	70.3	0	
Strontium	23.1	23.3	1	
Thallium	0.226	0.238	5	
Titanium	795	803	1	
Vanadium	27.3	27.1	1	
Zinc	77.2	86.6	11	
Lithium	18.9	20.4	8	
Phosphorus	422	439	4	

V:\FIELD DUPLICATES\FD_inorganic\29414C4.WPD

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qual. Parent Only
	5	6		
Aluminum	16600	16500	1	
Antimony	0.158	0.170	7	
Arsenic	4.53	4.61	2	
Barium	101	97.7	3	
Beryllium	0.718	0.724	1	
Boron	5.71	5.60	2	
Cadmium	0.317	0.297	7	
Calcium	47800	43300	10	

LDC#: 29414C4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: MG
2nd Reviewer: ✓

METHOD: Metals (EPA Method 6010B/7000)

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

Analyte	Concentration (mg/Kg)		RPD (≤50)	Qual. Parent Only
	5	6		
Chromium	21.6	20.7	4	
Cobalt	6.97	6.48	7	
Copper	10.9	9.60	13	
Iron	22400	23000	3	
Lead	7.73	7.54	2	
Magnesium	5220	5190	1	
Manganese	289	263	9	
Molybdenum	0.557	0.588	5	
Nickel	13.4	11.7	14	
Potassium	3420	3450	1	
Sodium	129	114	12	
Strontium	101	92.9	8	
Thallium	0.278	0.275	1	
Titanium	840	839	0	
Vanadium	40.5	41.1	1	
Zinc	62.5	64.4	3	
Lithium	22.0	22.0	0	
Phosphorus	363	380	5	

LDC #: 29414C4

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MG
2nd Reviewer:

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

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

%R = Found 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)						
1138 ICV	ICP/MS (Initial calibration)	Cu	29.89	30.00	100	100	Y
1051 ICV	CVAA (Initial calibration)	Hg	2.00	2.00	100	not reported	
	ICP (Continuing calibration)						
1358 CCV 3	ICP/MS (Continuing calibration)	Sn	25.01	25.00	100	100	
1146 CCV 3	CVAA (Continuing calibration)	Hg	4.96	5.00	99.2	not reported	
	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 #: 29414C4

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
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)
1201 ICSAB	ICP interference check	Zr	19.53 (µg/L)	20.00 (µg/L)	98	98	Y
1224 LCS	Laboratory control sample	Ag	24.64 (mg/kg)	25.0 (mg/kg)	99	99	
1313 16	Matrix spike	Se	(SSR-SR) 25.73 (mg/kg)	27.6 (mg/kg)	93	93	
1313/1318 16/17	Duplicate	Be	28.83 (mg/kg)	27.10 (mg/kg)	6	6	
1246/1251 2	ICP serial dilution	Ba	101.86 (mg/kg)	88.72 (mg/kg)	13	13	

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 #: 29414C4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 3
Reviewer: MG
2nd reviewer: V

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

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

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

Detected analyte results for #2, Al were recalculated and verified using the following equation:

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

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

Recalculation:

$$\frac{(20140.00\ \mu g/L)(0.100\ L)(10)}{(2.01\ g)(0.907)} = 11047.30\ \mu g/g \text{ or } mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	2	Al	11000	11000	Y
		Sb	0.223	0.223	
		As	3.10	3.10	
		Ba	102	102	
		Be	0.500	0.500	
		B	3.05	3.05	
		Cd	0.619	0.619	
		Ca	2790	2790	
		Cr	16.6	16.6	
		Co	4.77	4.77	
		Cu	11.8	11.8	
		Fe	16500	16500	
		Pb	21.4	21.4	
		Mg	3600	3600	
		Mn	291	291	
		Mo	0.506	0.506	
		Ni	11.3	11.3	
		K	3440	3440	
		Ag	0.539	0.539	
		Na	70.4	70.4	

Note:

LDC #: 29414C4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: MG
2nd reviewer:

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

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

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

Detected analyte results for # 2, Sr 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:

$$\frac{(42.140\ mg/L)(0.100L)(10)}{(2.01\ g)(0.907)} = 23.115$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
1	2 cont'd	Sr	23.1	23.1	Y
		Tl	0.226	0.226	
		Ti	795	795	
		V	27.3	27.3	
		Zn	77.2	77.2	
		Li	18.9	18.9	
		P	422	422	
2	5	Al	16600	16600	
		Sb	0.158	0.158	
		As	4.53	4.53	
		Ba	101	101	
		Be	0.718	0.718	
		B	5.71	5.71	
		Cd	0.317	0.317	
		Ca	47800	47800	
		Cr	21.6	21.6	
		Co	6.97	6.97	
		Cu	10.9	10.9	
		Fe	22400	22400	

Note:

LDC #: 29414C4

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: MG
2nd reviewer:

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

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

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

Detected analyte results for #5, Ni 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:

$$\frac{(4.7430\ \mu g/L)(0.100\ L)(50)}{(2.01\ g)(0.884)} = 13.347\ \mu g/g \text{ or } mg/kg$$

#	Sample ID	Analyte	Reported Concentration (mg/kg)	Calculated Concentration (mg/kg)	Acceptable (Y/N)
2	5 cont'd	Pb	7.73	7.73	Y
		Mg	5220	5220	
		Mn	289	289	
		Mo	0.557	0.557	
		Ni	13.4	13.3	
		K	3420	3420	
		Na	129	129	
		Sr	101	101	
		Tl	0.278	0.278	
		Ti	840	840	
		V	40.5	40.5	
		Zn	62.5	62.5	
		Li	22.0	22.0	
		P	363	363	

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 11, 2012

LDC Report Date: April 3, 2013

Matrix: Soil

Parameters: Herbicides

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12L076

Sample Identification

SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 5 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8151A for Herbicides.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at the required frequencies.

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

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

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

IV. Blanks

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

Samples EB2-121312 and EB1-121312 (both from SDG 12L106) were identified as equipment blanks. No herbicide contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No herbicide contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicate

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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

Samples SL-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 were identified as field duplicates. No herbicides were detected in any of the samples.

Santa Susana Field Laboratory
Herbicides - Data Qualification Summary - SDG 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory
Herbicides - Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Herbicides - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C5 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: FJ
2nd Reviewer:

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/11/12
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	N	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	ND	D = 1, 3
XIII.	Field blanks	ND	EB= EB2-121312, EB1-121312 FB= FB-111412 (280-35930-1)

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-599-SA6-SB-0.0-0.5	11	MBLK1S	21		31	
2	SL-599-SA6-SB-4.0-5.0	12		22		32	
3	SL-999-SA6-SB-0.0-0.5	13		23		33	
4	SL-599-SA6-SB-0.0-0.5MS	14		24		34	
5	SL-599-SA6-SB-0.0-0.5MSD	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 #: 29414 c5

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

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

LDC #: 29414c5

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows? FM	✓		✓	
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 #: 29414C5

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: F7
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

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

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported Ave CF (initial)	Recalculated Ave CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/13/12	2,4-D	1506	1506	1517.4	1517.4	8.0	8.0
	STX-CLPEST		Dinoseb	5098	5098	5228.5	5228.5	12.8	12.8
2	STX-CLPEST II	11/13/12	↓	1390	1390	1424.3	1424.3	9.5	9.5
				3462	3462	3484.7	3484.7	5.0	5.0
3									
4									

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

LDC #: 29414CS

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FD
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

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	QL19002A	12/9/12	2,4-D	100.0	103.89	103.89	4	4
	STX cup 1		Dinoseb	100.0	96.72	96.72	3	3
2	STX cup2		↓	↓	100.44	100.44	0	0
					108.23	108.23	8	8
3	QL19019A	12/19/12	↓	↓	98.82	98.82	1	1
	STX cup1				90.13	90.13	10	10
4	STXcup2		↓	↓	96.30	96.30	4	4
					100.76	100.76	1	1

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

LDC #: 29414C5

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: SA

METHOD: ___ GC ___ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
2,4-DCPAA	STX CB1	1000	621.1	62.1	62.1	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 #: 29414C5

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: ✓ GC ___ HPLC

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

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

MS/MSD samples: 4 + 5

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)	55.1	55.1	ND	47.7	42.9	87	87	78	78	11	11
Dinoseb (8151)	↓	↓	↓	36.0	28.2	65	65	51	78	24	24
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

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

LDC #: 29414C5

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: FD
2nd Reviewer:

METHOD: ✓ GC __ HPLC

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

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

Where SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

LCS/LCSD samples: LCS ID

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike 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)	50	50	ND	34.4	37.1	69	69	74	74	8	8
Dinoseb (8151)	50	50	ND	25.0	26.0	50	50	52	52	4	4
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 #: 29414cj

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: /GC __ HPLC

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

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

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

Example:

Sample ID._____ Compound Name _____

Concentration =_____

ND

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

Comments: _____

SAMPCALew.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 11, 2012
LDC Report Date:	April 9, 2013
Matrix:	Soil
Parameters:	Hexavalent Chromium
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	12L076

Sample Identification

SL-548-SA6-SB-0.0-0.5
SL-948-SA6-SB-0.0-0.5
SL-548-SA6-SB-0.0-0.5MS
SL-548-SA6-SB-0.0-0.5MSD

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 were met.

III. Calibration Verification

Continuing calibration frequency and analysis criteria were met.

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-121212 (from SDG 12L093) was identified as an equipment blank. No hexavalent chromium was found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No hexavalent chromium was found.

V. Matrix Spike/Matrix Spike Duplicates

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

VI. Duplicates

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 RL and above the MDL were qualified as follows:

Sample	Analyte	Flag	A or P
All samples in SDG 12L076	All analytes reported below the RL and above the MDL.	J (all detects)	A

IX. Overall Assessment of Data

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

X. Field Duplicates

Samples SL-548-SA6-SB-0.0-0.5 and SL-948-SA6-SB-0.0-0.5 were identified as field duplicates. No hexavalent chromium was detected in any of the samples.

Santa Susana Field Laboratory
Hexavalent Chromium - Data Qualification Summary - SDG 12L076

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12L076	SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5	All analytes reported below the RL and above the MDL.	J (all detects)	A	Sample result verification (Z)

Santa Susana Field Laboratory
Hexavalent Chromium – Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Hexavalent Chromium - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C6 **VALIDATION COMPLETENESS WORKSHEET** Date: 4-8-13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: MG
2nd Reviewer: W

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: 12-11-12
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/MSD
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	ND	D = 1+2
X	Field blanks	ND	FB-EB-121212 (12L093) FB = FB-111412 (280-35930-1)

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

Validated Samples:
all soil

1	SL-548-SA6-SB-0.0-0.5	11		21		31	
2	SL-948-SA6-SB-0.0-0.5	12		22		32	
3	SL-548-SA6-SB-0.0-0.5MS	13		23		33	
4	SL-548-SA6-SB-0.0-0.5MSD	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	PBS	30		40	

Notes:

LDC #: 29414C6

VALIDATION FINDINGS CHECKLIST

Reviewer: MG
2nd Reviewer: W

Method: Inorganics (EPA Method 7199)

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

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.		✓		
X. Field blanks				
Field blanks were identified in this SDG.				
Target analytes were detected in the field blanks.				

LDC #: 29414C6

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer:

METHOD: Inorganics, Method ~~SW~~ 7199

The correlation coefficient (r) for the calibration of Cr VI was recalculated. Calibration date: 11-30-12

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 ID	Conc Found (units)	Area True (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	Cr VI	Blank	0.0 (µg/L)	0.000	r^2 = 0.9991	r^2 = 0.9990	Y
		Standard 1	0.2 (")	0.0000143			
		Standard 2	1.0 (")	0.0000809			
		Standard 3	2.0 (")	0.0001791			
		Standard 4	5.0 (")	0.0004744			
		Standard 5	7.5 (")	0.0007471			
		Standard 6	10.0 (")	0.0009621			
		Standard 7	-	-			
Calibration verification	Cr VI	1215 CCV43	1.968 (µg/L)	2.0 (µg/L)	98	98	
Calibration verification	—	—	—	—	—	—	—
Calibration verification	—	—	—	—	—	—	—

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 #: 29414C6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer:

METHOD: Inorganics, Method 7199

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

%R = Found x 100 / True 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| x 100 / (S+D)/2 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)
1256 LCS	Laboratory control sample	Cr VI	8.47 (mg/kg)	10 (mg/kg)	85	85	Y
1440 3	Matrix spike sample	Cr VI	(SSR-SR) 9.20 (mg/kg)	11.3 (mg/kg)	81	81	↓
1440 / 1501 3/4	Duplicate sample	Cr VI	9.20 (mg/kg)	9.38 (mg/kg)	2	2	↓

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 #: 29414C6

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd reviewer: ✓

METHOD: Inorganics, Method 7199

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 all samples = N.D. ~~reported with a positive detect were recalculated and verified using the following equation~~:

Concentration =

Recalculation:

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

Note:

LDC Report# 29414C7

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Santa Susana Field Laboratory
Collection Date:	December 11, 2012
LDC Report Date:	April 3, 2013
Matrix:	Soil/Water
Parameters:	Total Petroleum Hydrocarbons as Gasoline
Validation Level:	Level IV
Laboratory:	EMAX Laboratories, Inc.
Sample Delivery Group (SDG):	12L076

Sample Identification

TB-121112
SL-599-SA6-SB-4.5
SL-597-SA6-SB-4.0
SL-605-SA6-SB-4.5
SL-609-SA6-SB-2.5
SL-610-SA6-SB-2.5
SL-595-SA6-[illegible]

Introduction

This data review covers 6 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Gasoline.

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

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

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

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

III. Calibration Verification

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

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

IV. Blanks

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

Sample TB-021112 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample EB1-121312 (from SDG 12L106) was identified as an equipment blank. No total petroleum hydrocarbons as gasoline contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No total petroleum hydrocarbons as gasoline contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	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 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	TB-121112 SL-599-SA6-SB-4.5 SL-597-SA6-SB-4.0 SL-605-SA6-SB-4.5 SL-609-SA6-SB-2.5 SL-610-SA6-SB-3.5 SL-595-SA6-SB-2.5	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 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C7 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer: F
2nd Reviewer: A

METHOD: GC TPH as Gasoline (EPA SW 846 Method 8015B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/11/12
II	Initial calibration	A	% RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	N	client specified
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	N	
XIII.	Field blanks	ND	TB = 1 EB = EB1-121312(SDG# 12L106) FB = FB-111412 (SDG# 280-35938)

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	TB-121112 W	11	MBLK1W	21		31	
2	SL-599-SA6-SB-4.5 S	12	MBLK1S	22		32	
3	SL-597-SA6-SB-4.0	13		23		33	
4	SL-605-SA6-SB-4.5	14		24		34	
5	SL-609-SA6-SB-2.5	15		25		35	
6	SL-610-SA6-SB-3.5	16		26		36	
7	SL-595-SA6-SB-2.5	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 29414C7

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC _____ HPLC

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

LDC #: 29414CJ

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer:

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

LDC #: 29414c7

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd Reviewer: [signature]

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

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

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (500 std)	Recalculated CF (500 std)	Reported Ave CF (initial)	Recalculated Ave CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	11/09/12	GRO (C6-C10)	21056	21056	19918.6	19918.6	8.3	8.3
2									
3									
4									

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

LDC #: 29414C7

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

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

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

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	EL12023A	12/13/12	GRO C4-C10	500.0	494.50	494.50	1	1
	EL13003A	12/13/12	↓	500.0	534.13	534.13	7	7
2								
3								
4								

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

LDC #: 29414C7

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: ✓ GC __ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #2

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
4BFB	DB-5	40	39.04	97.6	97.6	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 #: 29414C7

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

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

METHOD: ✓ GC __HPLC

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

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

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

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS 10

Compound	Spike Added (ug/kg)		Sample Conc. (ug/kg)	Spike 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)	25	25	ND	18.8	21.0	75	75	84	84	11	11
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 #: 29414C7

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ **__ GC __ HPLC**

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

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

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

Example:

Sample ID._____ Compound Name _____

Concentration =_____

MD

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

Comments: _____

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: December 11, 2012

LDC Report Date: April 3, 2013

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12L076

Sample Identification

SL-512-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5
SL-599-SA6-SB-4.0-5.0
SL-999-SA6-SB-0.0-0.5
SL-548-SA6-SB-0.0-0.5
SL-948-SA6-SB-0.0-0.5
SL-555-SA6-SB-0.0-0.5
SL-597-SA6-SB-3.5-4.5
SL-605-SA6-SB-4.0-5.0
SL-609-SA6-SB-2.0-3.0
SL-610-SA6-SB-3.0-4.0
SL-594-SA6-SB-0.0-0.5
SL-595-SA6-SB-0.0-0.5
SL-595-SAS6-SB-2.0-3.0
SL-593-SA6-SB-0.0-0.5
SL-599-SA6-SB-0.0-0.5MS
SL-599-SA6-SB-0.0-0.5MSD
SL-548-SA6-SB-0.0-0.5MS
SL-548-SA6-SB-0.0-0.5MSD

Introduction

This data review covers 19 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.

Samples EB1-121312, EB2-121312 (both from SDG 12L106), and EB-121212 (from SDG 12L093) were identified as equipment blanks. No total petroleum hydrocarbons as extractables contaminants were found.

Sample FB-111412 (from SDG 280-35930-1) was identified as a field blank. No total petroleum hydrocarbons as extractables 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

All compound quantitations were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12L076	All compounds reported below the RL.	J (all detects)	A

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

Samples SL-599-SA6-SB-0.0-0.5 and SL-999-SA6-SB-0.0-0.5 and samples SL-548-SA6-SB-0.0-0.5 and SL-948-SA6-SB-0.0-0.5 were identified as field duplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-599-SA6-SB-0.0-0.5	SL-999-SA6-SB-0.0-0.5			
EFH (C21-C30)	8.9	7.5	17 (≤50)	-	-
Total EFH (C8-C40)	8.9	16	57 (≤50)	J (all detects)	A
EFH (C30-C40)	11U	8.2	200 (≤50)	J (all detects) UJ (all non-detects)	A

Compound	Concentration (mg/Kg)		RPD (Limits)	Flag	A or P
	SL-548-SA6-SB-0.0-0.5	SL-948-SA6-SB-0.0-0.5			
EFH (C21-C30)	4.4	3.8	15 (≤50)	-	-
Total EFH (C8-C40)	4.4	3.8	15 (≤50)	-	-

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 12L076

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12L076	SL-512-SA6-SB-0.0-0.5 SL-599-SA6-SB-0.0-0.5 SL-599-SA6-SB-4.0-5.0 SL-999-SA6-SB-0.0-0.5 SL-548-SA6-SB-0.0-0.5 SL-948-SA6-SB-0.0-0.5 SL-555-SA6-SB-0.0-0.5 SL-597-SA6-SB-3.5-4.5 SL-605-SA6-SB-4.0-5.0 SL-609-SA6-SB-2.0-3.0 SL-610-SA6-SB-3.0-4.0 SL-594-SA6-SB-0.0-0.5 SL-595-SA6-SB-0.0-0.5 SL-595-SAS6-SB-2.0-3.0 SL-593-SA6-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)
12L076	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	Total EFH (C8-C40)	J (all detects)	A	Field duplicates (RPD) (FD)
12L076	SL-599-SA6-SB-0.0-0.5 SL-999-SA6-SB-0.0-0.5	EFH (C30-C40)	J (all detects) UJ (all non-detects)	A	Field duplicates (RPD) (FD)

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 12L076

No Sample Data Qualified in this SDG

LDC #: 29414C8 **VALIDATION COMPLETENESS WORKSHEET** Date: 4/2/13
SDG #: 12L076 Level IV Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

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: 12/11/12
II	Initial calibration	A	%RSD ≤ 20
III.	Calibration verification/ICV	A	ICV/CCV ≤ 20
IV.	Blanks	A	
V	Surrogate recovery	A	
VI.	Matrix spike/Matrix spike duplicates	A	
VII.	Laboratory control samples	A	LCS/D
VIII.	Target compound identification	A	
IX.	Compound quantitation/RL/LOQ/LODs	A	
X.	System Performance	A	
XI.	Overall assessment of data	A	
XII.	Field duplicates	SW	D = 3, 4 5, 6 EB-121212 (SDG# 12L
XIII.	Field blanks	ND	FB = FB-111412 (SDG# 280-35930-1) EB = EB1-121312 and EB2-121312 (SDG# 12L06

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-512-SA6-SB-0.0-0.5	11	SL-610-SA6-SB-3.0-4.0	21	MBLK1S	31	
2	SL-599-SA6-SB-0.0-0.5	12	SL-594-SA6-SB-0.0-0.5	22		32	
3	SL-599-SA6-SB-4.0-5.0	13	SL-595-SA6-SB-0.0-0.5	23		33	
4	SL-999-SA6-SB-0.0-0.5	14	SL-595-SAS6-SB-2.0-3.0	24		34	
5	SL-548-SA6-SB-0.0-0.5	15	SL-593-SA6-SB-0.0-0.5	25		35	
6	SL-948-SA6-SB-0.0-0.5	16	SL-599-SA6-SB-0.0-0.5MS	26		36	
7	SL-555-SA6-SB-0.0-0.5	17	SL-599-SA6-SB-0.0-0.5MSD	27		37	
8	SL-597-SA6-SB-3.5-4.5	18	SL-548-SA6-SB-0.0-0.5MS	28		38	
9	SL-605-SA6-SB-4.0-5.0	19	SL-548-SA6-SB-0.0-0.5MSD	29		39	
10	SL-609-SA6-SB-2.0-3.0	20		30		40	

Notes:

LDC #: 29414C8

VALIDATION FINDINGS CHECKLIST

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

Method: / GC _____ HPLC

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

LDC #: 29414C8

VALIDATION FINDINGS CHECKLIST

Reviewer: FT
2nd Reviewer: [illegible]

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

LDC #: 29414C8

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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

METHOD: ___ GC ___ HPLC
Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

code= Fd

Compound	Concentration (mg/kg)		%RPD Limit 50	Qualification Parent only / All Samples
	2	4		
EFH (C21-C30)	8.9	7.5	17	-
Total EFH (C8-C40)	8.9	16	57	J/A det
EFH (C30-C40)	11U	8.2	200	J/UJ/A

Compound	Concentration (mg/kg)		%RPD Limit 50	Qualification Parent only / All Samples
	5	6		
EFH (C21-C30)	4.4	3.8	15	-
Total EFH (C8-C40)	4.4	3.8	15	-

LDC #: 29414G

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: F7
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC _____

The calibration factors (CF) and relative standard deviation (%RSD) were recalculated using the following calculations:

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

Where: A = Area of compound
C = Concentration of compound
S = Standard deviation of calibration factors
X = Mean of calibration factors

#	Standard ID	Calibration Date	Compound	Reported CF (100 std)	Recalculated CF (100 std)	Reported Ave CF (initial)	Recalculated Ave CF (intial)	Reported %RSD	Recalculated %RSD
1	ICAL	10/29/12	Total EFH (c8-c40)	21430	21430	22835.2	22835.2	6.4	6.4
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 #: 29414cs

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: FT
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

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	LL13007A	12/13/12	Total EFH (c8-c40)	500	473.97	473.97	5	5
	LL13027A	12/13/12	↓	500	517.89	517.89	4	4
2								
	LL13039A	12/13/12	↓	500	512.77	512.77	3	3
3								
4								

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

LDC #: 29414C8

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Reviewer: FT
2nd reviewer: [illegible]

METHOD: ✓ GC __ HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Bromobenzene	NS	100	75.50Y	75.5	75.5	0
Hexacosane	↓	25	21.509	86.0	86.0	0

Sample ID:

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

Sample ID:

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

LDC #: 29414C8

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

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

METHOD: ✓ GC ___HPLC

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

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

MS/MSD samples: 16 + 17

Compound	Spike Added (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 (C_8-C_{40})	551	551	8.88	551	558	98	98	100	100	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 #: 29414C8

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: FJ

2nd Reviewer: [illegible]

METHOD: ✓ GC __HPLC

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

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

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory Control Sample
SC = Sample concentration
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: LCS/D

Compound	Spike Added (mg/kg)		Sample Conc. (mg/kg)	Spike Sample Concentration (mg/kg)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (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)	500	500	ND	505	510	101	101	102	102	1	1

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

LDC #: 29414c8

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: ✓ GC __ HPLC

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

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

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

Example:

Sample ID. #1 Compound Name Total EFH (c8-c40)

Concentration = $\frac{5701774 \quad (10)}{22835 \quad 21467 \quad (10.03) \quad (0.947)}$

= 260 mg/kg

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

Comments: _____

SAMPLE DELIVERY GROUP

12L093

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-Dec-2012	TB-121212	L093-02	TB	5030B	8015B GRO	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5	L093-06	N	3550B	8015B EFH	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5	L093-06	N	3550B	8082	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5	L093-06	N	3550B	8270C SIM	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5	L093-06	N	7471A	7471A	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5	L093-06	N	TOTAL	6020	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	L093-06M	MS	3550B	8015B EFH	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	L093-06M	MS	3550B	8082	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	L093-06M	MS	3550B	8270C SIM	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	L093-06M	MS	7471A	7471A	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MS	L093-06M	MS	TOTAL	6020	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	L093-06S	MSD	3550B	8015B EFH	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	L093-06S	MSD	3550B	8082	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	L093-06S	MSD	3550B	8270C SIM	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	L093-06S	MSD	7471A	7471A	III
12-Dec-2012	SL-614-SA6-SB-0.0-0.5MSD	L093-06S	MSD	TOTAL	6020	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	L093-07	FD	3550B	8015B EFH	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	L093-07	FD	3550B	8082	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	L093-07	FD	3550B	8270C SIM	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	L093-07	FD	7471A	7471A	III
12-Dec-2012	SL-1014-SA6-SB-0.0-0.5	L093-07	FD	TOTAL	6020	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	L093-03	N	3550B	8015B EFH	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	L093-03	N	3550B	8082	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	L093-03	N	3550B	8270C SIM	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	L093-03	N	7471A	7471A	III
12-Dec-2012	SL-611-SA6-SB-0.0-0.5	L093-03	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
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	L093-04	N	3550B	8015B EFH	III
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	L093-04	N	3550B	8082	III
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	L093-04	N	3550B	8270C SIM	III
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	L093-04	N	7471A	7471A	III
12-Dec-2012	SL-611-SA6-SB-3.0-4.0	L093-04	N	TOTAL	6020	III
12-Dec-2012	SL-611-SA6-SB-3.5	L093-05	N	5035	8015B GRO	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	L093-11	N	3550B	8015B EFH	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	L093-11	N	3550B	8082	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	L093-11	N	3550B	8270C SIM	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	L093-11	N	7471A	7471A	III
12-Dec-2012	SL-613-SA6-SB-0.0-0.5	L093-11	N	TOTAL	6020	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	L093-08	N	3550B	8015B EFH	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	L093-08	N	3550B	8082	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	L093-08	N	3550B	8270C SIM	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	L093-08	N	7471A	7471A	III
12-Dec-2012	SL-602-SA6-SB-0.0-0.5	L093-08	N	TOTAL	6020	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	L093-09	N	3550B	8015B EFH	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	L093-09	N	3550B	8082	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	L093-09	N	3550B	8270C SIM	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	L093-09	N	7471A	7471A	III
12-Dec-2012	SL-602-SA6-SB-4.0-5.0	L093-09	N	TOTAL	6020	III
12-Dec-2012	SL-602-SA6-SB-4.5	L093-10	N	5035	8015B GRO	III
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	L093-12	N	3550B	8015B EFH	III
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	L093-12	N	3550B	8082	III
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	L093-12	N	3550B	8270C SIM	III
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	L093-12	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
12-Dec-2012	SL-615-SA6-SB-0.0-0.5	L093-12	N	TOTAL	6020	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	L093-13	N	3550B	8015B EFH	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	L093-13	N	3550B	8082	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	L093-13	N	3550B	8270C SIM	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	L093-13	N	7471A	7471A	III
12-Dec-2012	SL-615-SA6-SB-4.0-5.0	L093-13	N	TOTAL	6020	III
12-Dec-2012	SL-615-SA6-SB-4.5	L093-14	N	5035	8015B GRO	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	L093-18	N	3550B	8015B EFH	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	L093-18	N	3550B	8082	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	L093-18	N	3550B	8270C SIM	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	L093-18	N	7471A	7471A	III
12-Dec-2012	SL-621-SA6-SB-0.0-0.5	L093-18	N	TOTAL	6020	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	L093-19	N	3550B	8015B EFH	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	L093-19	N	3550B	8082	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	L093-19	N	3550B	8270C SIM	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	L093-19	N	7471A	7471A	III
12-Dec-2012	SL-621-SA6-SB-2.5-3.5	L093-19	N	TOTAL	6020	III
12-Dec-2012	SL-621-SA6-SB-3.0	L093-20	N	5035	8015B GRO	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	L093-15	N	3550B	8015B EFH	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	L093-15	N	3550B	8082	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	L093-15	N	3550B	8270C SIM	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	L093-15	N	7471A	7471A	III
12-Dec-2012	SL-616-SA6-SB-0.0-0.5	L093-15	N	TOTAL	6020	III
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	L093-16	N	3550B	8015B EFH	III
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	L093-16	N	3550B	8082	III
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	L093-16	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
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	L093-16	N	7471A	7471A	III
12-Dec-2012	SL-616-SA6-SB-4.0-5.0	L093-16	N	TOTAL	6020	III
12-Dec-2012	SL-616-SA6-SB-4.5	L093-17	N	5035	8015B GRO	III
12-Dec-2012	SL-678-SA6-SB-3.0R	L093-21	N	5035	8015B GRO	III
12-Dec-2012	EB-121212	L093-01	EB	3520C	8015B EFH	III
12-Dec-2012	EB-121212	L093-01	EB	3520C	8082	III
12-Dec-2012	EB-121212	L093-01	EB	3520C	8270C SIM	III
12-Dec-2012	EB-121212	L093-01	EB	5030B	8015B GRO	III
12-Dec-2012	EB-121212	L093-01	EB	7470A	7470A	III
12-Dec-2012	EB-121212	L093-01	EB	NONE	7199	III
12-Dec-2012	EB-121212	L093-01	EB	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: 12L093 **Laboratory:** EMXT

EDD Filename: Prep12L093 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

Method: 6020 **Matrix:** AQ

Sample ID: EB-121212 *Collected:* 12/12/2012 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
CALCIUM	0.0268	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
NICKEL	0.000247	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-1014-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 8:10:00 *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	0.149	J	0.105	MDL	0.527	PQL	MG/KG	J	Z, Q
BARIUM	100		0.211	MDL	0.527	PQL	MG/KG	J	*XI
CADMIUM	0.241	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
MOLYBDENUM	0.517	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
SILVER	0.190	J	0.0527	MDL	0.527	PQL	MG/KG	J	Z
SODIUM	63.3	J	52.7	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.258	J	0.0527	MDL	0.422	PQL	MG/KG	J	Z

Sample ID: SL-602-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 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	0.138	J	0.107	MDL	0.535	PQL	MG/KG	J	Z, Q
BARIUM	125		0.214	MDL	0.535	PQL	MG/KG	J	*XI
BERYLLIUM	0.530	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
CADMIUM	0.323	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
MOLYBDENUM	0.514	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
SILVER	0.0931	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
SODIUM	104	J	53.5	MDL	107	PQL	MG/KG	J	Z
THALLIUM	0.262	J	0.0535	MDL	0.428	PQL	MG/KG	J	Z

Sample ID: SL-602-SA6-SB-4.0-5.0 *Collected:* 12/12/2012 10:35:00 *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	0.119	J	0.105	MDL	0.523	PQL	MG/KG	J	Z, Q
BARIUM	94.9		0.209	MDL	0.523	PQL	MG/KG	J	*XI

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: **SL-602-SA6-SB-4.0-5.0** ***Collected:*** **12/12/2012 10:35:00** ***Analysis Type:*** **RES/TOT** ***Dilution:*** **0.995**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.177	J	0.0523	MDL	0.523	PQL	MG/KG	J	Z
MOLYBDENUM	0.382	J	0.0523	MDL	0.523	PQL	MG/KG	J	Z
SILVER	0.0569	J	0.0523	MDL	0.523	PQL	MG/KG	J	Z
THALLIUM	0.227	J	0.0523	MDL	0.419	PQL	MG/KG	J	Z

Sample ID: **SL-611-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 8:45:00** ***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	0.163	J	0.109	MDL	0.546	PQL	MG/KG	J	Z, Q
BARIUM	80.0		0.218	MDL	0.546	PQL	MG/KG	J	*XI
BERYLLIUM	0.503	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
CADMIUM	0.106	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
MOLYBDENUM	0.352	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
SODIUM	89.9	J	54.6	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.295	J	0.0546	MDL	0.437	PQL	MG/KG	J	Z

Sample ID: **SL-611-SA6-SB-3.0-4.0** ***Collected:*** **12/12/2012 9:10:00** ***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	0.197	J	0.104	MDL	0.519	PQL	MG/KG	J	Z, Q
BARIUM	87.0		0.208	MDL	0.519	PQL	MG/KG	J	*XI
CADMIUM	0.127	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
MOLYBDENUM	0.482	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
SELENIUM	0.215	J	0.208	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.401	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z

Sample ID: **SL-613-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 9:45:00** ***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	0.153	J	0.105	MDL	0.526	PQL	MG/KG	J	Z, Q
BARIUM	105		0.211	MDL	0.526	PQL	MG/KG	J	*XI
BERYLLIUM	0.461	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
CADMIUM	0.255	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
MOLYBDENUM	0.451	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
SILVER	0.0932	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory:** EMXT

EDD Filename: Prep12L093 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-613-SA6-SB-0.0-0.5 **Collected:** 12/12/2012 9:45:00 **Analysis Type:** RES/TOT **Dilution:** 0.976

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SODIUM	61.8	J	52.6	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.241	J	0.0526	MDL	0.421	PQL	MG/KG	J	Z

Sample ID: SL-614-SA6-SB-0.0-0.5 **Collected:** 12/12/2012 8:00:00 **Analysis Type:** RES/TOT **Dilution:** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.168	J	0.104	MDL	0.520	PQL	MG/KG	J	Z, Q
BARIUM	103		0.208	MDL	0.520	PQL	MG/KG	J	*XI
CADMIUM	0.240	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
SILVER	0.232	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
SODIUM	66.3	J	52.0	MDL	104	PQL	MG/KG	J	Z
THALLIUM	0.258	J	0.0520	MDL	0.416	PQL	MG/KG	J	Z

Sample ID: SL-615-SA6-SB-0.0-0.5 **Collected:** 12/12/2012 11:05:00 **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	0.146	J	0.111	MDL	0.555	PQL	MG/KG	J	Z, Q
BARIUM	135		0.222	MDL	0.555	PQL	MG/KG	J	*XI
CADMIUM	0.291	J	0.0555	MDL	0.555	PQL	MG/KG	J	Z
MOLYBDENUM	0.541	J	0.0555	MDL	0.555	PQL	MG/KG	J	Z
SODIUM	75.6	J	55.5	MDL	111	PQL	MG/KG	J	Z
THALLIUM	0.295	J	0.0555	MDL	0.444	PQL	MG/KG	J	Z

Sample ID: SL-615-SA6-SB-4.0-5.0 **Collected:** 12/12/2012 11:25:00 **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	0.124	J	0.104	MDL	0.520	PQL	MG/KG	J	Z, Q
BARIUM	112		0.208	MDL	0.520	PQL	MG/KG	J	*XI
CADMIUM	0.175	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
MOLYBDENUM	0.361	J	0.0520	MDL	0.520	PQL	MG/KG	J	Z
SODIUM	102	J	52.0	MDL	104	PQL	MG/KG	J	Z
THALLIUM	0.249	J	0.0520	MDL	0.416	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory:** EMXT

EDD Filename: Prep12L093 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

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

Sample ID: SL-616-SA6-SB-0.0-0.5 ***Collected:*** 12/12/2012 2:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.159	J	0.106	MDL	0.529	PQL	MG/KG	J	Z, Q
BARIUM	123		0.212	MDL	0.529	PQL	MG/KG	J	*XI
BERYLLIUM	0.511	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
CADMIUM	0.274	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
MOLYBDENUM	0.520	J	0.0529	MDL	0.529	PQL	MG/KG	J	Z
SODIUM	60.2	J	52.9	MDL	106	PQL	MG/KG	J	Z
THALLIUM	0.250	J	0.0529	MDL	0.423	PQL	MG/KG	J	Z

Sample ID: SL-616-SA6-SB-4.0-5.0 ***Collected:*** 12/12/2012 2:15:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.104	MDL	0.519	PQL	MG/KG	J	Z, Q
BARIUM	111		0.208	MDL	0.519	PQL	MG/KG	J	*XI
CADMIUM	0.141	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.249	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z

Sample ID: SL-621-SA6-SB-0.0-0.5 ***Collected:*** 12/12/2012 1:15:00 ***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	0.187	J	0.108	MDL	0.541	PQL	MG/KG	J	Z, Q
BARIUM	118		0.216	MDL	0.541	PQL	MG/KG	J	*XI
CADMIUM	0.267	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SILVER	0.0687	J	0.0541	MDL	0.541	PQL	MG/KG	J	Z
SODIUM	65.7	J	54.1	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.307	J	0.0541	MDL	0.433	PQL	MG/KG	J	Z

Sample ID: SL-621-SA6-SB-2.5-3.5 ***Collected:*** 12/12/2012 1:30:00 ***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	0.167	J	0.105	MDL	0.524	PQL	MG/KG	J	Z, Q
BARIUM	106		0.209	MDL	0.524	PQL	MG/KG	J	*XI
CADMIUM	0.104	J	0.0524	MDL	0.524	PQL	MG/KG	J	Z
SODIUM	93.3	J	52.4	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.246	J	0.0524	MDL	0.419	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

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

Sample ID: **SL-1014-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 8:10:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.2	J	2.7	MDL	5.3	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.2	J	2.7	MDL	5.3	PQL	MG/KG	J	Z

Sample ID: **SL-602-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 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
EFH(C21-C30)	4.4	J	2.7	MDL	5.4	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	4.4	J	2.7	MDL	5.4	PQL	MG/KG	J	Z

Sample ID: **SL-613-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 9:45:00** ***Analysis Type:*** **RES** ***Dilution:*** **1**

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.8	J	2.7	MDL	5.4	PQL	MG/KG	J	Z
EFH(C30-C40)	5.7	J	5.4	MDL	11	PQL	MG/KG	J	Z

Sample ID: **SL-614-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 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
EFH(C21-C30)	3.5	J	2.7	MDL	5.3	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.5	J	2.7	MDL	5.3	PQL	MG/KG	J	Z

Sample ID: **SL-615-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 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)	5.4	J	2.8	MDL	5.6	PQL	MG/KG	J	Z
EFH(C30-C40)	5.8	J	5.6	MDL	11	PQL	MG/KG	J	Z

Sample ID: **SL-616-SA6-SB-0.0-0.5** ***Collected:*** **12/12/2012 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
EFH(C21-C30)	3.3	J	2.6	MDL	5.3	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.3	J	2.6	MDL	5.3	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory:** EMXT

EDD Filename: Prep12L093 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: SVOA

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

Sample ID: SL-621-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 1:15:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.7	J	2.7	MDL	5.4	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.7	J	2.7	MDL	5.4	PQL	MG/KG	J	Z

Method Category: SVOA

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

Sample ID: SL-1014-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 8:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
BENZO(A)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
BENZO(B)FLUORANTHENE	2.7	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(E)PYRENE	5.3	U	2.7	MDL	5.3	PQL	UG/KG	UJ	FD
BENZO(G,H,I)PERYLENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	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
DIBENZO(A,H)ANTHRACENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD
INDENO(1,2,3-CD)PYRENE	11	U	2.7	MDL	11	PQL	UG/KG	UJ	FD

Sample ID: SL-602-SA6-SB-0.0-0.5 *Collected:* 12/12/2012 10:15:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	2.8	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	3.1	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	3.3	J	2.7	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	4.1	J	2.7	MDL	11	PQL	UG/KG	J	Z
PYRENE	3.6	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-602-SA6-SB-4.0-5.0 *Collected:* 12/12/2012 10:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	2.8	J	2.6	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory:** EMXT

EDD Filename: Prep12L093 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: SVOA

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

Sample ID: SL-613-SA6-SB-0.0-0.5 **Collected:** 12/12/2012 9:45:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	2.8	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-614-SA6-SB-0.0-0.5 **Collected:** 12/12/2012 8:00:00 **Analysis Type:** RES-BASE/NEUTRAL **Dilution:** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.7	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	4.5	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(B)FLUORANTHENE	9.5	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(E)PYRENE	6.3		2.7	MDL	5.3	PQL	UG/KG	J	FD
BENZO(G,H,I)PERYLENE	3.4	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(K)FLUORANTHENE	2.8	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
CHRYSENE	3.1	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
DIBENZO(A,H)ANTHRACENE	2.7	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD
INDENO(1,2,3-CD)PYRENE	4.6	J	2.7	MDL	11	PQL	UG/KG	J	Z, FD

Method Category: VOA

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

Sample ID: EB-121212 **Collected:** 12/12/2012 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)	18	J	10	MDL	50	PQL	UG/L	U	T

Sample ID: TB-121212 **Collected:** 12/12/2012 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)	12	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
*XI	ICP Serial Dilution
A	Professional Judgment
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L093

Trip Blank Outlier Report

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

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

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-121212(RES)	12/12/2012 8:00:00 AM	GASOLINE RANGE ORGANICS (C5-C12)	12 UG/L	EB1-121312 EB-121212 EB2-121312 FB-111412 SL-1014-SA6-SB-0.0-0.5 SL-602-SA6-SB-0.0-0.5 SL-602-SA6-SB-4.0-5.0 SL-602-SA6-SB-4.5 SL-611-SA6-SB-0.0-0.5 SL-611-SA6-SB-3.0-4.0 SL-611-SA6-SB-3.5 SL-613-SA6-SB-0.0-0.5 SL-614-SA6-SB-0.0-0.5 SL-615-SA6-SB-0.0-0.5 SL-615-SA6-SB-4.0-5.0 SL-615-SA6-SB-4.5 SL-616-SA6-SB-0.0-0.5 SL-616-SA6-SB-4.0-5.0 SL-616-SA6-SB-4.5 SL-621-SA6-SB-0.0-0.5 SL-621-SA6-SB-2.5-3.5 SL-621-SA6-SB-3.0 SL-678-SA6-SB-3.0R

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-121212(RES)	GASOLINE RANGE ORGANICS (C5-C12)	18 UG/L	50U UG/L

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: 12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-614-SA6-SB-0.0-0.5MS (TOT) **SL-614-SA6-SB-0.0-0.5MSD (TOT)** (SL-1014-SA6-SB-0.0-0.5 SL -602-SA6-SB-0.0-0.5 SL -602-SA6-SB-4.0-5.0 SL -611-SA6-SB-0.0-0.5 SL -611-SA6-SB-3.0-4.0 SL -613-SA6-SB-0.0-0.5 SL -614-SA6-SB-0.0-0.5 SL -615-SA6-SB-0.0-0.5 SL -615-SA6-SB-4.0-5.0 SL -616-SA6-SB-0.0-0.5 SL -616-SA6-SB-4.0-5.0 SL -621-SA6-SB-0.0-0.5 SL -621-SA6-SB-2.5-3.5)	TITANIUM	209	127	75.00-125.00	-	TITANIUM	No Qual, >4X
SL-614-SA6-SB-0.0-0.5MS (TOT) **SL-614-SA6-SB-0.0-0.5MSD (TOT)** (SL-1014-SA6-SB-0.0-0.5 SL -602-SA6-SB-0.0-0.5 SL -602-SA6-SB-4.0-5.0 SL -611-SA6-SB-0.0-0.5 SL -611-SA6-SB-3.0-4.0 SL -613-SA6-SB-0.0-0.5 SL -614-SA6-SB-0.0-0.5 SL -615-SA6-SB-0.0-0.5 SL -615-SA6-SB-4.0-5.0 SL -616-SA6-SB-0.0-0.5 SL -616-SA6-SB-4.0-5.0 SL -621-SA6-SB-0.0-0.5 SL -621-SA6-SB-2.5-3.5)	MANGANESE	22	3	75.00-125.00	-	MANGANESE	No Qual, >4X
SL-614-SA6-SB-0.0-0.5MS (TOT) **SL-614-SA6-SB-0.0-0.5MSD (TOT)** (SL-1014-SA6-SB-0.0-0.5 SL -602-SA6-SB-0.0-0.5 SL -602-SA6-SB-4.0-5.0 SL -611-SA6-SB-0.0-0.5 SL -611-SA6-SB-3.0-4.0 SL -613-SA6-SB-0.0-0.5 SL -614-SA6-SB-0.0-0.5 SL -615-SA6-SB-0.0-0.5 SL -615-SA6-SB-4.0-5.0 SL -616-SA6-SB-0.0-0.5 SL -616-SA6-SB-4.0-5.0 SL -621-SA6-SB-0.0-0.5 SL -621-SA6-SB-2.5-3.5)	ALUMINUM ANTIMONY	72 39	59 38	75.00-125.00 75.00-125.00	- -	ALUMINUM ANTIMONY	J(all detects) UJ(all non-detects) Al, No Qual, >4X

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-614-SA6-SB-0.0-0.5 (TOT)	SL-1014-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	13900	13500	3	50.00	No Qualifiers Applied
ANTIMONY	0.168	0.149	12	50.00	
ARSENIC	3.94	3.88	2	50.00	
BARIUM	103	100	3	50.00	
BERYLLIUM	0.582	0.546	6	50.00	
CADMIUM	0.240	0.241	0	50.00	
CALCIUM	2040	1990	2	50.00	
CHROMIUM	17.1	16.6	3	50.00	
COBALT	5.53	5.20	6	50.00	
COPPER	8.33	8.13	2	50.00	
IRON	18600	18700	1	50.00	
LEAD	11.3	9.90	13	50.00	
LITHIUM	21.5	21.3	1	50.00	
MAGNESIUM	4230	4090	3	50.00	
MANGANESE	279	264	6	50.00	
MOLYBDENUM	0.535	0.517	3	50.00	
NICKEL	11.3	10.8	5	50.00	
PHOSPHORUS	347	355	2	50.00	
POTASSIUM	3500	3540	1	50.00	
SILVER	0.232	0.190	20	50.00	
SODIUM	66.3	63.3	5	50.00	
STRONTIUM	17.0	16.6	2	50.00	
THALLIUM	0.258	0.258	0	50.00	
TITANIUM	843	833	1	50.00	
VANADIUM	30.9	30.0	3	50.00	
ZINC	50.0	49.4	1	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-614-SA6-SB-0.0-0.5	SL-1014-SA6-SB-0.0-0.5			
EFH(C21-C30)	3.5	3.2	9	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	3.5	3.2	9	50.00	

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-614-SA6-SB-0.0-0.5	SL-1014-SA6-SB-0.0-0.5			
BENZO(A)ANTHRACENE	3.7	11 U	200	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	4.5	11 U	200	50.00	
BENZO(B)FLUORANTHENE	9.5	2.7	111	50.00	
BENZO(E)PYRENE	6.3	5.3 U	200	50.00	
BENZO(G,H,I)PERYLENE	3.4	11 U	200	50.00	
BENZO(K)FLUORANTHENE	2.8	11 U	200	50.00	
CHRYSENE	3.1	11 U	200	50.00	
DIBENZO(A,H)ANTHRACENE	2.7	11 U	200	50.00	
INDENO(1,2,3-CD)PYRENE	4.6	11 U	200	50.00	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 9045D
Matrix: SO

Analyte	*Concentration (PH UNIT)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-614-SA6-SB-0.0-0.5	SL-1014-SA6-SB-0.0-0.5			
PH	6.62	6.48	2		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-121212	CALCIUM	J	0.0268	0.100	PQL	MG/L	J (all detects)
	NICKEL	J	0.000247	0.00100	PQL	MG/L	

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-121212	GASOLINE RANGE ORGANICS (C5-C12)	J	18	50	PQL	UG/L	J (all detects)
TB-121212	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-1014-SA6-SB-0.0-0.5	ANTIMONY	J	0.149	0.527	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.241	0.527	PQL	MG/KG	
	MOLYBDENUM	J	0.517	0.527	PQL	MG/KG	
	SILVER	J	0.190	0.527	PQL	MG/KG	
	SODIUM	J	63.3	105	PQL	MG/KG	
	THALLIUM	J	0.258	0.422	PQL	MG/KG	
SL-602-SA6-SB-0.0-0.5	ANTIMONY	J	0.138	0.535	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.530	0.535	PQL	MG/KG	
	CADMIUM	J	0.323	0.535	PQL	MG/KG	
	MOLYBDENUM	J	0.514	0.535	PQL	MG/KG	
	SILVER	J	0.0931	0.535	PQL	MG/KG	
	SODIUM	J	104	107	PQL	MG/KG	
	THALLIUM	J	0.262	0.428	PQL	MG/KG	
SL-602-SA6-SB-4.0-5.0	ANTIMONY	J	0.119	0.523	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.177	0.523	PQL	MG/KG	
	MOLYBDENUM	J	0.382	0.523	PQL	MG/KG	
	SILVER	J	0.0569	0.523	PQL	MG/KG	
	THALLIUM	J	0.227	0.419	PQL	MG/KG	
SL-611-SA6-SB-0.0-0.5	ANTIMONY	J	0.163	0.546	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.503	0.546	PQL	MG/KG	
	CADMIUM	J	0.106	0.546	PQL	MG/KG	
	MOLYBDENUM	J	0.352	0.546	PQL	MG/KG	
	SODIUM	J	89.9	109	PQL	MG/KG	
	THALLIUM	J	0.295	0.437	PQL	MG/KG	
SL-611-SA6-SB-3.0-4.0	ANTIMONY	J	0.197	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.127	0.519	PQL	MG/KG	
	MOLYBDENUM	J	0.482	0.519	PQL	MG/KG	
	SELENIUM	J	0.215	0.519	PQL	MG/KG	
	THALLIUM	J	0.401	0.415	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-613-SA6-SB-0.0-0.5	ANTIMONY	J	0.153	0.526	PQL	MG/KG	
	BERYLLIUM	J	0.461	0.526	PQL	MG/KG	
	CADMIUM	J	0.255	0.526	PQL	MG/KG	
	MOLYBDENUM	J	0.451	0.526	PQL	MG/KG	J (all detects)
	SILVER	J	0.0932	0.526	PQL	MG/KG	
	SODIUM	J	61.8	105	PQL	MG/KG	
	THALLIUM	J	0.241	0.421	PQL	MG/KG	
SL-614-SA6-SB-0.0-0.5	ANTIMONY	J	0.168	0.520	PQL	MG/KG	
	CADMIUM	J	0.240	0.520	PQL	MG/KG	
	SILVER	J	0.232	0.520	PQL	MG/KG	J (all detects)
	SODIUM	J	66.3	104	PQL	MG/KG	
	THALLIUM	J	0.258	0.416	PQL	MG/KG	
SL-615-SA6-SB-0.0-0.5	ANTIMONY	J	0.146	0.555	PQL	MG/KG	
	CADMIUM	J	0.291	0.555	PQL	MG/KG	
	MOLYBDENUM	J	0.541	0.555	PQL	MG/KG	J (all detects)
	SODIUM	J	75.6	111	PQL	MG/KG	
	THALLIUM	J	0.295	0.444	PQL	MG/KG	
SL-615-SA6-SB-4.0-5.0	ANTIMONY	J	0.124	0.520	PQL	MG/KG	
	CADMIUM	J	0.175	0.520	PQL	MG/KG	
	MOLYBDENUM	J	0.361	0.520	PQL	MG/KG	J (all detects)
	SODIUM	J	102	104	PQL	MG/KG	
	THALLIUM	J	0.249	0.416	PQL	MG/KG	
SL-616-SA6-SB-0.0-0.5	ANTIMONY	J	0.159	0.529	PQL	MG/KG	
	BERYLLIUM	J	0.511	0.529	PQL	MG/KG	
	CADMIUM	J	0.274	0.529	PQL	MG/KG	
	MOLYBDENUM	J	0.520	0.529	PQL	MG/KG	J (all detects)
	SODIUM	J	60.2	106	PQL	MG/KG	
	THALLIUM	J	0.250	0.423	PQL	MG/KG	
SL-616-SA6-SB-4.0-5.0	ANTIMONY	J	0.116	0.519	PQL	MG/KG	
	CADMIUM	J	0.141	0.519	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.249	0.415	PQL	MG/KG	
SL-621-SA6-SB-0.0-0.5	ANTIMONY	J	0.187	0.541	PQL	MG/KG	
	CADMIUM	J	0.267	0.541	PQL	MG/KG	
	SILVER	J	0.0687	0.541	PQL	MG/KG	J (all detects)
	SODIUM	J	65.7	108	PQL	MG/KG	
	THALLIUM	J	0.307	0.433	PQL	MG/KG	
SL-621-SA6-SB-2.5-3.5	ANTIMONY	J	0.167	0.524	PQL	MG/KG	
	CADMIUM	J	0.104	0.524	PQL	MG/KG	
	SODIUM	J	93.3	105	PQL	MG/KG	J (all detects)
	THALLIUM	J	0.246	0.419	PQL	MG/KG	

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1014-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.2	5.3	PQL	MG/KG	
	TOTAL EFH(C8-C40)	J	3.2	5.3	PQL	MG/KG	J (all detects)
SL-602-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.4	5.4	PQL	MG/KG	
	TOTAL EFH(C8-C40)	J	4.4	5.4	PQL	MG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L093 **Laboratory: EMXT**

EDD Filename: Prep12L093 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-613-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.8	5.4	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	5.7	11	PQL	MG/KG	
SL-614-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.5	5.3	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.5	5.3	PQL	MG/KG	
SL-615-SA6-SB-0.0-0.5	EFH(C21-C30)	J	5.4	5.6	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	5.8	11	PQL	MG/KG	
SL-616-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.3	5.3	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.3	5.3	PQL	MG/KG	
SL-621-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.7	5.4	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.7	5.4	PQL	MG/KG	

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1014-SA6-SB-0.0-0.5	BENZO(B)FLUORANTHENE	J	2.7	11	PQL	UG/KG	J (all detects)
SL-602-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	2.8	11	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	3.1	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	3.3	11	PQL	UG/KG	
	FLUORANTHENE	J	4.1	11	PQL	UG/KG	
	PYRENE	J	3.6	11	PQL	UG/KG	
SL-602-SA6-SB-4.0-5.0	BENZO(A)PYRENE	J	2.8	11	PQL	UG/KG	J (all detects)
SL-613-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	2.8	11	PQL	UG/KG	J (all detects)
SL-614-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.7	11	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	4.5	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	9.5	11	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	3.4	11	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	2.8	11	PQL	UG/KG	
	CHRYSENE	J	3.1	11	PQL	UG/KG	
	DIBENZO(A,H)ANTHRACENE	J	2.7	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.6	11	PQL	UG/KG	

LDC #: 29414D4 **VALIDATION COMPLETENESS WORKSHEET** Date: 4-2-13
SDG #: 12L093 ADR Page: 1 of 1
Laboratory: EMAX Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 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: 12/12/12
II.	ICP/MS Tune	-	
III.	Calibration	-	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	-	
VI.	Matrix Spike Analysis	N	MS/D (Al, Mn, Ti: 4X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	SW	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	-	4+5
XV	Field Blanks	SW	EB=1, ~~EB~~ * FB = EB1-121312 EB = EB2-121312 (12106) FB = FB-111412 (280-35930-1)

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

Validated Samples:

1	EB-121212 W	11	SL-616-SA6-SB-0.0-0.5	21		31	
2	SL-611-SA6-SB-0.0-0.5	12	SL-616-SA6-SB-4.0-5.0	22		32	
3	SL-611-SA6-SB-3.0-4.0	13	SL-621-SA6-SB-0.0-0.5	23		33	
4	SL-614-SAS6-SB-0.0-0.5	14	SL-621-SA6-SB-2.5-3.5	24		34	
5	SL-1014-SA6-SB-0.0-0.5	15	SL-614-SAS6-SB-0.0-0.5MS	25		35	
6	SL-602-SA6-SB-0.0-0.5	16	SL-614-SAS6-SB-0.0-0.5MSD	26		36	
7	SL-602-SA6-SB-4.0-5.0	17		27		37	
8	SL-613-SA6-SB-0.0-0.5	18		28		38	
9	SL-615-SA6-SB-0.0-0.5	19		29		39	
10	SL-615-SA6-SB-4.0-5.0	20		30		40	

Notes:

LDC #: 29414Q4

VALIDATION FINDINGS WORKSHEET
Field Blanks

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

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

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 12/12/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: ~~All Soil~~ None

Analyte	Blank ID	Sample Identification									
	EB-121212 (SDG: 12L093)	Action Limit	~~No Qual~~ 2								
Ca	0.0268	6.7									
Ni	0.000247	0.06175									

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 #: 29414 04

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: M

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

(Y) N N/A Field blanks were identified in this SDG.

(Y) N N/A Were target analytes detected in the field blanks?

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

Sampling date: 11/14/12 Soil factor applied 50x

Field blank type: (circle one) ~~Field Blank~~ / Rinsate / Other: _____ Associated Samples: All

Analyte	Blank ID	Sample Identification									
	FB-111412	5x		5	6	7	8	13			
Ag	0.00078	0.195		0.190	0.0931	0.0569	0.0932	0.0687			

Blank units: _____ **Associated sample units:** _____

Sampling date: _____ Soil factor applied _____

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: _____

Analyte	Blank ID	Sample Identification									

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 #: 29414D4

VALIDATION FINDINGS WORKSHEET
ICP Serial Dilution

Reviewer: OR
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
		4	S	Ba	13	All Soil	J/UJ/A (A)

Comments: _____

SDILICPMS.wpd

SAMPLE DELIVERY GROUP

12L106

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-Dec-2012	TB-121312	L106-03	TB	5030B	8015B GRO	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5	L106-04	N	3550B	8015B EFH	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5	L106-04	N	3550B	8082	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5	L106-04	N	3550B	8270C SIM	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5	L106-04	N	7471A	7471A	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5	L106-04	N	TOTAL	6020	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	L106-04M	MS	3550B	8015B EFH	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	L106-04M	MS	3550B	8082	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	L106-04M	MS	3550B	8270C SIM	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	L106-04M	MS	7471A	7471A	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MS	L106-04M	MS	TOTAL	6020	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	L106-04S	MSD	3550B	8015B EFH	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	L106-04S	MSD	3550B	8082	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	L106-04S	MSD	3550B	8270C SIM	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	L106-04S	MSD	7471A	7471A	III
13-Dec-2012	SL-585-SA6-SB-0.0-0.5MSD	L106-04S	MSD	TOTAL	6020	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	L106-05	FD	3550B	8015B EFH	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	L106-05	FD	3550B	8082	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	L106-05	FD	3550B	8270C SIM	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	L106-05	FD	7471A	7471A	III
13-Dec-2012	SL-985-SA6-SB-0.0-0.5	L106-05	FD	TOTAL	6020	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	L106-06	N	3550B	8015B EFH	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	L106-06	N	3550B	8082	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	L106-06	N	3550B	8270C SIM	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	L106-06	N	7471A	7471A	III
13-Dec-2012	SL-584-SA6-SB-0.0-0.5	L106-06	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	L106-10	N	3550B	8015B EFH	III
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	L106-10	N	3550B	8082	III
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	L106-10	N	3550B	8270C SIM	III
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	L106-10	N	7471A	7471A	III
13-Dec-2012	SL-582-SA6-SB-0.0-0.5	L106-10	N	TOTAL	6020	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	L106-07	N	3550B	8015B EFH	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	L106-07	N	3550B	8082	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	L106-07	N	3550B	8270C SIM	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	L106-07	N	7471A	7471A	III
13-Dec-2012	SL-593-SA6-SB-4.5-5.5	L106-07	N	TOTAL	6020	III
13-Dec-2012	SL-593-SA6-SB-5.0	L106-08	N	5035	8015B GRO	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	L106-09	N	3550B	8015B EFH	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	L106-09	N	3550B	8082	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	L106-09	N	3550B	8270C SIM	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	L106-09	N	7471A	7471A	III
13-Dec-2012	SL-682-SA6-SB-0.0-0.5	L106-09	N	TOTAL	6020	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	L106-11	N	3550B	8015B EFH	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	L106-11	N	3550B	8082	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	L106-11	N	3550B	8270C SIM	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	L106-11	N	7471A	7471A	III
13-Dec-2012	SL-682-SA6-SB-3.0-4.0	L106-11	N	TOTAL	6020	III
13-Dec-2012	SL-682-SA6-SB-3.5	L106-12	N	5035	8015B GRO	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	3550B	8015B EFH	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	3550B	8081A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	3550B	8082	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	3550B	8270C SIM	III

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

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	7471A	7471A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	GEN PREP	8151A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5	L106-13	N	TOTAL	6020	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	3550B	8015B EFH	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	3550B	8081A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	3550B	8082	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	3550B	8270C SIM	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	7471A	7471A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	GEN PREP	8151A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MS	L106-13M	MS	TOTAL	6020	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	3550B	8015B EFH	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	3550B	8081A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	3550B	8082	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	3550B	8270C SIM	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	7471A	7471A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	GEN PREP	8151A	III
13-Dec-2012	SL-685-SA6-SB-0.0-0.5MSD	L106-13S	MSD	TOTAL	6020	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	3550B	8015B EFH	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	3550B	8081A	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	3550B	8082	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	3550B	8270C SIM	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	7471A	7471A	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	GEN PREP	8151A	III
13-Dec-2012	SL-1085-SA6-SB-0.0-0.5	L106-14	FD	TOTAL	6020	III
13-Dec-2012	SL-685-SA6-SB-4.5	L106-16	N	5035	8015B GRO	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	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
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	3550B	8081A	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	3550B	8082	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	3550B	8270C SIM	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	7471A	7471A	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	GEN PREP	8151A	III
13-Dec-2012	SL-685-SA6-SB-4.0-5.0	L106-15	N	TOTAL	6020	III
13-Dec-2012	EB1-121312	L106-01	EB	3520C	8015B EFH	III
13-Dec-2012	EB1-121312	L106-01	EB	3520C	8081A	III
13-Dec-2012	EB1-121312	L106-01	EB	3520C	8082	III
13-Dec-2012	EB1-121312	L106-01	EB	3520C	8270C SIM	III
13-Dec-2012	EB1-121312	L106-01	EB	5030B	8015B GRO	III
13-Dec-2012	EB1-121312	L106-01	EB	7470A	7470A	III
13-Dec-2012	EB1-121312	L106-01	EB	GEN PREP	8151A	III
13-Dec-2012	EB1-121312	L106-01	EB	TOTAL	6020	III
13-Dec-2012	EB2-121312	L106-02	EB	3520C	8015B EFH	III
13-Dec-2012	EB2-121312	L106-02	EB	3520C	8081A	III
13-Dec-2012	EB2-121312	L106-02	EB	3520C	8082	III
13-Dec-2012	EB2-121312	L106-02	EB	3520C	8270C SIM	III
13-Dec-2012	EB2-121312	L106-02	EB	7470A	7470A	III
13-Dec-2012	EB2-121312	L106-02	EB	GEN PREP	8151A	III
13-Dec-2012	EB2-121312	L106-02	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*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-1085-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 2:15:00 ***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	0.206	J	0.107	MDL	0.535	PQL	MG/KG	J	Z
BERYLLIUM	0.407	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
CADMIUM	0.245	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
MOLYBDENUM	0.446	J	0.0535	MDL	0.535	PQL	MG/KG	J	Z
SILVER	0.118	J	0.0535	MDL	0.535	PQL	MG/KG	UJ	FD, F
SODIUM	68.9	J	53.5	MDL	107	PQL	MG/KG	J	Z
THALLIUM	0.215	J	0.0535	MDL	0.428	PQL	MG/KG	J	Z

Sample ID: SL-582-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 9:35:00 ***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	0.211	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.254	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
SILVER	0.0831	J	0.0560	MDL	0.560	PQL	MG/KG	U	F
SODIUM	81.6	J	56.0	MDL	112	PQL	MG/KG	J	Z
THALLIUM	0.255	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z

Sample ID: SL-584-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 9:00:00 ***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	0.391	J	0.113	MDL	0.566	PQL	MG/KG	J	Z
CADMIUM	0.261	J	0.0566	MDL	0.566	PQL	MG/KG	J	Z
SILVER	0.132	J	0.0566	MDL	0.566	PQL	MG/KG	U	F
THALLIUM	0.332	J	0.0566	MDL	0.453	PQL	MG/KG	J	Z

Sample ID: SL-585-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 8:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.250	J	0.116	MDL	0.582	PQL	MG/KG	J	Z
BERYLLIUM	0.530	J	0.0582	MDL	0.582	PQL	MG/KG	J	Z
CADMIUM	0.340	J	0.0582	MDL	0.582	PQL	MG/KG	J	Z
PHOSPHORUS	501		6.98	MDL	14.0	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-585-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 8:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0985	J	0.0582	MDL	0.582	PQL	MG/KG	U	F
SODIUM	83.0	J	58.2	MDL	116	PQL	MG/KG	J	Z
THALLIUM	0.246	J	0.0582	MDL	0.466	PQL	MG/KG	J	Z
Zirconium	5.82	U	2.91	MDL	5.82	PQL	MG/KG	UJ	Q

Sample ID: SL-593-SA6-SB-4.5-5.5 ***Collected:*** 12/13/2012 10:45:00 ***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	0.187	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
CADMIUM	0.106	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
THALLIUM	0.229	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z

Sample ID: SL-682-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 1:00:00 ***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	0.244	J	0.118	MDL	0.592	PQL	MG/KG	J	Z
BORON	5.22	J	2.96	MDL	5.92	PQL	MG/KG	J	Z
CADMIUM	0.385	J	0.0592	MDL	0.592	PQL	MG/KG	J	Z
MOLYBDENUM	0.535	J	0.0592	MDL	0.592	PQL	MG/KG	J	Z
SODIUM	84.2	J	59.2	MDL	118	PQL	MG/KG	J	Z
THALLIUM	0.274	J	0.0592	MDL	0.473	PQL	MG/KG	J	Z

Sample ID: SL-682-SA6-SB-3.0-4.0 ***Collected:*** 12/13/2012 1:25:00 ***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	0.236	J	0.106	MDL	0.528	PQL	MG/KG	J	Z
CADMIUM	0.120	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
SODIUM	94.6	J	52.8	MDL	106	PQL	MG/KG	J	Z
THALLIUM	0.341	J	0.0528	MDL	0.422	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

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

Sample ID: SL-685-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 2:10:00 ***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	0.220	J	0.109	MDL	0.546	PQL	MG/KG	J	Z
BARIUM	84.5		0.218	MDL	0.546	PQL	MG/KG	J	Q
BERYLLIUM	0.438	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
CADMIUM	0.334	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
MOLYBDENUM	0.499	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
SILVER	6.05		0.0546	MDL	0.546	PQL	MG/KG	J	FD
SODIUM	70.8	J	54.6	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.219	J	0.0546	MDL	0.437	PQL	MG/KG	J	Z

Sample ID: SL-685-SA6-SB-4.0-5.0 ***Collected:*** 12/13/2012 2:40:00 ***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	0.171	J	0.108	MDL	0.539	PQL	MG/KG	J	Z
CADMIUM	0.282	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
MOLYBDENUM	0.535	J	0.0539	MDL	0.539	PQL	MG/KG	J	Z
SODIUM	86.5	J	53.9	MDL	108	PQL	MG/KG	J	Z
THALLIUM	0.325	J	0.0539	MDL	0.431	PQL	MG/KG	J	Z

Sample ID: SL-985-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 8:10:00 ***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	0.293	J	0.115	MDL	0.574	PQL	MG/KG	J	Z
BERYLLIUM	0.511	J	0.0574	MDL	0.574	PQL	MG/KG	J	Z
CADMIUM	0.378	J	0.0574	MDL	0.574	PQL	MG/KG	J	Z
SILVER	0.120	J	0.0574	MDL	0.574	PQL	MG/KG	U	F
SODIUM	90.4	J	57.4	MDL	115	PQL	MG/KG	J	Z
THALLIUM	0.230	J	0.0574	MDL	0.459	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

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

Sample ID: SL-582-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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)	4.8	J	2.8	MDL	5.7	PQL	MG/KG	J	Z

Sample ID: SL-584-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
EFH(C21-C30)	3.7	J	2.9	MDL	5.9	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.7	J	2.9	MDL	5.9	PQL	MG/KG	J	Z

Sample ID: SL-585-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
EFH(C21-C30)	31		3.0	MDL	5.9	PQL	MG/KG	J	FD

Sample ID: SL-985-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 8:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	17		2.9	MDL	5.9	PQL	MG/KG	J	FD

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-1085-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
AROCLOR 1260	18	J	11	MDL	22	PQL	UG/KG	J	Z

Sample ID: SL-585-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 8:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	24	U	12	MDL	24	PQL	UG/KG	UJ	FD
Aroclor 5460	48	U	24	MDL	48	PQL	UG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-685-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
AROCLOR 1260	21	J	11	MDL	22	PQL	UG/KG	J	Z

Sample ID: SL-985-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 8:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1254	24		12	MDL	23	PQL	UG/KG	J	FD
Aroclor 5460	78		23	MDL	47	PQL	UG/KG	J	FD

Method Category: SVOA

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

Sample ID: EB1-121312 *Collected:* 12/13/2012 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.11	J	0.10	MDL	0.20	PQL	UG/L	J	Z

Sample ID: EB2-121312 *Collected:* 12/13/2012 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.06

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.12	J	0.11	MDL	0.21	PQL	UG/L	J	Z

Method Category: SVOA

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

Sample ID: SL-1085-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
BENZO(A)ANTHRACENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
BENZO(A)PYRENE	4.6	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(B)FLUORANTHENE	4.1	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(E)PYRENE	2.9	J	2.8	MDL	5.5	PQL	UG/KG	J	Z, FD
BENZO(G,H,I)PERYLENE	4.5	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

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

Sample ID: SL-1085-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 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*
BENZO(K)FLUORANTHENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
CHRYSENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
FLUORANTHENE	3.2	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
INDENO(1,2,3-CD)PYRENE	3.5	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
PHENANTHRENE	11	U	2.8	MDL	11	PQL	UG/KG	UJ	FD
PYRENE	2.8	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD

Sample ID: SL-582-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 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*
ANTHRACENE	3.8	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)ANTHRACENE	7.6	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	5.7	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	5.5	J	2.8	MDL	5.7	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	4.2	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	3.5	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-585-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 8:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
ANTHRACENE	5.1	J	3.0	MDL	12	PQL	UG/KG	J	Z, FD
BENZO(A)ANTHRACENE	16		3.0	MDL	12	PQL	UG/KG	J	FD
BENZO(A)PYRENE	20		3.0	MDL	12	PQL	UG/KG	J	FD
BENZO(B)FLUORANTHENE	27		3.0	MDL	12	PQL	UG/KG	J	FD
BENZO(E)PYRENE	16		3.0	MDL	5.9	PQL	UG/KG	J	FD
BENZO(G,H,I)PERYLENE	17		3.0	MDL	12	PQL	UG/KG	J	FD
BENZO(K)FLUORANTHENE	8.9	J	3.0	MDL	12	PQL	UG/KG	J	Z, FD
CHRYSENE	23		3.0	MDL	12	PQL	UG/KG	J	FD
DIBENZO(A,H)ANTHRACENE	5.5	J	3.0	MDL	12	PQL	UG/KG	J	Z, FD
FLUORANTHENE	44		3.0	MDL	12	PQL	UG/KG	J	FD
INDENO(1,2,3-CD)PYRENE	12		3.0	MDL	12	PQL	UG/KG	J	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-585-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 8:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	28		3.0	MDL	12	PQL	UG/KG	J	FD
PYRENE	42		3.0	MDL	12	PQL	UG/KG	J	FD

Sample ID: SL-682-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 1:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(E)PYRENE	3.8	J	3.0	MDL	6.1	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	4.7	J	3.0	MDL	12	PQL	UG/KG	J	Z

Sample ID: SL-685-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 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
BENZO(A)ANTHRACENE	7.6	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	11	J	2.8	MDL	11	PQL	UG/KG	J	FD
BENZO(B)FLUORANTHENE	15		2.8	MDL	11	PQL	UG/KG	J	FD
BENZO(E)PYRENE	9.4		2.8	MDL	5.6	PQL	UG/KG	J	FD
BENZO(G,H,I)PERYLENE	10	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
BENZO(K)FLUORANTHENE	5.2	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
CHRYSENE	10	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
FLUORANTHENE	15		2.8	MDL	11	PQL	UG/KG	J	FD
INDENO(1,2,3-CD)PYRENE	6.4	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
PHENANTHRENE	3.8	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
PYRENE	14		2.8	MDL	11	PQL	UG/KG	J	FD

Sample ID: SL-985-SA6-SB-0.0-0.5 *Collected:* 12/13/2012 8:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTHRACENE	12	U	2.9	MDL	12	PQL	UG/KG	UJ	FD
BENZO(A)ANTHRACENE	5.5	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
BENZO(A)PYRENE	9.1	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
BENZO(B)FLUORANTHENE	13		2.9	MDL	12	PQL	UG/KG	J	FD
BENZO(E)PYRENE	8.5		2.9	MDL	5.9	PQL	UG/KG	J	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

Method: **8270C SIM** ***Matrix:*** **SO**

Sample ID: SL-985-SA6-SB-0.0-0.5 ***Collected:*** 12/13/2012 8:10:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	9.1	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
BENZO(K)FLUORANTHENE	3.2	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
CHRYSENE	9.4	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
DIBENZO(A,H)ANTHRACENE	12	U	2.9	MDL	12	PQL	UG/KG	UJ	FD
FLUORANTHENE	19		2.9	MDL	12	PQL	UG/KG	J	FD
INDENO(1,2,3-CD)PYRENE	6.4	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
PHENANTHRENE	8.2	J	2.9	MDL	12	PQL	UG/KG	J	Z, FD
PYRENE	15		2.9	MDL	12	PQL	UG/KG	J	FD

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: EB1-121312 ***Collected:*** 12/13/2012 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)	18	J	10	MDL	50	PQL	UG/L	U	T

Sample ID: TB-121312 ***Collected:*** 12/13/2012 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)	20	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
F	Field Blank Contamination
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L106

Trip Blank Outlier Report

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8015B GRO**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-121312(RES)	12/13/2012 8:00:00 AM	GASOLINE RANGE ORGANICS (C5-C12)	20 UG/L	EB1-121312 EB2-121312 FB-111412 SL-1085-SA6-SB-0.0-0.5 SL-582-SA6-SB-0.0-0.5 SL-584-SA6-SB-0.0-0.5 SL-585-SA6-SB-0.0-0.5 SL-593-SA6-SB-4.5-5.5 SL-593-SA6-SB-5.0 SL-682-SA6-SB-0.0-0.5 SL-682-SA6-SB-3.0-4.0 SL-682-SA6-SB-3.5 SL-685-SA6-SB-0.0-0.5 SL-685-SA6-SB-4.0-5.0 SL-685-SA6-SB-4.5 SL-985-SA6-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
EB1-121312(RES)	GASOLINE RANGE ORGANICS (C5-C12)	18 UG/L	50U UG/L

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: 12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-685-SA6-SB-0.0-0.5MSD (TOT) (SL-685-SA6-SB-0.0-0.5)	ALUMINUM BARIUM TITANIUM	- - -	127 126 260	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ALUMINUM BARIUM TITANIUM	J (all detects) Al, Ti, No Qual >4X
SL-585-SA6-SB-0.0-0.5MS (TOT) SL-585-SA6-SB-0.0-0.5MSD (TOT) (SL-585 -SA6-SB-0.0-0.5)	TITANIUM	8	251	75.00-125.00	-	TITANIUM	No Qual, >4X
SL-585-SA6-SB-0.0-0.5MS (TOT) SL-585-SA6-SB-0.0-0.5MSD (TOT) (SL-585-SA6 -SB-0.0-0.5)	IRON MANGANESE PHOSPHORUS Zirconium	51 30 69 52	65 60 65 59	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	IRON MANGANESE PHOSPHORUS Zirconium	J(all detects) UJ(all non-detects) Fe, Mn No Qual, >4X

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG) SL-585-SA6-SB-0.0-0.5 (TOT)	Concentration (MG/KG) SL-985-SA6-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	13300	12300	8	50.00	
ANTIMONY	0.250	0.293	16	50.00	
ARSENIC	4.11	4.03	2	50.00	
BARIUM	94.9	91.6	4	50.00	
BERYLLIUM	0.530	0.511	4	50.00	
CADMIUM	0.340	0.378	11	50.00	
CALCIUM	2560	2340	9	50.00	
CHROMIUM	22.2	21.4	4	50.00	
COBALT	5.69	5.60	2	50.00	
COPPER	11.8	12.3	4	50.00	
IRON	20100	20000	0	50.00	
LEAD	29.0	37.9	27	50.00	
LITHIUM	21.4	19.7	8	50.00	
MAGNESIUM	4740	4350	9	50.00	No Qualifiers Applied
MANGANESE	256	230	11	50.00	
MOLYBDENUM	0.613	0.630	3	50.00	
NICKEL	12.5	11.8	6	50.00	
PHOSPHORUS	501	426	16	50.00	
POTASSIUM	3200	3070	4	50.00	
SILVER	0.0985	0.120	20	50.00	
SODIUM	83.0	90.4	9	50.00	
STRONTIUM	18.1	17.3	5	50.00	
THALLIUM	0.246	0.230	7	50.00	
TITANIUM	946	923	2	50.00	
VANADIUM	35.4	34.9	1	50.00	
ZINC	102	113	10	50.00	

Analyte	Concentration (MG/KG) SL-685-SA6-SB-0.0-0.5 (TOT)	Concentration (MG/KG) SL-1085-SA6-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	11100	11200	1	50.00	
ANTIMONY	0.220	0.206	7	50.00	
ARSENIC	3.23	3.26	1	50.00	
BARIUM	84.5	76.0	11	50.00	
BERYLLIUM	0.438	0.407	7	50.00	
CADMIUM	0.334	0.245	31	50.00	
CALCIUM	1840	1760	4	50.00	
CHROMIUM	15.6	14.3	9	50.00	
COBALT	5.19	4.65	11	50.00	
COPPER	11.1	7.80	35	50.00	
IRON	16200	15700	3	50.00	
LEAD	28.7	21.8	27	50.00	
LITHIUM	16.1	16.9	5	50.00	No Qualifiers Applied
MAGNESIUM	3580	3580	0	50.00	
MANGANESE	246	228	8	50.00	
MOLYBDENUM	0.499	0.446	11	50.00	
NICKEL	10.3	9.24	11	50.00	
PHOSPHORUS	316	299	6	50.00	
POTASSIUM	2810	2640	6	50.00	
SODIUM	70.8	68.9	3	50.00	
STRONTIUM	14.0	15.3	9	50.00	
THALLIUM	0.219	0.215	2	50.00	
TITANIUM	903	885	2	50.00	
VANADIUM	28.4	27.5	3	50.00	
ZINC	57.6	46.9	20	50.00	
SILVER	6.05	0.118	192	50.00	J(all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG) SL-685-SA6-SB-0.0-0.5	Concentration (MG/KG) SL-1085-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
EFH(C21-C30)	15	13	14	50.00	No Qualifiers Applied
EFH(C30-C40)	20	15	29	50.00	
TOTAL EFH(C8-C40)	35	28	22	50.00	

Analyte	Concentration (MG/KG) SL-585-SA6-SB-0.0-0.5	Concentration (MG/KG) SL-985-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
EFH(C30-C40)	33	22	40	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	64	39	49	50.00	
EFH(C21-C30)	31	17	58	50.00	J(all detects)

Method: 8081A
Matrix: SO

Analyte	Concentration (UG/KG) SL-685-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-1085-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
4,4'-DDT	6.4	4.4	37	50.00	No Qualifiers Applied

Method: 8082
Matrix: SO

Analyte	Concentration (UG/KG) SL-685-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-1085-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
AROCLOR 1260	21	18	15	50.00	No Qualifiers Applied

Analyte	Concentration (UG/KG) SL-585-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-985-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
AROCLOR 1254	24 U	24	200	50.00	J(all detects)
Aroclor 5460	48 U	78	200	50.00	UJ(all non-detects)

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG) SL-685-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-1085-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
BENZO(A)ANTHRACENE	7.6	11 U	200	50.00	J(all detects) UJ(all non-detects)
BENZO(A)PYRENE	11	4.6	82	50.00	
BENZO(B)FLUORANTHENE	15	4.1	114	50.00	
BENZO(E)PYRENE	9.4	2.9	106	50.00	
BENZO(G,H,I)PERYLENE	10	4.5	76	50.00	
BENZO(K)FLUORANTHENE	5.2	11 U	200	50.00	
CHRYSENE	10	11 U	200	50.00	
FLUORANTHENE	15	3.2	130	50.00	
INDENO(1,2,3-CD)PYRENE	6.4	3.5	59	50.00	
PHENANTHRENE	3.8	11 U	200	50.00	
PYRENE	14	2.8	133	50.00	

Analyte	Concentration (UG/KG) SL-585-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-985-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8270C SIM
Matrix: SO

ANTHRACENE	5.1	12 U	200	50.00	
BENZO(A)ANTHRACENE	16	5.5	98	50.00	
BENZO(A)PYRENE	20	9.1	75	50.00	
BENZO(B)FLUORANTHENE	27	13	70	50.00	
BENZO(E)PYRENE	16	8.5	61	50.00	
BENZO(G,H,I)PERYLENE	17	9.1	61	50.00	J(all detects)
BENZO(K)FLUORANTHENE	8.9	3.2	94	50.00	UJ(all non-detects)
CHRYSENE	23	9.4	84	50.00	
DIBENZO(A,H)ANTHRACENE	5.5	12 U	200	50.00	
FLUORANTHENE	44	19	79	50.00	
INDENO(1,2,3-CD)PYRENE	12	6.4	61	50.00	
PHENANTHRENE	28	8.2	109	50.00	
PYRENE	42	15	95	50.00	

Method: 9045D
Matrix: SO

Analyte	*Concentration (PH UNIT)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-685-SA6-SB-0.0-0.5	SL-1085-SA6-SB-0.0-0.5			
PH	6.33	6.68	5		No Qualifiers Applied

Analyte	*Concentration (PH UNIT)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-585-SA6-SB-0.0-0.5	SL-985-SA6-SB-0.0-0.5			
PH	6.42	6.75	5		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121312	GASOLINE RANGE ORGANICS (C5-C12)	J	18	50	PQL	UG/L	J (all detects)
TB-121312	GASOLINE RANGE ORGANICS (C5-C12)	J	20	50	PQL	UG/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121312	NAPHTHALENE	J	0.11	0.20	PQL	UG/L	J (all detects)
EB2-121312	NAPHTHALENE	J	0.12	0.21	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1085-SA6-SB-0.0-0.5	ANTIMONY	J	0.206	0.535	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.407	0.535	PQL	MG/KG	
	CADMIUM	J	0.245	0.535	PQL	MG/KG	
	MOLYBDENUM	J	0.446	0.535	PQL	MG/KG	
	SILVER	J	0.118	0.535	PQL	MG/KG	
	SODIUM	J	68.9	107	PQL	MG/KG	
	THALLIUM	J	0.215	0.428	PQL	MG/KG	
SL-582-SA6-SB-0.0-0.5	ANTIMONY	J	0.211	0.560	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.254	0.560	PQL	MG/KG	
	SILVER	J	0.0831	0.560	PQL	MG/KG	
	SODIUM	J	81.6	112	PQL	MG/KG	
	THALLIUM	J	0.255	0.448	PQL	MG/KG	
SL-584-SA6-SB-0.0-0.5	ANTIMONY	J	0.391	0.566	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.261	0.566	PQL	MG/KG	
	SILVER	J	0.132	0.566	PQL	MG/KG	
	THALLIUM	J	0.332	0.453	PQL	MG/KG	
SL-585-SA6-SB-0.0-0.5	ANTIMONY	J	0.250	0.582	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.530	0.582	PQL	MG/KG	
	CADMIUM	J	0.340	0.582	PQL	MG/KG	
	SILVER	J	0.0985	0.582	PQL	MG/KG	
	SODIUM	J	83.0	116	PQL	MG/KG	
	THALLIUM	J	0.246	0.466	PQL	MG/KG	
SL-593-SA6-SB-4.5-5.5	ANTIMONY	J	0.187	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.106	0.519	PQL	MG/KG	
	THALLIUM	J	0.229	0.415	PQL	MG/KG	
SL-682-SA6-SB-0.0-0.5	ANTIMONY	J	0.244	0.592	PQL	MG/KG	J (all detects)
	BORON	J	5.22	5.92	PQL	MG/KG	
	CADMIUM	J	0.385	0.592	PQL	MG/KG	
	MOLYBDENUM	J	0.535	0.592	PQL	MG/KG	
	SODIUM	J	84.2	118	PQL	MG/KG	
	THALLIUM	J	0.274	0.473	PQL	MG/KG	

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-682-SA6-SB-3.0-4.0	ANTIMONY	J	0.236	0.528	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.120	0.528	PQL	MG/KG	
	SODIUM	J	94.6	106	PQL	MG/KG	
	THALLIUM	J	0.341	0.422	PQL	MG/KG	
SL-685-SA6-SB-0.0-0.5	ANTIMONY	J	0.220	0.546	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.438	0.546	PQL	MG/KG	
	CADMIUM	J	0.334	0.546	PQL	MG/KG	
	MOLYBDENUM	J	0.499	0.546	PQL	MG/KG	
	SODIUM	J	70.8	109	PQL	MG/KG	
	THALLIUM	J	0.219	0.437	PQL	MG/KG	
SL-685-SA6-SB-4.0-5.0	ANTIMONY	J	0.171	0.539	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.282	0.539	PQL	MG/KG	
	MOLYBDENUM	J	0.535	0.539	PQL	MG/KG	
	SODIUM	J	86.5	108	PQL	MG/KG	
	THALLIUM	J	0.325	0.431	PQL	MG/KG	
SL-985-SA6-SB-0.0-0.5	ANTIMONY	J	0.293	0.574	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.511	0.574	PQL	MG/KG	
	CADMIUM	J	0.378	0.574	PQL	MG/KG	
	SILVER	J	0.120	0.574	PQL	MG/KG	
	SODIUM	J	90.4	115	PQL	MG/KG	
	THALLIUM	J	0.230	0.459	PQL	MG/KG	

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-582-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.8	5.7	PQL	MG/KG	J (all detects)
SL-584-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.7	5.9	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.7	5.9	PQL	MG/KG	

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1085-SA6-SB-0.0-0.5	AROCLOR 1260	J	18	22	PQL	UG/KG	J (all detects)
SL-685-SA6-SB-0.0-0.5	AROCLOR 1260	J	21	22	PQL	UG/KG	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L106 **Laboratory: EMXT**

EDD Filename: Prep12L106 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1085-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	4.6	11	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	4.1	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	2.9	5.5	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	4.5	11	PQL	UG/KG	
	FLUORANTHENE	J	3.2	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.5	11	PQL	UG/KG	
	PYRENE	J	2.8	11	PQL	UG/KG	
SL-582-SA6-SB-0.0-0.5	ANTHRACENE	J	3.8	11	PQL	UG/KG	J (all detects)
	BENZO(A)ANTHRACENE	J	7.6	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	5.7	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	5.5	5.7	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	4.2	11	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	3.5	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.0	11	PQL	UG/KG	
SL-585-SA6-SB-0.0-0.5	ANTHRACENE	J	5.1	12	PQL	UG/KG	J (all detects)
	BENZO(K)FLUORANTHENE	J	8.9	12	PQL	UG/KG	
	DIBENZO(A,H)ANTHRACENE	J	5.5	12	PQL	UG/KG	
SL-682-SA6-SB-0.0-0.5	BENZO(E)PYRENE	J	3.8	6.1	PQL	UG/KG	J (all detects)
	BENZO(G,H,I)PERYLENE	J	4.7	12	PQL	UG/KG	
SL-685-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	7.6	11	PQL	UG/KG	J (all detects)
	BENZO(G,H,I)PERYLENE	J	10	11	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	5.2	11	PQL	UG/KG	
	CHRYSENE	J	10	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	6.4	11	PQL	UG/KG	
	PHENANTHRENE	J	3.8	11	PQL	UG/KG	
SL-985-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	5.5	12	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	9.1	12	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	9.1	12	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	3.2	12	PQL	UG/KG	
	CHRYSENE	J	9.4	12	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	6.4	12	PQL	UG/KG	
	PHENANTHRENE	J	8.2	12	PQL	UG/KG	

LDC #: 29414E4

SDG #: 12L106

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 4/2/13

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 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: 12/13/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Fe, Mn, Ti; >4X/13/14; 15/16: Al, Ti; >4X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	A	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW/ND	*EB=1,2 FB= FB-111412 (286-35930-1)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	EB1-121312 W	11	SL-1085-SA6-SB-0.0-0.5	21		31	
2	EB2-121312	12	SL-685-SA6-SB-4.0-5.0	22		32	
3	SL-585-SA6-SB-0.0-0.5	13	SL-585-SA6-SB-0.0-0.5MS	23		33	
4	SL-985-SA6-SB-0.0-0.5	14	SL-585-SA6-SB-0.0-0.5MSD	24		34	
5	SL-584-SA6-SB-0.0-0.5	15	SL-685-SA6-SB-0.0-0.5MS	25		35	
6	SL-593-SA6-SB-4.5-5.5	16	SL-685-SA6-SB-0.0-0.5MSD	26		36	
7	SL-682-SA6-SB-0.0-0.5	17		27		37	
8	SL-582-SA6-SB-0.0-0.5	18		28		38	
9	SL-682-SA6-SB-3.0-4.0	19		29		39	
10	SL-685-SA6-SB-0.0-0.5	20		30		40	

Notes:

LDC #: 29414E4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: LA

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	FB-111412 (SDG:280-35930-1)	Action Limit	3	4	5	8	11						
Ag	0.00078	0.195	0.0985	0.120	0.132	0.0831	0.118						

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

12L126

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-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	3550B	8015B EFH	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	3550B	8081A	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	3550B	8082	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	3550B	8270C SIM	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	7471A	7471A	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	GEN PREP	8151A	III
14-Dec-2012	SL-690-SA6-SB-0.0-0.5	L126-05	N	TOTAL	6020	III
14-Dec-2012	TB-121412	L126-01	TB	5030B	8015B GRO	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	3550B	8015B EFH	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	3550B	8081A	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	3550B	8082	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	3550B	8270C SIM	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	7471A	7471A	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	GEN PREP	8151A	III
14-Dec-2012	SL-690-SA6-SB-2.5-3.5	L126-06	N	TOTAL	6020	III
14-Dec-2012	SL-690-SA6-SB-3.0	L126-07	N	5035	8015B GRO	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	L126-02	N	3550B	8015B EFH	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	L126-02	N	3550B	8082	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	L126-02	N	3550B	8270C SIM	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	L126-02	N	7471A	7471A	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5	L126-02	N	TOTAL	6020	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5MS	L126-02M	MS	7471A	7471A	III
14-Dec-2012	SL-607-SA6-SB-0.0-0.5MSD	L126-02S	MSD	7471A	7471A	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	L126-03	N	3550B	8015B EFH	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	L126-03	N	3550B	8082	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	L126-03	N	3550B	8270C SIM	III

III = EPA Level 3 Data Review *N = Normal Sample* *TB = Trip Blank* *MS = Matrix Spike*
IV = EPA Level 4 Data Validation *FD = Field Duplicate* *FB = Field Blank* *MSD = Matrix Spike Duplicate*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	L126-03	N	7471A	7471A	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0	L126-03	N	TOTAL	6020	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0MS	L126-03M	MS	3550B	8270C SIM	III
14-Dec-2012	SL-607-SA6-SB-4.0-5.0MSD	L126-03S	MSD	3550B	8270C SIM	III
14-Dec-2012	SL-607-SA6-SB-4.5	L126-04	N	5035	8015B GRO	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	3550B	8015B EFH	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	3550B	8081A	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	3550B	8082	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	3550B	8270C SIM	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	7471A	7471A	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	GEN PREP	8151A	III
14-Dec-2012	SL-660-SA6-SB-0.0-0.5	L126-08	N	TOTAL	6020	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	3550B	8015B EFH	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	3550B	8081A	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	3550B	8082	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	3550B	8270C SIM	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	7471A	7471A	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	GEN PREP	8151A	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0	L126-09	N	TOTAL	6020	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0MS	L126-09M	MS	3550B	8081A	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0MS	L126-09M	MS	3550B	8082	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0MSD	L126-09S	MSD	3550B	8081A	III
14-Dec-2012	SL-660-SA6-SB-4.0-5.0MSD	L126-09S	MSD	3550B	8082	III
14-Dec-2012	SL-660-SA6-SB-4.5	L126-10	N	5035	8015B GRO	III
14-Dec-2012	SL-558-SA6-SB-0.0-0.5	L126-11	N	3550B	8015B EFH	III
14-Dec-2012	SL-558-SA6-SB-0.0-0.5	L126-11	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-Dec-2012	SL-558-SA6-SB-0.0-0.5	L126-11	N	3550B	8270C SIM	III
14-Dec-2012	SL-558-SA6-SB-0.0-0.5	L126-11	N	7471A	7471A	III
14-Dec-2012	SL-558-SA6-SB-0.0-0.5	L126-11	N	TOTAL	6020	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	L126-12	N	3550B	8015B EFH	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	L126-12	N	3550B	8082	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	L126-12	N	3550B	8270C SIM	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	L126-12	N	7471A	7471A	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5	L126-12	N	TOTAL	6020	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5MS	L126-12M	MS	TOTAL	6020	III
14-Dec-2012	SL-689-SA6-SB-0.0-0.5MSD	L126-12S	MSD	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: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-558-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 2:20:00 ***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	0.351	J	0.114	MDL	0.570	PQL	MG/KG	J	Z
BERYLLIUM	0.439	J	0.0570	MDL	0.570	PQL	MG/KG	J	Z
BORON	3.56	J	2.85	MDL	5.70	PQL	MG/KG	J	Z
CADMIUM	0.387	J	0.0570	MDL	0.570	PQL	MG/KG	J	Z
SILVER	0.326	J	0.0570	MDL	0.570	PQL	MG/KG	J	Z
SODIUM	78.5	J	57.0	MDL	114	PQL	MG/KG	J	Z
THALLIUM	0.225	J	0.0570	MDL	0.456	PQL	MG/KG	J	Z

Sample ID: SL-607-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 9:00:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.315	J	0.109	MDL	0.545	PQL	MG/KG	J	Z
BORON	2.93	J	2.72	MDL	5.45	PQL	MG/KG	J	Z
CADMIUM	0.300	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
SILVER	0.377	J	0.0545	MDL	0.545	PQL	MG/KG	J	Z
SODIUM	62.4	J	54.5	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0545	MDL	0.436	PQL	MG/KG	J	Z

Sample ID: SL-607-SA6-SB-4.0-5.0 ***Collected:*** 12/14/2012 9:15:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.238	J	0.105	MDL	0.526	PQL	MG/KG	J	Z
CADMIUM	0.176	J	0.0526	MDL	0.526	PQL	MG/KG	J	Z
SELENIUM	0.403	J	0.211	MDL	0.526	PQL	MG/KG	J	Z
SODIUM	99.3	J	52.6	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.279	J	0.0526	MDL	0.421	PQL	MG/KG	J	Z

Sample ID: SL-660-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 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	0.430	J	0.106	MDL	0.528	PQL	MG/KG	J	Z
BERYLLIUM	0.409	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-660-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 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
SODIUM	95.3	J	52.8	MDL	106	PQL	MG/KG	J	Z
THALLIUM	0.250	J	0.0528	MDL	0.422	PQL	MG/KG	J	Z

Sample ID: SL-660-SA6-SB-4.0-5.0 ***Collected:*** 12/14/2012 11:45:00 ***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	0.180	J	0.105	MDL	0.524	PQL	MG/KG	J	Z
SODIUM	96.2	J	52.4	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.254	J	0.0524	MDL	0.419	PQL	MG/KG	J	Z

Sample ID: SL-689-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 2:50:00 ***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	0.272	J	0.112	MDL	0.561	PQL	MG/KG	J	Z
BERYLLIUM	0.514	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
MOLYBDENUM	0.374	J	0.0561	MDL	0.561	PQL	MG/KG	J	Z
SELENIUM	0.225	J	0.224	MDL	0.561	PQL	MG/KG	J	Z
SODIUM	92.4	J	56.1	MDL	112	PQL	MG/KG	J	Z
THALLIUM	0.286	J	0.0561	MDL	0.448	PQL	MG/KG	J	Z

Sample ID: SL-690-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 7:50:00 ***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	0.198	J	0.114	MDL	0.568	PQL	MG/KG	J	Z
BERYLLIUM	0.556	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
CADMIUM	0.204	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
MOLYBDENUM	0.480	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
SODIUM	66.4	J	56.8	MDL	114	PQL	MG/KG	J	Z
THALLIUM	0.241	J	0.0568	MDL	0.455	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-690-SA6-SB-2.5-3.5 *Collected:* 12/14/2012 8:10:00 *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	0.203	J	0.111	MDL	0.554	PQL	MG/KG	J	Z
CADMIUM	0.150	J	0.0554	MDL	0.554	PQL	MG/KG	J	Z
SODIUM	77.1	J	55.4	MDL	111	PQL	MG/KG	J	Z
THALLIUM	0.242	J	0.0554	MDL	0.443	PQL	MG/KG	J	Z

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-660-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 10:05:00 *Analysis Type:* RES/TOT *Dilution:* 0.979

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0597	J	0.0522	MDL	0.104	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-607-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 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
EFH(C30-C40)	9.6	J	5.4	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-660-SA6-SB-4.0-5.0 *Collected:* 12/14/2012 11:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.8	J	2.6	MDL	5.2	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.8	J	2.6	MDL	5.2	PQL	MG/KG	J	Z

Sample ID: SL-690-SA6-SB-0.0-0.5 *Collected:* 12/14/2012 7:50:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.6	J	2.9	MDL	5.7	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.6	J	2.9	MDL	5.7	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

Method: **8015B EFH** ***Matrix:*** **SO**

Sample ID: SL-690-SA6-SB-2.5-3.5 ***Collected:*** 12/14/2012 8:10:00 ***Analysis Type:*** RES ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.0	J	2.9	MDL	5.7	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	3.0	J	2.9	MDL	5.7	PQL	MG/KG	J	Z

Method Category: **SVOA**

Method: **8270C SIM** ***Matrix:*** **SO**

Sample ID: SL-558-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 2:20:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 8

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	25	J	23	MDL	92	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	36	J	23	MDL	92	PQL	UG/KG	J	Z
BENZO(E)PYRENE	43	J	23	MDL	46	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	25	J	23	MDL	92	PQL	UG/KG	J	Z

Sample ID: SL-607-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 9:00:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHYLENE	4.1	J	2.7	MDL	11	PQL	UG/KG	J	Z
ANTHRACENE	10	J	2.7	MDL	11	PQL	UG/KG	J	Z
DIBENZO(A,H)ANTHRACENE	7.6	J	2.7	MDL	11	PQL	UG/KG	J	Z
PHENANTHRENE	5.6	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-660-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 10:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.4	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	5.2	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	9.6	J	2.7	MDL	11	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	6.0	J	2.7	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	5.7	J	2.7	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	6.1	J	2.7	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	4.7	J	2.7	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

Method: **8270C SIM** ***Matrix:*** **SO**

Sample ID: SL-660-SA6-SB-0.0-0.5 ***Collected:*** 12/14/2012 10:05:00 ***Analysis Type:*** RES-BASE/NEUTRAL ***Dilution:*** 1

Analyte	*Lab Result*	*Lab Qual*	*DL*	*DL Type*	*RL*	*RL Type*	*Units*	*Data Review Qual*	*Reason Code*
PYRENE	5.2	J	2.7	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_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 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L126

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: 12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-689-SA6-SB-0.0-0.5MS (TOT) SL-689-SA6-SB-0.0-0.5MSD (TOT) (SL-558-SA6-SB-0.0-0.5 SL -607-SA6-SB-0.0-0.5 SL -607-SA6-SB-4.0-5.0 SL -660-SA6-SB-0.0-0.5 SL -660-SA6-SB-4.0-5.0 SL -689-SA6-SB-0.0-0.5 SL -690-SA6-SB-0.0-0.5 SL -690-SA6-SB-2.5-3.5)	IRON MANGANESE TITANIUM	71 57 53	66 48 50	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 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-558-SA6-SB-0.0-0.5	ANTIMONY	J	0.351	0.570	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.439	0.570	PQL	MG/KG	
	BORON	J	3.56	5.70	PQL	MG/KG	
	CADMIUM	J	0.387	0.570	PQL	MG/KG	
	SILVER	J	0.326	0.570	PQL	MG/KG	
	SODIUM	J	78.5	114	PQL	MG/KG	
	THALLIUM	J	0.225	0.456	PQL	MG/KG	
SL-607-SA6-SB-0.0-0.5	ANTIMONY	J	0.315	0.545	PQL	MG/KG	J (all detects)
	BORON	J	2.93	5.45	PQL	MG/KG	
	CADMIUM	J	0.300	0.545	PQL	MG/KG	
	SILVER	J	0.377	0.545	PQL	MG/KG	
	SODIUM	J	62.4	109	PQL	MG/KG	
	THALLIUM	J	0.271	0.436	PQL	MG/KG	
SL-607-SA6-SB-4.0-5.0	ANTIMONY	J	0.238	0.526	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.176	0.526	PQL	MG/KG	
	SELENIUM	J	0.403	0.526	PQL	MG/KG	
	SODIUM	J	99.3	105	PQL	MG/KG	
	THALLIUM	J	0.279	0.421	PQL	MG/KG	
SL-660-SA6-SB-0.0-0.5	ANTIMONY	J	0.430	0.528	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.409	0.528	PQL	MG/KG	
	SODIUM	J	95.3	106	PQL	MG/KG	
	THALLIUM	J	0.250	0.422	PQL	MG/KG	
SL-660-SA6-SB-4.0-5.0	ANTIMONY	J	0.180	0.524	PQL	MG/KG	J (all detects)
	SODIUM	J	96.2	105	PQL	MG/KG	
	THALLIUM	J	0.254	0.419	PQL	MG/KG	
SL-689-SA6-SB-0.0-0.5	ANTIMONY	J	0.272	0.561	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.514	0.561	PQL	MG/KG	
	MOLYBDENUM	J	0.374	0.561	PQL	MG/KG	
	SELENIUM	J	0.225	0.561	PQL	MG/KG	
	SODIUM	J	92.4	112	PQL	MG/KG	
	THALLIUM	J	0.286	0.448	PQL	MG/KG	
SL-690-SA6-SB-0.0-0.5	ANTIMONY	J	0.198	0.568	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.556	0.568	PQL	MG/KG	
	CADMIUM	J	0.204	0.568	PQL	MG/KG	
	MOLYBDENUM	J	0.480	0.568	PQL	MG/KG	
	SODIUM	J	66.4	114	PQL	MG/KG	
	THALLIUM	J	0.241	0.455	PQL	MG/KG	
SL-690-SA6-SB-2.5-3.5	ANTIMONY	J	0.203	0.554	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.150	0.554	PQL	MG/KG	
	SODIUM	J	77.1	111	PQL	MG/KG	
	THALLIUM	J	0.242	0.443	PQL	MG/KG	

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-660-SA6-SB-0.0-0.5	MERCURY	J	0.0597	0.104	PQL	MG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L126 **Laboratory: EMXT**

EDD Filename: Prep12L126 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8015B EFH**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-607-SA6-SB-0.0-0.5	EFH(C30-C40)	J	9.6	11	PQL	MG/KG	J (all detects)
SL-660-SA6-SB-4.0-5.0	EFH(C21-C30)	J	3.8	5.2	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.8	5.2	PQL	MG/KG	
SL-690-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.6	5.7	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.6	5.7	PQL	MG/KG	
SL-690-SA6-SB-2.5-3.5	EFH(C21-C30)	J	3.0	5.7	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	3.0	5.7	PQL	MG/KG	

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-558-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	25	92	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	36	92	PQL	UG/KG	
	BENZO(E)PYRENE	J	43	46	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	25	92	PQL	UG/KG	
SL-607-SA6-SB-0.0-0.5	ACENAPHTHYLENE	J	4.1	11	PQL	UG/KG	J (all detects)
	ANTHRACENE	J	10	11	PQL	UG/KG	
	DIBENZO(A,H)ANTHRACENE	J	7.6	11	PQL	UG/KG	
	PHENANTHRENE	J	5.6	11	PQL	UG/KG	
SL-660-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.4	11	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	5.2	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	9.6	11	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	6.0	11	PQL	UG/KG	
	CHRYSENE	J	5.7	11	PQL	UG/KG	
	FLUORANTHENE	J	6.1	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.7	11	PQL	UG/KG	
	PYRENE	J	5.2	11	PQL	UG/KG	

LDC #: 29414F4
SDG #: 12L126
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: CL
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 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: 12/14/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N	MS/D (Fe, Mn, Ti 7+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	—	EB* = EB1-121312 > (12L106) FB = FB-111412 (280-35930-1) EB2-121312

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-607-SA6-SB-0.0-0.5	11	SL-689-SA6-SB-0.0-0.5MS	21		31	
2	SL-607-SA6-SB-4.0-5.0	12	SL-689-SA6-SB-0.0-0.5MSD	22		32	
3	SL-690-SA6-SB-0.0-0.5	13		23		33	
4	SL-690-SA6-SB-2.5-3.5	14		24		34	
5	SL-660-SA6-SB-0.0-0.5	15		25		35	
6	SL-660-SA6-SB-4.0-5.0	16		26		36	
7	SL-558-SA6-SB-0.0-0.5	17		27		37	
8	SL-689-SA6-SB-0.0-0.5	18		28		38	
9	SL-607-SA6-SB-0.0-0.5MS	19		29		39	
10	SL-607-SA6-SB-0.0-0.5MSD	20		30		40	

Notes:

LDC #: 29414F4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: A
2nd Reviewer: V

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

(N) N N/A Field blanks were identified in this SDG.

(N) N N/A Were target analytes detected in the field blanks?

Blank units: mg/L **Associated sample units:** mg/kg

Sampling date: 11/14/12 Soil factor applied 5x

Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification								
	FB-111412	5x								
Ag	0.00078	0.195								

Blank units: _____ **Associated sample units:** _____

Sampling date: _____ Soil factor applied _____

Field blank type: (circle one) Field Blank / Rinsate / Other: _____ Associated Samples: _____

Analyte	Blank ID	Sample Identification								

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

12L140

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-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	3550B	8015B EFH	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	3550B	8082	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	3550B	8270C SIM	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	7471A	7471A	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	NONE	6850	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5	L140-02	N	TOTAL	6020	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	3550B	8015B EFH	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	3550B	8082	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	3550B	8270C SIM	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	7471A	7471A	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	NONE	6850	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MS	L140-02M	MS	TOTAL	6020	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	3550B	8015B EFH	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	3550B	8082	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	3550B	8270C SIM	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	7471A	7471A	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	NONE	6850	III
17-Dec-2012	SL-518-SA6-SB-0.0-0.5MSD	L140-02S	MSD	TOTAL	6020	III
17-Dec-2012	TB-121712	L140-01	TB	5030B	8015B GRO	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	3550B	8015B EFH	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	3550B	8082	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	3550B	8270C SIM	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	7471A	7471A	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	NONE	6850	III
17-Dec-2012	SL-918-SA6-SB-0.0-0.5	L140-03	FD	TOTAL	6020	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	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
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	N	3550B	8082	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	N	3550B	8270C SIM	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	N	7471A	7471A	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	N	NONE	6850	III
17-Dec-2012	SL-515-SA6-SB-0.0-0.5	L140-09	N	TOTAL	6020	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	3550B	8015B EFH	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	3550B	8082	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	3550B	8270C SIM	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	7471A	7471A	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	NONE	6850	III
17-Dec-2012	SL-514-SA6-SB-0.0-0.5	L140-04	N	TOTAL	6020	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	3550B	8015B EFH	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	3550B	8082	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	3550B	8270C SIM	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	7471A	7471A	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	NONE	6850	III
17-Dec-2012	SL-514-SA6-SB-4.0-5.0	L140-05	N	TOTAL	6020	III
17-Dec-2012	SL-514-SA6-SB-4.5	L140-07	N	5035	8015B GRO	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	3550B	8015B EFH	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	3550B	8082	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	3550B	8270C SIM	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	7471A	7471A	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	NONE	6850	III
17-Dec-2012	SL-514-SA6-SB-7.0-8.0	L140-06	N	TOTAL	6020	III
17-Dec-2012	SL-514-SA6-SB-7.5	L140-08	N	5035	8015B GRO	III
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	L140-16	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
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	L140-16	N	3550B	8082	III
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	L140-16	N	3550B	8270C SIM	III
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	L140-16	N	7471A	7471A	III
17-Dec-2012	SL-592-SA6-SB-0.0-0.5	L140-16	N	TOTAL	6020	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	L140-17	N	3550B	8015B EFH	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	L140-17	N	3550B	8082	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	L140-17	N	3550B	8270C SIM	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	L140-17	N	7471A	7471A	III
17-Dec-2012	SL-592-SA6-SB-2.5-3.5	L140-17	N	TOTAL	6020	III
17-Dec-2012	SL-592-SA6-SB-3.0	L140-18	N	5035	8015B GRO	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	L140-13	N	3550B	8015B EFH	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	L140-13	N	3550B	8082	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	L140-13	N	3550B	8270C SIM	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	L140-13	N	7471A	7471A	III
17-Dec-2012	SL-591-SA6-SB-0.0-0.5	L140-13	N	TOTAL	6020	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	L140-14	N	3550B	8015B EFH	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	L140-14	N	3550B	8082	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	L140-14	N	3550B	8270C SIM	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	L140-14	N	7471A	7471A	III
17-Dec-2012	SL-591-SA6-SB-4.0-5.0	L140-14	N	TOTAL	6020	III
17-Dec-2012	SL-591-SA6-SB-4.5	L140-15	N	5035	8015B GRO	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	L140-10	N	3550B	8015B EFH	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	L140-10	N	3550B	8082	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	L140-10	N	3550B	8270C SIM	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	L140-10	N	7471A	7471A	III
17-Dec-2012	SL-590-SA6-SB-0.0-0.5	L140-10	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
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	L140-11	N	3550B	8015B EFH	III
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	L140-11	N	3550B	8082	III
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	L140-11	N	3550B	8270C SIM	III
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	L140-11	N	7471A	7471A	III
17-Dec-2012	SL-590-SA6-SB-4.0-5.0	L140-11	N	TOTAL	6020	III
17-Dec-2012	SL-590-SA6-SB-4.5	L140-12	N	5035	8015B GRO	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	L140-19	N	3550B	8015B EFH	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	L140-19	N	3550B	8082	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	L140-19	N	3550B	8270C SIM	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	L140-19	N	7471A	7471A	III
17-Dec-2012	SL-575-SA6-SB-0.0-0.5	L140-19	N	TOTAL	6020	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	L140-20	N	3550B	8015B EFH	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	L140-20	N	3550B	8082	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	L140-20	N	3550B	8270C SIM	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	L140-20	N	7471A	7471A	III
17-Dec-2012	SL-575-SA6-SB-2.0-3.0	L140-20	N	TOTAL	6020	III
17-Dec-2012	SL-575-SA6-SB-2.5	L140-21	N	5035	8015B GRO	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	L140-22	N	3550B	8015B EFH	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	L140-22	N	3550B	8082	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	L140-22	N	3550B	8270C SIM	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	L140-22	N	7471A	7471A	III
17-Dec-2012	SL-576-SA6-SB-0.0-0.5	L140-22	N	TOTAL	6020	III
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	L140-23	N	3550B	8015B EFH	III
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	L140-23	N	3550B	8082	III
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	L140-23	N	3550B	8270C SIM	III
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	L140-23	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
17-Dec-2012	SL-576-SA6-SB-2.0-3.0	L140-23	N	TOTAL	6020	III
17-Dec-2012	SL-576-SA6-SB-2.5	L140-24	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*

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-514-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 9:45:00 ***Analysis Type:*** RES ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.282	J	0.119	MDL	0.596	PQL	MG/KG	J	Z
BERYLLIUM	0.435	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
CADMIUM	0.376	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
CALCIUM	8430		11.9	MDL	23.9	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.584	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
SODIUM	112	J	59.6	MDL	119	PQL	MG/KG	J	Z
STRONTIUM	37.1		0.298	MDL	0.596	PQL	MG/KG	J	Q, E
THALLIUM	0.178	J	0.0596	MDL	0.477	PQL	MG/KG	J	Z
ZINC	53.4		1.79	MDL	5.96	PQL	MG/KG	J	Q

Sample ID: SL-514-SA6-SB-4.0-5.0 ***Collected:*** 12/17/2012 10:00:00 ***Analysis Type:*** RES ***Dilution:*** 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.165	J	0.103	MDL	0.513	PQL	MG/KG	J	Z
BERYLLIUM	0.429	J	0.0513	MDL	0.513	PQL	MG/KG	J	Z
CADMIUM	0.207	J	0.0513	MDL	0.513	PQL	MG/KG	J	Z
CALCIUM	5660		10.3	MDL	20.5	PQL	MG/KG	J	Q, Q
STRONTIUM	18.9		0.257	MDL	0.513	PQL	MG/KG	J	Q, E
THALLIUM	0.214	J	0.0513	MDL	0.410	PQL	MG/KG	J	Z
ZINC	47.5		1.54	MDL	5.13	PQL	MG/KG	J	Q

Sample ID: SL-514-SA6-SB-7.0-8.0 ***Collected:*** 12/17/2012 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.152	J	0.105	MDL	0.525	PQL	MG/KG	J	Z
BERYLLIUM	0.466	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
CADMIUM	0.158	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
CALCIUM	5550		10.5	MDL	21.0	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.503	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
SELENIUM	0.517	J	0.210	MDL	0.525	PQL	MG/KG	J	Z
STRONTIUM	15.1		0.262	MDL	0.525	PQL	MG/KG	J	Q, E
THALLIUM	0.240	J	0.0525	MDL	0.420	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-514-SA6-SB-7.0-8.0 ***Collected:*** 12/17/2012 10:15:00 ***Analysis Type:*** RES ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ZINC	54.5		1.57	MDL	5.25	PQL	MG/KG	J	Q

Sample ID: SL-515-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 9:00:00 ***Analysis Type:*** RES ***Dilution:*** 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.257	J	0.110	MDL	0.551	PQL	MG/KG	J	Z
BERYLLIUM	0.356	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z
CADMIUM	0.310	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z
CALCIUM	9830		11.0	MDL	22.0	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.452	J	0.0551	MDL	0.551	PQL	MG/KG	J	Z
SODIUM	96.0	J	55.1	MDL	110	PQL	MG/KG	J	Z
STRONTIUM	35.2		0.275	MDL	0.551	PQL	MG/KG	J	Q, E
THALLIUM	0.148	J	0.0551	MDL	0.441	PQL	MG/KG	J	Z
ZINC	44.0		1.65	MDL	5.51	PQL	MG/KG	J	Q

Sample ID: SL-518-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 7:55:00 ***Analysis Type:*** RES ***Dilution:*** 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.378	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BERYLLIUM	0.481	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CADMIUM	0.191	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CALCIUM	6220		10.8	MDL	21.6	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.323	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
SODIUM	107	J	54.0	MDL	108	PQL	MG/KG	J	Z, FD
STRONTIUM	19.8		0.270	MDL	0.540	PQL	MG/KG	J	Q, E
THALLIUM	0.238	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z
ZINC	108		1.62	MDL	5.40	PQL	MG/KG	J	Q

Sample ID: SL-575-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 2:45:00 ***Analysis Type:*** RES ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.340	J	0.106	MDL	0.528	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-575-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 2:45:00 ***Analysis Type:*** RES ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CADMIUM	0.229	J	0.0528	MDL	0.528	PQL	MG/KG	J	Z
CALCIUM	3700		10.6	MDL	21.1	PQL	MG/KG	J	Q, Q
SILVER	0.128	J	0.0528	MDL	0.528	PQL	MG/KG	U	F
SODIUM	95.9	J	52.8	MDL	106	PQL	MG/KG	J	Z
STRONTIUM	19.7		0.264	MDL	0.528	PQL	MG/KG	J	Q, E
THALLIUM	0.322	J	0.0528	MDL	0.422	PQL	MG/KG	J	Z
ZINC	72.1		1.58	MDL	5.28	PQL	MG/KG	J	Q

Sample ID: SL-575-SA6-SB-2.0-3.0 ***Collected:*** 12/17/2012 3:10:00 ***Analysis Type:*** RES ***Dilution:*** 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.319	J	0.100	MDL	0.502	PQL	MG/KG	J	Z
CADMIUM	0.157	J	0.0502	MDL	0.502	PQL	MG/KG	J	Z
CALCIUM	2930		10.0	MDL	20.1	PQL	MG/KG	J	Q, Q
SELENIUM	0.203	J	0.201	MDL	0.502	PQL	MG/KG	J	Z
SILVER	0.0698	J	0.0502	MDL	0.502	PQL	MG/KG	U	F
SODIUM	89.6	J	50.2	MDL	100	PQL	MG/KG	J	Z
STRONTIUM	14.4		0.251	MDL	0.502	PQL	MG/KG	J	Q, E
THALLIUM	0.333	J	0.0502	MDL	0.402	PQL	MG/KG	J	Z
ZINC	56.6		1.51	MDL	5.02	PQL	MG/KG	J	Q

Sample ID: SL-576-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 3:30:00 ***Analysis Type:*** RES ***Dilution:*** 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.294	J	0.114	MDL	0.568	PQL	MG/KG	J	Z
CADMIUM	0.253	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
CALCIUM	3640		11.4	MDL	22.7	PQL	MG/KG	J	Q, Q
SILVER	0.0854	J	0.0568	MDL	0.568	PQL	MG/KG	U	F
SODIUM	83.3	J	56.8	MDL	114	PQL	MG/KG	J	Z
STRONTIUM	22.3		0.284	MDL	0.568	PQL	MG/KG	J	Q, E
THALLIUM	0.301	J	0.0568	MDL	0.454	PQL	MG/KG	J	Z
ZINC	67.1		1.70	MDL	5.68	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory:** EMXT

EDD Filename: Prep12L140 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-576-SA6-SB-2.0-3.0 *Collected:* 12/17/2012 3:40:00 *Analysis Type:* RES *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.189	J	0.102	MDL	0.511	PQL	MG/KG	J	Z
CADMIUM	0.134	J	0.0511	MDL	0.511	PQL	MG/KG	J	Z
CALCIUM	3000		10.2	MDL	20.5	PQL	MG/KG	J	Q, Q
SODIUM	94.1	J	51.1	MDL	102	PQL	MG/KG	J	Z
STRONTIUM	19.7		0.256	MDL	0.511	PQL	MG/KG	J	Q, E
THALLIUM	0.257	J	0.0511	MDL	0.409	PQL	MG/KG	J	Z
ZINC	54.4		1.53	MDL	5.11	PQL	MG/KG	J	Q

Sample ID: SL-590-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 2:00:00 *Analysis Type:* RES *Dilution:* 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.203	J	0.108	MDL	0.540	PQL	MG/KG	J	Z
BERYLLIUM	0.486	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
BORON	3.59	J	2.70	MDL	5.40	PQL	MG/KG	J	Z
CADMIUM	0.285	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
CALCIUM	2460		10.8	MDL	21.6	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.536	J	0.0540	MDL	0.540	PQL	MG/KG	J	Z
STRONTIUM	29.5		0.270	MDL	0.540	PQL	MG/KG	J	Q, E
THALLIUM	0.220	J	0.0540	MDL	0.432	PQL	MG/KG	J	Z
ZINC	48.7		1.62	MDL	5.40	PQL	MG/KG	J	Q
Zirconium	4.80	J	2.70	MDL	5.40	PQL	MG/KG	J	Z

Sample ID: SL-590-SA6-SB-4.0-5.0 *Collected:* 12/17/2012 2:15:00 *Analysis Type:* RES *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.207	J	0.106	MDL	0.530	PQL	MG/KG	J	Z
CADMIUM	0.146	J	0.0530	MDL	0.530	PQL	MG/KG	J	Z
CALCIUM	2450		10.6	MDL	21.2	PQL	MG/KG	J	Q, Q
SILVER	0.0883	J	0.0530	MDL	0.530	PQL	MG/KG	U	F
STRONTIUM	25.1		0.265	MDL	0.530	PQL	MG/KG	J	Q, E
THALLIUM	0.324	J	0.0530	MDL	0.424	PQL	MG/KG	J	Z
ZINC	55.3		1.59	MDL	5.30	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-591-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 1:10:00 ***Analysis Type:*** RES ***Dilution:*** 0.971

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.259	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BERYLLIUM	0.348	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
CADMIUM	0.318	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
CALCIUM	2790		10.8	MDL	21.7	PQL	MG/KG	J	Q, Q
STRONTIUM	44.3		0.271	MDL	0.542	PQL	MG/KG	J	Q, E
THALLIUM	0.186	J	0.0542	MDL	0.433	PQL	MG/KG	J	Z
ZINC	48.8		1.63	MDL	5.42	PQL	MG/KG	J	Q

Sample ID: SL-591-SA6-SB-4.0-5.0 ***Collected:*** 12/17/2012 1:25:00 ***Analysis Type:*** RES ***Dilution:*** 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.166	J	0.106	MDL	0.532	PQL	MG/KG	J	Z
BORON	3.00	J	2.66	MDL	5.32	PQL	MG/KG	J	Z
CADMIUM	0.0961	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
CALCIUM	1910		10.6	MDL	21.3	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.491	J	0.0532	MDL	0.532	PQL	MG/KG	J	Z
STRONTIUM	20.4		0.266	MDL	0.532	PQL	MG/KG	J	Q, E
THALLIUM	0.214	J	0.0532	MDL	0.426	PQL	MG/KG	J	Z
ZINC	40.8		1.60	MDL	5.32	PQL	MG/KG	J	Q

Sample ID: SL-592-SA6-SB-0.0-0.5 ***Collected:*** 12/17/2012 12:35:00 ***Analysis Type:*** RES ***Dilution:*** 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.339	J	0.108	MDL	0.542	PQL	MG/KG	J	Z
BERYLLIUM	0.416	J	0.0542	MDL	0.542	PQL	MG/KG	J	Z
BORON	3.26	J	2.71	MDL	5.42	PQL	MG/KG	J	Z
CALCIUM	2840		10.8	MDL	21.7	PQL	MG/KG	J	Q, Q
SODIUM	81.9	J	54.2	MDL	108	PQL	MG/KG	J	Z
STRONTIUM	19.9		0.271	MDL	0.542	PQL	MG/KG	J	Q, E
THALLIUM	0.205	J	0.0542	MDL	0.433	PQL	MG/KG	J	Z
ZINC	198		1.63	MDL	5.42	PQL	MG/KG	J	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-592-SA6-SB-2.5-3.5 *Collected:* 12/17/2012 12:45:00 *Analysis Type:* RES *Dilution:* 0.966

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.209	J	0.100	MDL	0.500	PQL	MG/KG	J	Z
CADMIUM	0.126	J	0.0500	MDL	0.500	PQL	MG/KG	J	Z
CALCIUM	2640		10.0	MDL	20.0	PQL	MG/KG	J	Q, Q
SODIUM	75.9	J	50.0	MDL	100	PQL	MG/KG	J	Z
STRONTIUM	15.0		0.250	MDL	0.500	PQL	MG/KG	J	Q, E
THALLIUM	0.241	J	0.0500	MDL	0.400	PQL	MG/KG	J	Z
ZINC	50.2		1.50	MDL	5.00	PQL	MG/KG	J	Q

Sample ID: SL-918-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 8:00:00 *Analysis Type:* RES *Dilution:* 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.447	J	0.119	MDL	0.596	PQL	MG/KG	J	Z
BERYLLIUM	0.520	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
CADMIUM	0.206	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
CALCIUM	6720		11.9	MDL	23.8	PQL	MG/KG	J	Q, Q
MOLYBDENUM	0.321	J	0.0596	MDL	0.596	PQL	MG/KG	J	Z
SODIUM	183		59.6	MDL	119	PQL	MG/KG	J	FD
STRONTIUM	27.0		0.298	MDL	0.596	PQL	MG/KG	J	Q, E
THALLIUM	0.238	J	0.0596	MDL	0.477	PQL	MG/KG	J	Z
ZINC	78.2		1.79	MDL	5.96	PQL	MG/KG	J	Q

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-514-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:45:00 *Analysis Type:* RES/TOT *Dilution:* 0.993

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0642	J	0.0598	MDL	0.120	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 7471A **Matrix: SO**

Sample ID: SL-515-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:00:00 *Analysis Type:* RES/TOT *Dilution:* 0.998

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0562	J	0.0553	MDL	0.111	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-514-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:45:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	8.1	J	6.0	MDL	12	PQL	MG/KG	J	Z

Sample ID: SL-518-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 7:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	4.7	J	2.8	MDL	5.6	PQL	MG/KG	J	Z, FD
EFH(C30-C40)	11	U	5.6	MDL	11	PQL	MG/KG	UJ	FD
TOTAL EFH(C8-C40)	4.7	J	2.8	MDL	5.6	PQL	MG/KG	J	Z, FD

Sample ID: SL-575-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
EFH(C21-C30)	4.6	J	2.7	MDL	5.4	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	4.6	J	2.7	MDL	5.4	PQL	MG/KG	J	Z

Sample ID: SL-576-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
EFH(C21-C30)	4.4	J	2.9	MDL	5.8	PQL	MG/KG	J	Z
TOTAL EFH(C8-C40)	4.4	J	2.9	MDL	5.8	PQL	MG/KG	J	Z

Sample ID: SL-591-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 1:10:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C30-C40)	6.0	J	5.6	MDL	11	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-918-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
EFH(C21-C30)	17		3.0	MDL	6.0	PQL	MG/KG	J	FD
EFH(C30-C40)	14		6.0	MDL	12	PQL	MG/KG	J	FD
TOTAL EFH(C8-C40)	31		3.0	MDL	6.0	PQL	MG/KG	J	FD

Method Category: SVOA

Method: 8082 **Matrix: SO**

Sample ID: SL-518-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 7:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	35	J	22	MDL	45	PQL	UG/KG	J	Z

Sample ID: SL-592-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 12:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1260	17	J	11	MDL	22	PQL	UG/KG	J	Z

Sample ID: SL-918-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
Aroclor 5460	30	J	24	MDL	48	PQL	UG/KG	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-514-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	5.6	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(A)PYRENE	7.5	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	8.6	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	6.8	J	3.0	MDL	12	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-514-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	3.8	J	3.0	MDL	12	PQL	UG/KG	J	Z
FLUORANTHENE	5.7	J	3.0	MDL	12	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	4.6	J	3.0	MDL	12	PQL	UG/KG	J	Z
PYRENE	5.5	J	3.0	MDL	12	PQL	UG/KG	J	Z

Sample ID: SL-514-SA6-SB-4.0-5.0 *Collected:* 12/17/2012 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(K)FLUORANTHENE	6.6	J	2.6	MDL	10	PQL	UG/KG	J	Z
DIBENZO(A,H)ANTHRACENE	3.6	J	2.6	MDL	10	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	7.7	J	2.6	MDL	10	PQL	UG/KG	J	Z
PHENANTHRENE	7.0	J	2.6	MDL	10	PQL	UG/KG	J	Z

Sample ID: SL-515-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 9:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	4.0	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	5.5	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	5.9	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	3.5	J	2.8	MDL	5.5	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	3.7	J	2.8	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	5.2	J	2.8	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.4	J	2.8	MDL	11	PQL	UG/KG	J	Z
PYRENE	4.3	J	2.8	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-518-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 7:55:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	3.9	J	2.8	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	2.9	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD
INDENO(1,2,3-CD)PYRENE	3.0	J	2.8	MDL	11	PQL	UG/KG	J	Z, FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8270C SIM **Matrix: SO**

Sample ID: SL-575-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 2:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ACENAPHTHENE	4.2	J	2.7	MDL	11	PQL	UG/KG	J	Z
ANTHRACENE	3.4	J	2.7	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-576-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 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
BENZO(A)ANTHRACENE	3.1	J	2.9	MDL	12	PQL	UG/KG	J	Z
BENZO(A)PYRENE	5.6	J	2.9	MDL	12	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	8.8	J	2.9	MDL	12	PQL	UG/KG	J	Z
BENZO(E)PYRENE	4.1	J	2.9	MDL	5.8	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	3.1	J	2.9	MDL	12	PQL	UG/KG	J	Z
CHRYSENE	6.6	J	2.9	MDL	12	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.9	J	2.9	MDL	12	PQL	UG/KG	J	Z
PHENANTHRENE	5.4	J	2.9	MDL	12	PQL	UG/KG	J	Z
PYRENE	11	J	2.9	MDL	12	PQL	UG/KG	J	Z

Sample ID: SL-592-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 12:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 3

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	9.6	J	8.3	MDL	33	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	12	J	8.3	MDL	33	PQL	UG/KG	J	Z
BENZO(E)PYRENE	13	J	8.3	MDL	17	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	13	J	8.3	MDL	33	PQL	UG/KG	J	Z
FLUORANTHENE	11	J	8.3	MDL	33	PQL	UG/KG	J	Z

Sample ID: SL-918-SA6-SB-0.0-0.5 *Collected:* 12/17/2012 8:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	3.9	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	12	U	3.0	MDL	12	PQL	UG/KG	UJ	FD
INDENO(1,2,3-CD)PYRENE	12	U	3.0	MDL	12	PQL	UG/KG	UJ	FD

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: TB-121712 ***Collected:*** 12/17/2012 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)	11	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
E	Matrix Spike Precision
F	Field Blank Contamination
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Precision
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L140

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: 12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**

Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-518-SA6-SB-0.0-0.5MS	CALCIUM	26	71	75.00-125.00	-	CALCIUM	
(TOT)	MANGANESE	-31	43	75.00-125.00	-	MANGANESE	
SL-518-SA6-SB-0.0-0.5MSD	TITANIUM	-577	-87	75.00-125.00	-	TITANIUM	
(TOT)							
(SL-514-SA6-SB-0.0-0.5							
SL -514-SA6-SB-4.0-5.0							
SL -514-SA6-SB-7.0-8.0							
SL -515-SA6-SB-0.0-0.5							J (all detects)
SL -518-SA6-SB-0.0-0.5							R (all non-detects)
SL -575-SA6-SB-0.0-0.5							
SL -575-SA6-SB-2.0-3.0							Mn, Ti, No Qual, >4X
SL -576-SA6-SB-0.0-0.5							
SL -576-SA6-SB-2.0-3.0							
SL -590-SA6-SB-0.0-0.5							
SL -590-SA6-SB-4.0-5.0							
SL -591-SA6-SB-0.0-0.5							
SL -591-SA6-SB-4.0-5.0							
SL -592-SA6-SB-0.0-0.5							
SL -592-SA6-SB-2.5-3.5							
SL -918-SA6-SB-0.0-0.5)							
SL-518-SA6-SB-0.0-0.5MS	ALUMINUM	43	-	75.00-125.00	-	ALUMINUM	
(TOT)	IRON	30	-	75.00-125.00	-	IRON	
SL-518-SA6-SB-0.0-0.5MSD	STRONTIUM	-	128	75.00-125.00	21 (20.00)	STRONTIUM	
(TOT)	ZINC	63	-	75.00-125.00	-	ZINC	
(SL-514-SA6-SB-0.0-0.5							
SL -514-SA6-SB-4.0-5.0							
SL -514-SA6-SB-7.0-8.0							
SL -515-SA6-SB-0.0-0.5							J(all detects)
SL -518-SA6-SB-0.0-0.5							UJ(all non-detects)
SL -575-SA6-SB-0.0-0.5							
SL -575-SA6-SB-2.0-3.0							Al, Fe, No Qual, >4X
SL -576-SA6-SB-0.0-0.5							
SL -576-SA6-SB-2.0-3.0							
SL -590-SA6-SB-0.0-0.5							
SL -590-SA6-SB-4.0-5.0							
SL -591-SA6-SB-0.0-0.5							
SL -591-SA6-SB-4.0-5.0							
SL -592-SA6-SB-0.0-0.5							
SL -592-SA6-SB-2.5-3.5							
SL -918-SA6-SB-0.0-0.5)							

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG) SL-518-SA6-SB-0.0-0.5 (TOT)	Concentration (MG/KG) SL-918-SA6-SB-0.0-0.5 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	12400	13800	11	50.00	No Qualifiers Applied
ANTIMONY	0.378	0.447	17	50.00	
ARSENIC	3.88	3.78	3	50.00	
BARIUM	71.7	77.7	8	50.00	
BERYLLIUM	0.481	0.520	8	50.00	
CADMIUM	0.191	0.206	8	50.00	
CALCIUM	6220	6720	8	50.00	
CHROMIUM	15.8	17.3	9	50.00	
COBALT	5.67	6.52	14	50.00	
COPPER	7.12	8.83	21	50.00	
IRON	21600	23100	7	50.00	
LEAD	5.81	6.69	14	50.00	
LITHIUM	27.9	27.2	3	50.00	
MAGNESIUM	5280	5720	8	50.00	
MANGANESE	307	313	2	50.00	
MOLYBDENUM	0.323	0.321	1	50.00	
NICKEL	9.25	10.8	15	50.00	
PHOSPHORUS	395	426	8	50.00	
POTASSIUM	2640	2650	0	50.00	
STRONTIUM	19.8	27.0	31	50.00	
THALLIUM	0.238	0.238	0	50.00	
TITANIUM	1270	1340	5	50.00	
VANADIUM	33.4	37.2	11	50.00	
ZINC	108	78.2	32	50.00	
SODIUM	107	183	52	50.00	J(all detects)

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG) SL-518-SA6-SB-0.0-0.5	Concentration (MG/KG) SL-918-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
EFH(C21-C30)	4.7	17	113	50.00	J(all detects)
EFH(C30-C40)	11 U	14	200	50.00	UJ(all non-detects)
TOTAL EFH(C8-C40)	4.7	31	147	50.00	

Method: 8082
Matrix: SO

Analyte	Concentration (UG/KG) SL-518-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-918-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
Aroclor 5460	35	30	15	50.00	No Qualifiers Applied

Method: 8270C SIM
Matrix: SO

Analyte	Concentration (UG/KG) SL-518-SA6-SB-0.0-0.5	Concentration (UG/KG) SL-918-SA6-SB-0.0-0.5	Sample RPD	eQAPP RPD	Flag
BENZO(A)PYRENE	3.9	3.9	0	50.00	No Qualifiers Applied
BENZO(B)FLUORANTHENE	2.9	12 U	200	50.00	J(all detects)
INDENO(1,2,3-CD)PYRENE	3.0	12 U	200	50.00	UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 9045D
Matrix: SO

Analyte	*Concentration (PH UNIT)*		*Sample RPD*	*eQAPP RPD*	*Flag*
	SL-518-SA6-SB-0.0-0.5	SL-918-SA6-SB-0.0-0.5			
PH	7.58	7.23	5		No Qualifiers Applied

Reporting Limit Outliers

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-121712	GASOLINE RANGE ORGANICS (C5-C12)	J	11	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-514-SA6-SB-0.0-0.5	ANTIMONY	J	0.282	0.596	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.435	0.596	PQL	MG/KG	
	CADMIUM	J	0.376	0.596	PQL	MG/KG	
	MOLYBDENUM	J	0.584	0.596	PQL	MG/KG	
	SODIUM	J	112	119	PQL	MG/KG	
	THALLIUM	J	0.178	0.477	PQL	MG/KG	
SL-514-SA6-SB-4.0-5.0	ANTIMONY	J	0.165	0.513	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.429	0.513	PQL	MG/KG	
	CADMIUM	J	0.207	0.513	PQL	MG/KG	
	THALLIUM	J	0.214	0.410	PQL	MG/KG	
SL-514-SA6-SB-7.0-8.0	ANTIMONY	J	0.152	0.525	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.466	0.525	PQL	MG/KG	
	CADMIUM	J	0.158	0.525	PQL	MG/KG	
	MOLYBDENUM	J	0.503	0.525	PQL	MG/KG	
	SELENIUM	J	0.517	0.525	PQL	MG/KG	
	THALLIUM	J	0.240	0.420	PQL	MG/KG	
SL-515-SA6-SB-0.0-0.5	ANTIMONY	J	0.257	0.551	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.356	0.551	PQL	MG/KG	
	CADMIUM	J	0.310	0.551	PQL	MG/KG	
	MOLYBDENUM	J	0.452	0.551	PQL	MG/KG	
	SODIUM	J	96.0	110	PQL	MG/KG	
	THALLIUM	J	0.148	0.441	PQL	MG/KG	
SL-518-SA6-SB-0.0-0.5	ANTIMONY	J	0.378	0.540	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.481	0.540	PQL	MG/KG	
	CADMIUM	J	0.191	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.323	0.540	PQL	MG/KG	
	SODIUM	J	107	108	PQL	MG/KG	
	THALLIUM	J	0.238	0.432	PQL	MG/KG	
SL-575-SA6-SB-0.0-0.5	ANTIMONY	J	0.340	0.528	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.229	0.528	PQL	MG/KG	
	SILVER	J	0.128	0.528	PQL	MG/KG	
	SODIUM	J	95.9	106	PQL	MG/KG	
	THALLIUM	J	0.322	0.422	PQL	MG/KG	
SL-575-SA6-SB-2.0-3.0	ANTIMONY	J	0.319	0.502	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.157	0.502	PQL	MG/KG	
	SELENIUM	J	0.203	0.502	PQL	MG/KG	
	SILVER	J	0.0698	0.502	PQL	MG/KG	
	SODIUM	J	89.6	100	PQL	MG/KG	
	THALLIUM	J	0.333	0.402	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-576-SA6-SB-0.0-0.5	ANTIMONY	J	0.294	0.568	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.253	0.568	PQL	MG/KG	
	SILVER	J	0.0854	0.568	PQL	MG/KG	
	SODIUM	J	83.3	114	PQL	MG/KG	
	THALLIUM	J	0.301	0.454	PQL	MG/KG	
SL-576-SA6-SB-2.0-3.0	ANTIMONY	J	0.189	0.511	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.134	0.511	PQL	MG/KG	
	SODIUM	J	94.1	102	PQL	MG/KG	
	THALLIUM	J	0.257	0.409	PQL	MG/KG	
SL-590-SA6-SB-0.0-0.5	ANTIMONY	J	0.203	0.540	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.486	0.540	PQL	MG/KG	
	BORON	J	3.59	5.40	PQL	MG/KG	
	CADMIUM	J	0.285	0.540	PQL	MG/KG	
	MOLYBDENUM	J	0.536	0.540	PQL	MG/KG	
	THALLIUM	J	0.220	0.432	PQL	MG/KG	
	Zirconium	J	4.80	5.40	PQL	MG/KG	
SL-590-SA6-SB-4.0-5.0	ANTIMONY	J	0.207	0.530	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.146	0.530	PQL	MG/KG	
	SILVER	J	0.0883	0.530	PQL	MG/KG	
	THALLIUM	J	0.324	0.424	PQL	MG/KG	
SL-591-SA6-SB-0.0-0.5	ANTIMONY	J	0.259	0.542	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.348	0.542	PQL	MG/KG	
	CADMIUM	J	0.318	0.542	PQL	MG/KG	
	THALLIUM	J	0.186	0.433	PQL	MG/KG	
SL-591-SA6-SB-4.0-5.0	ANTIMONY	J	0.166	0.532	PQL	MG/KG	J (all detects)
	BORON	J	3.00	5.32	PQL	MG/KG	
	CADMIUM	J	0.0961	0.532	PQL	MG/KG	
	MOLYBDENUM	J	0.491	0.532	PQL	MG/KG	
	THALLIUM	J	0.214	0.426	PQL	MG/KG	
SL-592-SA6-SB-0.0-0.5	ANTIMONY	J	0.339	0.542	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.416	0.542	PQL	MG/KG	
	BORON	J	3.26	5.42	PQL	MG/KG	
	SODIUM	J	81.9	108	PQL	MG/KG	
	THALLIUM	J	0.205	0.433	PQL	MG/KG	
SL-592-SA6-SB-2.5-3.5	ANTIMONY	J	0.209	0.500	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.126	0.500	PQL	MG/KG	
	SODIUM	J	75.9	100	PQL	MG/KG	
	THALLIUM	J	0.241	0.400	PQL	MG/KG	
SL-918-SA6-SB-0.0-0.5	ANTIMONY	J	0.447	0.596	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.520	0.596	PQL	MG/KG	
	CADMIUM	J	0.206	0.596	PQL	MG/KG	
	MOLYBDENUM	J	0.321	0.596	PQL	MG/KG	
	THALLIUM	J	0.238	0.477	PQL	MG/KG	

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-514-SA6-SB-0.0-0.5	MERCURY	J	0.0642	0.120	PQL	MG/KG	J (all detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA6-SB-0.0-0.5	MERCURY	J	0.0562	0.111	PQL	MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-514-SA6-SB-0.0-0.5	EFH(C30-C40)	J	8.1	12	PQL	MG/KG	J (all detects)
SL-518-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.7	5.6	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	4.7	5.6	PQL	MG/KG	
SL-575-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.6	5.4	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	4.6	5.4	PQL	MG/KG	
SL-576-SA6-SB-0.0-0.5	EFH(C21-C30)	J	4.4	5.8	PQL	MG/KG	J (all detects)
	TOTAL EFH(C8-C40)	J	4.4	5.8	PQL	MG/KG	
SL-591-SA6-SB-0.0-0.5	EFH(C30-C40)	J	6.0	11	PQL	MG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-518-SA6-SB-0.0-0.5	Aroclor 5460	J	35	45	PQL	UG/KG	J (all detects)
SL-592-SA6-SB-0.0-0.5	AROCLOR 1260	J	17	22	PQL	UG/KG	J (all detects)
SL-918-SA6-SB-0.0-0.5	Aroclor 5460	J	30	48	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-514-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	5.6	12	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	7.5	12	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	8.6	12	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	6.8	12	PQL	UG/KG	
	CHRYSENE	J	3.8	12	PQL	UG/KG	
	FLUORANTHENE	J	5.7	12	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	4.6	12	PQL	UG/KG	
	PYRENE	J	5.5	12	PQL	UG/KG	
SL-514-SA6-SB-4.0-5.0	BENZO(K)FLUORANTHENE	J	6.6	10	PQL	UG/KG	J (all detects)
	DIBENZO(A,H)ANTHRACENE	J	3.6	10	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	7.7	10	PQL	UG/KG	
	PHENANTHRENE	J	7.0	10	PQL	UG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L140 **Laboratory: EMXT**

EDD Filename: Prep12L140 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8270C SIM**

Matrix: **SO**

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-515-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	4.0	11	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	5.5	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	5.9	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	3.5	5.5	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	3.7	11	PQL	UG/KG	
	FLUORANTHENE	J	5.2	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.4	11	PQL	UG/KG	
	PYRENE	J	4.3	11	PQL	UG/KG	
SL-518-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	3.9	11	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	2.9	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.0	11	PQL	UG/KG	
SL-575-SA6-SB-0.0-0.5	ACENAPHTHENE	J	4.2	11	PQL	UG/KG	J (all detects)
	ANTHRACENE	J	3.4	11	PQL	UG/KG	
SL-576-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.1	12	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	5.6	12	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	8.8	12	PQL	UG/KG	
	BENZO(E)PYRENE	J	4.1	5.8	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	3.1	12	PQL	UG/KG	
	CHRYSENE	J	6.6	12	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.9	12	PQL	UG/KG	
	PHENANTHRENE	J	5.4	12	PQL	UG/KG	
	PYRENE	J	11	12	PQL	UG/KG	
SL-592-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	9.6	33	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	12	33	PQL	UG/KG	
	BENZO(E)PYRENE	J	13	17	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	13	33	PQL	UG/KG	
	FLUORANTHENE	J	11	33	PQL	UG/KG	
SL-918-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	3.9	12	PQL	UG/KG	J (all detects)

LDC #: 29414G4
SDG #: 12L140
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: AL
2nd Reviewer: [signature]

METHOD: Metals (EPA SW 846 Method 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: 12/17/12
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	-	1+2
XV	Field Blanks	SW	EB = *EB1-121912 FB = FB-111412 *EB2-121912 (12L166) (280-35930-1)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-518-SA6-SB-0.0-0.5	11	SL-592-SA6-SB-0.0-0.5	21		31	
2	SL-918-SA6-SB-0.0-0.5	12	SL-592-SA6-SB-2.5-3.5	22		32	
3	SL-514-SA6-SB-0.0-0.5	13	SL-575-SA6-SB-0.0-0.5	23		33	
4	SL-514-SA6-SB-4.0-5.0	14	SL-575-SA6-SB-2.0-3.0	24		34	
5	SL-514-SA6-SB-7.0-8.0	15	SL-576-SA6-SB-0.0-0.5	25		35	
6	SL-515-SA6-SB-0.0-0.5	16	SL-576-SA6-SB-2.0-3.0	26		36	
7	SL-590-SA6-SB-0.0-0.5	17	SL-518-SA6-SB-0.0-0.5MS	27		37	
8	SL-590-SA6-SB-4.0-5.0	18	SL-518-SA6-SB-0.0-0.5MSD	28		38	
9	SL-591-SA6-SB-0.0-0.5	19		29		39	
10	SL-591-SA6-SB-4.0-5.0	20		30		40	

Notes: _____

LDC #: 29414G4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Page: 1 of 1
Reviewer: SM
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification											
	FB-111412 (SDG:280-35930-1)	Action Limit	13	14	15	8T							
Ag	0.00078	0.195	~~0.0983~~	~~0.0790~~	~~0.131~~	0.0883 ~~0.182~~							
			0.128	0.0698	0.0854								

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

12L153

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-Dec-2012	TB-121812	L153-01	TB	5030B	8015B GRO	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	L153-02	N	3550B	8015B EFH	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	L153-02	N	3550B	8082	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	L153-02	N	3550B	8270C SIM	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	L153-02	N	7471A	7471A	III
18-Dec-2012	SL-588-SA6-SB-0.0-0.5	L153-02	N	TOTAL	6020	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	L153-03	N	3550B	8015B EFH	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	L153-03	N	3550B	8082	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	L153-03	N	3550B	8270C SIM	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	L153-03	N	7471A	7471A	III
18-Dec-2012	SL-588-SA6-SB-2.0-3.0	L153-03	N	TOTAL	6020	III
18-Dec-2012	SL-588-SA6-SB-2.5	L153-04	N	5035	8015B GRO	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	L153-07	N	3550B	8015B EFH	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	L153-07	N	3550B	8082	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	L153-07	N	3550B	8270C SIM	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	L153-07	N	7471A	7471A	III
18-Dec-2012	SL-617-SA6-SB-0.0-0.5	L153-07	N	TOTAL	6020	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	L153-08	N	3550B	8015B EFH	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	L153-08	N	3550B	8082	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	L153-08	N	3550B	8270C SIM	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	L153-08	N	7471A	7471A	III
18-Dec-2012	SL-617-SA6-SB-4.0-5.0	L153-08	N	TOTAL	6020	III
18-Dec-2012	SL-617-SA6-SB-4.5	L153-09	N	5035	8015B GRO	III
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	L153-06	N	3550B	8015B EFH	III
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	L153-06	N	3550B	8082	III
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	L153-06	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
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	L153-06	N	7471A	7471A	III
18-Dec-2012	SL-600-SA6-SB-0.0-0.5	L153-06	N	TOTAL	6020	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	L153-05	N	3550B	8015B EFH	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	L153-05	N	3550B	8082	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	L153-05	N	3550B	8270C SIM	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	L153-05	N	7471A	7471A	III
18-Dec-2012	SL-589-SA6-SB-0.0-0.5	L153-05	N	TOTAL	6020	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	3550B	8015B EFH	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	3550B	8081A	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	3550B	8082	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	3550B	8270C SIM	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	7471A	7471A	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	GEN PREP	8151A	III
18-Dec-2012	SL-685-SA6-SB-6.5-7.5	L153-10	N	TOTAL	6020	III
18-Dec-2012	SL-685-SA6-SB-7.0	L153-11	N	5035	8015B GRO	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: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-588-SA6-SB-0.0-0.5 ***Collected:*** 12/18/2012 12:35:00 ***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	0.204	J	0.119	MDL	0.593	PQL	MG/KG	J	Z
BERYLLIUM	0.536	J	0.0593	MDL	0.593	PQL	MG/KG	J	Z
CADMIUM	0.275	J	0.0593	MDL	0.593	PQL	MG/KG	J	Z
SILVER	0.0983	J	0.0593	MDL	0.593	PQL	MG/KG	U	F
SODIUM	61.0	J	59.3	MDL	119	PQL	MG/KG	J	Z
THALLIUM	0.245	J	0.0593	MDL	0.475	PQL	MG/KG	J	Z

Sample ID: SL-588-SA6-SB-2.0-3.0 ***Collected:*** 12/18/2012 12:45:00 ***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	0.164	J	0.105	MDL	0.525	PQL	MG/KG	J	Z
CADMIUM	0.149	J	0.0525	MDL	0.525	PQL	MG/KG	J	Z
SILVER	0.0790	J	0.0525	MDL	0.525	PQL	MG/KG	U	F
SODIUM	81.7	J	52.5	MDL	105	PQL	MG/KG	J	Z
THALLIUM	0.234	J	0.0525	MDL	0.420	PQL	MG/KG	J	Z

Sample ID: SL-589-SA6-SB-0.0-0.5 ***Collected:*** 12/18/2012 2:15:00 ***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	0.190	J	0.116	MDL	0.581	PQL	MG/KG	J	Z
BERYLLIUM	0.556	J	0.0581	MDL	0.581	PQL	MG/KG	J	Z
CADMIUM	0.315	J	0.0581	MDL	0.581	PQL	MG/KG	J	Z
SILVER	0.131	J	0.0581	MDL	0.581	PQL	MG/KG	U	F
SODIUM	69.2	J	58.1	MDL	116	PQL	MG/KG	J	Z
THALLIUM	0.265	J	0.0581	MDL	0.465	PQL	MG/KG	J	Z

Sample ID: SL-600-SA6-SB-0.0-0.5 ***Collected:*** 12/18/2012 1:45:00 ***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	0.176	J	0.114	MDL	0.568	PQL	MG/KG	J	Z
BERYLLIUM	0.555	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
CADMIUM	0.285	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
MOLYBDENUM	0.525	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
SILVER	0.239	J	0.0568	MDL	0.568	PQL	MG/KG	J	Z
SODIUM	68.1	J	56.8	MDL	114	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-600-SA6-SB-0.0-0.5 ***Collected:*** 12/18/2012 1:45:00 ***Analysis Type:*** RES/TOT ***Dilution:*** 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
THALLIUM	0.227	J	0.0568	MDL	0.454	PQL	MG/KG	J	Z

Sample ID: SL-617-SA6-SB-0.0-0.5 ***Collected:*** 12/18/2012 1:10:00 ***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	0.217	J	0.112	MDL	0.559	PQL	MG/KG	J	Z
BERYLLIUM	0.507	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
BORON	3.20	J	2.79	MDL	5.59	PQL	MG/KG	J	Z
CADMIUM	0.353	J	0.0559	MDL	0.559	PQL	MG/KG	J	Z
SODIUM	68.4	J	55.9	MDL	112	PQL	MG/KG	J	Z
THALLIUM	0.229	J	0.0559	MDL	0.447	PQL	MG/KG	J	Z

Sample ID: SL-617-SA6-SB-4.0-5.0 ***Collected:*** 12/18/2012 1:20:00 ***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	0.136	J	0.103	MDL	0.515	PQL	MG/KG	J	Z
BORON	2.64	J	2.57	MDL	5.15	PQL	MG/KG	J	Z
CADMIUM	0.112	J	0.0515	MDL	0.515	PQL	MG/KG	J	Z
SODIUM	85.0	J	51.5	MDL	103	PQL	MG/KG	J	Z
THALLIUM	0.248	J	0.0515	MDL	0.412	PQL	MG/KG	J	Z

Sample ID: SL-685-SA6-SB-6.5-7.5 ***Collected:*** 12/18/2012 3:00:00 ***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	0.131	J	0.110	MDL	0.548	PQL	MG/KG	J	Z
BORON	3.42	J	2.74	MDL	5.48	PQL	MG/KG	J	Z
CADMIUM	0.182	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
MOLYBDENUM	0.187	J	0.0548	MDL	0.548	PQL	MG/KG	J	Z
SILVER	0.182	J	0.0548	MDL	0.548	PQL	MG/KG	U	F
THALLIUM	0.218	J	0.0548	MDL	0.439	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **SVOA**

Method: **8015B EFH** ***Matrix:*** **SO**

Sample ID: SL-589-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 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(C30-C40)	6.2	J	5.8	MDL	12	PQL	MG/KG	J	Z

Method Category: **SVOA**

Method: **8082** ***Matrix:*** **SO**

Sample ID: SL-600-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 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
Aroclor 5460	31	J	23	MDL	46	PQL	UG/KG	J	Z

Method Category: **SVOA**

Method: **8270C SIM** ***Matrix:*** **SO**

Sample ID: SL-588-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 12:35:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	3.9	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	7.2	J	3.0	MDL	12	PQL	UG/KG	J	Z
BENZO(E)PYRENE	3.4	J	3.0	MDL	6.0	PQL	UG/KG	J	Z
CHRYSENE	6.2	J	3.0	MDL	12	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.4	J	3.0	MDL	12	PQL	UG/KG	J	Z
PHENANTHRENE	4.9	J	3.0	MDL	12	PQL	UG/KG	J	Z
PYRENE	10	J	3.0	MDL	12	PQL	UG/KG	J	Z

Sample ID: SL-600-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	3.0	J	2.9	MDL	11	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	3.4	J	2.9	MDL	11	PQL	UG/KG	J	Z
ACENAPHTHYLENE	3.1	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(A)ANTHRACENE	3.1	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	4.3	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	4.3	J	2.9	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.8	J	2.9	MDL	11	PQL	UG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L153 **Laboratory:** EMXT

EDD Filename: Prep12L153 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: SVOA

Method: 8270C SIM **Matrix:** SO

Sample ID: SL-600-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 1:45:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	5.1	J	2.9	MDL	11	PQL	UG/KG	J	Z

Sample ID: SL-617-SA6-SB-0.0-0.5 *Collected:* 12/18/2012 1:10:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	3.9	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(A)PYRENE	4.3	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	8.2	J	2.9	MDL	11	PQL	UG/KG	J	Z
BENZO(E)PYRENE	4.1	J	2.9	MDL	5.7	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	3.4	J	2.9	MDL	11	PQL	UG/KG	J	Z
CHRYSENE	5.7	J	2.9	MDL	11	PQL	UG/KG	J	Z
FLUORANTHENE	9.5	J	2.9	MDL	11	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	3.9	J	2.9	MDL	11	PQL	UG/KG	J	Z
PHENANTHRENE	3.8	J	2.9	MDL	11	PQL	UG/KG	J	Z
PYRENE	8.0	J	2.9	MDL	11	PQL	UG/KG	J	Z

Method Category: VOA

Method: 8015B GRO **Matrix:** AQ

Sample ID: TB-121812 *Collected:* 12/18/2012 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)	29	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
F	Field Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L153

Reporting Limit Outliers

Lab Reporting Batch ID: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-121812	GASOLINE RANGE ORGANICS (C5-C12)	J	29	50	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-588-SA6-SB-0.0-0.5	ANTIMONY	J	0.204	0.593	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.536	0.593	PQL	MG/KG	
	CADMIUM	J	0.275	0.593	PQL	MG/KG	
	SILVER	J	0.0983	0.593	PQL	MG/KG	
	SODIUM	J	61.0	119	PQL	MG/KG	
	THALLIUM	J	0.245	0.475	PQL	MG/KG	
SL-588-SA6-SB-2.0-3.0	ANTIMONY	J	0.164	0.525	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.149	0.525	PQL	MG/KG	
	SILVER	J	0.0790	0.525	PQL	MG/KG	
	SODIUM	J	81.7	105	PQL	MG/KG	
	THALLIUM	J	0.234	0.420	PQL	MG/KG	
SL-589-SA6-SB-0.0-0.5	ANTIMONY	J	0.190	0.581	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.556	0.581	PQL	MG/KG	
	CADMIUM	J	0.315	0.581	PQL	MG/KG	
	SILVER	J	0.131	0.581	PQL	MG/KG	
	SODIUM	J	69.2	116	PQL	MG/KG	
	THALLIUM	J	0.265	0.465	PQL	MG/KG	
SL-600-SA6-SB-0.0-0.5	ANTIMONY	J	0.176	0.568	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.555	0.568	PQL	MG/KG	
	CADMIUM	J	0.285	0.568	PQL	MG/KG	
	MOLYBDENUM	J	0.525	0.568	PQL	MG/KG	
	SILVER	J	0.239	0.568	PQL	MG/KG	
	SODIUM	J	68.1	114	PQL	MG/KG	
	THALLIUM	J	0.227	0.454	PQL	MG/KG	
SL-617-SA6-SB-0.0-0.5	ANTIMONY	J	0.217	0.559	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.507	0.559	PQL	MG/KG	
	BORON	J	3.20	5.59	PQL	MG/KG	
	CADMIUM	J	0.353	0.559	PQL	MG/KG	
	SODIUM	J	68.4	112	PQL	MG/KG	
	THALLIUM	J	0.229	0.447	PQL	MG/KG	
SL-617-SA6-SB-4.0-5.0	ANTIMONY	J	0.136	0.515	PQL	MG/KG	J (all detects)
	BORON	J	2.64	5.15	PQL	MG/KG	
	CADMIUM	J	0.112	0.515	PQL	MG/KG	
	SODIUM	J	85.0	103	PQL	MG/KG	
	THALLIUM	J	0.248	0.412	PQL	MG/KG	
SL-685-SA6-SB-6.5-7.5	ANTIMONY	J	0.131	0.548	PQL	MG/KG	J (all detects)
	BORON	J	3.42	5.48	PQL	MG/KG	
	CADMIUM	J	0.182	0.548	PQL	MG/KG	
	MOLYBDENUM	J	0.187	0.548	PQL	MG/KG	
	SILVER	J	0.182	0.548	PQL	MG/KG	
	THALLIUM	J	0.218	0.439	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L153 **Laboratory: EMXT**

EDD Filename: Prep12L153 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-589-SA6-SB-0.0-0.5	EFH(C30-C40)	J	6.2	12	PQL	MG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-600-SA6-SB-0.0-0.5	Aroclor 5460	J	31	46	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-588-SA6-SB-0.0-0.5	BENZO(A)PYRENE	J	3.9	12	PQL	UG/KG	J (all detects)
	BENZO(B)FLUORANTHENE	J	7.2	12	PQL	UG/KG	
	BENZO(E)PYRENE	J	3.4	6.0	PQL	UG/KG	
	CHRYSENE	J	6.2	12	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.4	12	PQL	UG/KG	
	PHENANTHRENE	J	4.9	12	PQL	UG/KG	
	PYRENE	J	10	12	PQL	UG/KG	
SL-600-SA6-SB-0.0-0.5	1-METHYLNAPHTHALENE	J	3.0	11	PQL	UG/KG	J (all detects)
	2-METHYLNAPHTHALENE	J	3.4	11	PQL	UG/KG	
	ACENAPHTHYLENE	J	3.1	11	PQL	UG/KG	
	BENZO(A)ANTHRACENE	J	3.1	11	PQL	UG/KG	
	BENZO(A)PYRENE	J	4.3	11	PQL	UG/KG	
	BENZO(K)FLUORANTHENE	J	4.3	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.8	11	PQL	UG/KG	
	NAPHTHALENE	J	5.1	11	PQL	UG/KG	
SL-617-SA6-SB-0.0-0.5	BENZO(A)ANTHRACENE	J	3.9	11	PQL	UG/KG	J (all detects)
	BENZO(A)PYRENE	J	4.3	11	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	8.2	11	PQL	UG/KG	
	BENZO(E)PYRENE	J	4.1	5.7	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	3.4	11	PQL	UG/KG	
	CHRYSENE	J	5.7	11	PQL	UG/KG	
	FLUORANTHENE	J	9.5	11	PQL	UG/KG	
	INDENO(1,2,3-CD)PYRENE	J	3.9	11	PQL	UG/KG	
	PHENANTHRENE	J	3.8	11	PQL	UG/KG	
	PYRENE	J	8.0	11	PQL	UG/KG	

LDC #: 29414H4
SDG #: 12L153
Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
ADR

Date: 4/2/13
Page: 1 of 1
Reviewer: CA
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 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: 12/18/12
II.	ICP/MS Tune	—	
III.	Calibration	—	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	—	
VI.	Matrix Spike Analysis	N/N	~~MS/D (12L153)~~ CS (different site)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS/D
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	N	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	—	
XV	Field Blanks	SW	EB = *EB1-121912 (12L166) *EB2-121912 *FB = FB-111412 (280-35930-1)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	SL-588-SA6-SB-0.0-0.5 *	11		21		31	
2	SL-588-SA6-SB-2.0-3.0 *	12		22		32	
3	SL-589-SA6-SB-0.0-0.5 *	13		23		33	
4	SL-600-SA6-SB-0.0-0.5	14		24		34	
5	SL-617-SA6-SB-0.0-0.5	15		25		35	
6	SL-617-SA6-SB-4.0-5.0	16		26		36	
7	SL-685-SA6-SB-6.5-7.5 *	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 29414H4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer: L

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	1	2	3	7						
Ag	0.00078	0.195	0.0983	0.0790	0.131	0.182						

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".

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-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	TOTAL	6020	III
19-Dec-2012	TB-121912	L166-03	TB	5030B	8015B GRO	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8015B EFH	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8082	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8270C SIM	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	7471A	7471A	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Dec-2012	SL-622-SA6-SB-4.0	L166-07	N	5035	8015B GRO	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8015B EFH	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8082	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8270C SIM	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	7471A	7471A	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	TOTAL	6020	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8015B EFH	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8082	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8270C SIM	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	7471A	7471A	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	TOTAL	6020	III
19-Dec-2012	SL-624-SA6-SB-4.5	L166-10	N	5035	8015B GRO	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8015B EFH	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8082	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8270C SIM	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	7471A	7471A	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	TOTAL	6020	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8015B EFH	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8082	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8270C SIM	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	7471A	7471A	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	TOTAL	6020	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8015B EFH	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8081A	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8082	III
19-Dec-2012	EB1-121912	L166-01	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Dec-2012	EB1-121912	L166-01	EB	5030B	8015B GRO	III
19-Dec-2012	EB1-121912	L166-01	EB	7470A	7470A	III
19-Dec-2012	EB1-121912	L166-01	EB	GEN PREP	8151A	III
19-Dec-2012	EB1-121912	L166-01	EB	NONE	6850	III
19-Dec-2012	EB1-121912	L166-01	EB	TOTAL	6020	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8015B EFH	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8082	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8270C SIM	III
19-Dec-2012	EB2-121912	L166-02	EB	7470A	7470A	III
19-Dec-2012	EB2-121912	L166-02	EB	NONE	6850	III
19-Dec-2012	EB2-121912	L166-02	EB	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: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB1-121912 *Collected:* 12/19/2012 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
CALCIUM	0.0315	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000587	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z
NICKEL	0.000210	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z
SODIUM	0.0601	J	0.0500	MDL	0.100	PQL	MG/L	J	Z

Sample ID: EB2-121912 *Collected:* 12/19/2012 3:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0284	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000667	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z
NICKEL	0.000230	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-1022-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 8:00:00 *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	0.194	J	0.114	MDL	0.569	PQL	MG/KG	J	Z
CADMIUM	0.319	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
SILVER	0.0726	J	0.0569	MDL	0.569	PQL	MG/KG	U	F
SODIUM	66.4	J	56.9	MDL	114	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0569	MDL	0.455	PQL	MG/KG	J	Z
Zirconium	5.69	U	2.85	MDL	5.69	PQL	MG/KG	UJ	Q

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *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	0.190	J	0.113	MDL	0.565	PQL	MG/KG	J	Z
BERYLLIUM	0.540	J	0.0565	MDL	0.565	PQL	MG/KG	J	Z
CADMIUM	0.316	J	0.0565	MDL	0.565	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory:** EMXT

EDD Filename: Prep12L166 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0744	J	0.0565	MDL	0.565	PQL	MG/KG	U	F
SODIUM	62.7	J	56.5	MDL	113	PQL	MG/KG	J	Z
THALLIUM	0.248	J	0.0565	MDL	0.452	PQL	MG/KG	J	Z
Zirconium	5.65	U	2.83	MDL	5.65	PQL	MG/KG	UJ	Q

Sample ID: SL-622-SA6-SB-3.5-4.5 *Collected:* 12/19/2012 8:15:00 *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	0.141	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
CADMIUM	0.166	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
SILVER	0.0531	J	0.0519	MDL	0.519	PQL	MG/KG	U	F
SODIUM	96.8	J	51.9	MDL	104	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z
Zirconium	5.19	U	2.59	MDL	5.19	PQL	MG/KG	UJ	Q

Sample ID: SL-623-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 9:20:00 *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	0.181	J	0.107	MDL	0.534	PQL	MG/KG	J	Z
CADMIUM	0.213	J	0.0534	MDL	0.534	PQL	MG/KG	J	Z
MOLYBDENUM	0.435	J	0.0534	MDL	0.534	PQL	MG/KG	J	Z
SILVER	0.0812	J	0.0534	MDL	0.534	PQL	MG/KG	U	F
SODIUM	64.1	J	53.4	MDL	107	PQL	MG/KG	J	Z
THALLIUM	0.257	J	0.0534	MDL	0.427	PQL	MG/KG	J	Z
Zirconium	5.34	U	2.67	MDL	5.34	PQL	MG/KG	UJ	Q

Sample ID: SL-624-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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	0.184	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
BERYLLIUM	0.511	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.364	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-624-SA6-SB-0.0-0.5 ***Collected:*** 12/19/2012 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
SILVER	0.0611	J	0.0560	MDL	0.560	PQL	MG/KG	U	F
SODIUM	73.0	J	56.0	MDL	112	PQL	MG/KG	J	Z
THALLIUM	0.264	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID: SL-624-SA6-SB-4.0-5.0 ***Collected:*** 12/19/2012 8:55:00 ***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	0.131	J	0.109	MDL	0.546	PQL	MG/KG	J	Z
CADMIUM	0.164	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
MOLYBDENUM	0.512	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
SILVER	0.0604	J	0.0546	MDL	0.546	PQL	MG/KG	U	F
SODIUM	82.4	J	54.6	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.248	J	0.0546	MDL	0.436	PQL	MG/KG	J	Z
Zirconium	5.46	U	2.73	MDL	5.46	PQL	MG/KG	UJ	Q

Sample ID: SL-625-SA6-SB-0.0-0.5 ***Collected:*** 12/19/2012 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	0.204	J	0.109	MDL	0.547	PQL	MG/KG	J	Z
BERYLLIUM	0.449	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
CADMIUM	0.239	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
MOLYBDENUM	0.508	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
SILVER	0.0681	J	0.0547	MDL	0.547	PQL	MG/KG	U	F
SODIUM	67.4	J	54.7	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.229	J	0.0547	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.47	U	2.74	MDL	5.47	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	5.4	J	2.9	MDL	5.8	PQL	MG/KG	J	Z
EFH(C30-C40)	11	J	5.8	MDL	12	PQL	MG/KG	J	Z

Sample ID: SL-623-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.9	J	2.8	MDL	5.5	PQL	MG/KG	J	Z
EFH(C30-C40)	8.5	J	5.5	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-624-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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
EFH(C21-C30)	5.4	J	2.8	MDL	5.7	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB1-121912 *Collected:* 12/19/2012 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.03

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.18	J	0.10	MDL	0.21	PQL	UG/L	J	Z

Sample ID: EB2-121912 *Collected:* 12/19/2012 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.17	J	0.11	MDL	0.22	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: EB1-121912 ***Collected:*** 12/19/2012 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*
GASOLINE RANGE ORGANICS (C5-C12)	17	J	10	MDL	50	PQL	UG/L	U	T

Sample ID: TB-121912 ***Collected:*** 12/19/2012 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)	28	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
F	Field Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L166

Trip Blank Outlier Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8015B GRO**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-121912(RES)	12/19/2012 8:00:00 AM	GASOLINE RANGE ORGANICS (C5-C12)	28 UG/L	EB1-121912 EB2-121912 FB-111412 SL-1022-SA6-SB-0.0-0.5 SL-622-SA6-SB-0.0-0.5 SL-622-SA6-SB-3.5-4.5 SL-622-SA6-SB-4.0 SL-623-SA6-SB-0.0-0.5 SL-624-SA6-SB-0.0-0.5 SL-624-SA6-SB-4.0-5.0 SL-624-SA6-SB-4.5 SL-625-SA6-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
EB1-121912(RES)	GASOLINE RANGE ORGANICS (C5-C12)	17 UG/L	50U UG/L

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: 12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-622-SA6-SB-0.0-0.5MS (TOT) SL-622-SA6-SB-0.0-0.5MSD (TOT) (SL-1022-SA6-SB-0.0-0.5 SL -622-SA6-SB-0.0-0.5 SL -622-SA6-SB-3.5-4.5 SL -623-SA6-SB-0.0-0.5 SL -624-SA6-SB-0.0-0.5 SL -624-SA6-SB-4.0-5.0 SL -625-SA6-SB-0.0-0.5)	ALUMINUM BARIUM MANGANESE TITANIUM	- 134 156 200	141 135 - 464	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM BARIUM MANGANESE TITANIUM	No Qual, >4X
SL-622-SA6-SB-0.0-0.5MS (TOT) SL-622-SA6-SB-0.0-0.5MSD (TOT) (SL-1022-SA6-SB-0.0-0.5 SL -622-SA6-SB-0.0-0.5 SL -622-SA6-SB-3.5-4.5 SL -623-SA6-SB-0.0-0.5 SL -624-SA6-SB-0.0-0.5 SL -624-SA6-SB-4.0-5.0 SL -625-SA6-SB-0.0-0.5)	Zirconium	57	58	75.00-125.00	-	Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5 (TOT)	SL-1022-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	13200	13800	4	50.00	
ANTIMONY	0.190	0.194	2	50.00	
ARSENIC	3.52	3.45	2	50.00	
BARIUM	118	126	7	50.00	
BERYLLIUM	0.540	0.569	5	50.00	
CADMIUM	0.316	0.319	1	50.00	
CALCIUM	2230	2640	17	50.00	
CHROMIUM	17.2	17.3	1	50.00	
COBALT	5.29	5.35	1	50.00	
COPPER	10.1	9.76	3	50.00	
IRON	19000	19000	0	50.00	
LEAD	10.4	12.0	14	50.00	
LITHIUM	19.3	21.3	10	50.00	
MAGNESIUM	4150	4110	1	50.00	No Qualifiers Applied
MANGANESE	318	347	9	50.00	
MOLYBDENUM	0.635	0.621	2	50.00	
NICKEL	11.7	11.6	1	50.00	
PHOSPHORUS	436	433	1	50.00	
POTASSIUM	3720	4050	8	50.00	
SILVER	0.0744	0.0726	2	50.00	
SODIUM	62.7	66.4	6	50.00	
STRONTIUM	20.9	23.3	11	50.00	
THALLIUM	0.248	0.271	9	50.00	
TITANIUM	882	937	6	50.00	
VANADIUM	30.7	30.3	1	50.00	
ZINC	62.1	64.1	3	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5	SL-1022-SA6-SB-0.0-0.5			
EFH(C21-C30)	5.4	7.1	27	50.00	
EFH(C30-C40)	11	15	31	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	16	22	32	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5	SL-1022-SA6-SB-0.0-0.5			
PH	6.68	6.61	1		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	CALCIUM	J	0.0315	0.100	PQL	MG/L	J (all detects)
	COPPER	J	0.000587	0.00100	PQL	MG/L	
	NICKEL	J	0.000210	0.00100	PQL	MG/L	
	SODIUM	J	0.0601	0.100	PQL	MG/L	
EB2-121912	CALCIUM	J	0.0284	0.100	PQL	MG/L	J (all detects)
	COPPER	J	0.000667	0.00100	PQL	MG/L	
	NICKEL	J	0.000230	0.00100	PQL	MG/L	

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	GASOLINE RANGE ORGANICS (C5-C12)	J	17	50	PQL	UG/L	J (all detects)
TB-121912	GASOLINE RANGE ORGANICS (C5-C12)	J	28	50	PQL	UG/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	NAPHTHALENE	J	0.18	0.21	PQL	UG/L	J (all detects)
EB2-121912	NAPHTHALENE	J	0.17	0.22	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1022-SA6-SB-0.0-0.5	ANTIMONY	J	0.194	0.569	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.319	0.569	PQL	MG/KG	
	SILVER	J	0.0726	0.569	PQL	MG/KG	
	SODIUM	J	66.4	114	PQL	MG/KG	
	THALLIUM	J	0.271	0.455	PQL	MG/KG	
SL-622-SA6-SB-0.0-0.5	ANTIMONY	J	0.190	0.565	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.540	0.565	PQL	MG/KG	
	CADMIUM	J	0.316	0.565	PQL	MG/KG	
	SILVER	J	0.0744	0.565	PQL	MG/KG	
	SODIUM	J	62.7	113	PQL	MG/KG	
	THALLIUM	J	0.248	0.452	PQL	MG/KG	
SL-622-SA6-SB-3.5-4.5	ANTIMONY	J	0.141	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.166	0.519	PQL	MG/KG	
	SILVER	J	0.0531	0.519	PQL	MG/KG	
	SODIUM	J	96.8	104	PQL	MG/KG	
	THALLIUM	J	0.271	0.415	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-623-SA6-SB-0.0-0.5	ANTIMONY	J	0.181	0.534	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.213	0.534	PQL	MG/KG	
	MOLYBDENUM	J	0.435	0.534	PQL	MG/KG	
	SILVER	J	0.0812	0.534	PQL	MG/KG	
	SODIUM	J	64.1	107	PQL	MG/KG	
	THALLIUM	J	0.257	0.427	PQL	MG/KG	
SL-624-SA6-SB-0.0-0.5	ANTIMONY	J	0.184	0.560	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.511	0.560	PQL	MG/KG	
	CADMIUM	J	0.364	0.560	PQL	MG/KG	
	SILVER	J	0.0611	0.560	PQL	MG/KG	
	SODIUM	J	73.0	112	PQL	MG/KG	
	THALLIUM	J	0.264	0.448	PQL	MG/KG	
SL-624-SA6-SB-4.0-5.0	ANTIMONY	J	0.131	0.546	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.164	0.546	PQL	MG/KG	
	MOLYBDENUM	J	0.512	0.546	PQL	MG/KG	
	SILVER	J	0.0604	0.546	PQL	MG/KG	
	SODIUM	J	82.4	109	PQL	MG/KG	
	THALLIUM	J	0.248	0.436	PQL	MG/KG	
SL-625-SA6-SB-0.0-0.5	ANTIMONY	J	0.204	0.547	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.449	0.547	PQL	MG/KG	
	CADMIUM	J	0.239	0.547	PQL	MG/KG	
	MOLYBDENUM	J	0.508	0.547	PQL	MG/KG	
	SILVER	J	0.0681	0.547	PQL	MG/KG	
	SODIUM	J	67.4	109	PQL	MG/KG	
	THALLIUM	J	0.229	0.438	PQL	MG/KG	

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-622-SA6-SB-0.0-0.5	EFH(C21-C30)	J	5.4	5.8	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	11	12	PQL	MG/KG	
SL-623-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.9	5.5	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	8.5	11	PQL	MG/KG	
SL-624-SA6-SB-0.0-0.5	EFH(C21-C30)	J	5.4	5.7	PQL	MG/KG	J (all detects)

LDC #: 29414I4

SDG #: 12L166

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 4/2/13

Page: 1 of 1

Reviewer: CL

2nd Reviewer: L

METHOD: Metals (EPA SW 846 Method 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: 12/19/12
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, 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	-	3+4
XV	Field Blanks	SW	EB *1, 2 (no qualifiers) FB= FB-111412 (280-35930-1)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	EB1-121912 W	11	SL-622-SA6-SB-0.0-0.5MSD	21		31	
2	EB2-121912 W	12		22		32	
3	SL-622-SA6-SB-0.0-0.5	13		23		33	
4	SL-1022-SA6-SB-0.0-0.5	14		24		34	
5	SL-622-SA6-SB-3.5-4.5	15		25		35	
6	SL-624-SA6-SB-0.0-0.5	16		26		36	
7	SL-624-SA6-SB-4.0-5.0	17		27		37	
8	SL-623-SA6-SB-0.0-0.5	18		28		38	
9	SL-625-SA6-SB-0.0-0.5	19		29		39	
10	SL-622-SA6-SB-0.0-0.5MS	20		30		40	

Notes: _____

LDC #: 29414I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	3	4	5	6	7	8	9			
Ag	0.00078	0.195	0.0744	0.0726	0.0531	0.0611	0.0604	0.0812	0.0681			

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

12L166

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-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5	L166-04	N	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MS	L166-04M	MS	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-0.0-0.5MSD	L166-04S	MSD	TOTAL	6020	III
19-Dec-2012	TB-121912	L166-03	TB	5030B	8015B GRO	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8015B EFH	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8082	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	3550B	8270C SIM	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	7471A	7471A	III
19-Dec-2012	SL-1022-SA6-SB-0.0-0.5	L166-05	FD	TOTAL	6020	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8015B EFH	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8082	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	3550B	8270C SIM	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	N	7471A	7471A	III
19-Dec-2012	SL-622-SA6-SB-3.5-4.5	L166-06	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Dec-2012	SL-622-SA6-SB-4.0	L166-07	N	5035	8015B GRO	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8015B EFH	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8082	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	3550B	8270C SIM	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	7471A	7471A	III
19-Dec-2012	SL-624-SA6-SB-0.0-0.5	L166-08	N	TOTAL	6020	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8015B EFH	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8082	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	3550B	8270C SIM	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	7471A	7471A	III
19-Dec-2012	SL-624-SA6-SB-4.0-5.0	L166-09	N	TOTAL	6020	III
19-Dec-2012	SL-624-SA6-SB-4.5	L166-10	N	5035	8015B GRO	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8015B EFH	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8082	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	3550B	8270C SIM	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	7471A	7471A	III
19-Dec-2012	SL-623-SA6-SB-0.0-0.5	L166-11	N	TOTAL	6020	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8015B EFH	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8082	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	3550B	8270C SIM	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	7471A	7471A	III
19-Dec-2012	SL-625-SA6-SB-0.0-0.5	L166-12	N	TOTAL	6020	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8015B EFH	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8081A	III
19-Dec-2012	EB1-121912	L166-01	EB	3520C	8082	III
19-Dec-2012	EB1-121912	L166-01	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*

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Dec-2012	EB1-121912	L166-01	EB	5030B	8015B GRO	III
19-Dec-2012	EB1-121912	L166-01	EB	7470A	7470A	III
19-Dec-2012	EB1-121912	L166-01	EB	GEN PREP	8151A	III
19-Dec-2012	EB1-121912	L166-01	EB	NONE	6850	III
19-Dec-2012	EB1-121912	L166-01	EB	TOTAL	6020	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8015B EFH	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8082	III
19-Dec-2012	EB2-121912	L166-02	EB	3520C	8270C SIM	III
19-Dec-2012	EB2-121912	L166-02	EB	7470A	7470A	III
19-Dec-2012	EB2-121912	L166-02	EB	NONE	6850	III
19-Dec-2012	EB2-121912	L166-02	EB	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: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: METALS

Method: 6020 **Matrix: AQ**

Sample ID: EB1-121912 *Collected:* 12/19/2012 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
CALCIUM	0.0315	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000587	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z
NICKEL	0.000210	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z
SODIUM	0.0601	J	0.0500	MDL	0.100	PQL	MG/L	J	Z

Sample ID: EB2-121912 *Collected:* 12/19/2012 3:30:00 *Analysis Type:* RES/TOT *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CALCIUM	0.0284	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000667	J	0.000500	MDL	0.00100	PQL	MG/L	J	Z
NICKEL	0.000230	J	0.000200	MDL	0.00100	PQL	MG/L	J	Z

Method Category: METALS

Method: 6020 **Matrix: SO**

Sample ID: SL-1022-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 8:00:00 *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	0.194	J	0.114	MDL	0.569	PQL	MG/KG	J	Z
CADMIUM	0.319	J	0.0569	MDL	0.569	PQL	MG/KG	J	Z
SILVER	0.0726	J	0.0569	MDL	0.569	PQL	MG/KG	U	F
SODIUM	66.4	J	56.9	MDL	114	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0569	MDL	0.455	PQL	MG/KG	J	Z
Zirconium	5.69	U	2.85	MDL	5.69	PQL	MG/KG	UJ	Q

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *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	0.190	J	0.113	MDL	0.565	PQL	MG/KG	J	Z
BERYLLIUM	0.540	J	0.0565	MDL	0.565	PQL	MG/KG	J	Z
CADMIUM	0.316	J	0.0565	MDL	0.565	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory:** EMXT

EDD Filename: Prep12L166 **eQAPP Name:** CDM_SSFL_130305_EMAX

Method Category: METALS

Method: 6020 **Matrix:** SO

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *Analysis Type:* RES/TOT *Dilution:* 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SILVER	0.0744	J	0.0565	MDL	0.565	PQL	MG/KG	U	F
SODIUM	62.7	J	56.5	MDL	113	PQL	MG/KG	J	Z
THALLIUM	0.248	J	0.0565	MDL	0.452	PQL	MG/KG	J	Z
Zirconium	5.65	U	2.83	MDL	5.65	PQL	MG/KG	UJ	Q

Sample ID: SL-622-SA6-SB-3.5-4.5 *Collected:* 12/19/2012 8:15:00 *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	0.141	J	0.104	MDL	0.519	PQL	MG/KG	J	Z
CADMIUM	0.166	J	0.0519	MDL	0.519	PQL	MG/KG	J	Z
SILVER	0.0531	J	0.0519	MDL	0.519	PQL	MG/KG	U	F
SODIUM	96.8	J	51.9	MDL	104	PQL	MG/KG	J	Z
THALLIUM	0.271	J	0.0519	MDL	0.415	PQL	MG/KG	J	Z
Zirconium	5.19	U	2.59	MDL	5.19	PQL	MG/KG	UJ	Q

Sample ID: SL-623-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 9:20:00 *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	0.181	J	0.107	MDL	0.534	PQL	MG/KG	J	Z
CADMIUM	0.213	J	0.0534	MDL	0.534	PQL	MG/KG	J	Z
MOLYBDENUM	0.435	J	0.0534	MDL	0.534	PQL	MG/KG	J	Z
SILVER	0.0812	J	0.0534	MDL	0.534	PQL	MG/KG	U	F
SODIUM	64.1	J	53.4	MDL	107	PQL	MG/KG	J	Z
THALLIUM	0.257	J	0.0534	MDL	0.427	PQL	MG/KG	J	Z
Zirconium	5.34	U	2.67	MDL	5.34	PQL	MG/KG	UJ	Q

Sample ID: SL-624-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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	0.184	J	0.112	MDL	0.560	PQL	MG/KG	J	Z
BERYLLIUM	0.511	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z
CADMIUM	0.364	J	0.0560	MDL	0.560	PQL	MG/KG	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **METALS**

Method: **6020** ***Matrix:*** **SO**

Sample ID: SL-624-SA6-SB-0.0-0.5 ***Collected:*** 12/19/2012 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
SILVER	0.0611	J	0.0560	MDL	0.560	PQL	MG/KG	U	F
SODIUM	73.0	J	56.0	MDL	112	PQL	MG/KG	J	Z
THALLIUM	0.264	J	0.0560	MDL	0.448	PQL	MG/KG	J	Z
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID: SL-624-SA6-SB-4.0-5.0 ***Collected:*** 12/19/2012 8:55:00 ***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	0.131	J	0.109	MDL	0.546	PQL	MG/KG	J	Z
CADMIUM	0.164	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
MOLYBDENUM	0.512	J	0.0546	MDL	0.546	PQL	MG/KG	J	Z
SILVER	0.0604	J	0.0546	MDL	0.546	PQL	MG/KG	U	F
SODIUM	82.4	J	54.6	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.248	J	0.0546	MDL	0.436	PQL	MG/KG	J	Z
Zirconium	5.46	U	2.73	MDL	5.46	PQL	MG/KG	UJ	Q

Sample ID: SL-625-SA6-SB-0.0-0.5 ***Collected:*** 12/19/2012 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	0.204	J	0.109	MDL	0.547	PQL	MG/KG	J	Z
BERYLLIUM	0.449	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
CADMIUM	0.239	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
MOLYBDENUM	0.508	J	0.0547	MDL	0.547	PQL	MG/KG	J	Z
SILVER	0.0681	J	0.0547	MDL	0.547	PQL	MG/KG	U	F
SODIUM	67.4	J	54.7	MDL	109	PQL	MG/KG	J	Z
THALLIUM	0.229	J	0.0547	MDL	0.438	PQL	MG/KG	J	Z
Zirconium	5.47	U	2.74	MDL	5.47	PQL	MG/KG	UJ	Q

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: SVOA

Method: 8015B EFH **Matrix: SO**

Sample ID: SL-622-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 7:55:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	5.4	J	2.9	MDL	5.8	PQL	MG/KG	J	Z
EFH(C30-C40)	11	J	5.8	MDL	12	PQL	MG/KG	J	Z

Sample ID: SL-623-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 9:20:00 *Analysis Type:* RES *Dilution:* 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C21-C30)	3.9	J	2.8	MDL	5.5	PQL	MG/KG	J	Z
EFH(C30-C40)	8.5	J	5.5	MDL	11	PQL	MG/KG	J	Z

Sample ID: SL-624-SA6-SB-0.0-0.5 *Collected:* 12/19/2012 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
EFH(C21-C30)	5.4	J	2.8	MDL	5.7	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8270C SIM **Matrix: AQ**

Sample ID: EB1-121912 *Collected:* 12/19/2012 3:00:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.03

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.18	J	0.10	MDL	0.21	PQL	UG/L	J	Z

Sample ID: EB2-121912 *Collected:* 12/19/2012 3:30:00 *Analysis Type:* RES-BASE/NEUTRAL *Dilution:* 1.1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	0.17	J	0.11	MDL	0.22	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method Category: **VOA**

Method: **8015B GRO** ***Matrix:*** **AQ**

Sample ID: EB1-121912 ***Collected:*** 12/19/2012 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*
GASOLINE RANGE ORGANICS (C5-C12)	17	J	10	MDL	50	PQL	UG/L	U	T

Sample ID: TB-121912 ***Collected:*** 12/19/2012 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)	28	J	10	MDL	50	PQL	UG/L	J	Z

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Data Qualifier Summary

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Reason Code Legend

Reason Code	*Description*
F	Field Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
T	Trip Blank Contamination
Z	Reporting Limit Trace Value

* denotes a non-reportable result

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Enclosure I

Level III ADR Outliers
(including Manual Review Outliers)

Quality Control
Outlier Reports

12L166

Trip Blank Outlier Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **8015B GRO**
Matrix: **AQ**

Trip Blank Sample ID	Collected Date	Analyte	Result	Associated Samples
TB-121912(RES)	12/19/2012 8:00:00 AM	GASOLINE RANGE ORGANICS (C5-C12)	28 UG/L	EB1-121912 EB2-121912 FB-111412 SL-1022-SA6-SB-0.0-0.5 SL-622-SA6-SB-0.0-0.5 SL-622-SA6-SB-3.5-4.5 SL-622-SA6-SB-4.0 SL-623-SA6-SB-0.0-0.5 SL-624-SA6-SB-0.0-0.5 SL-624-SA6-SB-4.0-5.0 SL-624-SA6-SB-4.5 SL-625-SA6-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
EB1-121912(RES)	GASOLINE RANGE ORGANICS (C5-C12)	17 UG/L	50U UG/L

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: 12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: **6020**
Matrix: **SO**

QC Sample ID (Associated Samples)	*Compound*	*MS %R*	*MSD %R*	*%R Limits*	*RPD (Limits)*	*Affected Compounds*	*Flag*
SL-622-SA6-SB-0.0-0.5MS (TOT) SL-622-SA6-SB-0.0-0.5MSD (TOT) (SL-1022-SA6-SB-0.0-0.5 SL -622-SA6-SB-0.0-0.5 SL -622-SA6-SB-3.5-4.5 SL -623-SA6-SB-0.0-0.5 SL -624-SA6-SB-0.0-0.5 SL -624-SA6-SB-4.0-5.0 SL -625-SA6-SB-0.0-0.5)	ALUMINUM BARIUM MANGANESE TITANIUM	- 134 156 200	141 135 - 464	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM BARIUM MANGANESE TITANIUM	No Qual, >4X
SL-622-SA6-SB-0.0-0.5MS (TOT) SL-622-SA6-SB-0.0-0.5MSD (TOT) (SL-1022-SA6-SB-0.0-0.5 SL -622-SA6-SB-0.0-0.5 SL -622-SA6-SB-3.5-4.5 SL -623-SA6-SB-0.0-0.5 SL -624-SA6-SB-0.0-0.5 SL -624-SA6-SB-4.0-5.0 SL -625-SA6-SB-0.0-0.5)	Zirconium	57	58	75.00-125.00	-	Zirconium	J(all detects) UJ(all non-detects)

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5 (TOT)	SL-1022-SA6-SB-0.0-0.5 (TOT)			
ALUMINUM	13200	13800	4	50.00	
ANTIMONY	0.190	0.194	2	50.00	
ARSENIC	3.52	3.45	2	50.00	
BARIUM	118	126	7	50.00	
BERYLLIUM	0.540	0.569	5	50.00	
CADMIUM	0.316	0.319	1	50.00	
CALCIUM	2230	2640	17	50.00	
CHROMIUM	17.2	17.3	1	50.00	
COBALT	5.29	5.35	1	50.00	
COPPER	10.1	9.76	3	50.00	
IRON	19000	19000	0	50.00	
LEAD	10.4	12.0	14	50.00	
LITHIUM	19.3	21.3	10	50.00	
MAGNESIUM	4150	4110	1	50.00	No Qualifiers Applied
MANGANESE	318	347	9	50.00	
MOLYBDENUM	0.635	0.621	2	50.00	
NICKEL	11.7	11.6	1	50.00	
PHOSPHORUS	436	433	1	50.00	
POTASSIUM	3720	4050	8	50.00	
SILVER	0.0744	0.0726	2	50.00	
SODIUM	62.7	66.4	6	50.00	
STRONTIUM	20.9	23.3	11	50.00	
THALLIUM	0.248	0.271	9	50.00	
TITANIUM	882	937	6	50.00	
VANADIUM	30.7	30.3	1	50.00	
ZINC	62.1	64.1	3	50.00	

Method: 8015B EFH
Matrix: SO

Analyte	Concentration (MG/KG)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5	SL-1022-SA6-SB-0.0-0.5			
EFH(C21-C30)	5.4	7.1	27	50.00	
EFH(C30-C40)	11	15	31	50.00	No Qualifiers Applied
TOTAL EFH(C8-C40)	16	22	32	50.00	

Method: 9045D
Matrix: SO

Analyte	Concentration (PH UNIT)		Sample RPD	eQAPP RPD	Flag
	SL-622-SA6-SB-0.0-0.5	SL-1022-SA6-SB-0.0-0.5			
PH	6.68	6.61	1		No Qualifiers Applied

Project Name and Number: PHASE3 - SSFL PHASE 3 (SA6)

Reporting Limit Outliers

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	CALCIUM	J	0.0315	0.100	PQL	MG/L	J (all detects)
	COPPER	J	0.000587	0.00100	PQL	MG/L	
	NICKEL	J	0.000210	0.00100	PQL	MG/L	
	SODIUM	J	0.0601	0.100	PQL	MG/L	
EB2-121912	CALCIUM	J	0.0284	0.100	PQL	MG/L	J (all detects)
	COPPER	J	0.000667	0.00100	PQL	MG/L	
	NICKEL	J	0.000230	0.00100	PQL	MG/L	

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	GASOLINE RANGE ORGANICS (C5-C12)	J	17	50	PQL	UG/L	J (all detects)
TB-121912	GASOLINE RANGE ORGANICS (C5-C12)	J	28	50	PQL	UG/L	J (all detects)

Method: 8270C SIM

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB1-121912	NAPHTHALENE	J	0.18	0.21	PQL	UG/L	J (all detects)
EB2-121912	NAPHTHALENE	J	0.17	0.22	PQL	UG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-1022-SA6-SB-0.0-0.5	ANTIMONY	J	0.194	0.569	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.319	0.569	PQL	MG/KG	
	SILVER	J	0.0726	0.569	PQL	MG/KG	
	SODIUM	J	66.4	114	PQL	MG/KG	
	THALLIUM	J	0.271	0.455	PQL	MG/KG	
SL-622-SA6-SB-0.0-0.5	ANTIMONY	J	0.190	0.565	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.540	0.565	PQL	MG/KG	
	CADMIUM	J	0.316	0.565	PQL	MG/KG	
	SILVER	J	0.0744	0.565	PQL	MG/KG	
	SODIUM	J	62.7	113	PQL	MG/KG	
	THALLIUM	J	0.248	0.452	PQL	MG/KG	
SL-622-SA6-SB-3.5-4.5	ANTIMONY	J	0.141	0.519	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.166	0.519	PQL	MG/KG	
	SILVER	J	0.0531	0.519	PQL	MG/KG	
	SODIUM	J	96.8	104	PQL	MG/KG	
	THALLIUM	J	0.271	0.415	PQL	MG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12L166 **Laboratory: EMXT**

EDD Filename: Prep12L166 **eQAPP Name: CDM_SSFL_130305_EMAX**

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-623-SA6-SB-0.0-0.5	ANTIMONY	J	0.181	0.534	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.213	0.534	PQL	MG/KG	
	MOLYBDENUM	J	0.435	0.534	PQL	MG/KG	
	SILVER	J	0.0812	0.534	PQL	MG/KG	
	SODIUM	J	64.1	107	PQL	MG/KG	
	THALLIUM	J	0.257	0.427	PQL	MG/KG	
SL-624-SA6-SB-0.0-0.5	ANTIMONY	J	0.184	0.560	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.511	0.560	PQL	MG/KG	
	CADMIUM	J	0.364	0.560	PQL	MG/KG	
	SILVER	J	0.0611	0.560	PQL	MG/KG	
	SODIUM	J	73.0	112	PQL	MG/KG	
	THALLIUM	J	0.264	0.448	PQL	MG/KG	
SL-624-SA6-SB-4.0-5.0	ANTIMONY	J	0.131	0.546	PQL	MG/KG	J (all detects)
	CADMIUM	J	0.164	0.546	PQL	MG/KG	
	MOLYBDENUM	J	0.512	0.546	PQL	MG/KG	
	SILVER	J	0.0604	0.546	PQL	MG/KG	
	SODIUM	J	82.4	109	PQL	MG/KG	
	THALLIUM	J	0.248	0.436	PQL	MG/KG	
SL-625-SA6-SB-0.0-0.5	ANTIMONY	J	0.204	0.547	PQL	MG/KG	J (all detects)
	BERYLLIUM	J	0.449	0.547	PQL	MG/KG	
	CADMIUM	J	0.239	0.547	PQL	MG/KG	
	MOLYBDENUM	J	0.508	0.547	PQL	MG/KG	
	SILVER	J	0.0681	0.547	PQL	MG/KG	
	SODIUM	J	67.4	109	PQL	MG/KG	
	THALLIUM	J	0.229	0.438	PQL	MG/KG	

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-622-SA6-SB-0.0-0.5	EFH(C21-C30)	J	5.4	5.8	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	11	12	PQL	MG/KG	
SL-623-SA6-SB-0.0-0.5	EFH(C21-C30)	J	3.9	5.5	PQL	MG/KG	J (all detects)
	EFH(C30-C40)	J	8.5	11	PQL	MG/KG	
SL-624-SA6-SB-0.0-0.5	EFH(C21-C30)	J	5.4	5.7	PQL	MG/KG	J (all detects)

LDC #: 29414I4

SDG #: 12L166

Laboratory: EMAX Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

ADR

Date: 4/2/13

Page: 1 of 1

Reviewer: CL

2nd Reviewer: L

METHOD: Metals (EPA SW 846 Method 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: 12/19/12
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, 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	-	3+4
XV	Field Blanks	SW	EB *1, 2 (no qualifiers) FB= FB-111412 (280-35930-1)

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; *ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

1	EB1-121912 W	11	SL-622-SA6-SB-0.0-0.5MSD	21		31	
2	EB2-121912 W	12		22		32	
3	SL-622-SA6-SB-0.0-0.5	13		23		33	
4	SL-1022-SA6-SB-0.0-0.5	14		24		34	
5	SL-622-SA6-SB-3.5-4.5	15		25		35	
6	SL-624-SA6-SB-0.0-0.5	16		26		36	
7	SL-624-SA6-SB-4.0-5.0	17		27		37	
8	SL-623-SA6-SB-0.0-0.5	18		28		38	
9	SL-625-SA6-SB-0.0-0.5	19		29		39	
10	SL-622-SA6-SB-0.0-0.5MS	20		30		40	

Notes: _____

LDC #: 29414I4

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: SM
2nd Reviewer:

METHOD: Trace Metals (EPA SW846 6020A/7000)

Blank units: mg/L **Associated sample units:** mg/Kg
Sampling date: 11/14/12 Soil factor applied 50x
Field blank type: (circle one) Field Blank / Rinsate / Other: Associated Samples: All

Analyte	Blank ID	Sample Identification										
	FB-111412 (SDG:280-35930-1)	Action Limit	3	4	5	6	7	8	9			
Ag	0.00078	0.195	0.0744	0.0726	0.0531	0.0611	0.0604	0.0812	0.0681			

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".

Appendix D
Master Database Table
(On CD)

Master Chemical Database Table for Phase 3 Subarea 3 and Subarea 6 Sampling

Sample Name	Sample Date	Sample Type Code	Start Depth	End Depth	Depth Unit	Matrix Code	Parent Sample Code	Lab Sample ID	Lab Name	Analytical Method	Analysis Date	Prep Method	Lab SDG	Percent Moisture	Dilution Factor	Cas RN	Chemical Name	Report Result Value	Final Qualifiers	Method Detection Limit	Reporting Detection Limit	Report Result Unit	Lab Qualifiers	DQM Qualifiers	DQM Remarks	X Coordinate	Y Coordinate	Longitude	Latitude
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	1746-01-6	2,3,7,8-TCDD	1	U	0.14	1.0	ng/kg	U			1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	19408-74-3	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	0.7	J	0.075	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	3268-87-9	OCDD	210		0.096	10	ng/kg	B			1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	35822-46-9	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	22		0.12	5.1	ng/kg				1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	39001-02-0	OCDF	7.6	J	0.082	10	ng/kg	B J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	39227-28-6	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	0.27	J	0.078	5.1	ng/kg	Q J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	40321-76-4	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	0.17	J	0.091	5.1	ng/kg	Q J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	51207-31-9	2,3,7,8-TETRACHLORODIBENZOFURAN	1	U	0.11	1.0	ng/kg	U			1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	55673-89-7	1,2,3,4,7,8,9-HPCDF	0.5	J	0.10	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	57117-31-4	2,3,4,7,8-PECDF	0.52	J	0.069	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	57117-41-6	1,2,3,7,8-PENTACHLORODIBENZOFURAN	5.1	U	0.072	5.1	ng/kg	U			1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	57117-44-9	1,2,3,6,7,8-HXCDF	0.62	J	0.045	5.1	ng/kg	Q J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	57653-85-7	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	0.76	J	0.081	5.1	ng/kg	Q J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	60851-34-5	2,3,4,6,7,8-HXCDF	0.23	J	0.045	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	67562-39-4	1,2,3,4,6,7,8-HPCDF	6.4		0.061	5.1	ng/kg				1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	70648-26-9	1,2,3,4,7,8-HXCDF	2.4	J	0.043	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	72918-21-9	1,2,3,7,8,9-HXCDF	0.094	J	0.045	5.1	ng/kg	J	J	Z	1785985.695	268529.194	-118.70807	34.2358157
SL-507-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-22	Test America	1613B	11/19/2012	1613	280-35578-2	2.3	1	85508-50-5	37Cl-2,3,7,8-TCDD	18			1.0	ng/kg				1785985.695	268529.194	-118.70807	34.2358157
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-22-4	SILVER	0.029	J	0.021	0.80	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-28-0	THALLIUM	0.21	J	0.0036	0.47	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-36-0	ANTIMONY	0.019	J	0.014	8.9	mg/kg	J	J	Q, Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-38-2	ARSENIC	6.5	J	0.052	15	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-39-3	BARIUM	81	J	0.072	140	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-41-7	BERYLLIUM	0.45	J	0.023	1.1	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-43-9	CADMIUM	0.21	J	0.0096	1.0	mg/kg	J B	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-47-3	CHROMIUM	13	J	0.077	37	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-48-4	COBALT	4.9	J	0.0068	21	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-50-8	COPPER	7	J	0.072	30	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-62-2	VANADIUM (FUME OR DUST)	27	J	0.039	63	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7440-66-6	ZINC	58	J	0.32	110	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	6020A	11/14/2012	3050B	280-35578-1	1.8	1	7782-49-2	SELENIUM	0.67	U	0.14	0.67	mg/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	7471B	11/14/2012	7471B	280-35578-1	1.8	1	7439-97-6	MERCURY	0.016	J	0.0059	0.021	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	84-15-1	O-TERPHENYL	1.8				mg/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC12C14	EFH (C12-C14)	4.9	U	0.99	4.9	mg/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC15C20	EFH (C15-C20)	1.9	J	0.99	4.9	mg/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC21C30	EFH (C21-C30)	13		0.99	4.9	mg/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC30C40	EFH (C30-C40)	43		0.99	9.9	mg/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC8C11	EFH (C8-C11)	4.9	U	0.98	4.9	mg/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8015B EFH	11/15/2012	3550C	280-35578-1	1.8	1	PHCC8C40	TOTAL EFH(C8-C40)	51		0.67	3.9	mg/kg	B			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11096-82-5	Aroclor 1260	17	U	2.6	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11097-69-1	Aroclor 1254	17	U	5.5	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11100-14-4	Aroclor 1268	33	U	3.9	33	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11104-28-2	Aroclor 1221	33	U	15	33	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11126-42-4	Aroclor 5460	49	U	16	49	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	11141-16-5	Aroclor 1232	17	U	5.1	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	12642-23-8	Aroclor 5442	49	U	32	49	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	12672-29-6	Aroclor 1248	17	U	5.5	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	12674-11-2	Aroclor 1016	17	U	5.0	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	2051-24-3	Decachlorobiphenyl	4.6			3.3	ug/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	37324-23-5	Aroclor 1262	33	U	11	33	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	53469-21-9	Aroclor 1242	17	U	9.0	17	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	63496-31-1	Aroclor 5432	49	U	16	49	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	8082A	11/15/2012	3546	280-35578-1	1.8	1	877-09-8	Tetrachloro-M-Xylene	5.3			3.3	ug/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	120-12-7	ANTHRACENE	1.1	J	0.73	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	129-00-0	PYRENE	2.1	J	1.1	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	1718-51-0	Terphenyl - d14	16000				ng/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	191-24-2	BENZO(G,H,I)PERYLENE	2.2	J	1.1	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	193-39-5	INDENO(1,2,3-CD)PYRENE	1.5	J	1.1	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	205-99-2	BENZO(B)FLUORANTHENE	3.5	J	1.2	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	206-44-0	FLUORANTHENE	5.5	J	1.0	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	207-08-9	BENZO(K)FLUORANTHENE	10	U	1.0	10	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	208-96-8	ACENAPHTHYLENE	0.99	J	0.17	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	218-01-9	1,2-BENZPHENANTHRACENE	4.6	J	1.0	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	321-60-8	2-Fluorobiphenyl	15000				ng/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	4165-60-0	Nitrobenzene-D5	16000				ng/kg				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	50-32-8	BENZO(A)PYRENE	1.2	J	0.75	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	53-70-3	DIBENZO(A,H)ANTHRACENE	10	U	1.3	10	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	56-55-3	BENZO(A)ANTHRACENE	0.94	J	0.91	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	62-75-9	METHANAMINE, N-METHYL-N-NITROSO	10	U	2.4	10	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	83-32-9	ACENAPHTHENE	10	U	0.16	10	ug/kg	U			1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	85-01-8	PHENANTHRENE	3.9	J	1.1	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	86-73-7	FLUORENE	1.3	J	0.47	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	90-12-0	1-METHYLNAPHTHALENE	0.83	J	0.26	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	91-20-3	NAPHTHALENE	1.6	J	0.33	10	ug/kg	J	J	Z	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	8270C SIM	11/15/2012	3546	280-35578-1	1.8	1	91-57-6	2-METHYLNAPHTHALENE	10	U	0.31	10	ug/kg	J B	U	B	1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	9045D	11/10/2012	METHOD	280-35578-1		1	pH	PH	7.05		0.100	0.100	pH unit				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-12	Test America	9045D	11/10/2012	METHOD	280-35578-1		1	TEMP	Temperature	20.8		1.00	1.00	deg C				1785966.508	268616.51	-118.70813	34.2360552
SL-522-SA6-SB-0.0-0.5	11/7/2012	N	0	0.5	ft	SO		280-35578-11	Test America	AP EQUIVALEN	11/26/2012	METHOD	280-35578-1		1	BAP-EQUIV	BAP EQUIVALENT	1.8		0.00074	0.0050	ug/kg				1785966.508	268616.51	-118.70813	34.2360552

Master Chemical Database Table for Phase 3 Subarea 3 and Subarea 6 Sampling

Sample Name	Sample Date	Sample Type Code	Start Depth	End Depth	Depth Unit	Matrix Code	Parent Sample Code	Lab Sample ID	Lab Name	Analytical Method	Analysis Date	Prep Method	Lab SDG	Percent Moisture	Dilution Factor	Cas RN	Chemical Name	Report Result Value	Final Qualifiers	Method Detection Limit	Reporting Detection Limit	Report Result Unit	Lab Qualifiers	DQM Qualifiers	DQM Remarks	X Coordinate	Y Coordinate	Longitude	Latitude
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7429-90-5	ALUMINUM (FUME OR DUST)	14000	J	1.4	18000	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7439-89-6	IRON	19000	J	3.3	30	mg/kg		J	A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7439-93-2	LITHIUM	18	J	0.26	32	mg/kg	J	J	Z, A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7439-95-4	MAGNESIUM	4000		3.2	8.8	mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7439-96-5	MANGANESE	210	J	0.088	430	mg/kg	J	J	Z, A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-09-7	POTASSIUM	2100	J	36	5600	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-23-5	SODIUM	100	J	52	440	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-24-6	STRONTIUM	15	J	0.032	0.43	mg/kg		J	A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-31-5	TIN	1.9	J	0.80	9.6	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-32-6	TITANIUM METAL POWDER	800		0.12	0.87	mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-42-8	BORON	8.5	U	0.86	8.5	mg/kg	J	U	F	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-67-7	ZIRCONIUM	1.7	J	0.31	7.6	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7440-70-2	CALCIUM METAL	1800	J	12	44	mg/kg		J	A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6010C	11/15/2012	3050B	280-35658-1	2.7	1	7723-14-0	PHOSPHORUS	170	J	1.4	8.8	mg/kg		J	A	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7439-92-1	LEAD	6.4	J	0.016	29	mg/kg	J B	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7439-98-7	MOLYBDENUM	0.35	J	0.015	4.5	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-02-0	NICKEL	8.6	J	0.022	25	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-22-4	SILVER	0.035	J	0.017	0.68	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-28-0	THALLIUM	0.23	J	0.0030	0.39	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-36-0	ANTIMONY	7.4	UJ	0.012	7.4	mg/kg	U	UJ	Q	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-38-2	ARSENIC	3.9	J	0.043	13	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-39-3	BARIUM	68	J	0.060	120	mg/kg	J B	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-41-7	BERYLLIUM	0.6	J	0.019	0.94	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-43-9	CADMIUM	0.06	J	0.0080	0.86	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-47-3	CHROMIUM	17	J	0.065	32	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-48-4	COBALT	5	J	0.0057	18	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-50-8	COPPER	6.5	J	0.061	25	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-62-2	VANADIUM (FUME OR DUST)	31	J	0.033	53	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7440-66-6	ZINC	43	J	0.27	94	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	6020A	11/15/2012	3050B	280-35658-1	2.7	1	7782-49-2	SELENIUM	0.11	J	0.11	0.56	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	7471B	11/14/2012	7471B	280-35658-1	2.7	1	7439-97-6	MERCURY	0.022		0.0058	0.021	mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	84-15-1	O-TERPHENYL	1.6				mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC12C14	EFH (C12-C14)	5	U	1.0	5.0	mg/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC15C20	EFH (C15-C20)	3	J	1.0	5.0	mg/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC21C30	EFH (C21-C30)	9.6		1.0	5.0	mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC30C40	EFH (C30-C40)	29		1.0	10	mg/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC8C11	EFH (C8-C11)	5	U	1.0	5.0	mg/kg	J B	U	B	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8015B EFH	11/16/2012	3550C	280-35658-1	2.7	1	PHCC8C40	TOTAL EFH(C8-C40)	40		0.68	4.0	mg/kg	B			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11096-82-5	Aroclor 1260	17	U	2.7	17	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11097-69-1	Aroclor 1254	12	J	5.5	17	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11100-14-4	Aroclor 1268	33	U	4.0	33	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11104-28-2	Aroclor 1221	33	U	16	33	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11126-42-4	Aroclor 5460	50	U	16	50	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	11141-16-5	Aroclor 1232	17	U	5.1	17	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	12642-23-8	Aroclor 5442	50	U	32	50	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	12672-29-6	Aroclor 1248	17	U	5.6	17	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	12674-11-2	Aroclor 1016	17	U	5.1	17	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	2051-24-3	Decachlorobiphenyl	5			3.3	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	37324-23-5	Aroclor 1262	33	U	12	33	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	53469-21-9	Aroclor 1242	17	U	9.1	17	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	63496-31-1	Aroclor 5432	50	U	16	50	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	8082A	11/15/2012	3546	280-35658-1	2.7	1	877-09-8	Tetrachloro-M-Xylene	5.2			3.3	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	120-12-7	ANTHRACENE	3.6	J	0.73	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	129-00-0	PYRENE	54		1.1	10	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	1718-51-0	Terphenyl - d14	17000				ng/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	191-24-2	BENZO(G,H,I)PERYLENE	6	J	1.1	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	193-39-5	INDENO(1,2,3-CD)PYRENE	7.3	J	1.1	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	205-99-2	BENZO(B)FLUORANTHENE	18		1.2	10	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	206-44-0	FLUORANTHENE	81		1.0	10	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	207-08-9	BENZO(K)FLUORANTHENE	5.7	J	1.0	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	208-96-8	ACENAPHTHYLENE	2.1	J	0.17	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	218-01-9	1,2-BENZPHENANTHRACENE	21		1.0	10	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	321-60-8	2-Fluorobiphenyl	14000				ng/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	4165-60-0	Nitrobenzene-D5	16000				ng/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	50-32-8	BENZO(A)PYRENE	7.3	J	0.75	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	53-70-3	DIBENZO(A,H)ANTHRACENE	1.5	J	1.3	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	56-55-3	BENZO(A)ANTHRACENE	5.3	J	0.91	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	62-75-9	METHANAMINE, N-METHYL-N-NITROSO	10	U	2.4	10	ug/kg	U			1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	83-32-9	ACENAPHTHENE	0.82	J	0.16	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	85-01-8	PHENANTHRENE	64		1.1	10	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	86-73-7	FLUORENE	1.4	J	0.47	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	90-12-0	1-METHYLNAPHTHALENE	1.6	J	0.26	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	91-20-3	NAPHTHALENE	3	J	0.33	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	8270C SIM	11/17/2012	3546	280-35658-1	2.7	1	91-57-6	2-METHYLNAPHTHALENE	2.2	J	0.31	10	ug/kg	J	J	Z	1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	9045D	11/14/2012	METHOD	280-35658-1		1	pH	PH	6.97		0.100	0.100	pH unit				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-2	Test America	9045D	11/14/2012	METHOD	280-35658-1		1	TEMP	Temperature	13.3		1.00	1.00	deg C				1785958.253	268292.311	-118.70815	34.2351642
SL-513-SA6-SB-0.0-0.5	11/8/2012	N	0	0.5	ft	SO		280-35658-1	Test America	AP EQUIVALEN	11/26/2012	METHOD	280-35658-1		1	BAP-EQUIV	BAP EQUIVALENT	12		0.00074	0.0050	ug/kg				1785958.253	268292.311	-118.70815	34.2351642
SL-1010-SA6-SB-0.0-0.5	######	FD	0	0.5	ft	SO	SL-610-SA6-SB-0.0-0.5	280-35930-5	Test America	6010C	11/27/2012	3050B	280-35930-1	1.2	1	7429-90-5	ALUMINUM (FUME OR DUST)	13000	J	1.4	19000	mg/kg	J	J	Z	1787689.297	268028.748	-118.70242	34.2344733