Lab Reporting Batch ID: 12D106

EDD Filename: 12D106R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D106

Reporting Limit Outliers

Lab Reporting Batch ID: 12D106 Laboratory: EMXT

EDD Filename: 12D106R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-NBZ-SS-0.0-0.5	FLUORIDE	J	0.650	1.23	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-NBZ-SS-0.0-0.5	ANTIMONY	J	0.174	0.241	PQL	MG/KG	J (all detects)
SL-145-NBZ-SS-0.0-0.5	BORON SELENIUM SILVER	J	4.24 0.365 0.0947	6.28 0.503 0.126	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-148-NBZ-SS-0.0-0.5	BORON SELENIUM SILVER SODIUM]]]	3.35 0.350 0.0914 77.4	6.08 0.487 0.122 122	PQL PQL PQL PQL	MG/KG MG/KG MG/KG MG/KG	J (all detects)
SL-154-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.215 67.2	0.256 128	PQL PQL	MG/KG MG/KG	J (all detects)
SL-163-NBZ-SS-0.0-0.5	SELENIUM SILVER SODIUM	J J	0.319 0.0936 96.2	0.468 0.117 117	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-176-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM SODIUM Zirconium	1 1 1	0.229 0.256 103 4.00	0.233 0.466 117 5.83	PQL PQL PQL PQL	MG/KG MG/KG MG/KG MG/KG	J (all detects)
SL-182-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM	J	0.201 0.231	0.225 0.451	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-NBZ-SS-0.0-0.5	EFH(C8-C11)	J	0.69	1.2	PQL	MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J	0.37 0.36	0.42 0.42	PQL PQL	UG/KG UG/KG	J (all detects)
SL-168-NBZ-SS-0.0-0.5	4,4'-DDT	J	0.21	0.38	PQL	UG/KG	J (all detects)
SL-182-NBZ-SS-0.0-0.5	4,4'-DDE	J	0.31	0.40	PQL	UG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D106

Laboratory: EMXT

EDD Filename: 12D106R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-004-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE	J	1.1 13	2.1 20	PQL PQL	UG/KG UG/KG	J (all detects)
SL-145-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE FLUORANTHENE INDENO(1,2,3-CD)PYRENE PYRENE	7 7 7	2.0 1.6 1.7 2.0 1.2 2.0	2.2 2.2 2.2 2.2 2.2 2.2 2.2	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-148-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE FLUORANTHENE PHENANTHRENE PYRENE]]]	1.4 1.2 1.4 1.2 1.5	2.1 2.1 2.1 2.1 2.1	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-154-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE CHRYSENE FLUORANTHENE PHENANTHRENE PYRENE	J	2.1 1.4 1.4 2.2 1.2 1.9	2.3 2.3 2.3 2.3 2.3 2.3	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-168-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE	J	1.0 16	1.9 19	PQL PQL	UG/KG UG/KG	J (all detects)
SL-176-NBZ-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	14	20	PQL	UG/KG	J (all detects)
SL-182-NBZ-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	19	PQL	UG/KG	J (all detects)

LDC #: 28255T4

VALIDATION COMPLETENESS WORKSHEET

SDG #: 12D106

ADR

Page:_	
Reviewer:	
2nd Reviewer:	

Laboratory: EMAX Laboratories, Inc.

247(A

METHOD: Metals (EPA SW 846 Method 6910B/6020A/7000)

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

ļ	Validation Area	<u> </u>	Comments
<u>l.</u>	Technical holding times	_	Sampling dates: 4/11/17
II.	ICP/MS Tune		' ' '
III.	Calibration		
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis		
VI.	Matrix Spike Analysis	N	MS/D (from 12D135)
VII.	Duplicate Sample Analysis	N	,
VIII.	Laboratory Control Samples (LCS)	N	LCS/O
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	_	
ΧV	Field Blanks		

Note:

A = Acceptable

N = Not provided/applicable

SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

D = Duplicate

TB = Trip blank

EB = Equipment blank

Validated Samples:

SL-004-NBZ-SS-0.0-0.5 11 21 31 12 22 2 SL-145-NBZ-SS-0.0-0.5 32 3 SL-148-NBZ-SS-0.0-0.5 13 23 33 SL-154-NBZ-SS-0.0-0.5 14 24 34 15 25 5 SL-163-NBZ-SS-0.0-0.5 35 16 6 SL-168-NBZ-SS-0.0-0.5 26 36 SL-176-NBZ-SS-0.0-0.5 17 27 37 SL-182-NBZ-SS-0.0-0.5 18 28 8 38 19 29 39 20 30

Notes:		

SAMPLE DELIVERY GROUP

12D122

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	3550B	8081A	III
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	3550B	8082	III
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	3550B	8270C	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	3550B	8270C SIM	III
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	7471A	7471A	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	GEN PREP	300.0	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	GEN PREP	314.0	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	GEN PREP	6850	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	GEN PREP	7199	Ш
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02	N	GEN PREP	8151A	111
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02R	N	GEN PREP	7199	111
12-Apr-2012	SL-144-NBZ-SS-0.0-0.5	D122-02W	N	GEN PREP	6020	III
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	3550B	8081A	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	3550B	8082	III
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	3550B	8270C	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	3550B	8270C SIM	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	7471A	7471A	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	GEN PREP	300.0	111
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	GEN PREP	314.0	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	GEN PREP	6850	111
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	GEN PREP	7199	111
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03	N	GEN PREP	8151A	III
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03R	N	GEN PREP	7199	Ш
12-Apr-2012	SL-152-NBZ-SS-0.0-0.5	D122-03W	N	GEN PREP	6020	111
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	3550B	8015B EFH	111
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	3550B	8081A	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	3550B	8082	IH
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	3550B	8270C	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	3550B	8270C SIM	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	7471A	7471A	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	300.0	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	314.0	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	6850	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	7199	H
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	8151A	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	8330A	111
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	8332	111
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01	N	GEN PREP	9014	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MS	D122-01M	MS	3550B	8081A	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MS	D122-01M	MS	GEN PREP	300.0	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MS	D122-01M	MS	GEN PREP	314.0	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01R	N	GEN PREP	7199	111
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MSD	D122-01S	MSD	3550B	8081A	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MSD	D122-01S	MSD	GEN PREP	300.0	III
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5MSD	D122-01S	MSD	GEN PREP	314.0	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	D122-01W	N	GEN PREP	6020	111
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	3550B	8081A	111
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	3550B	8082	III
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	3550B	8270C	111
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	3550B	8270C SIM	111
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	7471A	7471A	111
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	GEN PREP	300.0	111

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	GEN PREP	314.0	III
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	GEN PREP	6850	Ш
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	GEN PREP	7199	Ш
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05	N	GEN PREP	8151A	Ш
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05R	N	GEN PREP	7199	III
12-Apr-2012	SL-172-NBZ-SS-0.0-0.5	D122-05W	N	GEN PREP	6020	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	3520C	8015B EFH	111
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	3520C	8081A	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	3520C	8082	Ш
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	3520C	8270C	111
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	7470A	7470A	111
12-Apr-2012	EB-NBZ-SS-041212	D122-06	ЕВ	GEN PREP	300.0	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	314.0	111
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EВ	GEN PREP	6020	Ш
12-Apr-2012	EB-NBZ-SS-041212	D122-06	ЕВ	GEN PREP	7199	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	8015B	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	8015M	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	ЕВ	GEN PREP	8151A	Ш
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	8330A	Ш
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	8332	III
12-Apr-2012	EB-NBZ-SS-041212	D122-06	EB	GEN PREP	9014	Ш
12-Apr-2012	EB-NBZ-SS-041212	D122-06R	EB	GEN PREP	7199	Ш
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	3550B	8081A	111
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	3550B	8082	111
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	3550B	8270C	III
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	3550B	8270C SIM	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	7471A	7471A	111
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	GEN PREP	300.0	III
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	GEN PREP	314.0	III
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	GEN PREP	6850	111
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	GEN PREP	7199	111
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04	N	GEN PREP	8151A	III
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04R	N	GEN PREP	7199	HI
12-Apr-2012	SL-158-NBZ-SS-0.0-0.5	D122-04W	N	GEN PREP	6020	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: GENCHEM

Method: 300.0 Matrix: SO

 Sample ID: SL-158-NBZ-SS-0.0-0.5
 Collected: 4/12/2012 3:04:00
 Analysis Type: RES
 Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.652	J	0.576	MDL	1.15	PQL	MG/KG	J	Z

Method Category: METALS
Method: 6020 Matrix: AQ

Collected: 4/12/2012 3:00:00 Analysis Type: RES/TOT Dilution: 1 Sample ID: EB-NBZ-SS-041212 Data Review Lab Lab DLRL Reason RL. DL Units Qual Code Result Qual Type Type Analyte J Z CALCIUM 0.0608 J 0.0250 MDL 0.100 PQL MG/L 0.00020 0.000205 0.00100 MG/L NICKEL

Method Category: METALS

Method: 6020 Matrix: SO

Sample ID:SL-011-NBZ-SS-0.0-0.5 Collected: 4/12/2012 11:12:00 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	0.140	J	0.109	MDL	0.219	PQL	MG/KG	J	Z
BARIUM	69.4		0.219	MDL	0.438	PQL	MG/KG	J	Q
Zirconium	5.47	U	2.74	MDL	5.47	PQL	MG/KG	UJ	Q

Sample ID:SL-144-NBZ-SS-0.0-0.5 Collected: 4/12/2012 9:22:00 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	106		0.229	MDL	0.459	PQL	MG/KG	J	Q
SODIUM	71.0	J	57.3	MDL	115	PQL	MG/KG	J	Z
Zirconium	5.73	U	2.87	MDL	5.73	PQL	MG/KG	บา	Q

 Sample ID: SL-152-NBZ-SS-0.0-0.5
 Collected: 4/12/2012 9:55:00
 Analysis Type: RES/TOT
 Dilution: 0.985

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BARIUM	68.6	200 - 100 A Color	0.234	MDL	0.468	PQL	MG/KG	J	Q

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D122

Laboratory: EMXT

EDD Filename: Prep12D122R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category:

METALS

Method:

6020

Matrix:

Collec	ted:	4/1	2/2	012	9:55:	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	0.240	J	0.234	MDL	0.468	PQL	MG/KG	J	Z
Zirconium	5.85	U	2.92	MDL	5.85	PQL	MG/KG	ΟĴ	Q

Sample ID: SL-158-NBZ-SS-0.0-0.5

Collected: 4/12/2012 3:04:00

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	0.228	PQL	MG/KG	J	Z
BARIUM	87.7		0.228	MDL	0.456	PQL	MG/KG	J	Q
SELENIUM	0.408	J	0.228	MDL	0.456	PQL	MG/KG	J	Z
SODIUM	69.9	J	57.0	MDL	114	PQL	MG/KG	J	Z
Zirconium	5.70	U	2.85	MDL	5.70	PQL	MG/KG	UJ	Q

Sample ID: SL-172-NBZ-SS-0.0-0.5

Collected: 4/12/2012 2:35:00

Analysis Type: RES/TOT

Dilution: 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.140	J	0.111	MDL	0.222	PQL	MG/KG	J	Z
BARIUM	71.4		0.222	MDL	0.444	PQL	MG/KG	J	Q
Zirconium	5.55	U	2.77	MDL	5.55	PQL	MG/KG	ΟJ	Q

Method Category: SVOA

Method:

Analyte

EFH(C15-C20)

8015B EFH

SO Matrix:

DL

Туре

MDL

Dilution: 1

Sample	ID: SL-011-NBZ-SS-0.0-0.5

Collected:	4/12/2012	11:12:00

DL

0.57

Lab

Qual

Lab

Result

0.65

Analysis Type: RES

RL

RL

Type

PQL

Units

MG/KG

Data	
Review	Reason
Qual	Code
A CHARLES TO THE PARTY OF THE P	
J	Z

* denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8081A Matrix: SO

Sample ID:SL-011-NBZ-SS-0.0-0.5 Collected: 4/12/2012 11:12:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.34	J	0.19	MDL	0.39	PQL	UG/KG	J	Z
4,4'-DDT	0.36	J	0.19	MDL	0.39	PQL	UG/KG	J	Z

Sample ID:SL-158-NBZ-SS-0.0-0.5 Collected: 4/12/2012 3:04:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.29	J	0.20	MDL	0.39	PQL	UG/KG	J	Z
4,4'-DDT	0.31	J	0.20	MDL	0.39	PQL	UG/KG	J	Z

Method Category: SVOA Method: 8082 Matrix: SO

 Sample ID:SL-152-NBZ-SS-0.0-0.5
 Collected: 4/12/2012 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
Aroclor 5460	2.7	J	2.0	MDL	3.9	PQL	UG/KG	J	Z, S

Sample ID: SL-158-NBZ-SS-0.0-0.5 Collected: 4/12/2012 3:04:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.8	J	2.0	MDL	3.8	PQL	UG/KG	J	S

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID:SL-011-NBZ-SS-0.0-0.5 Collected: 4/12/2012 11:12:00 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	1.4	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	1.8	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.3	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	1.4	J	0.97	MDL	1.9	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-011-NBZ-SS-0.0-0.5	Collected: 4/12/2012 11:12:00	Analysis Type: RES-BASE/NEUTRAL Dil	lution: 1
----------------------------------	-------------------------------	-------------------------------------	-----------

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BIS(2-ETHYLHEXYL)PHTHALATE	11	J	9.6	MDL	19	PQL	UG/KG	J	Z
CHRYSENE	0.98	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	0.97	MDL	1.9	PQL	UG/KG	J	Z

1

Sample ID:SL-144-NBZ-SS-0.0-0.5 Collected: 4/12/2012 9:22:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.8	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	1.9	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
ACENAPHTHENE	1.3	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
ACENAPHTHYLENE	1.5	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
BENZO(A)ANTHRACENE	1.2	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	1.2	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	9.7	MDL	19	PQL	UG/KG	J	Z
FLUORANTHENE	1.1	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
FLUORENE	1.1	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
PYRENE	1.2	J	0.98	MDL	2.0	PQL	UG/KG	J	Z

Sample ID:SL-152-NBZ-SS-0.0-0.5 Collected: 4/12/2012 9:55:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.7	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
Butylbenzylphthalate	10	J	10	MDL	20	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.1	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
PYRENE	1.1	J	1.0	MDL	2.0	PQL	UG/KG	J	Z

Sample ID:SL-158-NBZ-SS-0.0-0.5 Collected: 4/12/2012 3:04:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.5	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
BENZO(A)PYRENE	1.5	J	0.98	MDL	2.0	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID:SL-158-NBZ-SS-0.0-0.5 Collected: 4/12/2012 3:04:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(G,H,I)PERYLENE	1.8	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
FLUORANTHENE	1.7	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.9	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
PYRENE	1.8	J	0.98	MDL	2.0	PQL	UG/KG	J	Z

Sample ID:SL-172-NBZ-SS-0.0-0.5 Collected: 4/12/2012 2:35:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.5	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
BENZO(A)PYRENE	1.4	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
CHRYSENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.5	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
PHENANTHRENE	1.1	J	0.95	MDL	1.9	PQL	UG/KG	J	Z

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D122

EDD Filename: Prep12D122R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

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

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D122

Surrogate Outlier Report

Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8082 Matrix: SO				Harris Ha	
Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-152-NBZ-SS- 0.0-0.5	DECACHLOROBIPHENYL	150	45.00-120.00	All Target Analytes	J (all detects)
SL-158-NBZ-SS- 0.0-0.5	DECACHLOROBIPHENYL	128	45.00-120.00	All Target Analytes	J(all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SS-041212	CALCIUM	J	0.0608 0.000205	0.100 0.00100	PQL PQL	MG/L MG/L	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-158-NBZ-SS-0.0-0.5	FLUORIDE	J	0.652	1.15	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-011-NBZ-SS-0.0-0.5	ANTIMONY	J	0.140	0.219	PQL	MG/KG	J (all detects)
SL-144-NBZ-SS-0.0-0.5	SODIUM	J	71.0	115	PQL	MG/KG	J (all detects)
SL-152-NBZ-SS-0.0-0.5	SELENIUM	J	0.240	0.468	PQL	MG/KG	J (all detects)
SL-158-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM SODIUM	J J J	0.176 0.408 69.9	0.228 0.456 114	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-172-NBZ-SS-0.0-0.5	ANTIMONY	J	0.140	0.222	PQL	MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-011-NBZ-SS-0.0-0.5	EFH(C15-C20)	J	0.65	1.1	PQL	MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-011-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J	0.34 0.36	0.39 0.39	PQL PQL	UG/KG UG/KG	J (all detects)
SL-158-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J	0.29 0.31	0.39 0.39	PQL PQL	UG/KG UG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D122 Laboratory: EMXT

EDD Filename: Prep12D122R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8082 Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-152-NBZ-SS-0.0-0.5	Aroclor 5460	J	2.7	3.9	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-011-NBZ-SS-0.0-0.5	BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE CHRYSENE INDENO(1,2,3-CD)PYRENE	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1.4 1.8 1.3 1.4 11 0.98 1.1	1.9 1.9 1.9 1.9 19 1.9	PQL PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-144-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE ACENAPHTHYLENE BENZO(A)ANTHRACENE BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE FLUORANTHENE FLUORENE PYRENE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.8 1.9 1.3 1.5 1.2 1.2 16 1.1	2.0 2.0 2.0 2.0 2.0 2.0 19 2.0 2.0 2.0	PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-152-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE Butylbenzylphthalate INDENO(1,2,3-CD)PYRENE PYRENE	J	1.7 1.2 10 1.1 1.1	2.0 2.0 20 2.0 2.0 2.0	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-158-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE FLUORANTHENE INDENO(1,2,3-CD)PYRENE PYRENE	J J J	1.5 1.5 1.8 1.7 1.9 1.8	2.0 2.0 2.0 2.0 2.0 2.0 2.0	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-172-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE CHRYSENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE	J J J	1.5 1.4 1.3 1.5 1.1	1.9 1.9 1.9 1.9	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)

LDC #: 29230A4

SDG #: 12D122

VALIDATION COMPLETENESS WORKSHEET

DR		
	/	a

Date: <u> </u>
Page: <u></u> of
Reviewer: 🗸
2nd Reviewer: A

Laboratory: EMAX Laboratories, Inc.

METHOD: Metals (EPA SW 846 Method 6010B/6020 1/7000)

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	A	Sampling dates: 4/17/17
II.	ICP/MS Tune	_	
DI.	Calibration	_	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	<u> </u>	
VI.	Matrix Spike Analysis	SW	MS/D (120135)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	H	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates		
ΧV	Field Blanks	SW	63-6

N	ote:	

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:

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	<u> </u>			 .,	
1	SL-011-NBZ-SS-0.0-0.5	11	21	31	
2	SL-144-BNZ-SS-0.0-0.5	12	22	 32	
3	SL-152-NBZ-SS-0.0-0.5	13	23	33	
4	SL-158-NBZ-SS-0.0-0.5	14	24	34	
5	SL-172-NBZ-SS-0.0-0.5	15	25	35	
6	EB-NBZ-SS-041212 W	16	26	 36	
7		17	27	37	
8		18	28	38	
9		19	29	39	
10		20	30	40	

Notes:			

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VALIDATION FINDINGS WORKSHEET Field Blanks

Page: └ of ∫ Reviewer: 2nd Reviewer

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

Ka	100x
Associated sample units: mg/Kg	Soil factor applied
Assoc	4/12/12
Blank units: mg/L	Sampling date:

Associated Samples: Sampling date: 4/12/12 Soil factor applied 10 Field blank type: (circle one) Field Blank / Rinsate / Other:

All Soil

Sample Identification No Qualifiers (>2x) Action Limit 30.4 0.1 0.00020 0.0608 Blank ID 9 Analyte ပ္ပ Ξ

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".

LACCONO LIDCHI

VALIDATION FINDINGS WORKSHEET Matrix Spike/Matrix Spike Duplicates

Reviewer: 2nd Reviewer:

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

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

Was a matrix spike analyzed for each matrix in this SDG?

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.

Were all duplicate sample relative percent differences (RPD) < 20% for water samples and <35% for soil samples?

N N/A

Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations. CEVEL IN ONLY:
Y N/N/A We

Ouglifications	Wilding and Control of the Control o	Sold	3/UT/A												
RPD (I imits) Associated Samples		AllSoil													
RPD (l imits)															
MSD %Recovery			44												
MS %Recovery		136	55												
Analyte	S/msr)	<u>ب</u>	72												
Matrix	36-0-0.5M														
GI GSW/SW	SL-183-1182-560.0-0,5M5/msn)														
#				1	1	1	<u> </u>	\equiv				1	士		_

Comments:

SAMPLE DELIVERY GROUP

12D135

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	3550B	8081A	111
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	3550B	8082	111
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	3550B	8270C	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	3550B	8270C SIM	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	7471A	7471A	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	GEN PREP	300.0	111
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	GEN PREP	314.0	111
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	GEN PREP	6020	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	GEN PREP	7199	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01	N	GEN PREP	8151A	III
13-Apr-2012	SL-180-NBZ-SS-0.0-0.5	D135-01R	N	GEN PREP	7199	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	3550B	8081A	Ш
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	3550B	8082	
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	3550B	8270C	111
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	3550B	8270C SIM	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	7471A	7471A	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	GEN PREP	300.0	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	GEN PREP	314.0	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	GEN PREP	6020	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	GEN PREP	7199	Ш
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02	N	GEN PREP	8151A	
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5MS	D135-02M	MS	GEN PREP	6020	Ш
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5	D135-02R	N	GEN PREP	7199	III
13-Apr-2012	SL-183-NBZ-SS-0.0-0.5MSD	D135-02S	MSD	GEN PREP	6020	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D135

Laboratory: EMXT

EDD Filename: 12D135R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020 Matrix:

Sample	ID:SL	-180-NB	Z-SS-0.0-0.5
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Cal	lecte	d· A	1/13	/201	2	9:45:00

Analysis Type: RES/TOT

Dilution: 0.957

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.189	J	0.119	MDL	0.239	PQL	MG/KG	J	Z
BARIUM	59.5		0.239	MDL	0.477	PQL	MG/KG	J	Q
Zirconium	5.97	U	2.98	MDL	5.97	PQL	MG/KG	UJ	Q

Sample ID: SL-183-NBZ-SS-0.0-0.5

Collected: 4/13/2012 10:50:00

Analysis Type: RES/TOT

Dilution: 0.952

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.183	J	0.114	MDL	0.228	PQL	MG/KG	J	Z
BARIUM	74.6		0.228	MDL	0.456	PQL	MG/KG	J	Q
Zirconium	5.70	U	2.85	MDL	5.70	PQL	MG/KG	UJ	Q

Method Category:

SVOA

Method: 8081A Matrix:

Sample ID: SL-183-NBZ-SS-0.0-0.5

Collected: 4/13/2012 10:50:00

Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.32	J	0.20	MDL	0.41	PQL	UG/KG	J	Z
ALPHA-BHC	0.16	J	0.10	MDL	0.20	PQL	UG/KG	J	Z

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-180-NBZ-SS-0.0-0.5

Collected: 4/13/2012 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
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	10	MDL	21	PQL	UG/KG	J	Z

Sample ID: SL-183-NBZ-SS-0.0-0.5

Collected: 4/13/2012 10:50:00

Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL. Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORANTHENE	1.5	J	1.0	MDL	2.0	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

9/26/2012 9:50:41 AM

ADR version 1.6.0.189

Page 1 of 3

Lab Reporting Batch ID: 12D135

Laboratory: EMXT

EDD Filename: 12D135R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-183-NBZ-SS-0.0-0.5

Collected: 4/13/2012 10:50:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	1.2	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
PYRENE	1.3	J	1.0	MDL	2.0	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D135

EDD Filename: 12D135R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D135

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D135

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

EDD Filename: 12D135R

Method: 6020 Matrix: SO							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-183-NBZ-SS-0.0-0.5MS (TOT) (SL-180-NBZ-SS-0.0-0.5 SL -183-NBZ-SS-0.0-0.5)	BARIUM IRON	126 143	-	75.00-125.00 75.00-125.00		BARIUM IRON	J (all detects) Fe, No Qual, >4x
SL-183-NBZ-SS-0.0-0.5MS (TOT) SL-183-NBZ-SS-0.0-0.5MSD (TOT) (SL-180-NBZ-SS-0.0-0.5 SL-183-NBZ-SS-0.0-0.5)	MANGANESE TITANIUM Zirconium	391 50	35 39 49	75.00-125.00 75.00-125.00 75.00-125.00	- - -	MANGANESE TITANIUM Zirconium	J(all detects) UJ(all non-detects) Mn, Ti, No Qual, >4x

Reporting Limit Outliers

Lab Reporting Batch ID: 12D135

Laboratory: EMXT

EDD Filename: 12D135R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-180-NBZ-SS-0.0-0.5	ANTIMONY	J	0.189	0.239	PQL	MG/KG	J (all detects)
SL-183-NBZ-SS-0.0-0.5	ANTIMONY	J	0.183	0.228	PQL	MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-183-NBZ-SS-0.0-0.5	4,4'-DDE ALPHA-BHC	J J	0.32 0.16	0.41 0.20	PQL PQL	UG/KG UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-180-NBZ-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	21	PQL	UG/KG	J (all detects)
SL-183-NBZ-SS-0.0-0.5	FLUORANTHENE PHENANTHRENE PYRENE	J J	1.5 1.2 1.3	2.0 2.0 2.0	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)

LDC #: 28255U4 SDG #: 12D135

VALIDATION COMPLETENESS WORKSHEET

ADR

Laboratory: EMAX Laboratories, Inc.

Page: of \
Reviewer: 2nd Reviewer:

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

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

	Validation Area		Comments
I.	Technical holding times		Sampling dates: 4/13/17
11.	ICP/MS Tune		
111.	Calibration		
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	/	
VI.	Matrix Spike Analysis	N	MS/D (Fe, Mn, T; 74X)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	LCS19
IX.	Internal Standard (ICP-MS)	N	
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	Α	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates		
ΧV	Field Blanks		

Note:

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A = Acceptable

N = Not provided/applicable SW = See worksheet ND = No compounds detected

R = Rinsate FB = Field blank D = Duplicate TB = Trip blank

TB = Trip blank
EB = Equipment blank

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Validated Samples:

SL-180-NBZ-SS-0.0-0.5 11 21 31 12 SL-183-NBZ-SS-0.0-0.5 32 SL-183-NBZ-SS-0.0-0.5MS 3 13 23 33 SL-183-NBZ-SS-0.0-0.5MSD 14 24 4 34 25 5 15 35 6 16 26 36 17 27 37 18 28 8 38

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Notes:				

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SAMPLE DELIVERY GROUP

12D146

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	3550B	8015B EFH	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	3550B	8081A	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	3550B	8082	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	· N	3550B	8270C	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	3550B	8270C SIM	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	7471A	7471A	111
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	300.0	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	314.0	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	6020	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	7199	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	8151A	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	8330A	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	8332	111
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01	N	GEN PREP	9014	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	D146-01R	N	GEN PREP	7199	Ш
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	3550B	8081A	111
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	3550B	8082	Ш
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	3550B	8270C	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	3550B	8270C SIM	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	7471A	7471A	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	GEN PREP	300.0	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	GEN PREP	314.0	HI
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	GEN PREP	6020	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	GEN PREP	7199	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02	N	GEN PREP	8151A	III
16-Apr-2012	SL-159-NBZ-SS-0.0-0.5	D146-02R	N	GEN PREP	7199	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	3550B	8081A	111
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	3550B	8082	III
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	3550B	8270C	111
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	3550B	8270C SIM	Ш
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	7471A	7471A	Ш
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	GEN PREP	300.0	Ш
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	GEN PREP	314.0	III
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	GEN PREP	6020	111
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	GEN PREP	7199	Ш
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04	N	GEN PREP	8151A	Ħ
16-Apr-2012	SL-164-NBZ-SS-0.0-0.5	D146-04R	N	GEN PREP	7199	· III
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	3550B	8081A	Ш
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	3550B	8082	III
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	3550B	8270C	III
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	3550B	8270C SIM	Ш
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	7471A	7471A	111
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	. N	GEN PREP	300.0	111
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	GEN PREP	314.0	ill
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	GEN PREP	6020	III
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	GEN PREP	7199	111
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03	N	GEN PREP	8151A	III
16-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D146-03R	N	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	3550B	8081A	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	3550B	8082	HI
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	7471A	7471A	III
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	GEN PREP	300.0	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	GEN PREP	314.0	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	GEN PREP	6020	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	GEN PREP	7199	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05	N	GEN PREP	8151A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05G	MS	GEN PREP	7199	III
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05G1	MS	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05H	MSD	GEN PREP	7199	III
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05H1	MSD	GEN PREP	7199	. 111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	3550B	8081A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	3550B	8082	III
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	3550B	8270C	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	3550B	8270C SIM	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	7471A	7471A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	GEN PREP	300.0	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	GEN PREP	314.0	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	GEN PREP	6020	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M	MS	GEN PREP	8151A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MS	D146-05M1	MS	GEN PREP	7199	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05R	N	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	3550B	8081A	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	3550B	8082	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	3550B	8270C	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	3550B	8270C SIM	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	7471A	7471A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	GEN PREP	300.0	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	GEN PREP	314.0	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	GEN PREP	6020	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S	MSD	GEN PREP	8151A	Ш
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5MSD	D146-05S1	MSD	GEN PREP	7199	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05W	N	3550B	8270C	111
16-Apr-2012	SL-173-NBZ-SS-0.0-0.5	D146-05W	N	3550B	8270C SIM	111
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	3550B	8081A	Ш
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	3550B	8082	Ш
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	3550B	8270C	III
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	3550B	8270C SIM	111
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	7471A	7471A	Ш
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	GEN PREP	300.0	111
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	GEN PREP	314.0	III
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	GEN PREP	6020	Ш
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	GEN PREP	7199	111
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06	FD	GEN PREP	8151A	III
16-Apr-2012	DUP-08-NBZ-QC-041612	D146-06R	FD	GEN PREP	7199	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

EDD Filename: Prep12D146R eQAPP Name: CDM_SSFL_120730_EMAX

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Method: 300.0 Matrix: so

Sample ID: SL-013-NBZ-SS-0.0-0.5	Collect	ted: 4/16/2	012 10:07	:00 A	nalysis Ty	pe: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.829	J	0.740	MDL	1.48	PQL	MG/KG	J	Z

Method Category: **METALS** Method: 6020 so Matrix:

Sample ID: DUP-08-NBZ-QC-041612 Collected: 4/16/2012 3:23:00 Analysis Type: RES/TOT Dilution: 0.985

<u> </u>					,	, <u>1</u>		-	J. 300
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	10700		14.1	MDL	28.2	PQL	MG/KG	J	Q
ANTIMONY	0.160	J	0.117	MDL	0.235	PQL	MG/KG	J	Z, Q
BARIUM	74.0		0.235	MDL	0.470	PQL	MG/KG	J	Q
PHOSPHORUS	364		7.04	MDL	14.1	PQL	MG/KG	J	Q
POTASSIUM	3440		35.2	MDL	70.4	PQL	MG/KG	J	Q
SELENIUM	0.284	J	0.235	MDL	0.470	PQL	MG/KG	J	Z
SODIUM	62.9	J	58.7	MDL	117	PQL	MG/KG	J	Z
Zirconium	5.87	U	2.94	MDL	5.87	PQL	MG/KG	UJ	Q

Sample ID: SL-013-NBZ-SS-0.0-0.5 Collected: 4/16/2012 10:07:00 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	9530		17.7	MDL	35.3	PQL	MG/KG	J	Q
ANTIMONY	0.224	J	0.147	MDL	0.294	PQL	MG/KG	J	Z, Q
BARIUM	80.4		0.294	MDL	0.589	PQL	MG/KG	J	Q
BORON	3.78	J	3.68	MDL	7.36	PQL	MG/KG	J	Z
PHOSPHORUS	375		8.83	MDL	17.7	PQL	MG/KG	J	Q
POTASSIUM	2820		44.2	MDL	88.3	PQL	MG/KG	J	Q
SODIUM	98.0	J	73.6	MDL	147	PQL	MG/KG	J	Z
Zirconium	7.36	U	3.68	MDL	7.36	PQL	MG/KG	บม	Q

Sample ID: SL-159-NBZ-SS-0.0-0.5 Collected: 4/16/2012 11:01:00 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	11100		13.6	MDL	27.3	PQL	MG/KG	J	Q
ANTIMONY	0.134	J	0.114	MDL	0.227	PQL	MG/KG	J	Z, Q
BARIUM	77.4		0.227	MDL	0.455	PQL	MG/KG	J	Q

^{*} denotes a non-reportable result

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Lab Reporting Batch ID: 12D146

EDD Filename: Prep12D146R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020 Matrix: SC

 Sample ID: SL-159-NBZ-SS-0.0-0.5
 Collected: 4/16/2012 11:01:00
 Analysis Type: RES/TOT
 Dilution: 0.995

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHOSPHORUS	284		6.82	MDL	13.6	PQL	MG/KG	J	Q
POTASSIUM	3150		34.1	MDL	68.2	PQL	MG/KG	J	Q
SODIUM	63.4	J	56.9	MDL	114	PQL	MG/KG	J	Z
Zirconium	5.69	U	2.84	MDL	5.69	PQL	MG/KG	UJ	Q

Sample ID: SL-160-NBZ-SS-0.0-0.5 Collected: 4/16/2012 2:40:00 Analysis Type: RES/TOT Dilution: 1.00

······································									
Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
9850		13.4	MDL	26.8	PQL	MG/KG	J	Q	
0.123	J	0.112	MDL	0.223	PQL	MG/KG	J	Z, Q	
51.9		0.223	MDL	0.446	PQL	MG/KG	J	Q	
326		6.70	MDL	13.4	PQL	MG/KG	J	Q	
2460		33.5	MDL	67.0	PQL	MG/KG	J	Q	
57.0	J	55.8	MDL	112	PQL	MG/KG	J	Z	
5.58	U	2.79	MDL	5.58	PQL	MG/KG	UJ	Q	
	Result 9850 0.123 51.9 326 2460 57.0	Result Qual 9850	Result Qual DL 9850 13.4 0.123 J 0.112 51.9 0.223 326 6.70 2460 33.5 57.0 J 55.8	Result Qual DL Type 9850 13.4 MDL 0.123 J 0.112 MDL 51.9 0.223 MDL 326 6.70 MDL 2460 33.5 MDL 57.0 J 55.8 MDL	Result Qual DL Type RL 9850 13.4 MDL 26.8 0.123 J 0.112 MDL 0.223 51.9 0.223 MDL 0.446 326 6.70 MDL 13.4 2460 33.5 MDL 67.0 57.0 J 55.8 MDL 112	Result Qual DL Type RL Type 9850 13.4 MDL 26.8 PQL 0.123 J 0.112 MDL 0.223 PQL 51.9 0.223 MDL 0.446 PQL 326 6.70 MDL 13.4 PQL 2460 33.5 MDL 67.0 PQL 57.0 J 55.8 MDL 112 PQL	Result Qual DL Type RL Type Units 9850 13.4 MDL 26.8 PQL MG/KG 0.123 J 0.112 MDL 0.223 PQL MG/KG 51.9 0.223 MDL 0.446 PQL MG/KG 326 6.70 MDL 13.4 PQL MG/KG 2460 33.5 MDL 67.0 PQL MG/KG 57.0 J 55.8 MDL 112 PQL MG/KG	Lab Result Lab Qual DL DL Type RL Type RL Type RL Type Review Qual 9850 13.4 MDL 26.8 PQL MG/KG J 0.123 J 0.112 MDL 0.223 PQL MG/KG J 51.9 0.223 MDL 0.446 PQL MG/KG J 326 6.70 MDL 13.4 PQL MG/KG J 2460 33.5 MDL 67.0 PQL MG/KG J 57.0 J 55.8 MDL 112 PQL MG/KG J	

Sample ID: SL-164-NBZ-SS-0.0-0.5 Collected: 4/16/2012 11:35:00 Analysis Type: RES/TOT Dilution: 0.990

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	11100		14.2	MDL	28.4	PQL	MG/KG	J	Q
ANTIMONY	0.127	J	0.118	MDL	0.237	PQL	MG/KG	J	Z, Q
BARIUM	81.3		0.237	MDL	0.473	PQL	MG/KG	J	Q
PHOSPHORUS	374		7.10	MDL	14.2	PQL	MG/KG	J	Q
POTASSIUM	3430		35.5	MDL	71.0	PQL	MG/KG	J	Q
SODIUM	67.4	J	59.1	MDL	118	PQL	MG/KG	J	Z
Zirconium	5.91	U	2.96	MDL	5.91	PQL	MG/KG	UJ	Q

Sample ID: SL-173-NBZ-SS-0.0-0.5 Collected: 4/16/2012 3:18:00 Analysis Type: RES/TOT Dilution: 0.980

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	11500		14.2	MDL	28.5	PQL	MG/KG	J	Q
ANTIMONY	0.206	J	0.119	MDL	0.237	PQL	MG/KG	j	Z, Q
BARIUM	82.0		0.237	MDL	0.475	PQL	MG/KG	J	Q
PHOSPHORUS	397		7.12	MDL	14.2	PQL	MG/KG	J	Q
POTASSIUM	3670		35.6	MDL	71.2	PQL	MG/KG	J	Q

^{*} denotes a non-reportable result

Laboratory: EMXT

Lab Reporting Batch ID: 12D146

EDD Filename: Prep12D146R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category: METAL:	S MAL APP		
Method: 6020	and the second second	Matrix: SO	ACCOUNT OF THE PROPERTY OF THE PROPERTY OF THE PARTY.

Sample ID: SL-173-NBZ-SS-0.0-0.5	Collec	00 A	nalysis T	ype: RES	/TOT	Dilution: 0.980			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
SELENIUM	0.330	J	0.237	MDL	0.475	PQL	MG/KG	J	Z
SODIUM	72.2	J	59.3	MDL	119	PQL	MG/KG	J	Z
Zirconium	5.93	U	2.97	MDL	5.93	PQL	MG/KG	UJ	Q

Method Category:	SVOA	
Method:	015B EFH Matrix: SO	

Sample ID: SL-013-NBZ-55-0.0-0.5	Collec	tea: 4/16/2	012 10:07	:00 A	Analysis T	ype: RES	;	Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
EFH(C12-C14)	0.95	J	0.74	MDL	1.5	PQL	MG/KG	J	Z	
EFH(C8-C11)	0.90	J	0.74	MDL	1.5	PQL	MG/KG	J	7.	

Method Category:	SVOA				15 Table - 1
Method:	8081A	Length Land	Matrix: SO	× 1	

Sample ID: DUP-08-NBZ-QC-041612	Collect	Collected: 4/16/2012 3:23:00 Analysis Type: RES-BASE/NEUTRAL Dilution:							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.55		0.20	MDL	0.41	PQL	UG/KG	J	FD

Sample ID: SL-160-NBZ-SS-0.0-0.5	Collec	ted: 4/16/2	012 2:40:0	00	Analysis T	ype: RES	-BASE/NE	UTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	0.35	J	0.19	MDL	0.38	PQL	UG/KG	J	Z

Sample ID: SL-173-NBZ-SS-0.0-0.5	Collect	ted: 4/16/20	012 3:18:0	00 A	Analysis T	pe: RES	BASE/NE	UTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDT	1.1		0.21	MDL	0.41	PQL	UG/KG	J	FD

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D146

EDD Filename: Prep12D146R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

0 / / 0 0 / 10 0 0 0 0 0 0 0 0 0 0 0 0 0	• • • • • • • • • • • • • • • • • • • •	
Sample ID: SL-159-NBZ-SS-0.0-0.5	Collected: 4/16/2012 11:01:00	Analy

Sample ID: SL-159-NBZ-SS-0.0-0.5	Collect	ted: 4/16/20	012 11:01	:00 A	nalysis T	pe: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.1	J	1.9	MDL	3.8	PQL	UG/KG	J	Z

Method Category: SVOA Method: 8270C Matrix: SO

Sample ID: DUP-08-NBZ-QC-041612

Collected: 4/16/2012 3:23:00

Analysis Type: RES-BASE/NEUTRAL

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	200	U	100	MDL	200	PQL	UG/KG	UJ	L
ANILINE	400	U	200	MDL	400	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	200	U	100	MDL	200	PQL	UG/KG	UJ	E

Sample ID: SL-013-NBZ-SS-0.0-0.5

Collected: 4/16/2012 10:07:00

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-CHLORONAPHTHALENE	250	U	120	MDL	250	PQL	UG/KG	UJ	L
ANILINE	490	U	250	MDL	490	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	250	U	120	MDL	250	PQL	UG/KG	UJ	E

Sample ID: SL-159-NBZ-SS-0.0-0.5

Collected: 4/16/2012 11:01:00

Analysis Type: RES-BASE/NEUTRAL

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	υ	96	MDL	190	PQL	UG/KG	UJ	L
ANILINE	380	U	190	MDL	380	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	96	MDL	190	PQL	UG/KG	UJ	E

Sample ID: SL-160-NBZ-SS-0.0-0.5

Collected: 4/16/2012 2:40:00

Analysis Type: RES-BASE/NEUTRAL

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	U	94	MDL	190	PQL	UG/KG	ΟJ	L
ANILINE	370	U	190	MDL	370	PQL	UG/KG	ΟĴ	E
HEXACHLOROCYCLOPENTADIENE	190	U	94	MDL	190	PQL	UG/KG	UJ	E

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D146

EDD Filename: Prep12D146R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA Method: 8270C

Matrix:

Sample ID: SL-164-NBZ-SS-0.0-0.5	Collec	Collected: 4/16/2012 11:35:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
2-CHLORONAPHTHALENE	200	U	100	MDL	200	PQL	UG/KG	UJ	L		
ANILINE	400	U	200	MDL	400	PQL	UG/KG	UJ	E		
HEXACHLOROCYCLOPENTADIENE	200	U	100	MDL	200	PQL	UG/KG	UJ	E		

Sample ID: SL-173-NBZ-SS-0.0-0.5

Collected: 4/16/2012 3:18:00

Analysis Type: RES-BASE/NEUTRAL

Dilution: 1

Laboratory: EMXT

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	200	U	100	MDL	200	PQL	UG/KG	UJ	L
ANILINE	400	U	200	MDL	400	PQL	UG/KG	UJ	E
BENZIDINE	1000	U	510	MDL	1000	PQL	UG/KG	R	Q
HEXACHLOROCYCLOPENTADIENE	200	U	100	MDL	200	PQL	UG/KG	R	Q

Method Category:

SVOA

Method: 8270C SIM Matrix: SO

Sample ID: DUP-08-NBZ-QC-041612

Collected: 4/16/2012 3:23:00

Analysis Type: RES-BASE/NEUTRAL

	- Conce	CG. 4/10/2	012 0.20.	,,	ilaiyələ i	pe. ILL	-0401111	.UIIVAL ,	Dilauon. 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.5	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
BENZO(A)PYRENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
BENZO(B)FLUORANTHENE	1.4	J	1.0	MDL	2.0	PQL	UG/KG	J	Z, FD
BENZO(G,H,I)PERYLENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
BIS(2-ETHYLHEXYL)PHTHALATE	11	J	10	MDL	20	PQL	UG/KG	J	Z
CHRYSENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
DIBENZO(A,H)ANTHRACENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
FLUORANTHENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
INDENO(1,2,3-CD)PYRENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	υJ	FD
PHENANTHRENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD
PYRENE	2.0	U	1.0	MDL	2.0	PQL	UG/KG	UJ	FD

Sample ID: SL-013-NBZ-SS-0.0-0.5

Collected: 4/16/2012 10:07:00

Analysis Type: RES-BASE/NEUTRAL

Dilution: 4

		Ontotica. 4.102012 10.07.00 Analysis Type: NEO-BAGENEOTICE Bhation.								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
2-METHYLNAPHTHALENE	1.3	J	1.3	MDL	2.5	PQL	UG/KG	J	Z	
ACENAPHTHYLENE	1.3	J	1.3	MDL	2.5	PQL	UG/KG	J	Z	

^{*} denotes a non-reportable result

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

9/26/2012 11:34:21 AM

ADR version 1.6.0.189

Page 5 of 8

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

EDD Filename: Prep12D146R

eQAPP Name: CDM_SSFL_120730_EMAX

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Method	A MASSICAL	O CO CANADA		(
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Method.			62	เบบ อ	I THE RESERVE TO SERVE TO SERV

Sample ID: SL-013-NBZ-SS-0.0-0.5	Collected: 4/16/2012 10:07:00	Analysis Type: RES-BASE/NEUTRAL	Dilution: 1

Matrix:

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
NAPHTHALENE	1.6	J	1.3	MDL	2.5	PQL	UG/KG	J	Z

Sample ID: SL-159-NBZ-SS-0.0-0.5 Collected: 4/16/2012 11:01:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.5	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	1.6	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
ACENAPHTHENE	1.0	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
ACENAPHTHYLENE	1.2	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
BENZO(A)PYRENE	1.6	J	0.97	MDL	1.9	PQL	UG/KG	J.	Z
CHRYSENE	1.2	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
FLUORENE	1.1	J	0.97	MDL	1.9	PQL	UG/KG	J	Z

Sample ID: SL-160-NBZ-SS-0.0-0.5 Collected: 4/16/2012 2:40:00 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	1.4	J	0.95	MDL	1.9	PQL	UG/KG	J	Z	
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	9.4	MDL	19	PQL	UG/KG	J	Z	
Butylbenzylphthalate	9.4	J	9.4	MDL	19	PQL	UG/KG	J	Z	

Sample ID: SL-164-NBZ-SS-0.0-0.5 Collected: 4/16/2012 11:35:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.3	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	10	J	10	MDL	20	PQL	UG/KG	J	Z
PYRENE	1.7	J	1.0	MDL	2.0	PQL	UG/KG	J	Z

Sample ID: SL-173-NBZ-SS-0.0-0.5 Collected: 4/16/2012 3:18:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Thaysis Type. New Driver Diagon.									
Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code	
3.0		1.0	MDL	2.1	PQL	UG/KG	J	FD	
4.5		1.0	MDL	2.1	PQL	UG/KG	J	FD	
3.4		1.0	MDL	2.1	PQL	UG/KG	J	FD	
13	J	10	MDL	20	PQL	UG/KG	J	Z	
2.7		1.0	MDL	2.1	PQL	UG/KG	J	FD	
	3.0 4.5 3.4 13	Result Qual 3.0 4.5 3.4 3.4 13 J	Result Qual DL 3.0 1.0 4.5 1.0 3.4 1.0 13 J 10	Lab Result Lab Qual DL Type 3.0 1.0 MDL 4.5 1.0 MDL 3.4 1.0 MDL 13 J 10 MDL	Lab Result Lab Qual DL DL DL Type RL 3.0 1.0 MDL 2.1 4.5 1.0 MDL 2.1 3.4 1.0 MDL 2.1 13 J 10 MDL 20	Lab Result Lab Qual DL DL Type RL RL Type RL Type 3.0 1.0 MDL 2.1 PQL 4.5 1.0 MDL 2.1 PQL 3.4 1.0 MDL 2.1 PQL 13 J 10 MDL 20 PQL	Lab Result Lab Qual DL DL Type RL Type RL Type Units 3.0 1.0 MDL 2.1 PQL UG/KG 4.5 1.0 MDL 2.1 PQL UG/KG 3.4 1.0 MDL 2.1 PQL UG/KG 13 J 10 MDL 20 PQL UG/KG	Lab Result Lab Qual DL DL Type RL Type RL Type Units Data Review Qual 3.0 1.0 MDL 2.1 PQL UG/KG J 4.5 1.0 MDL 2.1 PQL UG/KG J 3.4 1.0 MDL 2.1 PQL UG/KG J 13 J 10 MDL 20 PQL UG/KG J	

^{*} denotes a non-reportable result

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

9/26/2012 11:34:21 AM

ADR version 1.6.0.189

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

EDD Filename: Prep12D146R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM SO Matrix:

Sample ID:	SI	L-173-NBZ-SS-0.0-0.	5
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Sample ID: SL-173-NBZ-SS-0.0-0.5	Collec	Collected: 4/16/2012 3:18:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
DIBENZO(A,H)ANTHRACENE	2.2		1.0	MDL	2.1	PQL	UG/KG	J	FD		
FLUORANTHENE	4.1		1.0	MDL	2.1	PQL	UG/KG	J	FD		
INDENO(1,2,3-CD)PYRENE	4.0		1.0	MDL	2.1	PQL	UG/KG	J	FD		
PHENANTHRENE	1.7	J	1.0	MDL	2.1	PQL	UG/KG	J	Z, FD		
PYRENE	3.6		1.0	MDL	2.1	PQL	UG/KG	J	FD		

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D146

EDD Filename: Prep12D146R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
E	Laboratory Control Precision
FD	Field Duplicate Precision
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
s	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D146

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

EDD	Filename:	12D146R	

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QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-173-NBZ-SS-0.0-0.5MSD (TOT) (DUP-08-NBZ-QC-041612 SL-013-NBZ-SS-0.0-0.5 SL-159-NBZ-SS-0.0-0.5 SL-160-NBZ-SS-0.0-0.5 SL-164-NBZ-SS-0.0-0.5 SL-173-NBZ-SS-0.0-0.5)	ALUMINUM BARIUM PHOSPHORUS POTASSIUM	-	152 172 146 134	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM BARIUM PHOSPHORUS POTASSIUM	J (all detects)
SL-173-NBZ-SS-0.0-0.5MS (TOT) SL-173-NBZ-SS-0.0-0.5MSD (TOT) (DUP-08-NBZ-QC-041612 SL-013-NBZ-SS-0.0-0.5 SL-159-NBZ-SS-0.0-0.5 SL-160-NBZ-SS-0.0-0.5 SL-164-NBZ-SS-0.0-0.5 SL-173-NBZ-SS-0.0-0.5	TITANIUM	26	422	75.00-125.00	-	TITANIUM	No Qual, >4x
SL-173-NBZ-SS-0.0-0.5MS (TOT) SL-173-NBZ-SS-0.0-0.5MSD (TOT) (DUP-08-NBZ-QC-041612 SL-013-NBZ-SS-0.0-0.5 SL-159-NBZ-SS-0.0-0.5 SL-160-NBZ-SS-0.0-0.5 SL-164-NBZ-SS-0.0-0.5 SL-173-NBZ-SS-0.0-0.5	ANTIMONY IRON Zirconium	73 71 53	72 181 58	75.00-125.00 75.00-125.00 75.00-125.00	- - -	ANTIMONY IRON Zirconium	J(all detects) UJ(all non-detects) Fe, No Qual, >4x

Method: 8270C

Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
	BENZIDINE HEXACHLOROCYCLOPENTADI	0 0	0 0	10.00-150.00 10.00-130.00	-	BENZIDINE HEXACHLOROCYCLOPENTAD	J(all detects) R(all non-detects)

Method: 8270C SIM

Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-173-NBZ-SS-0.0-0.5MSD (SL-173-NBZ-SS-0.0-0.5)	Di-n-octylphthalate	-	153	10.00-150.00	-	Di-n-octylphthalate	J(all detects)

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

EDD Filename: 12D146R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C Matrix: SO							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SVD047SC (DUP-08-NBZ-QC-041612 SL-013-NBZ-SS-0.0-0.5 SL-159-NBZ-SS-0.0-0.5 SL-160-NBZ-SS-0.0-0.5 SL-164-NBZ-SS-0.0-0.5 SL-173-NBZ-SS-0.0-0.5)	2-CHLORONAPHTHALENE ANILINE HEXACHLOROCYCLOPENTADI	- - -	47	50.00-130.00 20.00-150.00 10.00-130.00	56 (50.00)	2-CHLORONAPHTHALENE ANILINE HEXACHLOROCYCLOPENTAD	J (all detects) UJ (all non-detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: 12D146

EDD Filename: 12D146R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method: 6020 Matrix: SO

	Concentration	on (MG/KG)			
Analyte	SL-173-NBZ-SS-0.0-0.5 (TOT)	DUP-08-NBZ-QC- 041612 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	11500	10700	7	50.00	
ANTIMONY	0.206	0.160	25	50.00	
ARSENIC	3.90	3.43	13	50.00	
BARIUM	82.0	74.0	10	50.00	
BERYLLIUM	0.473	0.394	18	50.00	
CADMIUM	0.226	0.206	9	50.00	
CALCIUM	3280	2800	16	50.00	ĺ
CHROMIUM	11.6	10.6	9	50.00	
COBALT	4.87	4.38	11	50.00	
COPPER	6.69	5.98	11	50.00	
IRON	19600	18400	6	50.00	
LEAD	13.8	12.1	13	50.00	
LITHIUM	28.9	26.5	9	50.00	N
MAGNESIUM	4110	3810	8	50.00	No Qualifiers Applied
MANGANESE	292	268	9	50.00	
MOLYBDENUM	0.476	0.424	12	50.00	
NICKEL	7.65	6.90	10	50.00	
PHOSPHORUS	397	364	9	50.00	
POTASSIUM	3670	3440	6	50.00	
SELENIUM	0.330	0.284	15	50.00	
SODIUM	72.2	62.9	14	50.00	
STRONTIUM	20.3	17.6	14	50.00	
THALLIUM	0.247	0.228	8	50.00	
TITANIUM	900	834	8	50.00	
VANADIUM	26.8	24.3	10	50.00	
ZINC	60.6	56.9	6	50.00	

Method: 8081A Matrix: SO

	Concentration	on (UG/KG)			
Analyte	SL-173-NBZ-SS-0.0-0.5	DUP-08-NBZ-QC- 041612	Sample RPD	eQAPP RPD	Flag
4,4'-DDE	0.72	0.52	32	50.00	No Qualifiers Applied
4,4'-DDT	1.1	0.55	67	50.00	J(all detects)

Method: 8270C SIM Matrix: SO

Concentration (UG/KG) DUP-08-NBZ-QC-Sample eQAPP Analyte SL-173-NBZ-SS-0.0-0.5 041612 RPD RPD Flag BENZO(A)ANTHRACENE 2.3 1.5 42 50.00 No Qualifiers Applied BIS(2-ETHYLHEXYL)PHTHALATE 13 17 11 50.00 BENZO(A)PYRENE 3.0 2.0 U 200 50.00 BENZO(B)FLUORANTHENE 4.5 105 50.00 1.4 BENZO(G,H,I)PERYLENE 3.4 2.0 U 200 50.00 50.00 CHRYSENE 2.7 2.0 U 200 J(all detects) DIBENZO(A,H)ANTHRACENE 2.2 2.0 U 200 50.00 UJ(all non-detects) FLUORANTHENE 4.1 2.0 U 200 50.00 INDENO(1,2,3-CD)PYRENE 4.0 2.0 U 200 50.00 PHENANTHRENE 1.7 2.0 U 200 50.00 **PYRENE** 2.0 U 200 50.00

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D146

Laboratory: EMXT

EDD Filename: 12D146R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-013-NBZ-SS-0.0-0.5	FLUORIDE	J	0.829	1.48	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-08-NBZ-QC-041612	ANTIMONY SELENIUM SODIUM	J J	0.160 0.284 62.9	0.235 0.470 117	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-013-NBZ-SS-0.0-0.5	ANTIMONY BORON SODIUM	J	0.224 3.78 98.0	0.294 7.36 147	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-159-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.134 63.4	0.227 114	PQL PQL	MG/KG MG/KG	J (all detects)
SL-160-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.123 .57.0	0.223 112	PQL PQL	MG/KG MG/KG	J (all detects)
SL-164-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.127 67.4	0.237 118	PQL PQL	MG/KG MG/KG	J (all detects)
SL-173-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM SODIUM	J	0.206 0.330 72.2	0.237 0.475 119	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-013-NBZ-SS-0.0-0.5	EFH(C12-C14) EFH(C8-C11)	J J	0.95 0.90	1.5 1.5		MG/KG MG/KG	

Method: 8081A

Matrix: SO

		Lab		Reporting			
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-160-NBZ-SS-0.0-0.5	4,4'-DDT	J	0.35	0.38	PQL	UG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-159-NBZ-SS-0.0-0.5	Aroclor 5460	J	3.1	3.8	PQL	UG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D146

eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

EDD Filename: 12D146R

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-08-NBZ-QC-041612	BENZO(A)ANTHRACENE BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE	J J	1.5 1.4 11	2.0 2.0 20	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-013-NBZ-SS-0.0-0.5	2-METHYLNAPHTHALENE ACENAPHTHYLENE NAPHTHALENE	j	1.3 1.3 1.6	2.5 2.5 2.5	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-159-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE ACENAPHTHENE ACENAPHTHYLENE BENZO(A)PYRENE CHRYSENE FLUORENE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.5 1.6 1.0 1.2 1.6 1.2	1.9 1.9 1.9 1.9 1.9 1.9	PQL PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-160-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BIS(2-ETHYLHEXYL)PHTHALATE Butylbenzylphthalate	7 7	1.4 13 9.4	1.9 19 19	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-164-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BIS(2-ETHYLHEXYL)PHTHALATE PYRENE	J	1.3 10 1.7	2.0 20 2.0	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-173-NBZ-SS-0.0-0.5	BIS(2-ETHYLHEXYL)PHTHALATE PHENANTHRENE	J	13 1.7	20 2.1	PQL PQL	UG/KG UG/KG	J (all detects)

LDC #: 28255V4

VALIDATION COMPLETENESS WORKSHEET

ADR

SDG #: 12D146

Laboratory: EMAX Laboratories, Inc.

1471A

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

Reviewer:_ 2nd Reviewer:

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

	Validation Area		0
	Validation Area		Comments
<u>l.</u>	Technical holding times		Sampling dates: 4 / 16 / 1
11.	ICP/MS Tune	_	•
III.	Calibration		
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	_	
VI.	Matrix Spike Analysis	N	MS/D(FeJI)
VII.	Duplicate Sample Analysis	N	
VIII.	Laboratory Control Samples (LCS)	N	45/0
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		

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:

SL-013-NBZ-SS-0.0-0.5 11 21 31 SL-159-NBZ-SS-0.0-0.5 12 22 32 3 SL-160-NBZ-SS-0.0-0.5 13 23 33 SL-164-NBZ-SS-0.0-0.5 14 24 34 15 5 SL-173-NBZ-SS-0.0-0.5 25 35 6 DUP-08-NBZ-QC-041612 16 26 36 SL-173-NBZ-SS-0.0-0.5MS 17 27 37 8 SL-173-NBZ-SS-0.0-0.5MSD 18 28 38 9 19 29 39 20 30

Notes:				

SAMPLE DELIVERY GROUP

12D154

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	3550B	8081A	III
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	3550B	8082	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	3550B	8270C	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	3550B	8270C SIM	111
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	7471A	7471A	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	GEN PREP	300.0	III
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N GEN PREP		314.0	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	GEN PREP	6020	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N GEN PREP		7199	111
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09	N	GEN PREP	8151A	Ш
17-Apr-2012	SL-162-NBZ-SS-0.0-0.5	D154-09R	N	GEN PREP	7199	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	3550B	8015B EFH	III
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	3550B	8081A	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	3550B	8082	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	3550B	8270C	111
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	3550B	8270C SIM	111
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	7471A	7471A	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	300.0	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	314.0	H
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	6020	111
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	7199	111
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	8151A	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	8330A	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	8332	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03	N	GEN PREP	9014	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	D154-03R	N	GEN PREP	7199	111

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	3550B	8081A	III
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	3550B	8082	III
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	3550B	8270C	Ш
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	3550B	8270C SIM	Ш
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	7471A	7471A	111
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	GEN PREP	300.0	Ш
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N ·	GEN PREP	314.0	III
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	GEN PREP	6020	III
17 - Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	GEN PREP	7199	Ш
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10	N	GEN PREP	8151A	III
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5MS	D154-10M	MS	3550B	8270C	Ш
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5	D154-10R	N	GEN PREP	7199	III
17-Apr-2012	SL-166-NBZ-SS-0.0-0.5MSD	D154-10S	MSD	3550B	8270C	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	3550B	8015B EFH	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	3550B	8081A	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	3550B	8082	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	3550B	8270C	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	3550B	8270C SIM	Ш
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	7471A	7471A	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	300.0	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	314.0	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	6020	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	7199	Ш
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	8151A	Ш
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	8330A	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	8332	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04	N	GEN PREP	9014	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	D154-04R	N	GEN PREP	7199	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N	3550B	8081A	· III
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N	3550B	8082	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	D154-07 N		8270C	III
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	54-07 N 3550B		8270C SIM	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	7 N 7471A		7471A	III
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	07 N GEN PREP		300.0	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N GEN PREP		314.0	BI
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N GEN PREP		6020	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N GEN PREP		7199	Ш
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07	N	GEN PREP	8151A	m
17-Apr-2012	SL-156-NBZ-SS-0.0-0.5	D154-07R	N	GEN PREP	7199	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	3550B	8081A	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	3550B	8082	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	3550B	8270C	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	3550B	8270C SIM	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	7471A	7471A	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	GEN PREP	300.0	111
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	GEN PREP	314.0	ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	GEN PREP	6020	H
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	GEN PREP	7199	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08	N	GEN PREP	8151A	Ш
17-Apr-2012	SL-161-NBZ-SS-0.0-0.5	D154-08R	N	GEN PREP	7199	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	3550B	8015B EFH	111
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	3550B	8081A	111

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical M ethod	Review Level
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N ·	3550B	8082	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	3550B	8270C	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	3550B	8270C SIM	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	7471A	7471A	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	300.0	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	314.0	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	6020	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	7199	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	8151A	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	8330A	111
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	8332	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05	N	GEN PREP	9014	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5MS	D154-05M	MS	GEN PREP	8151A	. III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	D154-05R	N	GEN PREP	7199	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5MSD	D154-05S	MSD	GEN PREP	8151A	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	3520C	8015B EFH	111
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	3520C	8081A	111
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	3520C	8082	III
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	7470A	7470A	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	300.0	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	314.0	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	6020	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	7199	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	8015B	III
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	8015M	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	8151A	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	8330A	111
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	8332	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02	EB	GEN PREP	9014	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02R	EB	GEN PREP	7199	Ш
17-Apr-2012	EB-NBZ-SS-041712	D154-02W	EB	3520C	8270C	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	3550B	8081A	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	D154-06 N		8082	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	3550B	8270C	111
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	3550B	8270C SIM	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	7471A	7471A	111
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	GEN PREP	300.0	111
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	GEN PREP	314.0	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	GEN PREP	6020	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	GEN PREP	7199	Ш
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06	N	GEN PREP	8151A	111
17-Apr-2012	SL-147-NBZ-SS-0.0-0.5	D154-06R	N	GEN PREP	7199	111
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	3520C	8015B EFH	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	3520C	8082	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	5030B	8015B GRO	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	7470A	7470A	111
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	300:0	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	ЕВ	GEN PREP	314.0	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EВ	GEN PREP	6020	III
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	7199	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	8015B	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	8015 M	111

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	8330A	III
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	8332	Ш
17-Apr-2012	EB-NBZ-SB-041712	D154-01	EB	GEN PREP	9014	III
17-Apr-2012	EB-NBZ-SB-041712	D154-01R	EB	GEN PREP	7199	111
17-Apr-2012	EB-NBZ-SB-041712	D154-01W	EB	3520C	8270C	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D154

Laboratory: EMXT

Page 1 of 9

EDD Filename: Prep12D154R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Car	GENCHEM	

Method: 300.0 Matrix: SO

Sample ID: SL-147-NBZ-SS-0.0-0.5	Collected: 4/17/2012 3:25:00				Analysis Type: RES			Dilution: 1		
						5.		Data		

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Review Qual	Reason Code
FLUORIDE	0.660	J	0.577	MDL	1.15	PQL	MG/KG	J	Z

Method Category: GENCHEM

Method: 9014 Matrix: SO

Sample ID: SL-014-NBZ-SS-0.0-0.5	Collec	Collected: 4/17/2012 10:10:00				ype: RES	Dilution: 1		
							Data		
	Lab	Lab		DL		RL	 Review	Reason	

Type Units Analyte Result DL Qual Code Qual Type RLCYANIDE 0.339 0.314 MDL 0.627 PQL MG/KG Ζ

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.579	J	0.327	MDL	0.654	PQL	MG/KG	J	Z

AQ

Method Category: METALS

Method: 6020 Matrix:

Sample ID: EB-NBZ-SB-041712 Collected: 4/17/2012 3:45:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	0.0217	J	0.0200	MDL	0.100	PQL	MG/L	j	Z
COPPER	0.000894	J	0.00050 0	MDL	0.00100	PQL	MG/L	J	Z

Sample ID: EB-NBZ-SS-041712 Collected: 4/17/2012 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
CALCIUM	0.0492	J	0.0250	MDL	0.100	PQL	MG/L	J	Z
COPPER	0.000613	J	0.00050 0	MDL	0.00100	PQL	MG/L	J	Z
NICKEL	0.000255	J	0.00020 0	MDL	0.00100	PQL	MG/L	J	Z

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

3/11/2013 3:02:45 PM ADR version 1.7.0.207

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020 Matrix: SO

Sample ID: SL-014-NBZ-SS-0.0-0.5	Collec	ted: 4/17/2	012 10:10	:00 A	nalysis T	ype: RES	i		Dilution: 0.990	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ALUMINUM	9010	100 mm to process man to experience or	14.9	MDL	29.8	PQL	MG/KG	J	Q	
ANTIMONY	0.158	J	0.124	MDL	0.248	PQL	MG/KG	J	Z, Q	
BARIUM	71.1		0.248	MDL	0.497	PQL	MG/KG	J	Q	
PHOSPHORUS	337		7.45	MDL	14.9	PQL	MG/KG	J	Q	
POTASSIUM	3130		37.3	MDL	74.5	PQL	MG/KG	J	Q	
SODIUM	78.6	J	62.1	MDL	124	PQL	MG/KG	J	Z	
Zirconium	6.21	U	3.11	MDL	6.21	PQL	MG/KG	UJ	Q	

Sample ID: SL-088-NBZ-SS-0.0-0.5	Collect	ted: 4/17/2	012 11:00	:00 A	nalysis Ty	/pe: RES			Dilution: 0.995	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ALUMINUM	8520		15.6	MDL	31.3	PQL	MG/KG	J	Q	
ANTIMONY	0.200	J	0.130	MDL	0.260	PQL	MG/KG	J	Z, Q	
BARIUM	81.2		0.260	MDL	0.521	PQL	MG/KG	J.	Q	
PHOSPHORUS	401		7.81	MDL	15.6	PQL	MG/KG	J	Q	
POTASSIUM	2820		39.1	MDL	78.1	PQL	MG/KG	J	Q	
SODIUM	84.8	J	65.1	MDL	130	PQL	MG/KG	J	Z	
Zirconium	6.51	U	3.26	MDL	6.51	PQL	MG/KG	UJ	Q	

Sample ID: SL-090-NBZ-SS-0.0-0.5	Collec	ted: 4/17/2	012 2:12:0	00 A	nalysis T	ype: RES	i		Dilution: 0.995		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ALUMINUM	9610	AND SECULIAR METALLICATION OF THE SECULIAR SECUL	13.9	MDL	27.7	PQL	MG/KG	J	Q		
ANTIMONY	0.173	J	0.116	MDL	0.231	PQL	MG/KG	J	Z, Q		
BARIUM	73.7		0.231	MDL	0.462	PQL	MG/KG	J	Q		
BORON	4.52	J	2.89	MDL	5.78	PQL	MG/KG	J	Z		
PHOSPHORUS	369		6.93	MDL	13.9	PQL	MG/KG	J	Q		
POTASSIUM	3470		34.7	MDL	69.3	PQL	MG/KG	J	Q		
SODIUM	81.1	J	57.8	MDL	116	PQL	MG/KG	J	Z		
Zirconium	5.78	U	2.89	MDL	5.78	PQL	MG/KG	UJ	Q		

Sample ID: SL-147-NBZ-SS-0.0-0.5	Collected: 4/17/2012 3:25:00				nalysis Ty	/pe: RES	Dilution: 0.971		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	11000		13.5	MDL	26.9	PQL	MG/KG	j	Q

^{*} denotes a non-reportable result

Laboratory: EMXT

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020 Matrix: SO

Sample ID: SL-147-NBZ-SS-0.0-0.5	Collect	ted: 4/17/2	012 3:25:0	00 A	nalysis Ty	ype: RES			Dilution: 0.971	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.174	J	0.112	MDL	0.224	PQL	MG/KG	J	Z, Q	
BARIUM	78.3		0.224	MDL	0.448	PQL	MG/KG	J	Q	
BORON	3.38	J	2.80	MDL	5.61	PQL	MG/KG	J	Z	
PHOSPHORUS	403		6.73	MDL	13.5	PQL	MG/KG	J	Q	
POTASSIUM	3570		33.6	MDL	67.3	PQL	MG/KG	J	Q	
SELENIUM	0.259	J	0.224	MDL	0.448	PQL	MG/KG	J	Z	
SODIUM	67.1	J	56.1	MDL	112	PQL	MG/KG	J	Z	
Zirconium	5.61	U	2.80	MDL	5.61	PQL	MG/KG	UJ	Q	

Sample ID: SL-156-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:17:00 Analysis Type: RES Dilution: 0.980

Sample ID: 3L-156-NBZ-33-0.0-0.5	Conec	teu. 4/1//2	VIZ 11.17.	.00 A	iiaiyəiə i j	pe. ILLO		Dilation. 0.960		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ALUMINUM	19300		14.2	MDL	28.4	PQL	MG/KG	J	Q	
ANTIMONY	0.303		0.118	MDL	0.237	PQL	MG/KG	J	Q	
BARIUM	144		0.237	MDL	0.473	PQL	MG/KG	J	Q	
BORON	4.02	J	2.96	MDL	5.92	PQL	MG/KG	J	Z	
PHOSPHORUS	537		7.10	MDL	14.2	PQL	MG/KG	J	Q	
POTASSIUM	6350		35.5	MDL	71.0	PQL	MG/KG	J	Q	
SELENIUM	0.338	j	0.237	MDL	0.473	PQL	MG/KG	J	Z	
SILVER	0.0895	J	0.0592	MDL	0.118	PQL	MG/KG	J	Z	
SODIUM	63.7	J	59.2	MDL	118	PQL	MG/KG	J	Z	
Zirconium	5.92	U	2.96	MDL	5.92	PQL	MG/KG	UJ	Q	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	11100		13.4	MDL	26.7	PQL	MG/KG	J	Q
ANTIMONY	0.167	J	0.111	MDL	0.223	PQL	MG/KG	J	Z, Q
BARIUM	87.9		0.223	MDL	0.446	PQL	MG/KG	J	Q
PHOSPHORUS	356		6.69	MDL	13.4	PQL	MG/KG	j	Q
POTASSIUM	3170		33.4	MDL	66.9	PQL	MG/KG	J	Q
SELENIUM	0.244	J	0.223	MDL	0.446	PQL	MG/KG	J	Z
Zirconium	5.57	U	2.79	MDL	5.57	PQL	MG/KG	UJ	Q

^{*} denotes a non-reportable result

Laboratory: EMXT

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: **METALS**

6020 Method:

Matrix: SO

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8050		13.2	MDL	26.3	PQL	MG/KG	J	Q
ANTIMONY	0.113	J	0.110	MDL	0.220	PQL	MG/KG	J	Z, Q
BARIUM	55.4		0.220	MDL	0.439	PQL	MG/KG	J	Q
PHOSPHORUS	356		6.59	MDL	13.2	PQL	MG/KG	j	Q
POTASSIUM	2830		32.9	MDL	65.9	PQL	MG/KG	J	Q
Zirconium	5.49	U	2.74	MDL	5.49	PQL	MG/KG	UJ	Q

Collected: 4/17/2012 9:55:00

Sample ID: SL-166-NBZ-SS-0.0-0.5

Collected: 4/17/2012 10:30:00

Analysis Type: RES

Analysis Type: RES

Dilution: 0.985

Dilution: 1.00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ALUMINUM	8200		13.7	MDL	27.4	PQL	MG/KG	J	Q
ANTIMONY	0.133	J	0.114	MDL	0.229	PQL	MG/KG	J	Z, Q
BARIUM	57.5		0.229	MDL	0.457	PQL.	MG/KG	J	Q
PHOSPHORUS	368		6.86	MDL	13.7	PQL	MG/KG	J	Q
POTASSIUM	2570		34.3	MDL	68.6	PQL	MG/KG	J	Q
Zirconium	5.71	U	2.86	MDL	5.71	PQL	MG/KG	υJ	Q

Method Category:

METALS

Method: 7471A Matrix: SO

Imple ID: 3L-014-NBZ-33-0.0-0.3	Conectea.	4/1//2012 10.10.0

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	0.0676	J	0.0626	MDL	0.125	PQL	MG/KG	J	Z

Method Category:

SVOA

Method:

Analyte

EFH(C8-C11)

8015B EFH

Matrix:

DL

0.63

DL

Type

MDL

Dilution: 1

Sample	ID:	3L-0	14-NDZ-3	3-0.0-0.3

Collected:	4/17/2012 10:10:00	

Lab

Qual

Lab

Result

0.71

Anai	ysis	Type:	: RES

RL

Туре

Data Review Reason Units Qual Code MG/KG

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

1

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1	7	"	11	i a	14	7 6	- 88	6335			• 7 4	16.0		× 7	4.00	88X55		200		в.	a	188		188	
1	2.	М.	х 1				.86				-		4.8	8.	E. 122					α.	м		2.60		
					ARJI I							عفظ		- 4				975					. TO		

Method: 8015B EFH Matrix: SO

Sample ID: SL-088-NBZ-SS-0.0-0.5	Collected: 4/17/2012 11:00:00	Analysis Type: RES	Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C12-C14)	0.76	J	0.65	MDL	1.3	PQL	MG/KG	J	Z
EFH(C8-C11)	0.97	J	0.65	MDL	1.3	PQL	MG/KG	J	Z

Sample ID: SL-090-NBZ-SS-0.0-0.5 Collected: 4/17/2012 2:12:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.70	J	0.58	MDL	1.2	PQL	MG/KG	J	Z

Method Category: SVOA

Method: 8081A Matrix: SO

Sample ID: SL-161-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:50:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.37	J	0.19	MDL	0.38	PQL	UG/KG	J	Z

Method Category: SVOA Method: 8082 Matrix: SO

Sample ID: SL-161-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:50:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.6	J	1.9	MDL	3.7	PQL	UG/KG	J	Z

Sample ID: SL-162-NBZ-SS-0.0-0.5 Collected: 4/17/2012 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
Aroclor 5460	2.9	J	1.9	MDL	3.6	PQL	UG/KG	J	Z

* denotes a non-reportable result

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

3/11/2013 3:02:45 PM ADR version 1.7.0.207 Page 5 of 9

Lab Reporting Batch ID: 12D154 Laboratory: EMXT

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C Matrix: AQ

Sample ID: EB-NBZ-SB-041712	Collected: 4/17/2012 3:45:00	Analysis Type: RES-BASE/NEUTRAL	Dilution: 1.03
3ample 10. Lb-Nb2-3b-04 m 12	Conected. 4/1//2012 3:43:00	Allalysis Type. NEO-DAOLINEO INAL	Dilution, 1.03

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
	elia di kamen oran bugan di layan y	reuccosen paramidir agrimpia ezeni.	SERVICE SET CONTINUE	ALEXA REPRESENTATION OF THE PARTY OF THE PAR	APPENDING AND A SECOND	beninde bilde bild	rectification residence and a second	Company of the second state of the second	godyna je na krajena za krajena krajen
BENZIDINE	52	U	21	MDL	52	PQL	UG/L	R	L

Sample ID: EB-NBZ-SS-041712 Collected: 4/17/2012 3:00:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1.08

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZIDINE	54	U	22	MDL	54	PQL	UG/L	R	L

Method Category: SVOA

Method: 8270C Matrix: SO

Sample ID: SL-166-NBZ-SS-0.0-0.5 Collected: 4/17/2012 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
1,2-DICHLOROBENZENE	190	U	97	MDL	190	PQL	UG/KG	UJ	Q
1,3-DICHLOROBENZENE	190	C	97	MDL	190	PQL	UG/KG	เก	Q
BENZIDINE	960	U	490	MDL	960	PQL	UG/KG	R	Q

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-014-NBZ-SS-0.0-0.5 Collected: 4/17/2012 10:10:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.5	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	11	MDL	21	PQL.	UG/KG	J	Z
FLUORANTHENE	1.7	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
PYRENE	1.2	J	1.1	MDL	2.1	PQL	UG/KG	J	Z

Sample ID: SL-088-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:00:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.9	J	1.1	MDL	2.2	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.3	J	1.1	MDL	2.2	PQL	UG/KG	J	Z
FLUORANTHENE	1.5	J	1.1	MDL	2.2	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Z

UG/KG

Method Category: SVOA

PYRENE

Method: 8270C SIM Matrix: SO

1.6

Sample ID: SL-088-NBZ-SS-0.0-0.5	Collect	ed: 4/17/20	012 11:00	:00	Analysis T	Dilution: 1			
	Lab	Lab		DL		RL		Data Review	Reason
Analyte	Result	Qual	DL	Туре	RL	Туре	Units	Qual	Code

1.1

MDL.

2.2

PQL

Sample ID: SL-090-NBZ-SS-0.0-0.5 Collected: 4/17/2012 2:12:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.7	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.9	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
Butylbenzylphthalate	14	J	9.8	MDL	19	PQL	UG/KG	J	Z
CHRYSENE	1.9	J	0.99	MDL	2.0	PQL.	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
PHENANTHRENE	1.9	j	0.99	MDL	2.0	PQL	UG/KG	J	Z

Sample ID: SL-147-NBZ-SS-0.0-0.5 Collected: 4/17/2012 3:25:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.3	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
FLUORANTHENE	1.0	J	0.98	MDL	2.0	PQL	UG/KG	J	Z

Sample ID: SL-156-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:17:00 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	1.0	MDL	2.1	PQL	UG/KG	J	Z
BENZO(A)PYRENE	1.2	J	1.0	MDL	2.1	PQL	UG/KG	J	Z
FLUORANTHENE	2.0	J	1.0	MDL	2.1	PQL	UG/KG	J	Z
PYRENE	1.6	J	1.0	MDL	2.1	PQL	UG/KG	J	Z

Sample ID: SL-161-NBZ-SS-0.0-0.5 Collected: 4/17/2012 11:50:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	1.6	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	13	J	9.4	MDL	19	PQL	UG/KG	J	Z
FLUORANTHENE	1.6	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-162-NBZ-SS-0.0-0.5 Collected: 4/17/2012 9:55:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.5	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	1.5	J	0.93	MDL	1.9	PQL	UG/KG	J	Z

Sample ID: SL-166-NBZ-SS-0.0-0.5 Collected: 4/17/2012 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	0.99	MDL	2.0	PQL	UG/KG	J	Z
BENZO(A)PYRENE	1.0	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
FLUORANTHENE	1.9	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
PYRENE	1.5	J	0.99	MDL	2.0	PQL	UG/KG	J	Z

Method Category: VOA Method: 8015B GRO Matrix: AQ

Sample ID: EB-NBZ-SB-041712	Collec	Collected: 4/17/2012 3:45:00						Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
Analyte	Nesuit	Quai		I ype	STEENSTERN SEEDING PROSPERING G	Harmania Argue	07/1/23 8020598888888888888888	mongrowsky michael	THE PROPERTY AND STREET WAY AND STREET	
GASOLINE RANGE ORGANICS (C5-C12)	26	J	10	MDL	50	PQL	UG/L	J	Z	

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

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D154

EDD Filename: Prep12D154R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
E	Matrix Spike Precision
L	Laboratory Control Spike Lower Rejection
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

12D154

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D154 Laboratory: EMXT

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C Matrix: AQ							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SVD043WY (EB-NBZ-SB-041712 EB-NBZ-SS-041712)	BENZIDINE	- CONTRACTOR CONTRACTO	0	20.00-130.00	ortes (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994) (1994)	BENZIDINE	J (all detects) R (all non-detects)

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D154

Laboratory: EMXT

EDD Filename: Prep12D154R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-166-NBZ-SS-0.0-0.5MSD	1,2,4-TRICHLOROBENZENE	-	-	10.00-130.00	66 (50.00)	1,2,4-TRICHLOROBENZENE	
SL-166-NBZ-SS-0.0-0.5)	1,4-DICHLOROBENZENE	-	-	10.00-130.00	66 (50.00)	1,4-DICHLOROBENZENE	
	2-CHLORONAPHTHALENE	-	-	30.00-130.00	55 (50.00)	2-CHLORONAPHTHALENE 2-CHLOROPHENOL	
	2-CHLOROPHENOL	-	-	20.00-130.00 30.00-130.00	58 (50.00) 51 (50.00)	2-GHLOROPHENOL	
	2-METHYLPHENOL 2-NITROPHENOL	-	_	30.00-130.00	64 (50.00)	12-NITROPHENOL	
	ANILINE	-	_	10.00-150.00	55 (50.00)	ANILINE	
	BENZYL ALCOHOL		_	30.00-130.00	53 (50.00)	BENZYL ALCOHOL	
	BIS(2-CHLOROETHOXY)METHA	-		30.00-130.00	64 (50.00)	BIS(2-CHLOROETHOXY)METH	J (all detects)
	Bis(2-chloroethyl)ether	-	-	30.00-130.00	68 (50.00)	Bis(2-chloroethyl)ether	- (
	Bis(2-chloroisopropyl)ether	-	-	20.00-130.00	62 (50.00)	Bis(2-chloroisopropyl)ether	
	HEXACHLOROBUTADIENE	-	-	30.00-130.00	62 (50.00)	HEXACHLOROBUTADIENE	
	HEXACHLOROCYCLOPENTADI	-	-	10.00-130.00	67 (50.00)	HEXACHLOROCYCLOPENTAD	
	HEXACHLOROETHANE	-	-	20.00-130.00	60 (50.00)	HEXACHLOROETHANE	
	NITROBENZENE	-	-	30.00-130.00	63 (50.00)	NITROBENZENE	
	N-NITROSO-DI-N-PROPYLAMIN	-	-	20.00-130.00	53 (50.00)	N-NITROSO-DI-N-PROPYLAMI	
	PHENOL	-	-	20.00-130.00	51 (50.00)	PHENOL	
SL-166-NBZ-SS-0.0-0.5MS SL-166-NBZ-SS-0.0-0.5MSD	BENZIDINE	6	0	10.00-150.00	200 (50.00)	BENZIDINE	J(all detects) R(all non-detects)
SL-166-NBZ-SS-0.0-0.5)						ļ	
L-166-NBZ-SS-0.0-0.5MSD	1,2-DICHLOROBENZENE	-	28	30.00-130.00	66 (50.00)	1,2-DICHLOROBENZENE	J(all detects)
SL-166-NBZ-SS-0.0-0.5)	1,3-DICHLOROBENZENE	-	26	30.00-130.00	67 (50.00)	1,3-DICHLOROBENZENE	UJ(all non-detects

Reporting Limit Outliers

Lab Reporting Batch ID: 12D154 Laboratory: EMXT

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SB-041712	ALUMINUM COPPER	J	0.0217 0.000894	0.100 0.00100	PQL PQL	MG/L MG/L	J (all detects)
EB-NBZ-SS-041712	CALCIUM COPPER NICKEL	j	0.0492 0.000613 0.000255	0.100 0.00100 0.00100	PQL PQL PQL	MG/L MG/L MG/L	J (all detects)

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SB-041712	GASOLINE RANGE ORGANICS (C5-C12)	J	26	50	PQL	UG/L	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-147-NBZ-SS-0.0-0.5	FLUORIDE	J	0.660	1.15	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J J	0.158 78.6	0.248 124	PQL PQL	MG/KG MG/KG	J (all detects)
SL-088-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.200 84.8	0.260 130	PQL PQL	MG/KG MG/KG	J (all detects)
SL-090-NBZ-SS-0.0-0.5	ANTIMONY BORON SODIUM	J	0.173 4.52 81.1	0.231 5.78 116	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-147-NBZ-SS-0.0-0.5	ANTIMONY BORON SELENIUM SODIUM]]]	0.174 3.38 0.259 67.1	0.224 5.61 0.448 112	PQL PQL PQL PQL	MG/KG MG/KG MG/KG MG/KG	J (all detects)
SL-156-NBZ-SS-0.0-0.5	BORON SELENIUM SILVER SODIUM]]]	4.02 0.338 0.0895 63.7	5.92 0.473 0.118 118	PQL PQL PQL PQL	MG/KG MG/KG MG/KG MG/KG	J (all detects)
SL-161-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM	J	0.167 0.244	0.223 0.446	PQL PQL	MG/KG MG/KG	J (all detects)
SL-162-NBZ-SS-0.0-0.5	ANTIMONY	J	0.113	0.220	PQL	MG/KG	J (all detects)
SL-166-NBZ-SS-0.0-0.5	ANTIMONY	J	0.133	0.229	PQL	MG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D154

Laboratory: EMXT

EDD Filename: Prep12D154R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
	MERCURY	J	0.0676	0.125	PQL	MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-NBZ-SS-0.0-0.5	EFH(C8-C11)	J	0.71	1.3	PQL	MG/KG	J (all detects)
SL-088-NBZ-SS-0.0-0.5	EFH(C12-C14) EFH(C8-C11)	J	0.76 0.97	1.3 1.3	PQL PQL	MG/KG MG/KG	J (all detects)
SL-090-NBZ-SS-0.0-0.5	EFH(C8-C11)	J	0.70	1.2	PQL	MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	Туре	Units	Flag
SL-161-NBZ-SS-0.0-0.5	4,4'-DDE	J	0.37	0.38	PQL	UG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-161-NBZ-SS-0.0-0.5	Aroclor 5460	J	2.6	3.7	PQL	UG/KG	J (all detects)
SL-162-NBZ-SS-0.0-0.5	Aroclor 5460	J	2.9	3.6	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE BIS(2-ETHYLHEXYL)PHTHALATE FLUORANTHENE PYRENE	J	1.5 1.2 16 1.7 1.2	2.1 2.1 21 2.1 2.1	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-088-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE FLUORANTHENE PYRENE	1 1 1	1.9 1.3 1.5 1.6	2.2 2.2 2.2 2.2	PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG	J (all detects)

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

Reporting Limit Outliers

Lab Reporting Batch ID: 12D154 Laboratory: EMXT

EDD Filename: Prep12D154R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-090-NBZ-SS-0.0-0.5	BENZO(A)PYRENE BENZO(G,H,I)PERYLENE Butylbenzylphthalate CHRYSENE INDENO(1,2,3-CD)PYRENE PHENANTHRENE	J J J	1.7 1.9 14 1.9 1.6 1.9	2.0 2.0 19 2.0 2.0 2.0	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-147-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE FLUORANTHENE	J	1.3 1.0	2.0	PQL PQL	UG/KG UG/KG	J (all detects)
SL-156-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE FLUORANTHENE PYRENE	J J	1.6 1.2 2.0 1.6	2.1 2.1 2.1 2.1	PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-161-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE FLUORANTHENE PYRENE]]]	1.3 1.6 13 1.6 1.3	1.9 1.9 19 1.9 1.9	PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-162-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE PYRENE	J	1.5 1.5	1.9 1.9	PQL PQL	UG/KG UG/KG	J (all detects)
SL-166-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(A)PYRENE FLUORANTHENE PYRENE	J	1.3 1.0 1.9 1.5	2.0 2.0 2.0 2.0	PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG	J (all detects)

Method: 9014

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-014-NBZ-SS-0.0-0.5	CYANIDE	J	0.339	0.627	PQL	MG/KG	J (all detects)
SL-088-NBZ-SS-0.0-0.5	CYANIDE	J	0.579	0.654	PQL	MG/KG	J (all detects)

LDC #: 29230B4

VALIDATION COMPLETENESS WORKSHEET

ADR

SDG #: 12D154 Laboratory: EMAX Laboratories, Inc.

7470A17471A

METHOD: Metals (EPA SW 846 Method 60/10B/6020/17/000)

Date: 2/27/1
Page: _\text{of} _\text{Reviewer: _\text{2}}
2nd Reviewer: _\text{A}

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
l.	Technical holding times	A	Sampling dates: 4/17/12
II.	ICP/MS Tune	_	
111.	Calibration		
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	/	1
VI.	Matrix Spike Analysis	SW	MS/D (120146)
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	EB=1,2

NI	O.	١.	

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

soil/warer

1	EB-NBZ-SB-041712 W	11	21	31	
2	EB-NBZ-SS-041712	12	22	32	
3	SL-014-NBZ-SS-0.0-0.5	13	23	33	
4	SL-088-NBZ-SS-0.0-0.5	14	24	34	
5	SL-090-NBZ-SS-0.0-0.5	15	25	35	
6	SL-147-NBZ-SS-0.0-0.5	16	26	36	
7	SL-156-NBZ-SS-0.0-0.5	17	 27	37	
8	SL-161-NBZ-SS-0.0-0.5	18	28	 38	
9	SL-162-NBZ-SS-0.0-0.5	19	29	 39	
10	SL-166-NBZ-SS-0.0-0.5	20	30	 40	

Notes:			
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VALIDATION FINDINGS WORKSHEET Field Blanks

___of___ Page:__of___ Reviewer:__C2___ 2nd Reviewer:

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

/Kg	100x	
Associated sample units: mg/Kg	Soil factor applied	
[4/1712	
Blank units: mg/L	Sampling date:_	

Sampling date: 4/1712 Soil factor applied 10 Field blank type: (circle one) Field Blank / Rinsate / Other:

Associated Samples:

All Soil on 1= Nore 2= All Soil Sample Identification No Qualifiers (>5x) Action Limit 10.85 0.445 24.6 0.1 0.000613 0.000255 Blank ID 0.0492 Analyte Blank ID 0.0008 0.0217 J C Ω ₹ Z

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# 297384

Matrix Spike/Matrix Spike Duplicates VALIDATION FINDINGS WORKSHEET

Reviewer. 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".

Was a matrix spike analyzed for each matrix in this SDG?

Were matrix spike percent recoveries (%R) within the control limits of (75-125) If the sample concentration exceeded the spike concentration by a factor YON N/A

of 4 or more, no action was taken.

Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples? LEVEL-NONLY:

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a de li de la constanta de la	State Contraction				<u></u>										
		'		\	4/2/10	1									
Accordated Samples	1,28,119					}									
RPD (1 imite)	11														
MSD %Recovery	153	173	146	134	173	58									
MS %Recovery						53									
Analyte	MSD) PF1	Ba	ک	K	Sh	72									
Matrix	0.0-C.5mg														
MS/MSD ID	ST-173-1492-550.0-0.5mg/mgr)														
#			<u></u>										<u> </u>		

Comments:

SAMPLE DELIVERY GROUP

12D166

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Apr-2012	TB-041812	D166-11	TB	5030B	8015B GRO	111
18-Apr-2012	SL-008-NBZ-SB-4.5	D166-01	N	5035	8015B GRO	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	3550B	8015B EFH	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	3550B	8270C	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	3550B	8270C SIM	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	7471A	7471A	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	300.0	111
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	314.0	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	6020	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	7199	101
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	8015B	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	8015M	111
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	8330A	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	8332	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02	N	GEN PREP	9014	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0DUP	D166-02D	DUP	GEN PREP	7199	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0DUP	D166-02D	DUP	GEN PREP	9014	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02G	MS	GEN PREP	7199	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02G1	MS	GEN PREP	7199	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02M	MS	3550B	8015B EFH	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02M	MS	7471A	7471A	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02M	MS	GEN PREP	7199	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02M	MS	GEN PREP	9014	101
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MS	D166-02M1	MS	GEN PREP	7199	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02R	N	GEN PREP	7199	10
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MSD	D166-02S	MSD	3550B	8015B EFH	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0MSD	D166-02S	MSD	7471A	7471A	III
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	D166-02W	N	3550B	8082	111
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0DUP	D166-02Z	DUP	GEN PREP	7199	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	3550B	8015B EFH	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	3550B	8081A	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	3550B	8270C	111
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	3550B	8270C SIM	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	7471A	7471A	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	300.0	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	314.0	111
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	6020	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	7199	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	8151A	111
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	8330A	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	8332	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03	N	GEN PREP	9014	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03R	N	GEN PREP	7199	III
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	D166-03W	N	3550B	8082	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	3550B	8015B EFH	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	3550B	8081A	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	3550B	8082	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	3550B	8270C	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	3550B	8270C SIM	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	7471A	7471A	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	300.0	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	314.0	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	6020	111
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	7199	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	8151A	Ш
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	8330A	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	8332	Ш
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04	N	GEN PREP	9014	Ш
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	D166-04R	N	GEN PREP	7199	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	3550B	8015B EFH	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	3550B	8081A	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	3550B	8082	III ·
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	3550B	8270C	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	7471A	7471A	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	300.0	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	314.0	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	6020	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	7199	111
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	8151A	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	8330A	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	8332	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06	N	GEN PREP	9014	III
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06R	N	GEN PREP	7199	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	D166-06W	N	3550B	8270C SIM	III
18-Apr-2012	SL-082-NBZ-SB-3.0	D166-05	N	5035	8015B GRO	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	3550B	8081A	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	3550B	8082	III
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	3550B	8270C	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	3550B	8270C SIM	111
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	7471A	7471A	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	GEN PREP	300.0	III
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	GEN PREP	314.0	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	GEN PREP	6020	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	GEN PREP	7199	111
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10	N	GEN PREP	8151A	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10R	N	GEN PREP	7199	Ш
18-Apr-2012	SL-189-NBZ-SS-0.0-0.5	D166-10W	N	GEN PREP	6020	III
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	3550B	8015B EFH	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	3550B	8081A	181
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	3550B	8270C	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	3550B	8270C SIM	III
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	7471A	7471A	III
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	300.0	111
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	314.0	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	6020	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	7199	III
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	8151A	111
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	8330A	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	8332	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07	N	GEN PREP	9014	tii
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5MS	D166-07 M	MS	3550B	8081A	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07R	N	GEN PREP	7199	III
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5MSD	D166-07S	MSD	3550B	8081A	Ш
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07T	N	3550B	8082	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
18-Apr-2012	SL-083-NBZ-SS-0.0-0.5	D166-07W	N	GEN PREP	6020	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	3550B	8081A	111
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	3550B	8082	111
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	3550B	8270C	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	3550B	8270C SIM	111
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	7471A	7471A	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	GEN PREP	300.0	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	GEN PREP	314.0	111
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	GEN PREP	6020	Ш
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	GEN PREP	7199	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09	N	GEN PREP	8151A	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09R	N	GEN PREP	7199	III
18-Apr-2012	SL-160-NBZ-SS-0.0-0.5	D166-09W	N	GEN PREP	6020	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	3550B	8081A	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	3550B	8082	III
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	3550B	8270C	Ш
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	3550B	8270C SIM	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	7471A	7471A	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	GEN PREP	300.0	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	GEN PREP	314.0	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	GEN PREP	6020	Ш
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	GEN PREP	7199	III
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08	N	GEN PREP	8151A	111
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08R	N	GEN PREP	7199	Ш
18-Apr-2012	SL-146-NBZ-SS-0.0-0.5	D166-08W	N	GEN PREP	6020	Ш

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: GENCHEM

300.0 Matrix: SO Method:

	Analysis Type: RES	Analysis T	2 10:57:00	ted: 4/18/20	Collec	Sample ID:SL-082-NBZ-SB-2.5-3.5
Lab Lab DL RL Review Re	_				1	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Nitrate-NO3	1.09	J	0.853	MDL	1.71	PQL	MG/KG	J	Z

Analysis Type: RES Dilution: 1 Sample ID: SL-082-NBZ-SS-0.0-0.5 Collected: 4/18/2012 10:53:00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.831	J	0.573	MDL	1.15	PQL	MG/KG	J	Z

Collected: 4/18/2012 2:06:00 Analysis Type: RES Dilution: 1 Sample ID: SL-083-NBZ-SS-0.0-0.5

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.692	J	0.572	MDL	1.14	PQL	MG/KG	J	Z

Method Category: **GENCHEM** so Matrix: Method: 9014

Sample ID:SL-081-NBZ-SS-0.0-0.5 Collected: 4/18/2012 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
CYANIDE	0.335	J	0.298	MDL	0.595	PQL	MG/KG	J	Z

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

Dilution: 1.00 Sample ID: SL-008-NBZ-SB-4.0-5.0 Collected: 4/18/2012 9:55:00 Analysis Type: RES/TOT

Analyte	Lab Result	Lab Qual	DL	DL Type		RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.125	J	0.106	MDL	0.211	PQL	MG/KG	J	Z
SILVER	0.0587	J	0.0528	MDL	0.106	PQL	MG/KG	J	Z
SODIUM	71.8	J	52.8	MDL	106	PQL	MG/KG	J	Z

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING Page 1 of 8 ADR version 1.7.0.207 3/12/2013 7:18:55 AM

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D166 **Laboratory: EMXT**

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

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6020 Matrix: SO Method:

Sample ID: SL-081-NBZ-SS-0.0-0.5	Collec	ted: 4/18/2	012 10:00	0:00	Analysis T	ype: RES	S/TOT	Dilution: 0.980				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code			
ANTIMONY	0.166	J	0.117	MDL	0.233	PQL	MG/KG	J	Z			
BORON	4.98	J	2.92	MDL	5.83	PQL	MG/KG	J	Z			

Sample ID:SL-082-NBZ-SB-2.5-3.5	Collec	Collected: 4/18/2012 10:57:00 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	0.146	J	0.113	MDL	0.226	PQL	MG/KG	J	Z	
SELENIUM	0.227	J	0.226	MDL	0.453	PQL	MG/KG	J	Z	

0/- /D-01 000 ND7 00 0 0 5	Callan	40 de 41401	2042 40.55	2.00 //	nalvoja T	ima. DEG	стот		Dilution: 0.074
SODIUM	87.8	J	56.6	MDL	113	PQL	MG/KG	J	Z
SILVER	0.0947	J	0.0566	MDL	0.113	PQL	MG/KG	J	Z
SELENIUM	0.227	J	0.226	MDL	0.453	PQL	MG/KG	J	Z
		·							

Sample ID: SL-082-NBZ-SS-0.0-0.5	Collected: 4/18/2012 10:53:00	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	0.173	J	0.111	MDL	0.223	PQL	MG/KG	J	Z
SODIUM	68.3	J	55.7	MDL	111	PQL	MG/KG	J	Z

Sample ID:SL-083-NR7-SS-0-0-0-5	Collected: 4/18/2012 2:06:00	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	0.120	J	0.114	MDL	0.229	PQL	MG/KG	J	Z
SILVER	0.0876	J	0.0572	MDL	0.114	PQL	MG/KG	J	Z

Sample ID:SI -146-NB7-SS-0 0-0 5	Collected: 4/18/2012 3:40:00	Analysis Type: RES/TOT	Dilution: 0.990
Sample ID'SL-146-NBZ-SS-0-0-0-5	Conected: 4/16/2012 3:40:00	Allalysis lybe, RES/101	<i> </i>

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.116	J	0.114	MDL	0.228	PQL	MG/KG	J	Z

Sample ID: SL-160-NBZ-SS-0.0-0.5	Collected: 4/18/2012 2:25:00	Analysis Type: RES/TOT	Dilution: 0.976	
			Data	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.164	J	0.109	MDL	0.219	PQL	MG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D166

Laboratory: EMXT

EDD Filename: Prep12D166R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category:

METALS

Method:

6020

Matrix: SO

Sample ID:SL-189-NBZ-SS-0.0-0.5	Collected: 4/18/2012 11:20:00 Analysis Type: RES/TOT							Dilution: 0,990		
	Lab	Lab		DL		_RL		Data Review	Reason	
Analyte	Result	Qual	DL	Туре	RL	Туре	Units	Qual	Code	
ANTIMONY	0.129	J	0.113	MDL	0.227	PQL	MG/KG	J	Z	

Method Category:

METALS

7471A Method:

Matrix:

SO

SO

Sample ID: \$L-083-NBZ-\$\$-0.0-0.5	Collected: 4/18/2012 2:06:00	Analysis Type: RES/TOT	Dilution: 0.995
			Data

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Review Qual	Reason Code
MERCURY	0.0992	J	0.0569	MDL	0.114	PQL	MG/KG	J	Z

Method Category:

SVOA

SVOA

Method:

8015B EFH

Matrix:

Matrix:

Analysis Type: RES

Dilution: 1

Sample ID:SL-082-NBZ-SS-0.0-0.5	Collec	ted: 4/18/2	012 10:53	3:00 A	nalysis T	ype: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
	AND STATE OF	29:00:000000000000000000000000000000000	min make manyakan	20.000.000.000000000000000000000000000		inculturatura rakera 2000	SKOGERCKU EX X KER	100 SEEK PROPERTIES \$240	154666-4-0-1	
EFH(C15-C20)	0.86	J	0.57	MDL	1.1	PQL	MG/KG	J	Z	

Method Category:

8081A Method:

Sample ID: SL-081-NBZ-SS-0.0-0.5

Collected: 4/18/2012 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
4,4'-DDD	0.22	J	0.20	MDL	0.40	PQL	UG/KG	J	Z

Sample ID: SL-189-NBZ-SS-0.0-0.5

Collected: 4/18/2012 11:20:00

Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.30	J	0.19	MDL	0.39	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8082 Matrix: SO

Sample ID:SL-082-NBZ-SB-2.5-3.5 Collected: 4/18/2012 10:57:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	2.4	J	1.9	MDL	3.8	PQL	UG/KG	J	Z

Sample ID:SL-146-NBZ-SS-0.0-0.5 Collected: 4/18/2012 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
Aroclor 5460	3.6	J	2.0	MDL	3.8	PQL	UG/KG	J	Z

Method Category: SVOA Method: 8270C <u>Matrix: SO</u>

Sample ID:SL-008-NBZ-SB-4.0-5.0 Collected: 4/18/2012 9:55:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	180	U	89	MDL	180	PQL	UG/KG	UJ	L
ANILINE	350	U	180	MDL	350	PQL	UG/KG	υJ	E
HEXACHLOROCYCLOPENTADIENE	180	U	89	MDL	180	PQL	UG/KG	UJ	E

Sample ID:SL-081-NBZ-SS-0.0-0.5 Collected: 4/18/2012 10:00:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	200	U	100	MDL	200	PQL	UG/KG	UJ	L
ANILINE	400	U	200	MDL	400	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	200	U	100	MDL	200	PQL	UG/KG	UJ	E

Sample ID:SL-082-NBZ-SB-2.5-3.5 Collected: 4/18/2012 10:57:00 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-CHLORONAPHTHALENE	190	U	96	MDL	190	PQL	UG/KG	UJ	L
ANILINE	380	Ŭ	190	MDL	380	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	96	MDL	190	PQL	UG/KG	UJ	E

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

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA Method: 8270C

8270C Matrix: SO

Sample ID:SL-082-NBZ-SS-0.0-0.5 Collected: 4/18/2012 10:53:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	υ	96	MDL	190	PQL	UG/KG	UJ	L
ANILINE	380	U	190	MDL	380	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	96	MDL	190	PQL	UG/KG	UJ	E

Sample ID:SL-083-NBZ-SS-0.0-0.5 Collected: 4/18/2012 2:06:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	U	96	MDL	190	PQL	UG/KG	UJ	L
ANILINE	380	U	190	MDL	380	PQL	UG/KG	UJ	Ш
HEXACHLOROCYCLOPENTADIENE	190	U	96	MDL	190	PQL	UG/KG	UJ	Е

Sample ID:SL-146-NBZ-SS-0.0-0.5 Collected: 4/18/2012 3:40:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	U	97	MDL	190	PQL	UG/KG	UJ	L
ANILINE	380	U	190	MDL	380	PQL	UG/KG	ΟJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	97	MDL	190	PQL	UG/KG	UJ	E

Sample ID:SL-160-NBZ-SS-0.0-0.5 Collected: 4/18/2012 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
2-CHLORONAPHTHALENE	190	U	94	MDL	190	PQL	UG/KG	บป	L
ANILINE	370	U	190	MDL	370	PQL	UG/KG	UJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	94	MDL	190	PQL	UG/KG	UJ	E

Sample ID:SL-189-NBZ-SS-0.0-0.5 Collected: 4/18/2012 11:20:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-CHLORONAPHTHALENE	190	U	96	MDL	190	PQL	UG/KG	ÛĴ	L
ANILINE	380	U	190	MDL	380	PQL	UG/KG	υJ	E
HEXACHLOROCYCLOPENTADIENE	190	U	96	MDL	190	PQL	UG/KG	UJ	E

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING
ADR version 1 7 0 207

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Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-081-NBZ-SS-0.0-0.5 Collected: 4/18/2012 10:00:00 A	Analysis Type: RES-BASE/NEUTRAL L	Dilution: 1
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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.8	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
Butylbenzylphthalate	16	J	10	MDL	20	PQL	UG/KG	J	Z

Sample ID:SL-082-NBZ-SS-0.0-0.5 Collected: 4/18/2012 10:53:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
PHENANTHRENE	1.1	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	1.3	J	0.97	MDL	1.9	PQL	UG/KG	J	Z

Sample ID:SL-146-NBZ-SS-0.0-0.5 Collected: 4/18/2012 3:40:00 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	1.5	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
FLUORENE	1.2	J	0.98	MDL	2.0	PQL	UG/KG	J	Z
PHENANTHRENE	1.3	J	0.98	MDL	2.0	PQL	UG/KG	J	Z

Sample ID:SL-160-NBZ-SS-0.0-0.5 Collected: 4/18/2012 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
Butylbenzylphthalate	9.6	J	9.4	MDL	19	PQL	UG/KG	J	Z

Sample ID:SL-189-NBZ-SS-0.0-0.5 Collected: 4/18/2012 11:20:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.4	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
FLUORANTHENE	1.1	J	0.97	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	0.98	J	0.97	MDL	1.9	PQL	UG/KG	J	Z

Page 6 of 8

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: VOA

Method: 8015B GRO Matrix: AQ

Sample ID:TB-041812	Collected: 4/18/2012 8:00:00	Analysis Type: RES	Dilution: 1
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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
GASOLINE RANGE ORGANICS (C5-C12)	37	J	10	MDL	50	PQL	UG/L	J	Z

Lab Reporting Batch ID: 12D166

EDD Filename: Prep12D166R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
E	Laboratory Control Precision
L	Laboratory Control Precision
L	Laboratory Control Spike Lower Estimation
Q	Matrix Spike Upper Estimation
S	Surrogate/Tracer Recovery Lower Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D166

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D166

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

EDD Filename: Prep12D166R

Method: 8270C

Matrix: SO							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SVD047SC (SL-008-NBZ-SB-4.0-5.0 SL-081-NBZ-SS-0.0-0.5 SL-082-NBZ-SB-2.5-3.5 SL-082-NBZ-SS-0.0-0.5 SL-083-NBZ-SS-0.0-0.5 SL-160-NBZ-SS-0.0-0.5 SL-189-NBZ-SS-0.0-0.5	2-CHLORONAPHTHALENE ANILINE HEXACHLOROCYCLOPENTADI	-	47 -	50.00-130.00 20.00-150.00 10.00-130.00	56 (50.00) 56 (50.00)	2-CHLORONAPHTHALENE ANILINE HEXACHLOROCYCLOPENTAD	J (all detects) UJ (all non-detects)

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D166

Laboratory: EMXT

EDD Filename: Prep12D166R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8081A Matrix: SO							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-083-NBZ-SS-0.0-0.5MS SL-083-NBZ-SS-0.0-0.5MSD (SL-083-NBZ-SS-0.0-0.5)	4,4'-DDT	201	163	30.00-160.00	-	4,4'-DDT	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12D166

EDD Filename: Prep12D166R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-041812	GASOLINE RANGE ORGANICS (C5-C12)	J	37	50	PQL	UG/L	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-082-NBZ-SB-2.5-3.5	Nitrate-NO3	J	1.09	1.71	PQL	MG/KG	J (all detects)
SL-082-NBZ-SS-0.0-0.5	FLUORIDE	J	0.831	1.15	PQL	MG/KG	J (all detects)
SL-083-NBZ-SS-0.0-0.5	FLUORIDE	J	0.692	1.14	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-008-NBZ-SB-4.0-5.0	ANTIMONY SILVER SODIUM	J	0.125 0.0587 71.8	0.211 0.106 106	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-081-NBZ-SS-0.0-0.5	ANTIMONY BORON	J	0.166 4.98	0.233 5.83	PQL PQL	MG/KG MG/KG	J (all detects)
SL-082-NBZ-SB-2.5-3.5	ANTIMONY SELENIUM SILVER SODIUM	J J	0.146 0.227 0.0947 87.8	0.226 0.453 0.113 113	PQL PQL PQL PQL	MG/KG MG/KG MG/KG MG/KG	J (all detects)
SL-082-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J J	0.173 68.3	0.223 111	PQL PQL	MG/KG MG/KG	J (all detects)
SL-083-NBZ-SS-0.0-0.5	ANTIMONY SILVER	J J	0.120 0.0876	0.229 0.114	PQL PQL	MG/KG MG/KG	J (all detects)
SL-146-NBZ-SS-0.0-0.5	ANTIMONY	J	0.116	0.228	PQL	MG/KG	J (all detects)
SL-160-NBZ-SS-0.0-0.5	ANTIMONY	J	0.164	0.219	PQL	MG/KG	J (all detects)
SL-189-NBZ-SS-0.0-0.5	ANTIMONY	J	0.129	0.227	PQL	MG/KG	J (all detects)

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-083-NBZ-SS-0.0-0.5	MERCURY	J	0.0992	0.114	PQL	MG/KG	J (all detects)

Reporting Limit Outliers

Lab Reporting Batch ID: 12D166 Laboratory: EMXT

EDD Filename: Prep12D166R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-082-NBZ-SS-0.0-0.5	EFH(C15-C20)	J	0.86	1.1	PQL	MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-081-NBZ-SS-0.0-0.5	4,4'-DDD	J	0.22	0.40	PQL	UG/KG	J (all detects)
SL-189-NBZ-SS-0.0-0.5	4.4'-DDE	J	0.30	0.39	PQL	UG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-082-NBZ-SB-2.5-3.5	Aroclor 5460	J	2.4	3.8	PQL	UG/KG	J (all detects)
SL-146-NBZ-SS-0.0-0.5	Aroclor 5460	J	3.6	3.8	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-081-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE Butylbenzylphthalate	J	1.8 16	2.0 20	PQL PQL	UG/KG UG/KG	J (all detects)
SL-082-NBZ-SS-0.0-0.5	PHENANTHRENE PYRENE	J	1.1 1.3	1.9 1.9	PQL PQL	UG/KG UG/KG	J (all detects)
SL-146-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE FLUORENE PHENANTHRENE	J	1.5 1.2 1.3	2.0 2.0 2.0	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-160-NBZ-SS-0.0-0.5	Butylbenzylphthalate	J	9.6	19	PQL	UG/KG	J (all detects)
SL-189-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE FLUORANTHENE PYRENE	J	1.4 1.1 0.98	1.9 1.9 1.9	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)

Method: 9014

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-081-NBZ-SS-0.0-0.5	CYANIDE	J	0.335	0.595	PQL	MG/KG	J (all detects)

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

3/8/2013 11:36:09 AM ADR version 1.7.0.207 Page 2 of 2

LDC #: 29230C4

SDG #: 12D166

VALIDATION COMPLETENESS WORKSHEET

ADR

Laboratory: EMAX Laboratories, Inc.

7471A

METHOD: Metals (EPA SW 846 Method 6010B/6020A17600)

Reviewer 2nd Reviewe

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					
l.	Technical holding times		Sampling dates: 4/18/17					
II.	ICP/MS Tune							
III.	Calibration							
IV.	Blanks	A						
V.	ICP Interference Check Sample (ICS) Analysis							
VI.	Matrix Spike Analysis	N	MS/D (6020-CS) (747/A only)					
VII.	Duplicate Sample Analysis	N	, ,					
VIII.	Laboratory Control Samples (LCS)	N	LCS/D					
IX.	Internal Standard (ICP-MS)	N						
Х	Furnace Atomic Absorption QC	N						
XI.	ICP Serial Dilution	Δ						
XII.	Sample Result Verification	N						
XIII.	Overall Assessment of Data	N						
XIV.	Field Duplicates							
ΧV	Field Blanks	SW	CB=EB-NBZ-SB-OH1712 \ 12D154					
Note:	=EB-NBZ-SS-041712 /							

N = Not provided/applicable

SW = See worksheet

R = Rinsate

FB = Field blank

TB = Trip blank

EB = Equipment blank

Validated Samples:

	<u> </u>				
1	SL-008-NBZ-SB-4.0-5.0	11	21	31	
2	SL-081-NBZ-SS-0.0-0.5	12	22	32	
3	SL-082-NBZ-SS-0.0-0.5	13	23	33	
4	SL-082-NBZ-SB-2.5-3.5	14	24	34	
5	SL-083-NBZ-SS-0.0-0.5	15	25	35	
6	SL-146-NBZ-SS-0.0-0.5	16	26	36	
7	SL-160-NBZ-SS-0.0-0.5	17	27	37	
8	SL-189-NBZ-SS-0.0-0.5	18	28	38	
9	SL-008-NBZ-SB-4.0-5.0MS	19	29	39	
10	SL-008-NBZ-SB-4.0-5.0MSD	20	30	40	

Notes:			

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VALIDATION FINDINGS WORKSHEET Field Blanks

Reviewer: 2nd Reviewerg

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

Blank units: mg/L Associated sample units: mg/Kg Sampling date: 4/1712 Soil factor applied 10 Field blank type: (circle one) Field Blank / Rinsate / Other:

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Sa																					
	,																				
	No Qualifiers (>5x)											·									
	Action Limit	10.85	0.445	24.6	0.1													-			
Blank ID	EB-NBZ- SS-041712		0.000613	0.0492	0.000255																
Blank ID	EB-NBZ- SB-041712	0.0217	0.000894																		
Analyte		A	Cu	Ca	ż																
		Sample Id																			

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

12D176

Attachment I

Sample ID Cross Reference and Data Review Level

19-Apr-2012 19-Apr-2012	TB-041912		Туре	Method	Method	Level
19-Apr-2012		D176-14	TB	5030B	8015B GRO	Ш
•	TB-041912	D176-14	TB	5030B	8260B	Ш
19-Apr-2012	TB-041912	D176-14	ТВ	5030B	8260B SIM	111
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	3550B	8081A	III
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	3550B	8082	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	3550B	8270C	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	3550B	8270C SIM	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	7471A	7471A	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	300.0	III
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	314.0	III
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	6850	in
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	7199	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	8151A	III
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	8330A	m
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	8332	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	GEN PREP	9014	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01	N	TOTAL	6020	III
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01R	N	3550B	8015B EFH	Ш
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	D176-01R	N	GEN PREP	7199	111
19-Apr-2012	SL-012-NBZ-SB-1.0	D176-02	N	5035	8015B GRO	m
19-Apr-2012	SL-012-NBZ-SB-1.0	D176-02	N	5035	8260B	III
19-Apr-2012	SL-012-NBZ-SB-1.0	D176-02	N	5035	8260B SIM	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	3550B	8015B EFH	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	3550B	8082	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	3550B	8270C	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	3550B	8270C SIM	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	7471A	7471A	111
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	300.0	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	314.0	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	7199	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	8015B	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	8015 M	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	8330A	111
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	8332	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	GEN PREP	9014	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03	N	TOTAL	6020	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5MS	D176-03M	MS	GEN PREP	8330A	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5MS	D176-03M	MS	GEN PREP	8332	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	D176-03R	N	GEN PREP	7199	111
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5MSD	D176-03S	MSD	GEN PREP	8330A	III
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5MSD	D176-03S	MSD	GEN PREP	8332	Ш
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	3550B	8081A	III
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	3550B	8082	III
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	3550B	8270C	111
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	3550B	8270C SIM	Ш
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	7471A	7471A	Ш
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	GEN PREP	300.0	III
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	GEN PREP	314.0	III
19-Арг-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	GEN PREP	7199	III
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	GEN PREP	8151A	Ш
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11	N	TOTAL	6020	Ш
19-Apr-2012	SL-184-NBZ-SS-0.0-0.5	D176-11R	N	GEN PREP	7199	111

	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	3550B	8015B EFH	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	3550B	8081A	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	3550B	8082	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	3550B	8270C	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	3550B	8270C SIM	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	7471A	7471A	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	300.0	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	314.0	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	7199	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	· N	GEN PREP	8151A	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	8330A	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	8332	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	GEN PREP	9014	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04	N	TOTAL	6020	IV
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	D176-04R	N	GEN PREP	7199	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	3550B	8081A	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	3550B	8082	iV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	3550B	8270C	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	3550B	8270C SIM	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	7471A	7471A	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	300.0	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	314.0	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	7199	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	8015B	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	8015 M	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	8151A	IV

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	8330A	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	8332	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	GEN PREP	9014	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07	N	TOTAL	6020	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07R	N	3550B	8015B EFH	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	D176-07R	N	GEN PREP	7199	IV
19-Apr-2012	SL-087-NBZ-SS-0.5	D176-06	N	5035	8015B GRO	IV
19-Apr-2012	SL-087-NBZ-SS-0.5	D176-06	N	5035	8260B	IV
19-Apr-2012	SL-087-NBZ-SS-0.5	D176-06	N	5035	8260B SIM	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	3550B	8081A	Ш
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	3550B	8082	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	7471A	7471A	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	GEN PREP	300.0	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	GEN PREP	314.0	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	GEN PREP	7199	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	GEN PREP	8151A	Ш
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10	N	TOTAL	6020	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10R	N	GEN PREP	7199	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10W	N	3550B	8270C	IV
19-Apr-2012	SL-179-NBZ-SS-0.0-0.5	D176-10W	N	3550B	8270C SIM	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	3550B	8015B EFH	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	3550B	8081A	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	3550B	8082	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	3550B	8270C	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	3550B	8270C SIM	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	7471A	7471A	IV

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	300.0	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	314.0	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	7199	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	8151A	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	8330A	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	8332	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	GEN PREP	9014	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05	N	TOTAL	6020	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	D176-05R	N	GEN PREP	7199	IV
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	3550B	8081A	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	3550B	8082	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	3550B	8270C	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	3550B	8270C SIM	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	7471A	7471A	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	GEN PREP	300.0	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	GEN PREP	314.0	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	GEN PREP	7199	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	GEN PREP	8151A	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12	N	TOTAL	6020	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12G	MS	GEN PREP	7199	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12G1	MS	GEN PREP	7199	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12H	MSD	GEN PREP	7199	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12H1	MSD	GEN PREP	7199	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	3550B	8081A	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12 M	MS	3550B	8082	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	3550B	8270C	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12 M	MS	3550B	8270C	Ш

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	3550B	8270C SIM	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	7471A	7471A	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	GEN PREP	300.0	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	GEN PREP	314.0	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	GEN PREP	7199	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	GEN PREP	8151A	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M	MS	TOTAL	6020	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MS	D176-12M1	MS	GEN PREP	7199	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5	D176-12R	N	GEN PREP	7199	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	3550B	8081A	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	3550B	8082	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	3550B	8270C	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	3550B	8270C SIM	Ш
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	7471A	7471A	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	GEN PREP	300.0	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	GEN PREP	314.0	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	GEN PREP	7199	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	GEN PREP	8151A	111
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S	MSD	TOTAL	6020	III
19-Apr-2012	SL-193-NBZ-SS-0.0-0.5MSD	D176-12S1	MSD	GEN PREP	7199	III
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	3550B	8081A	III
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	3550B	8082	Ш
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	3550B	8270C	111
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	3550B	8270C SIM	iii
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	7471A	7471A	Ш
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	GEN PREP	300.0	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	GEN PREP	314.0	III
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	GEN PREP	7199	Ш
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	GEN PREP	8151A	Ш
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13	FD	TOTAL	6020	III
19-Apr-2012	DUP-09-NBZ-QC-041912	D176-13R	FD	GEN PREP	7199	111
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	3550B	8081A	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	3550B	8082	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	3550B	8270C SIM	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	7471A	7471A	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	GEN PREP	300.0	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	GEN PREP	314.0	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	GEN PREP	7199	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	GEN PREP	8151A	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09	N	TOTAL	6020	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09R	N	GEN PREP	7199	IV
19-Apr-2012	SL-178-NBZ-SS-0.0-0.5	D176-09W	N	3550B	8270C	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	3550B	8081A	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	3550B	8082	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	3550B	8270C	iV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	3550B	8270C SIM	Vi
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	7471A	7471A	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	GEN PREP	300.0	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	GEN PREP	314.0	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	GEN PREP	7199	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	GEN PREP	8151A	IV
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08	N	TOTAL	6020	IV

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
19-Apr-2012	SL-150-NBZ-SS-0.0-0.5	D176-08R	N	GEN PREP	7199	IV

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D176

Laboratory: EMXT

EDD Filename: 12D176R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: GENC	HEM		
Method: 300.0		Matrix: SO	

Sample ID: SL-012-NBZ-SB-0.5-1.5	Collect	ted: 4/19/2	012 9:25:0)0 A	nalysis T	ype: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
	BILLION COLOR SEVERA		STREET WAS DESCRIBED AND	yearners wyddifford	happalaist Parjai Militara (Sang)	2010. Also instrucțiui Billini	Hujildaşi'n kçələt qərə	ologica saturung, di trapière	and the second state of the second
FLUORIDE	1.00	J	0.598	MDL	1.20	PQL	MG/KG	J	Z

Sample ID: SL-017-NBZ-SS-0.0-0.5	Collect	Collected: 4/19/2012 10:09:00 Analysis Type: RES						Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
FLUORIDE	1.24	J	0.711	MDL	1.42	PQL	MG/KG	J	Z	

Sample ID: SL-086-NBZ-SS-0.0-0.5	Collected: 4/19/2012 11:40:00 Analysis Type: RES							Dilution: 1			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
FLUORIDE	1.03	J	0.646	MDL	1.29	PQL	MG/KG	J	Z		

Method Category: GEN	NCHEM		
Method: 901		Matrix: SO	

Sample ID: SL-086-NBZ-SS-0.0-0.5	Collect	ted: 4/19/2	012 11:40	:00 🗚	Analysis T	ype: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CYANIDE	0.327	J	0.323	MDL	0.646	PQL	MG/KG	J	Z

Method Category: METALS		
Method: 6020	Matrix: SO	

Sample ID: DUP-09-NBZ-QC-041912	Collec	Collected: 4/19/2012 11:50:00 Analysis Type: RES/TOT								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.222	U	0.111	MDL	0.222	PQL	MG/KG	UJ	Q, FD	
SODIUM	57.6	J	55.6	MDL	111	PQL	MG/KG	J	Z, FD	
Zirconium	5.56	U	2.78	MDL	5.56	PQL	MG/KG	UJ	Q	

Sample ID: SL-012-NBZ-SB-0.5-1.5	Collec	Collected: 4/19/2012 9:25:00 Analysis Type: RES/TOT							Dilution: 0.952		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ANTIMONY	0.228	U	0.114	MDL.	0.228	PQL	MĢ/KG	บา	Q		
SODIUM	92.2	J	56.9	MDL	114	PQL	MG/KG	J	Z		

^{*} denotes a non-reportable result

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

3/8/2013 8:10:10 AM

ADR version 1.7.0.207

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

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Method Category: METALS

Method: 6020 Matrix: SO

Sample ID: SL-012-NBZ-SB-0.5-1.5	Collect	ed: 4/19/20	012 9:25:0	10 A	nalysis Ty	pe: RES	тот	ı	Dilution: 0.952
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Zirconium	5.69	U	2.85	MDL	5.69	PQL	MG/KG	UJ	Q

Analysis Type: RES/TOT Sample ID: SL-012-NBZ-SS-0.0-0.5 Collected: 4/19/2012 8:46:00 Dilution: 0.957 Data DLLab Lab RL Review Reason Qual DLRLUnits Qual Code Analyte Result Туре Type PQL MG/KG ANTIMONY 0.267 0.112 MDL 0.223 J Q Ζ BORON 3.33 J 2.79 MDL 5.58 PQL MG/KG J SELENIUM 0.223 MDL 0.447 PQL MG/KG J Ζ 0.263 J 5.58 U 2.79 MDL 5.58 PQL MG/KG UJ Q Zirconium

Sample ID: SL-017-NBZ-SS-0.0-0.5	Collec	Collected: 4/19/2012 10:09:00 Analysis Type: RES/TOT Dilution: 0.9								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.330		0.137	MDL	0.275	PQL	MG/KG	J	Q	
SELENIUM	0.288	J	0.275	MDL	0.550	PQL	MG/KG	J	Z	
SILVER	0.0954	J	0.0687	MDL	0.137	PQL	MG/KG	J	Z	
SODIUM	124	J	68.7	MDL	137	PQL	MG/KG	J	Z	
Zirconium	6.87	U	3.44	MDL	6.87	PQL	MG/KG	UJ	Q	

Sample ID: SL-086-NBZ-SS-0.0-0.5	Collec	Collected: 4/19/2012 11:40:00 Analysis Type: RES/TOT Dilution: 0.99									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ANTIMONY	0.229	J	0.128	MDL	0.256	PQL	MG/KG	J	Z, Q		
SILVER	0.0736	J	0.0640	MDL	0.128	PQL	MG/KG	J	Z		
SODIUM	90.1	J	64.0	MDL	128	PQL	MG/KG	J	Z		
Zirconium	6.40	U	3.20	MDL	6.40	PQL	MG/KG	UJ	Q		

Sample ID: SL-087-NBZ-SS-0.0-0.5	Collec	Collected: 4/19/2012 10:09:00 Analysis Type: RES/TOT									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
ANTIMONY	0.133	J	0.123	MDL	0.246	PQL	MG/KG	J	Z, Q		
SODIUM	70.7	J	61.6	MDL.	123	PQL	MG/KG	J	Z		
Zirconium	6.16	U	3.08	MDL	6.16	PQL	MG/KG	UJ	Q		

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING 3/8/2013 8:10:10 AM ADR version 1.7.0.207

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category: METALS Method: 6020 Matrix: SO	

Sample ID: SL-150-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 3:35:0	00 A	nalysis T	ype: RES	/TOT	L	Dilution: 0.995
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.202	J	0.112	MDL	0.224	PQL	MG/KG	J	Z, Q
SODIUM	83.9	J	56.0	MDL	112	PQL	MG/KG	J	Z
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID: SL-178-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 3:00:0	00 A	nalysis Ty	ype: RES	Collected: 4/19/2012 3:00:00 Analysis Type: RES/TOT								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code						
ANTIMONY	0.142	J	0.111	MDL	0.223	PQL	MG/KG	J	Z, Q						
SELENIUM	0.274	J	0.223	MDL	0.446	PQL	MG/KG	J	Z						
SODIUM	62.0	J	55.7	MDL	111	PQL	MG/KG	J	Z						
Zirconium	5.57	U	2.79	MDL	5.57	PQL	MG/KG	UJ	Q						

Sample ID: SL-179-NBZ-SS-0.0-0.5	Collect	ted: 4/19/2	/TOT	Dilution: 1.00					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.138	J	0.112	MDL	0.225	PQL	MG/KG	J	Z, Q
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	UJ	Q

Sample ID: SL-184-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 10:05	:00	Analysis Ty	pe: RES	Dilution: 0.990		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.146	J	0.112	MDL	0.225	PQL	MG/KG	J	Z, Q
Zirconium	5.62	U	2.81	MDL	5.62	PQL	MG/KG	ΟΊ	Q

Sample ID: SL-193-NBZ-SS-0.0-0.5 Analyte	Collec	Collected: 4/19/2012 11:45:00 Analysis Type: RES/TOT								
	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.147	J	0.112	MDL	0.224	PQL.	MG/KG	J	Z, Q, FD	
SODIUM	112	U	55.9	MDL	112	PQL	MG/KG	UJ	FD	
Zirconium	5.59	U	2.79	MDL	5.59	PQL	MG/KG	UJ	Q	

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D176

Laboratory: EMXT eQAPP Name: CDM_SSFL_120730_EMAX EDD Filename: 12D176R

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Method Category:	Approximate the second second		SANCE OF STREET	
	2 - A COSTANS CARREST			
		The second of th	The state of the s	SEASON CONTRACTOR OF THE SEASON CONTRACTOR OF
				SPBULLED IN A COLUMN
Method:		Matrix: SO		
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Sample ID: SL-017-NBZ-SS-0.0-0.5	Collect	ted: 4/19/2	012 10:09	:00 A	nalysis T	/pe: RES	/TOT		Dilution: 0.990
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
MERCURY	0.0803	J	0.0704	MDL	0.141	PQL	MG/KG	J	Z

Method Category: SVOA		
Method: 8015B EFH	Matrix:	: SO

Sample ID: SL-012-NBZ-SS-0.0-0.5	Collect	ted: 4/19/2	012 8:46:0	00 A	Analysis T	ype: RES	;	i	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C15-C20)	0.69	J	0.58	MDL	1.2	PQL	MG/KG	J	Z

Sample ID: SL-087-NBZ-SS-0.0-0.5	Collec	Collected: 4/19/2012 10:09:00 Analysis Type: RES								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
EFH(C15-C20)	1.1	J	0.63	MDL	1.3	PQL	MG/KG	J	Z	
EFH(C8-C11)	0.69	J	0.63	MDL	1.3	PQL	MG/KG	J	Z	

Method Category: SVOA Method: 8081A Matrix: SO	
Method: 8081A Matrix: SO	

Sample ID: DUP-09-NBZ-QC-041912	Collect	Collected: 4/19/2012 11:50:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
4,4'-DDE	0.21	j	0.19	MDL	0.38	PQL	UG/KG	J	Z, FD		
4,4'-DDT	0.38	U	0.19	MDL	0.38	PQL	UG/KG	UJ	FD		

Sample ID: SL-012-NBZ-\$S-0.0-0.5	Collec	Collected: 4/19/2012 8:46:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1										
Analyte	Lab Result	Lab Qual	DL.	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code			
4,4'-DDE	0.31	J	0.20	MDL	0.40	PQL	UG/KG	J	Z			
4,4'-DDT	0.27	J	0.20	MDL	0.40	PQL	UG/KG	J	Z			

Sample ID: SL-017-NBZ-SS-0.0-0.5	Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1								Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHOXYCHLOR	2.4	U	1.2	MDL	2.4	PQL	UG/KG	UJ	С

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-010-AL - SSFL AREA IV COLLOCATED SAMPLING ADR version 1.7.0.207 3/8/2013 8:10:10 AM

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

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Method Category	SVO.	an a distribute di sen	oment i stader 6/176.		and the second	E F FINITE		en antico.	。
Garegori .									
Method:	8081A			Matrix:	so				
									MAKAMBAR KANDEN NOKTONI MUSIKA III MISA MUNISA

Sample ID: SL-086-NBZ-SS-0.0-0.5	Collec	Collected: 4/19/2012 11:40:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1										
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code			
4,4'-DDE	1.4		0.22	MDL	0.44	PQL	UG/KG	J	*XIII			
4,4'-DDT	3.0		0.22	MDL	0.44	PQL	UG/KG	J	*XIII			
METHOXYCHLOR	2.2	U	1.1	MDL	2.2	PQL	UG/KG	. UJ	С			

Sample ID: SL-087-NBZ-SS-0.0-0.5	Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1									
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
4,4'-DDE	0.43	J	0.21	MDL	0.43	PQL	UG/KG	J	*XIII	
METHOXYCHLOR	2.1	U	1.1	MDL	2.1	PQL	UG/KG	υJ	С	

Sample ID: SL-150-NBZ-SS-0.0-0.5	Collected: 4/19/2012 3:35:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
METHOXYCHLOR	1.9	U	0.96	MDL	1.9	PQL	UG/KG	UJ	С

Sample ID: SL-178-NBZ-SS-0.0-0.5	Collect	ted: 4/19/20	012 3:00:0	00 A	Analysis Type: RES-BASE/NEUTRAL Dilution: 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL _. Type	Units	Data Review Qual	Reason Code	
METHOXYCHLOR	1.9	U	0.95	MDL	1.9	PQL	UG/KG	UJ	С	

Sample ID: SL-179-NBZ-SS-0.0-0.5	Collected: 4/19/2012 11:10:00 Analysis Type: RES-BASE/NEUTRAL Dilut							Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
4,4'-DDE	0.37	J	0.19	MDL	0.38	PQL	UG/KG	J	Z

Sample ID: SL-193-NBZ-SS-0.0-0.5	0.5 Collect	Collected: 4/19/2012 11:45:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1								
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
4,4'-DDE	1.7	× 1811 - 182 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 - 183 -	0.19	MDL	0.38	PQL	UG/KG	J	FD	
4,4'-DDT	1.8		0.19	MDL	0.38	PQL	UG/KG	J	FD	

^{*} denotes a non-reportable result

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

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category:	SVOA	1.10	
Method:	8082	Matrix: SO	

Sample ID: SL-017-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 10:09	:00 A	nalysis T	ype: RES	-BASE/NE	ASE/NEUTRAL Dilution: 1					
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code				
AROCLOR 1242	2.4	U	1.2	MDL	2.4	PQL	UG/KG	UJ	С				
AROCLOR 1248	2.4	U	1.2	MDL	2.4	PQL	UG/KG	ΩJ	С				
AROCLOR 1260	2.4	U	1.2	MDL	2.4	PQL	UG/KG	เกา	С				

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	2.2	U	1.1	MDL	2.2	PQL	UG/KG	UJ	С
AROCLOR 1248	2.2	U	1.1	MDL	2.2	PQL	UG/KG	UJ	С
AROCLOR 1254	7.2		1.1	MDL	2.2	PQL	UG/KG	J	*XIII
AROCLOR 1260	2.2	U	1.1	MDL	2.2	PQL	UG/KG	UJ	С

Sample ID: SL-087-NBZ-SS-0.0-0.5	Collec	ted: 4/19/20	012 10:09	:00 A	nalysis T	ype: RES	-BASE/NE	NEUTRAL Dilution: 1						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code					
AROCLOR 1242	2.1	U	1.1	MDL	2.1	PQL	UG/KG	UJ	С					
AROCLOR 1248	2.1	U	1.1	MDL	2.1	PQL	UG/KG	υJ	С					
AROCLOR 1254	6.4		1.1	MDL	2.1	PQL	UG/KG	J	*XIII					
AROCLOR 1260	2.1	U	1.1	MDL	2.1	PQL	UG/KG	υJ	С					

Sample ID: SL-150-NBZ-SS-0.0-0.5 Analyte	Collec	ted: 4/19/2	012 3:35:0	00 A	nalysis T	ype: RES	: RES-BASE/NEUTRAL Dilution: 1						
	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code				
AROCLOR 1242	1.9	U	0.96	MDL	1.9	PQL	UG/KG	UJ	С				
AROCLOR 1248	1.9	U	0.96	MDL	1.9	PQL	UG/KG	UJ	С				
AROCLOR 1260	1.9	U	0.96	MDL	1.9	PQL	UG/KG	UJ	С				
Aroclor 5460	2.6	J	1.9	MDL	3.7	PQL	UG/KG	J	Z				

Sample ID: SL-178-NBZ-SS-0.0-0.5 Analyte	Collec	ted: 4/19/2	012 3:00:0	00 A	nalysis T	ype: RES	RES-BASE/NEUTRAL Dilution: 1						
	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code				
AROCLOR 1242	1.9	υ	0.95	MDL	1.9	PQL	UG/KG	บง	С				
AROCLOR 1248	1.9	U	0.95	MDL	1.9	PQL	UG/KG	UJ	С				
AROCLOR 1260	1.9	U	0.95	MDL	1.9	PQL	UG/KG	ΟΊ	C				

^{*} denotes a non-reportable result

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

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category: SVOA

Method: 8082 Matrix: SO

Sample ID: SL-179-NBZ-SS-0.0-0.5	Collected: 4/19/2012 11:10:00	Analysis Type: RES-BASE/NEUTRAL	Dilution: 1
Sample ID: 3L-179-NB2-33-0.0-0.5	Collected: 4/19/2012 11:10:00	Allalysis Type: NES-BASE/NEUTRAL	Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
AROCLOR 1242	1.9	U	0.96	MDL	1.9	PQL	UG/KG	υJ	С
AROCLOR 1248	1.9	U	0.96	MDL	1.9	PQL	UG/KG	ΠΊ	С
AROCLOR 1260	1.9	U	0.96	MDL	1.9	PQL	UG/KG	υJ	С

Method Category: SVOA Method: 8270C Matrix:

Sample ID: SL-017-NBZ-SS-0.0-0.5 Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	240	υ	240	MDL	240	PQL	UG/KG	UJ	*[][
2-Phenoxyethanol	240	υ	240	MDL	240	PQL	UG/KG	UJ	*!!!
Tetralin	240	U	240	MDL	240	PQL	UG/KG	UJ	*!!!

SO

Sample ID: SL-086-NBZ-SS-0.0-0.5 Collected: 4/19/2012 11:40:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	220	U	220	MDL	220	PQL	UG/KG	UJ	*111
2-Phenoxyethanol	220	U	220	MDL	220	PQL	UG/KG	UJ	*111
Tetralin	220	U	220	MDL	220	PQL	UG/KG	UJ	*111

Sample ID: SL-087-NBZ-SS-0.0-0.5 Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	210	U	210	MDL	210	PQL	UG/KG	UJ	*!!!
2-Phenoxyethanol	210	U	210	MDL	210	PQL	UG/KG	υJ	*111
Tetralin	210	U	210	MDL	210	PQL	UG/KG	UJ	*101

Sample ID: SL-150-NBZ-SS-0.0-0.5 Collected: 4/19/2012 3:35:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	190	U	190	MDL	190	PQL	UG/KG	UJ	*!!!
2-Phenoxyethanol	190	U	190	MDL	190	PQL	UG/KG	UJ	*111
Tetralin	190	U	190	MDL	190	PQL	UG/KG	υJ	* 1

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C Matrix: so

Sample ID: SL-178-NBZ-SS-0.0-0.5	Collected: 4/19/2012 3:00:00	Analysis Type: RES-BASE/NEUTRAL	Dilution: 1
		runaryoro rypor runo urrounte e inche	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	190	υ	190	MDL	190	PQL	UG/KG	υJ	*!!!
2-Phenoxyethanol	190	υ	190	MDL	190	PQL	UG/KG	ΟĴ	*
Tetralin	190	U	190	MDL	190	PQL	UG/KG	UJ	* 1

Analysis Type: RES-BASE/NEUTRAL Dilution: 1 Sample ID: SL-179-NBZ-SS-0.0-0.5 Collected: 4/19/2012 11:10:00

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2-Butoxyethanol	190	υ	190	MDL	190	PQL	UG/KG	UJ	*!!!
2-Phenoxyethanol	190	υ	190	MDL	190	PQL	UG/KG	UJ	*111
Tetralin	190	U	190	MDL	190	PQL	UG/KG	ΟĴ	*!!!

Analysis Type: RES-BASE/NEUTRAL Sample ID: SL-193-NBZ-SS-0.0-0.5 Collected: 4/19/2012 11:45:00 Dilution: 1

	Lab	Lab	54	DL	D1	RL Turns	Unita	Data Review	Reason
Analyte	Result	Qual	DL	Туре	RL.	Туре	Units	Qual	Code
BENZIDINE	930	U	470	MDL	930	PQL	UG/KG	R	Q

Method Category: SVOA Matrix: Method: 8270C SIM

Sample ID: DUP-09-NBZ-QC-041912 Collected: 4/19/2012 11:50:00 Analysis Lype: RE5-BA5E/NEUTRAL D	Sample ID: DUP-09-NBZ-QC-041912	Collected: 4/19/2012 11:50:00	Analysis Type: RES-BASE/NEUTRAL	Dilution: 1
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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.9	υ	0.95	MDL	1.9	PQL	UG/KG	UJ	FD
2-METHYLNAPHTHALENE	1.9	υ	0.95	MDL	1.9	PQL	UG/KG	UJ	FD
BENZO(A)PYRENE	1.9	υ	0.95	MDL	1.9	PQL	UG/KG	UJ	FD
BENZO(B)FLUORANTHENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.9	U	0.95	MDL	1.9	PQL	UG/KG	υJ	FD
CHRYSENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
FLUORANTHENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	j	Z
INDENO(1,2,3-CD)PYRENE	1.9	U	0.95	MDL	1.9	PQL	UG/KG	υJ	FD
NAPHTHALENE	1.9	U	0.95	MDL	1.9	PQL	UG/KG	υJ	FD
PHENANTHRENE	1.9	U	0.95	MDL	1.9	PQL	UG/KG	ΟΊ	FD
PYRENE	1.6	J	0.95	MDL	1.9	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

Laboratory: EMXT

Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

1

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-012-NBZ-SS-0.0-0.5	Collected: 4/19/2012 8:46:00	Analysis Type: RES-BASE/NEUTRAL	Dilution:
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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.2	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	1.3	J	0.99	MDL	2.0	PQL	UG/KG	J	z
BENZO(G,H,I)PERYLENE	1.1	J	0.99	MDL	2.0	PQL	UG/KG	J	z
BENZO(K)FLUORANTHENE	1.1	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
CHRYSENE	1.0	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
DIBENZO(A,H)ANTHRACENE	1.1	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.3	J	0.99	MDL	2.0	PQL	UG/KG	J	Z

Sample ID: SL-017-NBZ-SS-0.0-0.5 Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Amelida	Lab Result	Lab	DL	DL Type	RL	RL Tuno	Units	Data Review Qual	Reason
Analyte		Qual	<i>D</i> L			Type	UIIIS	Quai	Code
BENZO(A)PYRENE	1.4	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
BENZO(B)FLUORANTHENE	2.3	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.5	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
CHRYSENE	1.4	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
FLUORANTHENE	2.3	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.6	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
PHENANTHRENE	1.4	J	1.2	MDL	2.4	PQL	UG/KG	J	Z
PYRENE	2.3	J	1.2	MDL	2.4	PQL	UG/KG	J	Z

Sample ID: SL-086-NBZ-SS-0.0-0.5 Collected: 4/19/2012 11:40:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	2.0	J	1.1	MDL	2.2	PQL.	UG/KG	J	Z
FLUORANTHENE	2.1	J	1.1	MDL	2.2	PQL	UG/KG	J	Z
FLUORENE	1.6	J	1.1	MDL	2.2	PQL	UG/KG	J	Z
PHENANTHRENE	1.6	J	1.1	MDL	2.2	PQL	UG/KG	J	Z

Sample ID: SL-087-NBZ-SS-0.0-0.5 Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.3	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	1.4	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
ACENAPHTHYLENE	1.1	J	1.1	MDL	2.1	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	17	J	11	MDL	21	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Laboratory: EMXT

Method Category:	SVOA			
Method:	8270C SIM	Matrix:	SO	

Sample ID: SL-087-NBZ-SS-0.0-0.5	Collected: 4/19/2012 10:09:00 Analysis Type: RES-BASE/NEUTRA								RAL Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
NAPHTHALENE	1.6	J	1.1	MDL	2.1	PQL	UG/KG	J	Z	

Sample ID: SL-150-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 3:35:	00 A	nalysis T	ype: RES	-BASE/NE	UTRAL	TRAL Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
BENZO(A)PYRENE	1.4	J	0.96	MDL	1.9	PQL	UG/KG	J	Z	
BENZO(G,H,I)PERYLENE	1.8	J	0.96	MDL	1.9	PQL	UG/KG	J	Z	
BIS(2-ETHYLHEXYL)PHTHALATE	16	J	9.5	MDL	19	PQL	UG/KG	J	Z	
CHRYSENE	1.7	J	0.96	MDL	1.9	PQL	UG/KG	j	Z	
INDENO(1,2,3-CD)PYRENE	1.6	J	0.96	MDL	1.9	PQL	UG/KG	J	Z	
PHENANTHRENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	j	Z	

Sample ID: SL-178-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 3:00:	00 A	nalysis T	ype: RES	-BASE/NE	UTRAL I	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.4	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.8	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
Butylbenzylphthalate	12	J	9.4	MDL	19	PQL	UG/KG	J	Z
INDENO(1,2,3-CD)PYRENE	1.3	J	0.95	MDL	1.9	PQL	UG/KG	J	Z
PHENANTHRENE	1.3	J	0.95	MDL	1.9	PQL.	UG/KG	J	Z

Sample ID: SL-179-NBZ-SS-0.0-0.5	Collec	ted: 4/19/2	012 11:10	:00 A	nalysis T	ype: RES	-BASE/NE	UTRAL	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.6	J	0.96	MDL	1.9	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	18	J	9.4	MDL	19	PQL	UG/KG	J	Z
FLUORANTHENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z

Sample ID: SL-184-NBZ-SS-0.0-0.5	Collect	ted: 4/19/2	012 10:05	:00 A	nalysis T	ype: RES	-BASE/NE	UTRAL E	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	, RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.1	J	0.96	MDL.	1.9	PQL	UG/KG	J	Z
2-METHYLNAPHTHALENE	1.0	J	0.96	MDL	1.9	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID:SL-184-NBZ-SS-0.0-0.5 Collected: 4/19/2012 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
NAPHTHALENE	1.1	J	0.96	MDL	1.9	PQL	UG/KG	J	Z

Sample ID:SL-193-NBZ-SS-0.0-0.5 Collected: 4/19/2012 11:45:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1-METHYLNAPHTHALENE	0.98	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
2-METHYLNAPHTHALENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
BENZO(A)PYRENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
BENZO(G,H,I)PERYLENE	1.5	J	0.96	MDL	1.9	PQL	UG/KG	j	Z, FD	
Butylbenzylphthalate	13	J	9.4	MDL	19	PQL	UG/KG	j	Z	
CHRYSENE	1.4	J	0.96	MDL	1.9	PQL	UG/KG	j	Z	
FLUORANTHENE ·	1.7	J	0.96	MDL	1.9	PQL	UG/KG	J	Z	
INDENO(1,2,3-CD)PYRENE	1.2	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
NAPHTHALENE	1.1	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
PHENANTHRENE	1.1	J	0.96	MDL	1.9	PQL	UG/KG	J	Z, FD	
PYRENE	1.7	J	0.96	MDL	1.9	PQL	UG/KG	J	Z	

Method Category: VOA

Method: 8015B GRO Matrix: AQ

Sample ID:TB-041912	Collec	Collected: 4/19/2012 8:00:00			Inalysis T	ype: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
		с моженцииропрумыции:	and the second second	uden ja illi ompili smra i si	n tanas atara atara de a A	2000ata8#filesixnus-justA	TENNESSES PROPERTY OF THE PROP	C. STATE OF TAXABLE PARTY.		
GASOLINE RANGE ORGANICS (C5-C12)	14	J	10	MDL	50	PQL	UG/L	J	Z	

Method Category: VOA

Method: 8260B Matrix: SO

 Sample ID: SL-087-NBZ-SS-0.5
 Collected: 4/19/2012 10:35:00
 Analysis Type: RES
 Dilution: 0.92

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
TRICHLOROFLUOROMETHANE	6.0	U	2.4	MDL	6.0	PQL	UG/KG	ΠΊ	С

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

* denotes a non-reportable result

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Lab Reporting Batch ID: 12D176

EDD Filename: 12D176R

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
*XIII	Compound Quantitation and RLs (RPD)
*[]	Initial Calibration, # of points
С	Continuing Calibration Verification Percent Difference Lower Estimation
E	Matrix Spike Precision
FD	Field Duplicate Precision
Н	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

12D176

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D176

Laboratory: EMXT

EDD Filename: 12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020 Matrix: SO							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-193-NBZ-SS-0.0-0.5MS (TOT) SL-193-NBZ-SS-0.0-0.5MSD (TOT) SL-193-NBZ-SS-0.0-0.5MSD (TOT) (DUP-09-NBZ-QC-041912 SL-012-NBZ-SB-0.5-1.5 SL-012-NBZ-SS-0.0-0.5 SL-017-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	MANGANESE TITANIUM	7 19	350	75.00-125.00 75.00-125.00	-	MANGANESE TITANIUM	No Qual, >4X
SL-193-NBZ-SS-0.0-0.5MS (TOT) SL-193-NBZ-SS-0.0-0.5MSD (TOT) (DUP-09-NBZ-QC-041912 SL-012-NBZ-SB-0.5-1.5 SL-012-NBZ-SS-0.0-0.5 SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5 SL-184-NBZ-SS-0.0-0.5 SL-193-NBZ-SS-0.0-0.5	ANTIMONY IRON Zirconium	73 58 43	47	75.00-125.00 75.00-125.00 75.00-125.00	-	ANTIMONY IRON Zirconium	J(all detects) UJ(all non-detects) Fe, No Qual, >4X

Method: 8270C Matrix: SO

QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-193-NBZ-SS-0.0-0.5MSD (SL-193-NBZ-SS-0.0-0.5)	HEXACHLOROCYCLOPENTADI	-	-	10.00-130.00	68 (50.00)	HEXACHLOROCYCLOPENTAD	J(all detects)
SL-193-NBZ-SS-0.0-0.5MS SL-193-NBZ-SS-0.0-0.5MSD (SL-193-NBZ-SS-0.0-0.5)	BENZIDINE	0	0	10.00-150.00	-	BENZIDINE	J(all detects) R(all non-detects)

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Field Duplicate RPD Report

Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020 Matrix: SO

	Concentrati	on (MG/KG)			
Analyte	SL-193-NBZ-SS-0.0-0.5 (TOT)	DUP-09-NBZ-QC- 041912 (TOT)	Sample RPD	eQAPP RPD	Flag
ALUMINUM	10100	10700	6	50.00	S 450 S 50
ARSENIC	5.99	5.75	4	50.00	
BARIUM	77.5	74.7	4	50.00	
BERYLLIUM	0.400	0.394	2	50.00	
CADMIUM	0.212	0.202	5	50.00	
CALCIUM	2420	2120	13	50.00	
CHROMIUM	10.7	11.3	5	50.00	
COBALT	4.31	4.26	1	50.00	
COPPER	5.49	5.18	6	50.00	
IRON	16800	17400	4	50.00	
LEAD	6.82	4.20	48	50.00	
LITHIUM	26.4	27.2	3	50.00	No Qualifiers Applied
MAGNESIUM	4010	4130	3	50.00	
MANGANESE	260	256	2	50.00	
MOLYBDENUM	0.368	0.353	4	50.00	
NICKEL	7.65	7.42	3	50.00	
PHOSPHORUS	311	299	4	50.00	
POTASSIUM	3440	3600	5	50.00	
STRONTIUM	16.6	14.3	15	50.00	
THALLIUM	0.223	0.237	6	50.00	
TITANIUM	807	868	7	50.00	
VANADIUM	25.1	25.7	2	50.00	
ZINC	48.2	47.2	2	50.00	
ANTIMONY	0.147	0.222 U	200	50.00	J(all detects)
SODIUM	112 U	57.6	200	50.00	UJ(all non-detects)

Method: 8081A Matrix: SO

	Concentrati	ion (UG/KG)			Flag	
Analyte	SL-193-NBZ-SS-0.0-0.5	DUP-09-NBZ-QC- 041912	Sample RPD	eQAPP RPD		
4,4'-DDE 4,4'-DDT	1.7 1.8	0.21 0.38 U	156 200	50.00 50.00	J(all detects) UJ(all non-detects)	

Method: 8270C SIM Matrix: SO

	Concentrati				
Analyte	SL-193-NBZ-SS-0.0-0.5	DUP-09-NBZ-QC- 041912	Sample RPD	eQAPP RPD	Flag
BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE Butylbenzylphthalate CHRYSENE FLUORANTHENE PYRENE	2.1 22 13 1.4 1.7 1.7	1.3 19 21 1.3 1.3 1.6	47 15 47 7 27 6	50.00 50.00 50.00 50.00 50.00 50.00	No Qualifiers Applied
1-METHYLNAPHTHALENE 2-METHYLNAPHTHALENE BENZO(A)PYRENE BENZO(G,H,I)PERYLENE INDENO(1,2,3-CD)PYRENE NAPHTHALENE PHENANTHRENE	0.98 1.2 1.2 1.5 1.2 1.1	1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U	200 200 200 200 200 200 200 200	50.00 50.00 50.00 50.00 50.00 50.00 50.00	J(all detects) UJ(all non-detects)

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

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Field Duplicate RPD Report

Lab Reporting Batch ID: 12D176

Laboratory: EMXT

eQAPP Name: CDM_SSFL_120730_EMAX

EDD Filename: Prep12D176R *Method:* 9045D

Matrix: SO				i. Kiral	
	Concentration	on (PH UNIT)			
Analyte	SL-193-NBZ-SS-0.0-0.5	DUP-09-NBZ-QC- 041912	Sample RPD	eQAPP RPD	Flag
PH	6.24	6.42	3	A LA CASA CAN ARMIN'S HARRIES AND AND SECURITION OF A THEORY OF A	No Qualifiers Applied

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8015B GRO

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
TB-041912	GASOLINE RANGE ORGANICS (C5-C12)	J	14	50	PQL	UG/L	J (all detects)

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-NBZ-SB-0.5-1.5	FLUORIDE	J	1.00	1.20	PQL	MG/KG	J (all detects)
SL-017-NBZ-SS-0.0-0.5	FLUORIDE	J	1.24	1.42	PQL	MG/KG	J (all detects)
SL-086-NBZ-SS-0.0-0.5	FLUORIDE	J	1.03	1.29	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-09-NBZ-QC-041912	SODIUM	J	57.6	111	PQL	MG/KG	J (all detects)
SL-012-NBZ-SB-0.5-1.5	SODIUM	J	92.2	114	PQL	MG/KG	J (all detects)
SL-012-NBZ-SS-0.0-0.5	BORON SELENIUM	J	3.33 0.263	5.58 0.447	PQL PQL	MG/KG MG/KG	J (all detects)
SL-017-NBZ-SS-0.0-0.5	SELENIUM SILVER SODIUM	7 7	0.288 0.0954 124	0.550 0.137 137	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-086-NBZ-SS-0.0-0.5	ANTIMONY SILVER SODIUM	J	0.229 0.0736 90.1	0.256 0.128 128	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-087-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.133 70.7	0.246 123	PQL PQL	MG/KG MG/KG	J (all detects)
SL-150-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J J	0.202 83.9	0.224 112	PQL PQL	MG/KG MG/KG	J (all detects)
SL-178-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM SODIUM	J J	0.142 0.274 62.0	0.223 0.446 111	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-179-NBZ-SS-0.0-0.5	ANTIMONY	J	0.138	0.225	PQL	MG/KG	J (all detects)
SL-184-NBZ-SS-0.0-0.5	ANTIMONY	J	0.146	0.225	PQL	MG/KG	J (all detects)
SL-193-NBZ-SS-0.0-0.5	ANTIMONY	J	0.147	0.224	PQL	MG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 7471A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-017-NBZ-SS-0.0-0.5	MERCURY	J	0.0803	0.141	PQL	MG/KG	J (all detects)

Method: 8015B EFH

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-012-NBZ-SS-0.0-0.5	EFH(C15-C20)	J	0.69	1.2	PQL	MG/KG	J (all detects)
SL-087-NBZ-SS-0.0-0.5	EFH(C15-C20) EFH(C8-C11)	J	1.1 0.69	1.3 1.3	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8081A

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-09-NBZ-QC-041912	4,4'-DDE	J	0.21	0.38	PQL	UG/KG	J (all detects)
SL-012-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J	0.31 0.27	0.40 0.40	PQL PQL	UG/KG UG/KG	J (all detects)
SL-179-NBZ-SS-0.0-0.5	4,4'-DDE	J	0.37	0.38	PQL	UG/KG	J (all detects)

Method: 8082

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-150-NBZ-SS-0.0-0.5	Aroclor 5460	J	2.6	3.7	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-09-NBZ-QC-041912	BENZO(B)FLUORANTHENE CHRYSENE FLUORANTHENE PYRENE	j	1.3 1.3 1.3 1.6	1.9 1.9 1.9 1.9	PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-012-NBZ-SS-0.0-0.5	BENZO(A)PYRENE BENZO(B)FLUORANTHENE BENZO(G,H,I)PERYLENE BENZO(K)FLUORANTHENE CHRYSENE DIBENZO(A,H)ANTHRACENE INDENO(1,2,3-CD)PYRENE))))	1.2 1.3 1.1 1.1 1.0 1.1	2.0 2.0 2.0 2.0 2.0 2.0 2.0	PQL PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)

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

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Reporting Limit Outliers

Lab Reporting Batch ID: 12D176 Laboratory: EMXT

EDD Filename: Prep12D176R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C SIM

Matrix: SO

SampleID SL-017-NBZ-SS-0.0-0.5	Analyte			limit	Tunc	I Inite	Elaa
SL-017-NBZ-SS-0.0-0.5	The second section of the second section is a second section of the second section of the second section secti	Qual	Result	Limit	Type	Units	Flag
	BENZO(A)PYRENE	J	1.4	2.4	PQL	UG/KG	
	BENZO(B)FLUORANTHENE	J	2.3	2.4	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	1.5	2.4	PQL	UG/KG	
	CHRYSENE	J	1.4	2.4	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	2.3	2.4	PQL	UG/KG	o (an acteois)
	INDENO(1,2,3-CD)PYRENE	J	1.6	2.4	PQL	UG/KG	
	PHENANTHRENE	J	1.4	2.4	PQL	UG/KG	
	PYRENE	J	2.3	2.4	PQL	UG/KG	
SL-086-NBZ-SS-0.0-0.5	BENZO(A)PYRENE		2.0	2.2	PQL	UG/KG	
	FLUORÀNTHENE	J	2.1	2.2	PQL	UG/KG	l (all data ata)
	FLUORENE	J	1.6	2.2	PQL	UG/KG	J (all detects)
	PHENANTHRENE	J	1.6	2.2	PQL	UG/KG	
SL-087-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	1.3	2.1	PQL	UG/KG	
CE CC. 11DE CO 0.0 0.0	2-METHYLNAPHTHALENE	Ĵ	1.4	2.1	PQL	UG/KG	
	ACENAPHTHYLENE	l j	1.1	2.1	PQL	UG/KG	J (all detects)
	BIS(2-ETHYLHEXYL)PHTHALATE	j	17	21	PQL	UG/KG	5 (all detects)
	NAPHTHALENE	j	1.6	2.1	PQL	UG/KG	
SL-150-NBZ-SS-0.0-0.5		J	1.4	1.9	PQL	UG/KG	
SL-150-NBZ-55-0.0-0.5	BENZO(A)PYRENE	_		1			
	BENZO(G,H,I)PERYLENE	J	1.8	1.9	PQL	UG/KG	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	16	19	PQL	UG/KG	J (all detects)
	CHRYSENE	J	1.7	1.9	PQL	UG/KG	,
	INDENO(1,2,3-CD)PYRENE	J	1.6	1.9	PQL PQL	UG/KG	
	PHENANTHRENE	J	1.2	1.9		UG/KG	
SL-178-NBZ-SS-0.0-0.5	BENZO(A)PYRENE	J	1.4	1.9	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	1.8	1.9	PQL	UG/KG	
	Butylbenzylphthalate	J	12	19	PQL	UG/KG	J (all detects)
	INDENO(1,2,3-CD)PYRENE	J	1.3	1.9	PQL	UG/KG	
	PHENANTHRENE	J	1.3	1.9	PQL	UG/KG	
SL-179-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE	J	1.6	1.9	PQL	UG/KG	
	BENZO(G,H,I)PERYLENE	J	1.2	1.9	PQL	UG/KG	
	BIS(2-ETHYLHEXYL)PHTHALATE	J	18	19	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	1.2	1.9	PQL	UG/KG	
	PYRENE	J	1.2	1.9	PQL	UG/KG	
SL-184-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	1.1	1.9	PQL	UG/KG	
SE 15 1 1 SE SS 5.5 5.5	2-METHYLNAPHTHALENE	Ĵ	1.0	1.9	PQL	UG/KG	J (all detects)
	NAPHTHALENE	Ĵ	1.1	1.9	PQL	UG/KG	- (
SL-193-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE	J	0.98	1.9	PQL	UG/KG	
SE-195-NBZ-55-0.0-0.5	2-METHYLNAPHTHALENE	J	1.2	1.9	PQL	UG/KG	
	BENZO(A)PYRENE	J	1.2	1.9	PQL	UG/KG	
	BENZO(A)PTRENE BENZO(G,H,I)PERYLENE	j	1.5	1.9	PQL	UG/KG	
	Butylbenzylphthalate	j	1.3	19	PQL	UG/KG	
	CHRYSENE	J	1.4	1.9	PQL	UG/KG	J (all detects)
	FLUORANTHENE	J	1.7	1.9	PQL	UG/KG	u (an detecta)
	INDENO(1,2,3-CD)PYRENE	j	1.7	1.9	PQL	UG/KG	
	NAPHTHALENE	J	1.2	1.9	PQL	UG/KG	
	INACHIIALENG	į J	1.1	1.5		100/10	
	PHENANTHRENE	J	1.1	1.9	PQL	UG/KG	

Reporting Limit Outliers

Lab Reporting Batch ID: 12D176

Laboratory: EMXT

EDD Filename: Prep12D176R

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 9014							
Matrix: SO		建类性的混合的					
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-086-NBZ-SS-0.0-0.5	CYANIDE	J	0.327	0.646	PQL	MG/KG	J (all detects)

										267
DC #:	29230D4	VA	LIDATIO				SS WORKSHE	ET	[Date: 2/2Z
SDG#				(1	4DR	γIV			Pa	age: of lewer: A
_abora	tory: <u>EMAX Laboratorie</u>	s, Inc	<u> </u>	74716	ŧ	•			Revie	ewer: //L
METH	OD: Metals (EPA SW 84	46 Me	ethod 6020/						ZIIG NOVIC	
	imples listed below were ion findings worksheets.		ewed for ea	ch of the fo	ollowi	ng va	lidation areas. Vali	dation find	lings are note	d in attached
	Validation	Area					Çc	omments		
1.	Technical holding times			A	Samp	oling da	ites: 4/19/1	て		:
11.	ICP/MS Tune			A						
III.	Calibration		· · · · · · · · · · · · · · · · · · ·	A						
IV.	Blanks			A						
V.	ICP Interference Check Sar	nole (10	CS) Analysis	A		 				
VI.	Matrix Spike Analysis	1 ,		SW	Not r	eviewe	ed for ADR validation.	MS/	Olfe,1	$\eta_0,T;77x$
VII.	Duplicate Sample Analysis	ì		N	Not	reviewe	ed for ADR validation.			
VIII.	Laboratory Control Samples (LCS)					reviewe	ed for ADR validation.	LS	/D	
IX.	Internal Standard (ICP-MS)			A	Not	reviewe	ed for ADR validation.			
Х.	Furnace Atomic Absorption QC				Not	reviewe	ed for ADR validation.			
XI.	ICP Serial Dilution									
XII.	Sample Result Verification				Not	reviewe	ed for ADR validation.			
XIII.	Overall Assessment of Data	3		A	Not	reviewe	ed for ADR validation.			
XIV.	Field Duplicates	,			$ (0)^{1}\rangle$					
xv	Field Blanks			SW	GB = EB-NBZ-SS-041712 \ 12D154					
Note:	A = Acceptable N = Not provided/applicable SW = See worksheet	e	R = Rir	lo compound nsate ield blank	is dete	cted	= E3-NBZ D = Duplicate TB = Trip blank EB = Equipmer	C	041712,	/
Validate	ed Samples: ** Indicates sam	ple un	derwent Level	IV validation						
1	SL-012-NBZ-SS-0.0-0.5	11	DUP-09-NBZ	Z-QC-041912	2	21		31		
2	SL-012-NBZ-SB-0.5-1.5	12_	SL-193-NBZ	-SS-0.0-0.5N	/IS	22		32		
3	SL-017-NBZ-SS-0.0-0.5**	13	SL-193-NBZ	-SS-0.0-0.5N	/ISD	23		33		
4	SL-086-NBZ-SS-0.0-0.5**	14				24		34		
5	SL-087-NBZ-SS-0.0-0.5**	15				25		35		
6	SL-150-NBZ-SS-0.0-0.5**	16				26		36		
7	SL-178-NBZ-SS-0.0-0.5**	17				27		37		
8	SL-179-NBZ-SS-0.0-0.5**	18				28		38		
9	SL-184-NBZ-SS-0.0-0.5	19				29		39		
10	SL-193-NBZ-SS-0.0-0.5	20				30		40		

LDC #: 29230D4

VALIDATION FINDINGS WORKSHEET Field Blanks

2nd Reviewer: Reviewer: 4

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

its: mg/Kg
ed sample un
Associate
units: mg/L
놋

100x

Associated Samples: EB-NBZ-SB-041712=2 Sampling date: 4/17/12 Soil factor applied 10 Field blank type: (circle one) Field Blank / Rinsate / Other:

EB-NBZ-SS-041712= 1, 3-11

Sample Identification No Qualifiers (>5x) Action Limit 10.85 0.445 24.6 0.1 EB-NBZ-SS-041712 0.000613 0.000255 Blank ID 0.0492 EB-NBZ-SB-041712 Blank ID 0.000894 0.0217 Analyte C_{U} Ca z ₹

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:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Volatiles

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-087-NBZ-SS-0.5

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

Date	Compound	%D	Associated Samples	Flag	A or P
4/26/12	Trichlorofluoromethane	28.7	All samples in SDG 12D176	J (all detects) UJ (all non-detects)	Р

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

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

V. Blanks

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

Sample TB-041912 was identified as a trip blank. No volatile contaminants.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	A

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory Volatiles - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-087-NBZ-SS-0.5	Trichlorofluoromethane	J (all detects) UJ (all non-detects)	Р	Continuing calibration (%D) (C)
12D176	SL-087-NBZ-SS-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Volatiles - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Volatiles - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET LDC #: 29230D1a SDG #: 12D176

Laboratory: EMAX Laboratories, Inc.

Level IV

Reviewer

2nd Reviewer

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

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

	Validation Area		Comments
l.	Technical holding times	Δ	Sampling dates: 4/19/12
II.	GC/MS Instrument performance check	4	
III.	Initial calibration	A	% PSD = 30, 12
IV.	Continuing calibration/ICV	SA	10 PSD = 30, 12
V.	Blanks	A	•
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	Ν	client specified us 10
VIII.	Laboratory control samples	A	ves 10
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	Δ	
XI.	Target compound identification	Δ	
XII.	Compound quantitation/RL/LOQ/LODs	Д	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	Δ	
XV.	Overall assessment of data	Δ	
XVI.	Field duplicates	\sim	
XVII.	Field blanks	NP	TB=9B-041912

Note:

A = Acceptable

N = Not provided/applicable

SW = See worksheet

ND = No compounds detected

R = Rinsate

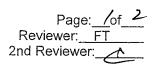
D = Duplicate

TB = Trip blank

FB = Field blank EB = Equipment blank

Validated Samples:

	5012						
1	SL-087-NBZ-SS-0.5	11	MBLKIS	21		31	
2		12	MBIX 25	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	



Method: Volatiles (EPA SW 846 Method 8260B)

				
· Validation Area	Yes	No	NA	Findings/Comments
II. Technical folding times				
All technical holding times were met.				
Cooler temperature criteria was met. III GO/MS Instrument performance check it.				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?				
III. Initial calibration			. =	
Did the laboratory perform a 5 point calibration prior to sample analysis?				
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	/			
Was a curve fit used for evaluation?				
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	/			
Were all percent relative standard deviations (%RSD) \leq 30% and relative response factors (RRF) \geq 0.05?				and a second
IV: Conunuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?				
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	/			
Were all percent differences (%D) \leq 25% and relative response factors (RRF) \geq 0.05?		/ .		·
V. iBlanko				
Was a method blank associated with every sample in this SDG?				
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	_			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
VI Surregate spiles as the second				
Were all surrogate %R within QC limits?				
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	***************************************			
WII Jaanix spike/Matrix spikerdusiicates				
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?				
VIIIs Laboratory control samples 1				
Man and LCC analyzed for this CDC2				

VALIDATION FINDINGS CHECKLIST

Page: 2of 2
Reviewer: FT
2nd Reviewer: 6

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
IX Regional Quality Assurance and Quality Controls				
Were performance evaluation (PE) samples performed?			/	
Were the performance evaluation (PE) samples within the acceptance limits?		_		
X, Internal Standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	_			
Were retention times within ± 30 seconds of the associated calibration standard?				
XI. Target compound identification.				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?				
Did compound spectra meet specified EPA "Functional Guidelines" criteria?				
Were chromatogram peaks verified and accounted for?				
XII Compound quantitation/ORDIS				5. Sec. 1995
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. Tentativaly recognised compounds wite.				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?				
Were relative intensities of the major ions within \pm 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 portamienacija (1975.)				
System performance was found to be acceptable.		-		
XV Overall assessment of data)				and the second s
Overall assessment of data was found to be acceptable.		,		
XVI. Fieldigolicates				
Field duplicate pairs were identified in this SDG.			-	1895-9-1957 rammate-easily cognitions in the property of the second in the control of the contro
				_
Target compounds were detected in the field duplicates.				
XVIII Field clarks (1971) — physical are the state of the				
Field blanks were identified in this SDG.		-		·
Target compounds were detected in the field blanks.				

TARGET COMPOUND WORKSHEET

WETHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCC 4-Chlochester
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD Isoprovid alcohol
C. Vinyl choride™	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1.2.4-Trichlorobenzene	TERE Acetonities
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	111. Hexachlorobitadiene	ברבר: אכשנטוונוום
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM Nanhthalana	
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1.2.3-Trichlorobenzene	DOCCO. ALIVORNINE HHHH 4.4 Discoso
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO, 1,3,5-Trichlorobenzene	III Isohutu alohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP, trans-1,2-Dichloroethene	III. Mathacolonitrila
I. 1,1-Dichloroethane*	CC, Toluene™	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK Pronjonitije
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LILL Ethy ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbanzene	SSS. o-Xylene	MMMM Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	ZXXX
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	0000
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	даад
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	2000.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX, Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE, sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	חחחת.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	

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

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VALIDATION FINDINGS WORKSHEET Continuing Calibration

Page: __of_ 2nd Reviewer: Reviewer:__

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

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

Was a continuing calibration standard analyzed at least once every 12 hours for each instrument? Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?

سطد ۽ ر	Qualifications	3/43/PP														
	Associated Samples	H1)														
>0.05 RRF ?	Finding RRF (Limit: >0.05)															
iteria of ≤25 %D and ≥0.05 RRF?	Finding %D (Limit: <25.0%)	7.8.7														
ithin the validation cr	Compound	KK														
Were all %D and RRFs within the validation criteria	Standard ID	RD B274-60V														
/N M/A We	# Date	11/21/4	,													

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Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page:of	iewer. FT	Reviewer:
Pa	Reviewer:	2nd Reviewer:

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

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

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

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

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

					Poportod	Docoloniated				
							nannday .	Recalculated	Керопед	Recalculated
*	Standard ID	Calibration Date	Compound (Ref	Compound (Reference Internal Standard)	RRF (タン std)	RRF (なつ std)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
~	1/003816	2/11/17	J	(1st internal standard)	Lm.o	5. 24.7	8,243	0.243	75.76	10.76
			>	(2nd internal standard)	1.422	1.422	1.437	1.437	Z.54	\$. SZ
			88	(3rd internal standard)	0.985	0.2N	0. 999	0.999	2-75	7-7
				(4th internal standard)						
2				(1st internal standard)						
			-	(2nd internal standard)						
				(3rd internal standard)						
				(4th internal standard)						
п				(1st internal standard)						
				(2nd internal standard)						
				(3rd internal standard)						
				(4th internal standard)						
4				(1st internal standard)						
				(2nd internal standard)						
				(3rd internal standard)		Ş.				
				(4th internal standard)						

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

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Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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

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

% Difference = 100 * (ave. RRF - RRF)/ave. RRF RRF = $(A_{\nu})(C_{\nu})/(A_{\nu})(C_{\nu})$

Where: ave. RRF = initial calibration average RRF RRF = continuing calibration RRF $A_x = Area$ of compound, $A_y = Area$ of $A_y = Area$ of

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

ated																
Recalculated %D	7.7	7.7	40													
Reported . %D	7:1	7.2	0.4													
Recalculated RRF (CC)	0.246	1.333	1.069		·											
Reported RRF (CC)	9/12.0	1.333	1.069												· ·	
Average RRF (initial)	0.243	1.437	0.999			·										
Compound (Reference internal Standard)	(1st internal standard)	V (2nd internal standard)	(3rd internal standard)	(4th internal standard)	(1st internal standard)	(2nd internal standard)	(3rd internal standard)	(4th internal standard)	(1st internal standard)	(2nd internal standard)	(3rd internal standard)	(4th internal standard)	(1st internal standard)	(2nd internal standard)	(3rd internal standard)	(brobasta lourotai dtt)
Calibration Date (4/20/12															
Standard ID	RDV322															
#	-				7				3				4			

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results. LDC#: 29230D/2

VALIDATION FINDINGS WORKSHEET **Surrogate Results Verification**

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

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID: # /

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	50.0	53.84	108	108	0
1,2-Dichloroethane-d4	1	49.66	99.3	99-3	1
Toluene-d8		52, 25	105	105	
Bromofluorobenzene	J	58.07	116	116	J

Sample ID:

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

Sample ID:

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

Sample ID:

oumpic ibi					
	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					<u> </u>

Sample ID:

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

LDC#: 2923010/a

Laboratory Control Sample Results Verification VALIDATION FINDINGS WORKSHEET

Page: __of_ 2nd Reviewer: 3 납 Reviewer:__

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

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy 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 = ILCS - LCSD I * 2/(LCS + LCSD)

0122

LCS ID:

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

	S	pike	Spiked 8	Sample	0	CS	I CSD	tD.	/SO I	I CS/I CSD
Compound	A A	Added W. 9. / Ka)	Concentration (uq/kg	tration kg	Percent Recovery	Recovery	Percent Recovery	ecovery	2	RPD
	l CS	CSD	10.8	l CSD	Renorfed	Recalc	Reported	Recalc	Reported	Ponsionistad
1,1-Dichloroethene	co.05	50.0	0.15	7.05	701	701	/0/	/0/	\	/
Trichloroethene	_	-	49.3	48.7	66	66	97	97	/	/
Benzene	\		5.8%	49.4	16	16	66	66	7	7
Toluene			41.0	46.2	76	76	76	22		\
Chlorobenzene	7	1	47.3	2.24	56	26	35	38	0	0
					:					

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#: 29230D/a

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

6f	
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	6f [

METHOD;	GC/MS	$V \cap \Delta$	/EDA	SIMB	46	Method	8260
	GUINO	VUA	(EPA	2000	40	Memoa	0200

MS VOA (EPA SW 846 Method 8260)
Were all reported results recalculated and verified for all level IV samples? Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concen	tration	$= \frac{(A_{v})(I_{s})(DF)}{(A_{is})(RRF)(V_{o})(\%S)}$	Example:
A _x	=	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D:
A_{ls}	=	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = () () () ()
RRF	=	Relative response factor of the calibration standard.	
V _o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).	= MO
Df	=	Dilution factor.	
%S	=	Percent solids, applicable to soils and solid matrices	

703	only.	olicable to solls and solid matrices			
#	· Sample ID	Compound	Reported Concentration ()	Calculated Concentration	Qualification
			· · · · · · · · · · · · · · · · · · ·		
					·
					_

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

1.4-Dioxane

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-087-NBZ-SS-0.5

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B using Selected Ion Monitoring (SIM) for 1,4-Dioxane.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Sample TB-041912 was identified as a trip blank. No 1,4-dioxane was found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

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

Santa Susana Field Laboratory 1,4-Dioxane - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-087-NBZ-SS-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory

1,4-Dioxane - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory 1,4-Dioxane - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET LDC #: 29230D1b SDG #: 12D176 Level IV Laboratory: EMAX Laboratories, Inc.

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

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

	Validation Area		Comments
1.	Technical holding times	A	Sampling dates: 4 19 12
JI.	GC/MS Instrument performance check	4	
111.	Initial calibration	4	% PSD =30
IV.	Continuing calibration/ICV	Δ	% RSD = 30 1CY/CCV = 25
V.	Blanks	d	
VI.	Surrogate spikes	Δ	
VII.	Matrix spike/Matrix spike duplicates	2	client specifie
VIII.	Laboratory control samples	4	ces/D
IX.	Regional Quality Assurance and Quality Control	Ν	
Χ.	Internal standards	Δ	
XI.	Target compound identification	Δ	
XII.	Compound quantitation/RL/LOQ/LODs	Д	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	Δ	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	PP	TB = TB-041912

Note: A = Acceptable N = Not provided/applicable ND = No compounds detected

D = Duplicate

SW = See worksheet

R = Rinsate FB = Field blank TB = Trip blank EB = Equipment blank 2nd Reviewer

Validated Samples:

_	<u>5011</u>					
1	SL-087-NBZ-SS-0.5	11	MB1415	21	31	
2		12	MBLKZS	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	0	20		30	 40	

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

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
In Technical Holding times	T .		I	
All technical holding times were met.				
Cooler temperature criteria was met. II. (GO/MS Instrument performance check to				
Were the BFB performance results reviewed and found to be within the specified criteria?	_			
Were all samples analyzed within the 12 hour clock criteria?				
(iii. Antilate an bratton				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	~			
Was a curve fit used for evaluation?		_		
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			_	
Were all percent relative standard deviations (%RSD) < 30% and relative response factors (RRF) > 0.05?				
W. Cohtinting selloration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	_			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?				
Were all percent differences (%D) \leq 25% and relative response factors (RRF) \geq 0.05?				
ValBlankester to the first transfer of the second of the s				
Was a method blank associated with every sample in this SDG?	/			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?				
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
Wi Suriogate spikes as was t				
Were all surrogate %R within QC limits?				
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			_	
WILMamx spike/Matrix spikerdupitrates				
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?				
VIIIuLab ratory confict samples				
Was an LCS analyzed for this SDG?				

LDC#: 29 2301016

VALIDATION FINDINGS CHECKLIST

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

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
X Regional Quality Assurance and Quality Control (*)				
Were performance evaluation (PE) samples performed?			/	
Were the performance evaluation (PE) samples within the acceptance limits?				
X, Internal standards i				
Were internal standard area counts within -50% or +100% of the associated calibration standard?				
Were retention times within ± 30 seconds of the associated calibration standard?				
XI Target Compound seemilijaalida 🛁 🐰 🔭 😘				en e
Were relative retention times (RRT's) within <u>+</u> 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 quantilation/CROLs				
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. Fentatively identified compounds (files)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			/	
Were relative intensities of the major ions within \pm 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 certoffhance:				
System performance was found to be acceptable.		-		
XV/ Overall assessment of analy structure.				
Overall assessment of data was found to be acceptable.		-	ļ	
XVI, Fjeld dliplicates		-		
Field duplicate pairs were identified in this SDG.	_			
Target compounds were detected in the field duplicates.				
XVIII Erella oranke sidera e e e e e e e e e e e e e e e e e e				
Field blanks were identified in this SDG.		<u>7-</u>		
Target compounds were detected in the field blanks.				

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DODD Isonoval alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	FEET Apatonities
D. Chloroethane	X, Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFF Arrior
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG Application
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH 14-Dioxana
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	000. 1,3,5-Trichlorobenzene	III. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacylonitrile
I. 1,1-Dichloroethane*	CC, Toluene™	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	0000.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	рвер.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	αααα.
P. Bromodichloromethane	JJ. Dichlorodifluoromethans	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE, sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-lsopropyltoluene	AAAA. Ethyl tert-butyl ether	uuuu.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

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

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Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	2nd Reviewer:

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

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

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

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

RRF = $(A_x)(C_s)/(A_s)(C_x)$ average RRF = sum of the RRFs/number of standards %RSD = 100 * (S/X)

				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference internal Standard)	RRF (20 <i>O</i> std)	RRF (20 (3 td)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
~	VOF513/	11/18/01	1, 4 - かかる~(1st internal standard)	1.163	1.163	1.145	-5/1.1	7.07	7.0.7
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
2			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
3			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)						
			(4th internal standard)						
4			(1st internal standard)						
			(2nd internal standard)						
			(3rd internal standard)		*.				
			(4th internal standard)						

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

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Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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

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

% Difference = 100 * (ave. RRF - RRF)/ave. RRF RRF = $(A_{\nu})(C_{\nu})/(A_{\nu})(C_{\nu})$

Where: ave. RRF = initial calibration average RRF RRF = continuing calibration RRF A_k = Area of compound, A_k = Area of C_k = Concentration of compound, C_k = Concert

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

Standard ID	Calibration Dafe	Compound (Reference internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF	Reported %D	Recalculated %D
3	RD/036 4/25/12		1-145	1.160	091.1	7.3	7.3
	 ₁ -	(2nd internal standard)					
	 -	(3rd internal standard)		·			
		(4th internal standard)					
		(1st internal standard)		-			
	·····	(2nd internal standard)					
	T	(3rd internal standard)					
		(4th internal standard)					
	 r	(1st internal standard)					
	·	(2nd internal standard)					
		(3rd internal standard)					
		(4th internal standard)					
		(1st internal standard)					
		(2nd internal standard)					
	r	(3rd internal standard)		ş			
		(4th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results. LDC#: 29230 DIb

VALIDATION FINDINGS WORKSHEET **Surrogate Results Verification**

Page:	_/of/
Reviewer: FT	
2nd reviewer:	A

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

The percent recov	eries (%F	() of surrog	ates were	recalculated	for the com	ipounds ider	ntified belo	w using the	e following	calculation:
-------------------	-----------	--------------	-----------	--------------	-------------	--------------	--------------	-------------	-------------	--------------

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

#1 Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4	20	16.97	84-8	84.8	0
Toluene-d8			·····		
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane .					
1,2-Dichloroethane-d4					
Toluene-d8				9	
Bromofluorobenzene					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					<u></u>
Toluene-d8					ļ
Bromofluorobenzene					

Sample ID:

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

Sample ID:

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

LDC #: 272 3001b

Laboratory Control Sample Results Verification VALIDATION FINDINGS WORKSHEET

Page: / of / 2nd Reviewer: Reviewer:____

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

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy 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 = 1 LCS - LCSD 1 * 2/(LCS + LCSD)

195/10

LCS ID:

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

	is	oike	Spiked S	ample	SOI	S	1 CSD	J. O.	1CS/	I CS/I CSD
Compound	Ad (ug	Added (29)	Concentration (us)	ration (45	Percent Recovery	Recovery	Percent Recovery	ecovery	2	RPD
	SOI	CSD) CS	I CSD	Renorted	Recalc	Reported	Rocalc	Coproced	Post Circles
1,1-Dichloroethene										
Trichloroethene										
Benzene										
Toluene										
Chlorobenzene										
1.4- Pioxane	000	Oor	661	207	00/	701	(03	103	×	7

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#: 2923001b

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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Reviewer:F	-T	
2nd reviewer:_	A	
	<	

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

Y	Ν	N/A
Y	Ν	N/A
		$\overline{}$

Were all reported results recalculated and verified for all level IV samples?

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

Conce	ntratio	$n = \frac{(A_s)(I_s)(DF)}{(A_{ts})(RRF)(V_o)(\%S)}$	Example:
A_{x}	Ħ	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D;:
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = () () () ()
RRF	=	Relative response factor of the calibration standard.	
V.	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).	= M)
Df	=	Dilution factor.	, ,
%S	=	Percent solids, applicable to soils and solid matrices	

	only.				
#	· Sample ID	Compound	Reported Concentration ()	Calculated Concentration	Qualification
 -			ļ		,
 					
				·	
					·

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 26, 2013

Matrix:

Soil

Parameters:

Semivolatiles

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

.p.o 20...o., 0.0ap (02.0). .22.

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

SL-179-NBZ-SS-0.0-0.5

Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 12D176	Tetralin 2-Butoxyethanol 2-Phenoxyethanol	A one point calibration was performed.	A five point calibration is specified by the method.	J (all detects) UJ (all non-detects)	Р

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 (r²) were greater than or equal to 0.990.

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No semivolatile contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, 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. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	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 Semivolatiles - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	Tetralin 2-Butoxyethanol 2-Phenoxyethanol	J (all detects) UJ (all non-detects)	Р	Initial calibration (# of points) (*III)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Semivolatiles - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET LDC #: 29230D2a SDG #: 12D176

Laboratory: EMAX Laboratories, Inc.

Level IV

Reviewer:

2nd Reviewer

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/19/12
II.	GC/MS Instrument performance check	Δ,	1
111.	Initial calibration	SIA	°/0 PSD = 30, (2
IV.	Continuing calibration/ICV	A	101/cov =x
V.	Blanks	Δ	
VI.	Surrogate spikes	Δ	No ASS. Sample
VII.	Matrix spike/Matrix spike duplicates	SW	NO ASS. Sample SL-193-NBZ-SS-0.0-0.5 MS/D
VIII.	Laboratory control samples	A	ies IP
IX.	Regional Quality Assurance and Quality Control	N	
Χ.	Internal standards	Δ	
XI.	Target compound identification	Δ	
XII.	Compound quantitation/RL/LOQ/LODs	Δ	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	Δ	
XV.	Overall assessment of data	Δ	
XVI.	Field duplicates	7	4.7
XVII.	Field blanks	N	EB = EB - NB2 - SB - 0417/2
lote:	A = Acceptable ND = No	o compounds	= FB - NBZ - SS - OY 17/2 s detected D = Duplicate $D = DP - Trickled = 0.06 M = 12.0 A$

N = Not provided/applicable

SW = See worksheet

R = Rinsate

FB = Field blank

TB = Trip blank EB = Equipment blank

SPG # 12P15V

Validated Samples:

vano	ated Samples:				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
7	SL-017-NBZ-SS-0.0-0.5	- 11	MBLKIS	21	31	
2	SL-086-NBZ-SS-0.0-0.5	12		22	32	
<u>3</u>	SL-087-NBZ-SS-0.0-0.5	13		23	33	
4	SL-150-NBZ-SS-0.0-0.5	14		24	34	
5	SL-178-NBZ-SS-0.0-0.5	15		25	35	
6	SL-179-NBZ-SS-0.0-05	16		26	36	
7		17		27	37	
8		18		28	38	
9		19		29	39	
10		20		30	40	

VALIDATION FINDINGS CHECKLIST

Page: _/of 2 Reviewer: _FT 2nd Reviewer: __A

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	Yes	No	NA		Ci-	dinas/	`~~~	nto	
Validation Area Unicephysical and Strong Country Coun	168	NO	IVA		FII	dings/(Jonne	iius	
All technical holding times were met.	_								
Cooler temperature criteria was met.		-							
in sections in a manufacture of the property of the section of the									
Were the DFTPP performance results reviewed and found to be within the specified criteria?	/								
Were all samples analyzed within the 12 hour clock criteria?		and accompanies to a		er marin in arm	ma vii Pinni Accessor			III MANAGEM AND	
William Soud Arion Comments of the Comments of									
Did the laboratory perform a 5 point calibration prior to sample analysis?				no	on	3_	com	pour	ds
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) \leq 30% and relative response factors (RRF) \geq 0.05?				Was Appen 1999 C. MA					
IV. Continuing call ordinal services and services are services and services and services are services are services and services are services and services are services are services and services are serviced and services are ser									
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/								
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	/								
Were all percent differences (%D) \leq 25% and relative response factors (RRF) \geq 0.05?				į					
Vublaniks									
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 Surrigile apikes/i 2002.									
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?	e5-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0				***********				
VIII Matrikspikė/Matrikspikėstopilčaliesty, karitinis ir iš iš 1973 p. 1993.									
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?						PARKET			
MIL Labatalov kontoi sampius									
Was an LCS analyzed for this SDG?									

LDC#: 29230 Dag

VALIDATION FINDINGS CHECKLIST

Page: Zof 2
Reviewer: FT
2nd Reviewer: ___

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
Were performance evaluation (PE) samples performed?			\	
Were the performance evaluation (PE) samples within the acceptance limits?				
X Inginium and a second				CARLES CONTRACTOR STREET, CLIPPIC CO.
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?				
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?				
All scomponissi ganoriali ciko kontroli. Esta esta esta esta esta esta esta esta e				
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. sentenivity desnihed completed (11/25) some light of the light o				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?				
Were relative intensities of the major ions within \pm 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)?			\	
NYE yang ngang mahasi sakabatan 1992 kilang sakabatan 1992 kilang sakabatan 1992 kilang sakabatan 1992 kilang				
System performance was found to be acceptable.		1		
AV. Over the session of order to the control of the				
Overall assessment of data was found to be acceptable.				
XXL Flor displicated and the second s				
Field duplicate pairs were identified in this SDG.				
Target compounds were detected in the field duplicates.				
XVIIISTĖJO GARIKS.				
Field blanks were identified in this SDG.		B		
Target compounds were detected in the field blanks.	<u>ں</u>		1	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

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

LDC#. 29230Ddg

VALIDATION FINDINGS WORKSHEET **Initial Calibration**

2nd Reviewer: Reviewer:

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

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

Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?

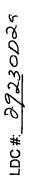
Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?

Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation? Did the initial calibration meet the acceptance criteria?

Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF?

Z/Z

Qualifications		(2)41/4	ļ									The second second		The state of the s				
Associated Samples		were All					177 1700 1700											
Finding RRF (Limit: >0.05)		Phenoxye thans	this point										2.0					
Finding %RSD (Limit: <30.0%)		1 2 -	bared															
Compound	ļ	2 - Butoxye Hano	à	r														
Standard ID		Tetralin.	7,4	//calibratio	•													
Date																		
*																		



Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

\	拞	X
Page:_	Reviewer:	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)

 $A_{ls} = Area \ of \ associated \ internal \ standard$ $C_{ls} = Concentration \ of \ internal \ standard$ $X = Mean \ of \ the \ RRFs$

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

				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
*	Standard ID	Calibration Date	Compound (Reference Internal Standard)	RRF (2< std)	RRF (2⁄√ std)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
_	SVEHAXS	1/2/12	Phenol (1st internal standard)	1.328	1.328	1.300	1.300	1.82	78.1
			Naphthalene (2nd Internal standard)	1.043	1.043	1.028	8001	1.92	76.1
			Fluorene (3rd internal standard)	1.406	1.406	1.404	40t 1	2.66	19.2
		· · · · · · ·	Pentachlorophenol (4th internal standard)	0.165	0.169	0.161	0.161	8.4O	0£.8
			Ach (कर्रेस Bis(2-ethylhexyl)) shthalala (5th internal standard)	0.447	74h.o	0.438	864.0	7.21	12+
				1,079	1.079	1.103	1.03	3.48	3,48
7	SUEHAMA	1/1/2/	Phonoi (1st-internal standard) (2011)	0.765	0.765	0.783	6.143	13.68	89.51
			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)						
က	SVEHAM	7/2/1	Phenol (4st internal standard) 5 + h	291.0	291.0	0.733	0.733	7.63	7.63
		~ ~	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.

29230025 LDC#:

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

Page: of 2nd Reviewer: 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 = $(A_y)(C_s)/(A_s)(C_x)$

ave. RRF = initial calibration average RRF RRF = continuing calibration RRF A_x = Area of compound, A_s = Concentration of compound, G_s Where:

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	RRF (CC)	RRF (CC)	Q%	Д%
+	RE JOOS	21/2/5	Phenol (1st internal standard)	1.300	1.113	1.17-3	8.6	8.6
		•	Naphthalene (2nd internal standard)	1.07K	1760	146.0	2.5	کنک
			Fluorene (3rd internal standard)	1. 404	1.415	1.415	0.8	8.0
			Pentachlorophenol (4th internal standard)	0.161	6-149	0-149	S-L	75
			Bis(2-ethylhexyl)phthalate (5th internal standard)	6.438 6.433	0.706	<u> </u>	2.7	3.7
			Renzo(a)nyrene (6th internal standard)	1.103	1.062	1.062	2.7	3-7
2	RE Joo4	21/45	Phenol (1st Internal standard)	0.783	1	0.715	L-8	8-7
			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)					
က			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#: 29230029

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Page:_		of	_
Reviewer:	FΤ		
2nd reviewer:		A	

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

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found

SS = Surrogate Spiked

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	6.44	64.4	64.4	0
2-Fluorobiphenyl		6,04	60.4	60.4	
Terphenyl-d14	J	8.07	80.7	80.7	
Phenoi-d5	30	19.62	65.4	65.4	
2-Fluorophenol	1	17.84	59 <i>.</i> 5	59.5	
2,4,6-Tribromophenol		23.23	77.4	77.4	J
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#. 29230039

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: of Reviewer: FT

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

The percent recoveries (%R) and Relative Percent Difference (RPD) of the 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 = 1 LCSC - LCSDC | * 2/(LCSC + LCSDC)

LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: LCS/LCSD

	Š	oike	Š	Spike)1	CS	101	CSD	SU	CS/I CSD
Compound	Ad Ad	Added walka)	Concentra	Concentration	Percent	Percent Recovery	Percent P	Percent Recovery	~	RPD
	SOI)	SOI	I CSD	Renorfed	Recalc	Renorted	Recalc	Reported	Recalculated
Phenol	L07	667	411	495	. 62	19	+4	74	18	×
N-Nitroso-di-n-propylamine			376	455	56	15	89	89	õ	6
4-Chloro-3-methylphenol			423	805	49	h1	5	2	×	×
Acenaphthene			443	P 65	29	71	્ર	3	2	ō
Pentachlorophenol			419	483	h9	h 9	77	al	7	7
Pyrene		→	955	54)	28	68	6%	5%	e	9
				`						

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results. LDC#: 27230D29

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page:_	<u>/</u> of	_
Reviewer:	FT	
2nd reviewer:_	A	

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

Υ	Ń	MIA)
Υ	N	N/A
	.,,	

Were all reported results recalculated and verified for all level IV samples?

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

,			
Conc	entratio	on = $\frac{(A_{\bullet})(I_{\bullet})(V_{\bullet})(DF)(2.0)}{(A_{I_{\bullet}})(RRF)(V_{\bullet})(V_{\bullet})(\%S)}$	Example:
A _x	=	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D
A _{is}	=	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = ()()()()()()
V _o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).	M
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	

2.0		nt for GPC cleanup			
#	Sample ID	Compound	Reported Concentration ()	Calculated Concentration ()	Qualification
	- · · · · · · · · · · · · · · · · · · ·				
				, , , , , , , , , , , , , , , , , , , ,	
				-	
					

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Semivolatiles

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

SL-179-NBZ-SS-0.0-0.5

Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard.

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

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

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

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

Santa Susana Field Laboratory Semivolatiles - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Semivolatiles - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SD(ab VIE :	TH(inc. romatic Hydro シャクム	l carbons (l		ethod 8270	0C-SIM)	Date: 2/ Page: / of Reviewer:
		Validation Ar	ea				Comments	
ا	l	Technical holding times		<u> </u>	Sampling dates:	4/19/	12	
i	l.	GC/MS Instrument performance	e check	A		1, 1	1	
	li.	Initial calibration		Δ	0/2 PSD	£30,	12	
IN	V.	Continuing calibration/ICV		Δ	104/	ca =	ど	
\	/.	Blanks		Δ	,			
V	/ I.	Surrogate spikes		A				
V	11.	Matrix spike/Matrix spike duplication	ates	Α	SL-193- N	BZ-55	- 0.0-	0.5 MS 10 .
V	III.	Laboratory control samples		Δ.	10010			
I)	Χ.	Regional Quality Assurance and	d Quality Control	N				
×	(.	Internal standards		Δ				
Х	(I.	Target compound identification		Δ				
Х	II.	Compound quantitation/RL/LOC	Q/LODs	Δ				
ΧI	III.	Tentatively identified compound	ls (TICs)	ν				
ΧI	IV.	System performance		A		-		
X	V.	Overall assessment of data		A		· ·		
X۱		Field duplicates		7			· · · · · · · · · · · · · · · · · · ·	
		Field blanks						
lote) :	A = Acceptable N = Not provided/applicable SW = See worksheet d Samples:	R = Rins	o compound sate eld blank		D = Duplicat TB = Trip bla EB = Equipr	ank	
1	Τ_,				24		24	
1	1	-017-NBZ-SS-0.0-0.5 11			21		31	
2	1	086-NBZ-SS-0.0-0.5 12			22		32	
3	SL	087-NBZ-SS-0.0-0.5 13 150-NBZ-SS-0.0-0.5 14			23		33 34	

29230D2bW.wpd

SL-178-NBZ-SS-0.0-0.5

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1V 6

LDC#: 2923002

VALIDATION FINDINGS CHECKLIST

Page: /of 2 Reviewer: FT 2nd Reviewer: _____

Method: Semivolatiles (EPA SW 846 Method 8270C)

Validation Area	V			-
Validation Alea Textures in a control of the contr	Yes	No_	NA	Findings/Comments
All technical holding times were met.			tid sie sie een te miede	
Cooler temperature criteria was met.				
II - Control in the control of the c				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?				
illi Eddal Callotollon				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/		<u> </u>	
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) \leq 30% and relative response factors (RRF) \geq 0.05?				
IV. Contraining satisfaction and the second state of the second st				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?				
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?				
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?	/			ı
Marie Santa Communication of the Communication of t				
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 SIIrigale spikes in 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
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?	AND MARKET SERVICES			
\$₹ij₽Matrix SpikerMatiks Spike auplicales hikolas, sa sa sa Susa Sasta sa				
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. Exporationy control caraginal and the second				
Was an LCS analyzed for this SDG?				

VALIDATION FINDINGS CHECKLIST

Page: Lof L Reviewer: FT 2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
EX - Registral Chapty Association South Quality Block of P.S. of South Labor. South South				and the second s
Were performance evaluation (PE) samples performed?			_	
Were the performance evaluation (PE) samples within the acceptance limits?				
Xanonalicualism				
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 Terget community remains a root.				
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. Caniscolos grantistion CROLIS				34 32 13 12 14 1
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?	\	1		
XIII. Tentalively seemilie recompetities (Title 1) 3/2 http://www.comput.com/				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?				
Were relative intensities of the major ions within \pm 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 perturgance / severe Parameter and the second s				
System performance was found to be acceptable.		_	and the second second	And the secretary of th
AV Overall assessment of calability and the late of th				
Overall assessment of data was found to be acceptable.				
XVIII (epit più dica ces)				
Field duplicate pairs were identified in this SDG.			-	
Target compounds were detected in the field duplicates.				ł
XVII. Fela blanks			I	
Field blanks were identified in this SDG.		/		
Target compounds were detected in the field blanks.		,		

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA Method 8270)

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

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Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	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 = $(A_x)(C_s)/(A_h)(C_x)$ 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,

 $A_{\rm b}$ = Area of associated internal standard $C_{\rm b}$ = Concentration of internal standard X = Mean of the RRFs

				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	RRF ()O std)	RRF () ⊖ std)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
-	SVEHAXS	1/52/	Phenol (1st internal standard)						
		· ·	ıdard)	3.606	3.606	3.773	3.773	7 4·X	148
			Huberene (art-internal standard)	1.175	1.175	- + - \$	7+1-1	71. 6	<i>1</i> -1.5
			Pentaghorophenol (4h Internal standard) 3 r ol	211.1	1.115	0.991	0.99)	7.61	11.51
			Bis(2-ethylhoxyl)phthalate (5th internal standard)	•					
			Recrete mene (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#. 27230D36

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer:__ 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 = $(A_y)(C_s)/(A_s)(C_x)$

ave. RRF = initial calibration average RRF RRF = continuing calibration RRF A_x = Area of compound, A_s C_x = Concentration of compound, C_s Where:

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	RRF (CC)	RRF (CC)	Q %	Q%
-	REJOOS	11/45	Phenol (1st internal standard)					
		•	Naphthalene (2nd internal standard)	3.773	791.5	3.157	غ	16,
			Fuerene (3rd internal standard)	7-1-1	1.058	1.053	7,7	7.7
			standa	0.99)	1.068	1.068	7.8	7,8
]			Bis(2-ethylhexyl)phthalate (5th internal standard)					-
			Benzo(a)pwrene (6th internal standard)					
2	PE1328	5/4/12	Phenol (1st internal etandard)					
		•	Naphthalene (2nd internal standard)	3.773	0 25.2	3.330	7.11	11.7
			Fluerene (3rd internal standard)	9 41.1	1.057	1.057	2.8	۲. ×
			Penachiocophend (Ath Internal standard)	0.991	1.091	1.091	10.1	13.1
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
က			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#: 29 2 3000b

VALIDATION FINDINGS WORKSHEET <u>Surrogate Results Verification</u>

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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:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	10	6.61	66.	66.1	6
2-Fluorobiphenyl	10	6.05	60.5	60.5	
Terphenyl-d14	10	7.64	76.4	76.4	
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					
Phenoi-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# 27230036

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: of Reviewer: FT

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

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

% Recovery = 100 * (SC/SA

Where: SSC = Spike concentration SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC)

LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: VOS |D

	Š	vike	ďS	ike	31	SO	10	I CSD	/SO I	CS/I CSD
Compound	Ad (vos	Added	Concentral	Concentration	Percent F	Percent Recovery	Percent I	Percent Recovery	<u> </u>	RPD
	1 68	CSD	168	usoi	Renorted	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine	-									
4-Chloro-3-methylphenol										
Acenaphthene	333	533	الح	279	%	(%	₩	30	3	ħ
Pentachlorophenol										
Pyrene	\rightarrow	-	4%	218	æ	≈ٰ	26	76	7	$\bar{\gamma}$
				,						

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#: 29230025

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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

Y N N/A Y N N/A

Were all reported results recalculated and verified for all level IV samples?

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

Concentration = (A_)(I_s)(V_i)(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 (uI)

Df = Dilution Factor.

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

2.0 = Factor of 2 to account for GPC cleanup

Example:

= 1.352 ng/kg

2.0	= Factor of 2 to accou	nt for GPC cleanup			,
#	Sample ID	Compound	Reported Concentration ()	Calculated Concentration ()	Qualification
	·				
		Language and the second			
			· · · · · · · · · · · · · · · · · · ·		
	·				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 19, 2012

LDC Report Date: February 27, 2013

Matrix: Soil

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

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 8081A for Chlorinated Pesticides.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
5/1/12	LE01005B/6B	STX-CLP2	Methoxychlor	22	All samples in SDG 12D176	J (all detects) UJ (all non-detects)	A

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

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

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

V. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No chlorinated pesticide contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

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

Sample	Compound	RPD	Flag	A or P
SL-086-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	90 55	J (all detects) J (all detects)	А
SL-087-NBZ-SS-0.0-0.5	4,4'-DDE	48	J (all detects)	А

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

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 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5	Methoxychlor	J (all detects) UJ (all non-detects)	А	Continuing calibration (%D) (C)
12D176	SL-086-NBZ-SS-0.0-0.5	4,4'-DDE 4,4'-DDT	J (all detects) J (all detects)	А	Compound quantitation and RLs (RPD) (*XIII)
12D176	SL-087-NBZ-SS-0.0-0.5	4,4'-DDE	J (all detects)	А	Compound quantitation and RLs (RPD) (*XIII)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SDG#	29230D3a : 12D176 tory: EMAX Laboratories	-			PLETEN Level IV		SS WORKSHEET		Date: 2/2/ Page: /of_ Reviewer: /
Γhe sa	OD: GC Chlorinated Pesmples listed below were on findings worksheets.	revie				-	dation areas. Validatio	on fir	2nd Reviewer:
	Validation	Area					Comm	ents	3
l.	Technical holding times			A	Sampling	date	es: 4/19/12		
H.	GC/ECD Instrument Perform	ance C	heck	Δ	ļ				
III.	Initial calibration			Δ	%		3D £ 20		
IV.	Continuing calibration/ICV			Ash	<u> </u>		104/CW = 20)	
V.	Blanks			Δ.					
VI.	Surrogate spikes			Δ					
VII.	Matrix spike/Matrix spike dup	licates		A	SL - 1	9:	3-NBZ-55- 10	0.0	5-0.5
VIII.	Laboratory control samples			Ą	IC.	۵_	10		
IX.	Regional quality assurance a	and qua	lity control	N					
X.	Florisil cartridge check			N					
XI.	GPC Calibration			N					
XII.	Target compound identificati	on		Δ					
XIII.	Compound quantitation/RL/L	.OQ/LO	Ds	ربہی					
XIV.	Overall assessment of data			Δ					
XV.	Field duplicates			7					
XVI.	Field blanks			NO	EB -	= ₹	=B-NBZ-SS-	04	1712
lote:	A = Acceptable N = Not provided/applicable SW = See worksheet		R = Rins	o compounds			ち り 行 D = Duplicate TB = Trip blank EB = Equipment blan	12	D 154
1 SL	-017-NBZ-SS-0.0-0.5	11			21		-	31	
	-086-NBZ-SS-0.0-0.5	12			22	Т		32	
	-087-NBZ-SS-0.0-0.5	13			23			33	
4 SL	-150-NBZ-SS-0.0-0.5	14			24			34	
	-178-NBZ-SS-0.0-0.5	15			25			35	
6		16			26			36	
7		17			27			37	
8		18			28			38	
9	,	19			29	\int		39	
10		20			30			40	
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 LDC #: 29230132 SDG #: su cone

	Page:_		2
	Reviewer:	F	2
2nd	Reviewer:		

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

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding-times				
All technical holding times were met.				
Cooler temperature criteria was met.				
II. GC/ECD Instrument performance check				
Was the instrument performance found to be acceptable?	/			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?				
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) \leq 20%?				
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		/		
Did the initial calibration meet the curve fit acceptance criteria?				
Were the RT windows properly established?				
Were the required standard concentrations analyzed in the initial calibration?				
IV. Continuing calibration				
What type of continuing calibration calculation was performed?%D or%R				·
Were Evaluation mix standards analyzed prior to the initial calibration and sample analysis?	_			
Were endrin and 4,4'-DDT breakdowns \leq 15%.0 for individual breakdown in the Evaluation mix standards?				
Was a continuing calibration analyzed daily?	/			
Were all percent differences (%D) ≤ 15%.0 or percent recovieries 85-115%?	/			
Were all the retention times within the acceptance windows?				
V. Blanks				
Was a method blank associated with every sample in this SDG?				
Was a method blank analyzed for each matrix and concentration?				
Were extract cleanup blanks analyzed with every batch requiring clean-up?		ļ .		_
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 #: 2927073a SDG #: see cones

VALIDATION FINDINGS CHECKLIST

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

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 confrol 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.		کسو		
Target compounds were detected in the field blanks.		/_	M	

VALIDATION FINDINGS WORKSHEET

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

R. Endrin aldehyde	Z. Aroclor-1248	HH.
S. alpha-Chlordane	AA Aroclor-1254	II.
T. gamma-Chlordane	BB. Aroclor-1260	JJ.
U. Toxaphene	CC. DB 608	KK.
V. Aroclor-1016	DD. DB 1701	LL.
W. Aroclor-1221	EE.	MM.
X. Aroclor-1232	Ħ.	NN.
	U. Toxaphene V. Aroclor-1016 W. Aroclor-1221 X. Aroclor-1232	

Notes:

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VALIDATION FINDINGS WORKSHEET Continuing Calibration

Reviewer:_

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HPLC METHOD: __GC_ Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A". AV pat type of continuing calibration calculation was performed? ___%D or ___RPD Y N/A

Were continuing calibration standards analyzed at the required frequencies?

Did the continuing calibration standards meet the %D / RPD validation criteria of <15.9%?

Level IV Only

∀N N/¥

Were the retention times for all calibrated compounds within their respective acceptance windows?

Qualifications **Associated Samples** RT (limit) 3 %D / RPD (Limit ≤ 15:0) 77 Compound STX-CLPY Detector/ Column LE CIOCSB/BB Standard ID Date

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LDC#:

Compound Quantitation and Reported CRQLs VALIDATION FINDINGS WORKSHEET

Page: __of__ Reviewer: __

2nd Reviewer:

METHOD: __GC__ HPLC

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

N N N N N N

Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

* XII

# Compound Name					
Compound Name Finding ± 90 Associated Samples 90 2 2 4 4 3 4 4 3 4 4 3 4 4 4 4 4 4 4 4 4 4			of RPD Bet 2 w		
$\frac{90}{55}$	#	Compound Name	Finding 差々し	Associated Samples	Qualifications
\$\frac{8}{3}		7	90	2	J/A 6+
		4	55		
		7	48	M	J/A det

Comments: See sample calculation verification worksheet for recalculations

030	
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Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	2nd Reviewer:

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

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

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

	·				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound		CF /200	$\frac{\mathrm{GF}}{2}$,	Average CF (initial)	%RSD	%RSD
-	141	11/01/h	endosulpan 1 f	RTX UP!	160703	`		15%28	h-h	4.4
			Methosychlor.			HERS	563216	2.11.695	/:5/	/:5/
			,							
2			1 1	RTYCUPZ	123297	123297	5:181 x1 5:181 x1	125 787.5	2.4	2.4
			1		25825	52862	L.518as	L'SL8QS	6.6	9.9
. m						·		•		
П										
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# 29220235 SDG#: Por

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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FPLC. METHOD: GC

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:

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

ave. CF ≈ initial calibration average CF
CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

Recalculated	%D		1	,	7	7 7 22	77	727	122	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Reca		ß											
Reported	Ω%	6	U/		7	72	7 2	72	7 7	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	72
Recalculated	CF/Conc. CCV	19.07	40.691		57.81	18.63	18.63	18.63	18.63	18.63	18.63	18.63	18.23
Reported	CF/Conc. CCV	19.07	40.691		18.63	18.63	18.63	18.63	18.63	18.63	18.63	18.63	18.63
	Average CF(Ical)/ CCV Conc.	20.0	200. CO		6.0٢	0.0x	20.0x	0.0x	20.0x	20.0x	20.0c 200.0c	20.0x 20.0x	0.0x 20.0x
	Compound	endosulpan / Alxeup)	mathoxychlor		1 1	J RTXCLP2		1 11 1 1 1	1 11 1 1 11				
	Calibration Date	10											
	Standard ID	1F01005A											
	#	1 1			_	2	2	2	3 2	3 2	3 8	2 6 4	2 6 4

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

SDG#: 29230039 SDG#: 129230039

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Page: __of_ 2nd reviewer: 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

SF = Surrogate Found SS = Surrogate Spiked Where:

Sample ID:						
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
7CMX	RTX CUPZ	Oħ	35.032	87.6	87-6	0
870	PTX and /	7	23.197	58.0	0.85	0
	•					

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andro 10.						
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	

Sample ID:

	Percent Percent Recovery Difference	Recalculated		
	Percent Recovery	Reported		
	Surrogate Found			
	Surrogate Spiked			
	Column/Detector			
Sample ID.	Surrogate			

LDC#: 27230/239 SDG #: per com

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

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

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

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

SSC = Spiked sample concentration SA = Spike added Where:

SC = Concentration

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

LCS/LCSD samples:

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

		Spiked	- 5	Sample	1	LCS	TC	CSD	SOT	LCS/LCSD
(4/5n) (4/6n)		(43/6	3/5		Percent	Percent Recovery	Percent	Percent Recovery		RPD
CSD CSD TCSD	, rcs			CSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
3.67 3.67 2.28 2	2.28		8	2.39	Z.	z'	20	90	6	6
2 3.75 2			7	28-2	601	€0/	701	901	Ŋ	~
·	·									

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.

29230035 an eng LDC #: SDG#

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

2nd Reviewer: _ Page:

GC HPLC METHOD:

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

(A)(Fv)(Df) Concentration= N/A Y/N N/A

(RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured Fv= Final Volume of extract

RF= Average response factor of the compound In the initial calibration Df= Dilution Factor

Vs= Initial volume of the sample Ws= Initial weight of the sample %S= Percent Solid

Example:

Compound Name_

4 4 DDE (2609733) (4) (114301.6) (30) (0.703) Concentration =__ Sample ID.

4.3 ug/kg u

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

Comments:

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Polychlorinated Biphenyls

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

SL-179-NBZ-SS-0.0-0.5

Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8082 for Polychlorinated Biphenyls.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/ECD Instrument Performance Check

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

III. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

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

Date	Standard	Column	Compound	%D	Associated Samples	Affected Compound	Flag	A or P
5/12/12	KE11028A	ZB-M-1	Aroclor-1260	24	MBLK1S	Aroclor-1260 Aroclor-1242 Aroclor-1248	J (all detects) UJ (all non-detects)	A
5/12/12	KE11030B	ZB-M-2	Aroclor-5460	50	MBLK1S	Aroclor-5460 Aroclor-5432 Aroclor-5442	J (all detects) UJ (all non-detects)	Α
5/12/12	KE11041A	ZB-M-1	Aroclor-1260	26	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	Aroclor-1260 Aroclor-1242 Aroclor-1248	J (all detects) UJ (all non-detects)	А

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

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

V. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No polychlorinated biphenyl contaminants were found.

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

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

XI. GPC Calibration

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

XII. Target Compound Identification

All target compound identifications were within validation criteria.

XIII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

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

Sample	Compound	RPD	Flag	A or P
SL-086-NBZ-SS-0.0-0.5	Aroclor-1254	57	J (all detects)	А
SL-087-NBZ-SS-0.0-0.5	Aroclor-1254	61	J (all detects)	А

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

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 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	Aroclor-1260 Aroclor-1242 Aroclor-1248	J (all detects) UJ (all non-detects)	А	Continuing calibration (%D) (C)
12D176	SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	Aroclor-1254	J (all detects)	Α	Compound quantitation and RLs (RPD) (*XIII)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Polychlorinated Biphenyls - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SDG	#: <u>29230D3b</u> #: <u>12D176</u> ratory: <u>EMAX Laboratorie</u>				PLET Level		SS WORKS	HEET	Date: 2/2 Page:l of _/ Reviewer:
The	HOD: GC Polychlorinated samples listed below were ation findings worksheets	e rev	•				•	/alidation find	lings are noted in attached
	Validation	Are	a					Comments	
1.	Technical holding times			Δ	Samp	ling da	tes: 4/19	112	
11.	GC/ECD Instrument Perforr	nanc	e Check	NΔ					
111.	Initial calibration			Δ		0/0	PSD =	w	
IV.	Continuing calibration/ICV			sw			PSD =	VZW	
V.	Blanks			Δ					
VI.	Surrogate spikes			A					
VII.	Matrix spike/Matrix spike du	plicat	es	A	SI		193- NB7	- 55- (0.0-05 MS/D
VIII	. Laboratory control samples			14		اد			
IX.	Regional quality assurance	and c	uality control	N					
X.	Florisil cartridge check			N					
XI.	GPC Calibration			N					
XII.	Target compound identificat	ion		<u> </u>		<u>-</u>			
XIII	. Compound quantitation/RL/	LOQ/	LODs	SW					
XI∨	. Overall assessment of data			Δ					
XV.	Field duplicates			N					
ΧVI	. Field blanks			ND	7 B	> =		2 <u> </u>	94171 2
Note: Valida	A = Acceptable N = Not provided/applicable SW = See worksheet ted Samples:)	R = Rin	o compound sate eld blank	s detec	ted	EB — NB 2 D = Duplica TB = Trip bl EB = Equipr	e ank	04/7/2 509 # 12P/57/
	3012	<u> </u>					T		
11 +2 +3 +4 +5 16	SL-017-NBZ-SS-0.0-0.5	11	MBLKIS			21		31	
2'	SL-086-NBZ-SS-0.0-0.5	12				22		32	
3'	SL-087-NBZ-SS-0.0-0.5	13				23		33	
4	SL-150-NBZ-SS-0.0-0.5	14				24		34	
5'	SL-178-NBZ-SS-0.0-0.5	15				25		35	
	SL-179-NB2-SS-0.0-0,5					26		36	
7		17				27		37	
8		18				28		38	
9		19	-			29		39	
10		20				30		40	

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Notes:___

VALIDATION FINDINGS CHECKLIST

Page: /of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

Method: / GC HPLC				
Validation Area	Yes	No	NA	Findings/Comments
I. Technical bolding 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?	ļ	_		
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?	ļ			
Were the RT windows properly established?				State in the filler review a property of the control of the contro
IV. Configuing calibration	T	I	I	
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	T	L		
Was a method blank associated with every sample in this SDG?		<u> </u>		
Was a method blank analyzed for each matrix and concentration?	-	ļ		
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	T			
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	T	ı		
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	T	I		
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?	<u> </u>			

DC#: 2923083h 3DG#: per cons

VALIDATION FINDINGS CHECKLIST

Page: 2of 2
Reviewer: F7
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				100 (100 (100 (100 (100 (100 (100 (100
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				Property of the second
Field blanks were identified in this SDG.		عمز		
Target compounds were detected in the field blanks.			ye	

VALIDATION FINDINGS WORKSHEET

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

A				
А. аірпа-БНС	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	.66.
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	П.
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. Arocior-1232	FF.	NN.

C:\docs\Work\Pesticides\COMPLST-3S.wpd

Notes:

VALIDATION FINDINGS WORKSHEET Continuing Calibration

Page: / of / Reviewer: FT

2nd Reviewer:

HPLC ၂ ၂၃ ၂ METHOD:

Were the retention times for all calibrated compounds within their respective acceptance windows?

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

What type of continuing calibration calculation was performed? ____%D or ____RPD

Y N/A

Were continuing calibration standards analyzed at the required frequencies?

Y N/A

Did the continuing calibration standards meet the %D / RPD validation criteria of <=15.0%?

evel IV Only

Y/N N/A

O = opos

Quali	1/m/B	QX1A1 BB	77		1/41/A	qual Aroulor 5460	1 5432	this 1		JM3/A gual	BB 7 7 U												
Associated Samples	MBHIS	i de la compania del compania del compania de la compania del la compania de la compania dela compania del la compania de la compania de la compania dela compania del la compania dela co			1				All except BIK)						A Maria de Salaria, de Carta d							
RT (limit)		()		()	()	()	()	()	(()	()	()	()	()	()	(()	()	()	()	()	()	
RPD ≤ 15:0)	24				as o				36														
Compound	ВВ				Aroclor 540				BB														
Detector/ Column	1-M-8=				7-M-8-				2-13-M-1														
Standard ID	KE 11028A		•		KE11030B				KE 11041 A														
╟──╟	2/12/12				2/11/15				apple														

25G	
80	
32	
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DC#:	

Compound Quantitation and Reported CRQLs **VALIDATION FINDINGS WORKSHEET**

2nd Reviewer: Reviewer:

METHOD: __GC__ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A". Le<mark>∳el IV/D Only</mark>

Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?
Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

/// × *

	Compound Name	*/6 KP// Beナ トン/ Finding ニゲン	Associated Samples	Qualifications	
	Aroclor 1254	23	2	1/10 de	
	(44)				
		19	K)	J	
L					
L					
<u> </u>					
۷					

Comments: See sample calculation verification worksheet for recalculations

COMQUANew.wpd

LDC# 09230 P36 SDG#:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page: 2nd Reviewer: Reviewer:

> HPLC_ METHOD: GC

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

CF = A/C

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

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

r									
				Reported	Récalculated	Reported	Recalculated	Renorted	Recalculated
#	Standard ID	Calibration Date	Compound	CF (32) std)	CF (370std)	Average CF (initial)	Average CF (initial)	%RSD	%RSD
-	700/	21/60/2	2B-Nultiresidue 1 X		'1	267,742 367,742	367/742	7.5	7.7
T			PCB 1260-1						
	-	-							
7			7B Multiesidue 2						
T			PCB 1260-1	9260	7860	1.6001	1.61001	14.5	12-51
1									
6			·						
T									
1									
4									

Comments: Referto 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 #: 27230036 SDG.#, for Cour

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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Page: //	Reviewer:	2nd Reviewer:

HPLC METHOD: GC

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

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

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

	-							
			 		Renorted	Recalculated	Reported	Recalculated
Calibration Standard ID Date C		O	punoduo	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	GF/Conc. CCV	. O%	0%
KE 11028A 5/12/12 PUB 1260		1 and	260	0.00	heh :819	618.424	λĸ	62
	·							
•	•							

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.

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#	#
LDC	SDG

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

METHOD: GC HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID:

	11			T	1
Percent Difference		0	9		
Percent Recovery	Recalculated	5.96	201		
Percent Recovery	Reported	3.76	102		
Surrogate Found		27.75	LL:0h		
Surrogate Spiked	dne	04	7		
Column/Detector	ZB- MuHi-Residu	ast 1	7		
Surrogate	72	DeB	TCMX		

ample 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	
			· &			

29 2300 35 the comp SDG#: LDC#.

VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Page: Reviewer:_

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

METHOD: CG HPLC

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

SC = Concentration

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples: レムム | D

	S	pike	Spiked	Spiked Sample	TC	SOT	TC	TCSD	TCS)	rcs/rcsd
Compound	₹ ¾)	Added (we) Ka	Concents (wg)	ntration	Percent	Percent Recovery	Percent l	Percent Recovery	&	RPD
	SOT	LCSD	SOT	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)							-			
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Arochor - 1260	66.7	66.7	52.3	52.4	. 58	83	. 61	79	5	ارا

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 #: 27230035 SDG #

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page: Reviewer: 2nd Reviewer:

METHOD: N/A

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

(A)(Fv)(Df) (RF)(Vs or Ws)(%S/100) Concentration=

Area or height of the compound to be measured Final Volume of extract

RF≈ Average response factor of the compound Vs= Initial volume of the sample Ws= Initial weight of the sample In the initial calibration Df≈ Dilution Factor

%S= Percent Solid

Example: Sample ID.

#7

Compound Name_

(11386.1) (3005) 69506

Concentration =_

1-6501

6.19 mg/kg ij

#±	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	= /-hx/,	617	pual es	encentration	
	1.	54.6	τĺ	(4).69.14)	
	1	(6//		(30,03)(0774	
	11 7-1	81.7			
	, , ,	9.93	P(7.2 ug/Kg	
	1			b . 0	
	Total=	69.14			
•					

Comments:

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

March 1, 2013

Matrix:

Soil

Parameters:

Metals

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

SL-179-NBZ-SS-0.0-0.5

Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 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, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, and Zirconium.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. ICPMS Tune

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

III. Calibration

An initial calibration was performed.

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No metal contaminants were found with the following exceptions:

Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
EB-NBZ-SS-041712	4/17/12	Copper Calcium Nickel	0.000613 mg/L 0.0492 mg/L 0.000255 mg/L	All samples in SDG 12D176

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

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

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

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
SL-193-NBZ-SS-0.0-0.5MS/MSD (All samples in SDG 12D176)	Antimony Zirconium	73 (75-125) 43 (75-125)	- 47 (75-125)	-	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	А

VII. Duplicate Sample Analysis

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

VIII. Laboratory Control Samples (LCS)

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

IX. Internal Standards

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

X. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

XI. ICP Serial Dilution

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

XII. Sample Result Verification

All sample result verifications were acceptable.

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

Sample	Analyte	Flag	A or P
All samples in SDG 12D176	All analytes reported below the RL and above the MDL.	J (all detects)	А

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 12D176

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	Antimony Zirconium	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	А	Matrix spike/Matrix spike duplicate (%R) (Q)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	All analytes reported below the RL and above the MDL.	J (all detects)	А	Sample result verification (Z)

Santa Susana Field Laboratory Metals - Laboratory Blank Data Qualification Summary - SDG 12D176

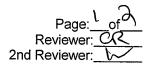
No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Metals - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

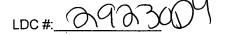
	:: 29230D4 #: 12D176 atory: EMAX Laboratorie		ALIDATIO		ADR		SS W	ORKSHE	ET	R	Date: 2/27 Page: of / eviewer: oteviewer:
/IETH	I OD: Metals (EPA SW 8	46 M	ethod 6020/							2nd R	eviewer:
	amples listed below were tion findings worksheets		ewed for ea	ch of the f	ollow	ing val	idation a	areas. Valid	lation find	dings are r	noted in attached
	Validation	Area						Ço	mments		
l.	Technical holding times			A	Sam	pling da	es: 4	/19/1	<u>て</u>		
II.	ICP/MS Tune			A							
III.	Calibration			A							
IV.	Blanks			A							
V.	ICP Interference Check Sar	nple (I	CS) Analysis	Α							
VI.	Matrix Spike Analysis			SW	Not	reviewe	for ADR	validation.	<u>ms/</u>	O (Fe	MOTITYX
VII.	Duplicate Sample Analysis			//	Not	reviewe	for ADR	validation.	, ,	,	
VIII.	Laboratory Control Samples	s (LCS)	A	T			validation.	LCS	10	
IX.	Internal Standard (ICP-MS)			A	T			validation.		<i>i</i> —	
Χ.	Furnace Atomic Absorption			N	Not	reviewe	for ADR	validation.			
XI.	ICP Serial Dilution			A							
XII.	Sample Result Verification			P	Not	reviewe	for ADR	validation.		<u> </u>	
XIII.	Overall Assessment of Data	a		A	Not	reviewe	for ADR	validation.			
XIV.	Field Duplicates			N	4	07	1)~	2/_			
ΧV	Field Blanks			SW	6	3=	EC	ONBZ	-85-	041716	12 DISY
ote:	A = Acceptable N = Not provided/applicable SW = See worksheet ad Samples: ** Indicates sam		R = Rin FB = Fi	o compound sate eld blank		cted	= E 		59-	orthe	L/a
			T			24		 	24		
	SL-012-NBZ-SS-0.0-0.5	17	DUP-09-NBZ			21			31	<u> </u>	
	SL-012-NBZ-SB-0.5-1.5	12	SL-193-NBZ								
	SL-017-NBZ-SS-0.0-0.5**7	13	SL-193-NBZ-	33-0.0-0:5N	io LT	23			33		
	SL-086-NBZ-SS-0.0-0.5	14				24			34		
	SL-087-NBZ-SS-0.0-0.5**	15				25			35		
	SL-150-NBZ-SS-0.0-0.5***	16				26			36		
	SL-178-NBZ-SS-0.0-0.5**-	17				27			37		
	SL-179-NBZ-SS-0.0-0.5**	18				28			38		
	SL-184-NBZ-SS-0.0-0.5	19				29			39	· · · · · · · · · · · · · · · · · · ·	
10	SL-193-NBZ-33-0.0-0.5	20	ļ			30			40		

VALIDATION FINDINGS CHECKLIST

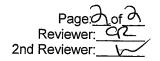


Method: Metals (EPA SW 846 Method 6010B/7000/6020)

			<u> </u>	
Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		<u></u>		
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) \leq 20% for waters and \leq 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were \leq 5X the RL, including when only one of the duplicate sample values were \leq 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 FINDINGS CHECKLIST



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)			_	<u></u>
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.		/	٢	
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			<u>.</u>	
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 #: 2923004

VALIDATION FINDINGS WORKSHEET Sample Specific Element Reference

Page: <u>1</u>	_of1_	_
Reviewer:	CR.	
2nd reviewer:	_ ~	_

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
All	_	Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
QC12, Y	3	Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
, ,		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
		Al Sh As Ba Be B Cd Ca Cr Co Cu Fe Ph Li Mg Mo Mn Hg Ni P K Se Ag Na Sr Tl Sn Ti V Zn Zr
		Analysis Method
ICP		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr
ICP-MS		Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mo, Mn, Hg, Ni, P, K, Se, Ag, Na, Sr, Tl, Sn, Ti, V, Zn, Zr

Comments: Mercury by CVAA if performed

LDC #: 29230D4

VALIDATION FINDINGS WORKSHEET Field Blanks

Reviewer: Of A

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

Blank units: mg/L Associated sample units: mg/Kg		
Sampling date: 4/17/12 Soil factor applied 100x		
Field blank type: (circle one) Field Blank / Rinsate / Other:	Associated Samples:	EB-NBZ-SB-041712=2EB-NBZ-SS-041712=1,311-C/L
		A CANADA CAN

tion														
Sample Identification														
Sar													:	
	No Qualifiers (>5x)	\												
	Action Limit		0.445	24.6	0.1									
Blank ID	EB-NBZ- SS-041712		~ 0.000613	0.0492	0.000255									
Blank ID	EB-NBZ-7 SB-041712	-	£.000894 0 - 0.000613											
Analyte		*	ਹੋ	Ca	Ż					•				

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# ONO SOD

VALIDATION FINDINGS WORKSHEET Matrix Spike/Matrix Spike Duplicates

Page:_ 2nd Reviewer: Reviewer.

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

Was a matrix spike analyzed for each matrix in this SDG?
Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factol of 4 or more, no action was taken.
Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

CI CSM/SM	Matrix	Analyte	%Recovery	%Beroven	DDD /1 imite)	Accociated Camples	
MB	S	Sh	73				A/ 10/ L
		72	43	47		1	
							0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

LDC #. 2923/07

VALIDATION FINDINGS WORKSHEET Initial and Continuing Calibration Calculation Verification

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:

 $%R = \frac{Found}{True} \times 100$

Where,

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

Acceptable (Y/N) Reported %R \mathbb{Q}^{\prime} 2 Recalculated % R True (ug/L) Q V 95,58I 77.18 Found (ug/L) ところ Ö Element K 去 ICP/MS (Continuing calibration) CVAA (Continuing calibration) (Continuing calibration) ICP/MS (Initial calibration) Type of Analysis CVAA (Initial calibration) GFAA (Initial calibration) CP (Initial calibration) Standard ID

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.

GFAA (Continuing calibation)

1002552 TIDC #:

VALIDATION FINDINGS WORKSHEET **Level IV Recalculation Worksheet**

Page:_ Reviewer: 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 = Found x 100 True

Where, Found = Concentration of each analyte <u>measured</u> 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 = $[S-D]_{X} \times 100$ (S+D)/2

Where,

S = Original sample concentration D = Duplicate sample concentration

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

%D = |I-SDR| x 100

Where, I = Initial Sample Result (mg/L) SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

					Recalculated	Reported	
Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	%R/RPD/%D	%R/RPD/%D	Acceptable (Y/N)
ICSAC	ICS ACA ICP interference check	لمها	h'81 W	97	9	69)
527	Laboratory control sample	GD	787	\$2	201	103	
21	Matrix spike	. H	(SSR-SR) A5,6	7,96	56	56	
12/13	Duplicate	$Q_{\mathbf{U}}$	1.92	78.1	0	S	
Ö	ICP serial dilution	(J.S.)	x 17,5	765)	7

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

LDC#: 2923004

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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

Page:_	\of_
Reviewer:	OR
2nd reviewer:	1~

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

Have results been reported and calculated correctly?

Y N Y N	N/A N/A	Are results w Are all detec	vithin the calibrate tion limits below t	ed range of the CRDL?	f the instrument	s and within the lin	ear range of the IC	P?
Detec	ted analy	te results for _			As	were recalci	ulated and verified	using the following
equati Concen	on: itration =	(RD)(FV)(Dil) (În. Vol.)			Recalculation:			
RD FV	= =	Raw data conce Final volume (m	nl)		100mL	-(10)(5,0	(1000)	=3,457m
In. Vol. Dil	=	Initial volume (n Dilution factor	nl) or weight (G)		0.703	(2.079)	(1000)	
#	Sa	ample ID		Analyte		Reported Concentration	Calculated Concentration	Acceptable (Y/N)
		3			Al	9990	9990	V
					Sb	0.330	0.330	1
					As	3,46	3.46	
	· · · · · · · · · · · · · · · · · · ·				Ba	106	106	
					Be	0,427	0.427	
					B	22,8	72.8	
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			G	0.284	0.284	
					a	13400	13400	
					9	15,8	15,8	
					Co	5.40	5,40	
					Cu	10.6	10.6	
		" - 			Fe	18300	18300	
					Ph	16,8	16.8	
					Me	6510	6510	
					M	370	370	
					9	0.717	0.717	
					Λ,	11.9	11.9	
					Κ	3540	2840	
				· · · · · · · · · · · · · · · · · · ·	Se	0.288	0.288	
		-			AG	Mas4	0.0954	
Note:_					North Strain Ti	124	124	
					TI	0.222	91.2	
					— Ti	905	905 345	1
					žn	68.8	68.8	/
					Li	905 34.5 68.8 24.1	909 34.5 68.8 24.1	
	RECAL	_C.4SW			Ø,	532	532	

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Herbicides

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

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.

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

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 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Herbicides - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Herbicides - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

	#: <u>12D176</u> ratory: <u>EMAX Laborato</u>	ries, Ir	nc.	L	evel IV				Page: /of / Reviewer: /> 2nd Reviewer:
MET	HOD: GC Herbicides (E	PA SV	V 846 Metho	od 8151A)					Zild Reviewel.
	samples listed below we ation findings worksheet		ewed for ea	ch of the fo	ollowing va	lidation	areas. Va	alidation findi	ings are noted in attached
	Validation	n Area					(Comments	
I.	Technical holding times			A	Sampling da	ates:	4//	9/12	
	Initial calibration			Δ	%	psd	520		
111.	Calibration verification/ICV	<u> </u>		Δ		1cv	Iccr =	w	
IV.	Blanks			Δ					
V	Surrogate recovery			Δ	·				
VI.	Matrix spike/Matrix spike c	luplicate	s	A	SL -	193-	ルタモ -	55-0.0	1-0.5 MS/10
VII.	Laboratory control sample	s		A	ics	10			
VIII.	Target compound identific	ation		Δ					
IX.	Compound quantitation/RI	JLOQ/L	ODs	Д					
<u>X.</u>	System Performance			Δ					
XI.	Overall assessment of dat	а		A					
XII.	Field duplicates			N					
XIII.	Field blanks			NO	EB =	EB	- NBZ	-55-04	17/2
Note:	N = Not provided/applicableR = RinsateTB = Trip blankSW = See worksheetFB = Field blankEB = Equipment blank					120 154			
Valida	ted Samples:								
1	SL-017-NBZ-SS-0.0-0.5	11			21			31	
2	SL-086-NBZ-SS-0.0-0.5	12			22			32	
3	SL-087-NBZ-SS-0.0-0.5	13			23			33	
4	SL-150-NBZ-SS-0.0-0.5	14			24			34	
5	SL-178-NBZ-SS-0.0-0.5	15			25			35	···
6		16			26			36	
7		17			27			37	
8		18			28			38	
9		19			29			39	***************************************
10		20			30			40	
Notes	3:								

VALIDATION COMPLETENESS WORKSHEET

LDC #: 29230D5

VALIDATION FINDINGS CHECKLIST

Page: / of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

ivietnod: CC HPLC				
Validation Area	Yes	No	NA	Findings/Comments
If Technical holding times				
All technical holding times were met.				
Cooler temperature criteria was met.				
(I. 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?	ļ			
Were the RT windows properly established?				
IV. Continuing calibration	1	I		
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	1			
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.		ŕ		
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?		-		
WIII. 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?		L		

.DC#: 2923005 SDG#: pu cond

VALIDATION FINDINGS CHECKLIST

Page:_2of_2 Reviewer:___F7 2nd Reviewer:____A

	ī		r	
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.		F		
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. Freid blanks				
Field blanks were identified in this SDG.		W	, ,	
Target compounds were detected in the field blanks.				

LDC#: 2923003 SDG#:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Page:_ Reviewer:

METHOD: GC

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

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

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

		·		Reported	Recalculated	Reported	Recalculated	Renorted	Recalculated
#	Standard ID	Calibration Date	Compound	CF (60 std)	CF.	Average CF (initial)	Average CF	%RSD	%RSD
-	769	3/11/2	2,4-D STX-QP1		077	838.6	23%6	5-61	74.5
			Dinoseb	/281	181	2004.4	p.par	201	103
	-	-							
77	1697	1/1/2		639	839	7.4.6	3.4.6	9.61	9.71
			Ł	1361	1957	2038.6	2038.6	2-5	2.5
		-							
က	,								
	·								
4									

Comments: Referto 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#: 272 3005 SDG.#,62 Cons

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

/to-/	62	Ž
Page:	Reviewer:	2nd Reviewer.

FIC METHOD: GC_

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

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

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

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV		0%
	G200072 (M)	1/1/h	2, 4-1) STREMP!	0.07	57.69	69-65	7	6
- 1			Dinose b	0.01	7/.05	71.05	41	18
7			1 STXCUPZ		58.46	9685	2	Ж
ļ			7	7	58.50	25125	ŋ	~
က								
- 1								
4								
	·							
١								

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.

070	
577-	cover
*	#: see
LUC	SDG

VALIDATION FINDINGS WORKSHEET Surrogate Resul

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	Verifica
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Page: ___of_ 2nd reviewer: Reviewer: FT

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

ササ Sample ID:

Percent Difference 0 Recalculated Percent Recovery 28.5 38.5 Percent Recovery Reported Surrogate Found 80165 Surrogate Spiked 009 Column/Detector 0 OCPAA Surrogate 4

Sar

ample 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	
						•
			· Po			

292300 the comp LDC#: SDG#:

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

Reviewer: Page:

2nd Reviewer:

GC_HPLC METHOD:

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

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

SC = Concentration

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples:

	S	pike	Spiked	Sample	TCS	SS	rcsd	SD	/SOT	rcs/rcsd
Compound	Adde (1437)	Added,	Conce (74	Concentration (4x//4)	Percent	Percent Recovery	Percent Recovery	Зесоvегу	R	RPD
	SOT	dsɔ٦	SOT	TCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recatc.
Gasoline (8015)										
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)	15.0	0.31	11.7	13.4	78	78	8.8	2	//	21
Dinoseb (8151)	15:0	0.51	15.6	0.01	27	63	29	67	Ş	7
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.

3005	ganes
292	Z
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100	SDG

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

HPLC METHOD.

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lere all reported results recalculated and verified for all level IV samples? Iere all recalculated results for detected target compounds within 10% of the reported results?

Example:	Sample ID.
(A)(Fv)(Df)	(RF)(Vs or Ws)(%S/100)
Concentration=	

Compound Name __

A= Area or height of the compound to be measured Fv≈ Final Volume of extract ☐ Dilution Factor RF= Average response factor of the compound

Concentration =

in the initial calibration

Vs= Initial volume of the sample

Ws= Initial weight of the sample

%S= Percent Solid

#=	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
<u> </u>					
comments:	ents:				
	•				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 26, 2013

Matrix:

Soil

Parameters:

Wet Chemistry

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-150-NBZ-SS-0.0-0.5

SL-178-NBZ-SS-0.0-0.5

SL-179-NBZ-SS-0.0-0.5

Introduction

This data review covers 6 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 9010A and 9014 for Cyanide, EPA Method 300.0 for Nitrate and Fluoride, EPA SW 846 Method 7199 for Hexavalent Chromium, and EPA 314.0 Perchlorate.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

III. Calibration Verification

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No contaminant concentrations were 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) and relative percent differences (RPD) were within QC limits.

VIII. Sample Result Verification

All sample result verifications were acceptable.

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

Sample	Analyte	Flag	A or P
All samples in SDG 12D176	All analytes reported below the RL and above the MDL.	J (all detects)	А

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 Wet Chemistry - Data Qualification Summary - SDG 12D176

SDG	Sample	Analyte	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5 SL-150-NBZ-SS-0.0-0.5 SL-178-NBZ-SS-0.0-0.5 SL-179-NBZ-SS-0.0-0.5	All analytes reported below the RL and above the MDL.	J (all detects)	А	Sample result verification (Z)

Santa Susana Field Laboratory Wet Chemistry – Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Wet Chemistry - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SDG Labor	#: <u>29230D6</u> #: <u>12D176</u> ratory: <u>EMAX Laboratorie</u>	s, Inc.	l	_evel l			Date: \(\)\(\)\(\)\(\)\(\)\(\)\(\)\(
MET Chro	H OD: (Analyte) Cyanid mium (EPA SW846 Meth	le (EPA SW846 od 7199), Perch	Method 90 lorate (EPA	010A/90 A Metho	14), Nitrate- ∕∕ (, d 314.0)	Fluoride (EP	A Method 300.0), Hexavalent
	samples listed below were ation findings worksheets.		ach of the f	ollowing	validation area	as. Validation	findings are noted in attached
	Validation	Area				Commer	nts
l.	Technical holding times		A	Samplin	g dates:	9/12	
lla.	Initial calibration		A		•		
IIb.	Calibration verification		A				
III.	Blanks		A				
IV	Matrix Spike/Matrix Spike Di	uplicates	A	M	5/P		
V	Duplicates		I N		· · · · · · · · · · · · · · · · · · ·		
VI.	Laboratory control samples		11	ICS	S/Q		
VII.	Sample result verification		A		,		
VIII.	Overall assessment of data		A				
IX.	Field duplicates		<u> N</u>		(0)		
Lx	Field blanks		$\overline{1ND}$	EB=	EB-MBZ	-22-091	11 2 (SOG:12DISY)
Note:	A = Acceptable N = Not provided/applicable SW = See worksheet	R = Ri	No compound nsate field blank	s detected	TB = Ti	plicate rip blank quipment blank	
Validat	ted Samples:						
1 3	SL-017-NBZ-SS-0.0-0.5	11		21		31	
2	SL-086-NBZ-SS-0.0-0.5	12		22		32	
3 5	SL-087-NBZ-SS-0.0-0.5	13		23		33	
4 3	SL-150-NBZ-SS-0.0-0.5	14		24		34	
5 5	SL-178-NBZ-SS-0.0-0.5	15		25		35	
6 5	51-179-NBZ-SS-0,0-0.5	16		26	,	36	,
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

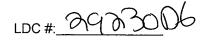
LDC#: 093006

VALIDATION FINDINGS CHECKLIST

Page: \(\frac{1}{2} \) of \(\frac{1}{2} \)
Reviewer: \(\frac{1}{2} \)
2nd Reviewer: \(\frac{1}{2} \)

Method: Inorganics (EPA Method See cover)

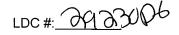
metriod:morganics (El A Metriod Section 5)							
Validation Area	Yes	No	NA	Findings/Comments			
I. Technical holding times							
All technical holding times were met.							
Cooler temperature criteria was met.							
 II. Calibration							
Were all instruments calibrated daily, each set-up time?		· ·					
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) \leq 20% for waters and \leq 35% for soil samples? A control limit of \leq CRDL(\leq 2X CRDL for soil) was used for samples that were \leq 5X the CRDL, including when only one of the duplicate sample values were \leq 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 FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: C(2
2nd Reviewer: _____

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.				2
X. Field blanks				-
Field blanks were identified in this SDG.				
Target analytes were detected in the field blanks.		/		



VALIDATION FINDINGS WORKSHEET Sample Specific Analysis Reference

Page:	<u> 1 of 1 </u>
Reviewer:	CR
2nd review	rer:

All circled methods are applicable to each sample.

Sample ID	Parameter S
1016	ph TDS CI(F)NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC(Cr6+CIO2)
1-3	ph TDS CI F (NO3) NO2 SO4 O-PO4 AIK CN) NH3 TKN TOC Cr6+ CIO4
	pH TDS CI F NO ₃ NO ₂ SO ₄ O-PO ₄ Alk CN NH ₃ TKN TOC Cr6+ ClO ₄
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO $_3$ NO $_2$ SO $_4$ O-PO $_4$ Alk CN NH $_3$ TKN TOC Cr6+ ClO $_4$
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO $_3$ NO $_2$ SO $_4$ O-PO $_4$ Alk CN NH $_3$ TKN TOC Cr6+ ClO $_4$
	pH TDS CLF NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO $_3$ NO $_2$ SO $_4$ O-PO $_4$ Alk CN NH $_3$ TKN TOC Cr6+ ClO $_4$
	pH TDS CI F NO $_3$ NO $_2$ SO $_4$ O-PO $_4$ AIK CN NH $_3$ TKN TOC Cr6+ CIO $_4$
	pH TDS CLF NO $_3$ NO $_2$ SO $_4$ O-PO $_4$ Alk CN NH $_3$ TKN TOC Cr6+ ClO $_4$
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CI F NO ₃ NO ₂ SO ₄ O-PO ₄ Alk CN NH ₃ TKN TOC Cr6+ ClO ₄
	pH TDS CI F NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CI F NO3 NO2 SO4 O-PO4 AIK CN NH3 TKN TOC Cr6+ CIO4
	pH TDS CLF NO3 NO2 SO4 O-PO4 Alk CN NH3 TKN TOC Cr6+ ClO4
	pH TDS CLE NO, NO, SO, O-PO, Alk CN NH, TKN TOC Cr6+ ClO,

Comments:		
		-
	, , , , , , , , , , , , , , , , , , , 	

LDC#: OCHO 300

Validation Findings Worksheet

2nd Reviewer:_

Initial and Continuing Calibration Calculation Verification

Method: Inorganics, Method Sec CO

was recalculated.Calibration date: 4/19/10 The correlation coefficient (r) for the calibration of

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

%R = Found X 100

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

					Recalculated	Reported	Acceptable
Type of analysis	Analyte	Standard	Conc. (mg/l)	Area	r or r²	r or r²	(Y/N)
Initial calibration		s1	0.05	1.149			
		s2	0.1	2.381	0.999860	0.999855	
		53	0.2	4.906			
	17	84	0.5	13.01			` .
		SS	_	27.54			<i>></i>
		9S	2	57.05			,
		s7	ī.	144.9			
	:	88	10	280.7			
Calibration verification	NOS	1CU		1,015	5.101	S' PI	
Calibration verification	G6t	2	6	3hb'1	41	47	,
Calibration verification	CN)	0.1	6,099	dd	dd	

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# 393390X

VALIDATION FINDINGS WORKSHEET Level IV Recalculation Worksheet

Reviewer: C/2 2nd Reviewer: //____

METHOD: Inorganics, Method Seconen

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

 $%R = Found \times 100$

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:

Where, RPD = $|S-D|_X \times 100$ (S+D)/2

S = 0

Original sample concentration Duplicate sample concentration

					Recalculated	Reported	
Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	%R/RPD	%R/RPD	Acceptable (Y/N)
5,77	Laboratory control sample	C 64	Loh	08 h	\$	85	>-
Matrix spike s 2 - 193 - N92 S - OO - O - S - I	Matrix spike sample OO-O.S	1	29'L	71,0	13	113	
	Duplicate sample	Ca	b/2	812	0		\

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

LDC #: 0973006

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page:	of		_
Reviewer:	00	,	_
2nd reviewer:_			_

M	ETH	OD: Inorganics, Metho	d See cover			
/ <u>Y</u>	/N	N/A Have results N/A Are results w	by for all questions answered "N". Not app been reported and calculated correctly? vithin the calibrated range of the instrumen tion limits below the CRQL?	•	e identified as "N/	A".
Co re	ompo calci	ound (analyte) results f ulated and verified usin	for	repo	orted with a positi	ve detect were
		tration =	Recalculation:	(am 17) 16.42		
J,0,0) - 5-1	972(Area)+00301	20.	(30,17)+603 .0027g(0,76	21755) Wi ii	(62)-1 14)-1
	#	Sample ID	Analyte	Reported Concentration	Calculated Concentration (Mp/kS)	Acceptable (Y/N)
			F	1,24	1.24	Ÿ
			NO ₃	14.3	14,3	
			C/V	0.70	0)/11	•
-						
					<u> </u>	
				<u> </u>		
No —	te:_					

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

March 6, 2013

Matrix:

Soil

Parameters:

Total Petroleum Hydrocarbons as Gasoline

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-087-NBZ-SS-0.5

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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-041912 was identified as a trip blank. No total petroleum hydrocarbons as gasoline contaminants were found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples	
TB-041912	4/19/12	Gasoline range organics	14 ug/L	All samples in SDG 12D176	

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

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

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 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-087-NBZ-SS-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Total Petroleum Hydrocarbons as Gasoline - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

									2 /2-
	#: <u>29230D7</u>	<u> </u>	LIDATIO			SS WOR	KSHEET		Date: 2/2
SDG	#: <u> 12D176 </u>	ies Inc			Level IV				Page: /of/ Reviewer:/
Labo	ratory. <u>LIVIAX Laborator</u>	ics, inc	<u>••</u>						2nd Reviewer:
MET	HOD: GC TPH as Gaso	line (E	PA SW 846	Method 8	3015B)				
The s	samples listed below we ation findings worksheet	re revi	ewed for ea	ch of the t	following va	lidation area	as. Validatio	n fin	dings are noted in attached
valide	T T T T T T T T T T T T T T T T T T T	J.		 	1				
	Validatio	n Area			1	· · · · · · · · · · · · · · · · · · ·	Comm	ents	
1.	Technical holding times			A	Sampling da	ites: 4/	19/12		
П	Initial calibration			Δ	%	MSD =	20		
III.	Calibration verification/IC\	/		Δ		101/00	NEZ	V	
IV.	Blanks			Δ		1			
٧	Surrogate recovery	-		A					
VI.	Matrix spike/Matrix spike of	luplicate	s	N	clie	nt spe	ici greo	/	
VII.	Laboratory control sample	s		A	Les 1	10	0		
VIII.				Δ					
iX.	Compound quantitation/RI		ODs	Δ					
X.	System Performance			A					
XI.	Overall assessment of dat	a		A					
XII.	Field duplicates			N					
XIII.			ىسى	AS	TB =	TB-	041912	<u></u>	
Note:	A = Acceptable N = Not provided/applicab SW = See worksheet	ole	R = Rin	o compound	ts detected	5β - ≜ D = Du TB = T	P2 - 56	- 0	41772 SPG+#
	ted Samples:								1
1	SL-087-NBZ-SS-0.5	11	MBIKE	>	21			31	
2		12			22			32	
3		13			23		····	33	
4		14			24			34	
2 3 4 5 6		15			25			35	
6		16			26			36	
7		17			27			37	
8		18			28			38	

Notes:_

DC#: 29230P7 SDG#: 29230P7 Page: /of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

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.				
ili Initial calibration	1			
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?			ļ	
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? VHIL 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 #: 2923007 SDG #: pu cond

VALIDATION FINDINGS CHECKLIST

Page: ²of 2 Reviewer: *F1* 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.		arc.	~	(2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
Target compounds were detected in the field blanks.		/	<u>~</u>	1

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VALIDATION FINDINGS WORKSHEET Field Blanks

Page: of	Reviewer: FT	2nd Reviewer:
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HPLC

Y N/A

Were field blanks identified in this SDG?

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METHOD:

Were target compounds detected in the field blanks? $\frac{1}{4} \frac{1}{19} \frac{1}{19} \frac{1}{19}$ Blank units: 129 Sampling date: ⁽

	/ Ambient Blank
	/ Atmospheric Blank
	/ Trip Blank
	:ype: (circle one) Field Blank / T
	: (circle one
,	d blank type:

Associated Samples:_ Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:_

ıtification				-		
Sample Identification						
Blank ID	7/6					
Blank ID Blank ID	78-04912	14				
Compound		Gasoline Range Organics	ס			CROL

Associated sample units:_ Blank units:

Sampling date:
Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank / Other:

Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:

Associated Samples:

Blank ID Sample Identification				
Blank ID Blank ID				
Compound				CRO

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".

2923027 SDG#: LDC #:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Reviewer: Page:

> HPLC METHOD: GC

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

CF = A/C

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

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

r									
	****			Reported	Recalculated	Reported	Recalculated	Renorted	Receionisted
#	Standard ID	Calibration Date	Сотроипа	CF (SV/std)	CF CF CF (520std)	•	Average CF (initial)	Ĺ	%RSD
-	100/	1/12/15	9/20 es-e12	66121	66121 66121	17064.3	!!	4.8	2.2
T									
	•								
7									
\neg									
1									
6)	······································		-						
Т									
\dashv									
4									
\neg									

Comments: Referto 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# 2923007 SDG.#, Lour

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

130	C 13	, A
Page:	Reviewer:	2nd Reviewer:

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

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

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

I									,
					Reported	Recalculated	Reported	Recalculated	
**	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV	д%	g %	
-	1/Hyh H12082 03	1/h4/h	GRO 55-012	1000.0	19.206	19:206	6	6	
7									
က		٠							
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.

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7/7	e cover
LDC #:	SDG #: sec

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

FT	Y
Reviewer:	2nd reviewer:

METHOD: CC 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

	Percent Difference		Q		
	Percent Recovery	Recalculated	70.7		
	Percent Recovery	Reported	70.4		
	Surrogate Found		51.80		
	Surrogate Spiked		Oh		
	Column/Detector		24		
Sample ID: # /	Surrogate		4- BFB		

iample ID:							Ī
Surrogate	Column/Detector	Surrogate Spiked	Surrogate	Percent	Percent	Percent Difference	
				Reported	Recalculated		1F===
							
							
							

Sample ID:

					Ī
Percent Difference					
Percent Recovery	Recalculated				
Percent Recovery	Reported				
Surrogate Found				:	***
Surrogate Spiked					
Column/Detector					
Surrogate					
	Surrogate Surrogate Percent Percent Spiked Found Recovery	Surrogate Surrogate Percent Spiked Found Recovery Recovery	Surrogate Surrogate Percent Percent Spiked Found Recovery Recovery Recovery Recovery Recovery Recovery	Surrogate Surrogate Percent Percent Spiked Found Recovery Recovery Recovery Recovery Recovery Recovery	Surrogate Surrogate Percent Percent Spiked Found Recovery Recovery Recovery Recovery Recovery Recovery Recovery Recalculated

2723007 ul comp SDG#: LDC#:

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

2nd Reviewer: Reviewer:_

Page:

GC HPLC METHOD:

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

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

SC = Concentration

LCSD = Laboratory control sample duplicate percent recovery

Class/D LCS/LCSD samples:

	S	pike	Spiked	1 Sample	דכ	TCS	TCSD	SD	rcs	TCS/FCSD
Compound	₹ ₹	Added mg/Kg/	Conce	Concentration	Percent i	Percent Recovery	Percent Recovery	Recovery	.	RPD
	SOT	TCSD	FCS	CSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)	25.0	28.0	2/.8	21.0	23	63	48	88	٨	2
Diesel (8015)										
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)							, ,			
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)									7	
	-		•		•					

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

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292	3
LDC #:_	SDG #:

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

2nd

(
X/A	N/A	
Z	N	

METHOD:

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

Example:

Sample ID.

(A)(Fv)(Df)	(RF)(Vs or Ws)(%S/100)
Concentration=	_

Compound Name

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

Concentration =_

*	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
				-	
Comments.	alika.				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Total Petroleum Hydrocarbons as Extractables

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

III. Calibration Verification

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

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment 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

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	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 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SDG	#: <u>29230D8</u> #: <u>12D176</u> ratory: <u>EMAX Laboratori</u> e				PLE T _evel	ENESS WOF	RKSHEET	Date: 2 /2 Page: / of / Reviewer: 15 2nd Reviewer:
MET	HOD: GC TPH as Extrac	table	es (EPA SW	846 Metho	od 801	5B)		2nd Reviewer:
	samples listed below were ation findings worksheets		iewed for ead	ch of the fo	ollowir	ng validation are	eas. Validation findi	ngs are noted in attached
	Validation	Are	а				Comments	
1.	Technical holding times			A	Samp	ing dates:	4/19/12	
11	Initial calibration			Δ	o _l	PSD 52	อ	
111.	Calibration verification/ICV			Δ		KY/COV E	20	
IV.	Blanks			Δ				
V	Surrogate recovery			A				
VI.	Matrix spike/Matrix spike du	plicat	es	И	cli	ent si	reciful	
VII.	Laboratory control samples			A	L	cs/P		
VIII.	Target compound identifica	tion		Δ				
IX.	Compound quantitation/RL/	LOQ/	LODs	Δ		<u>-</u>		
X.	System Performance			Δ				
XI.	Overall assessment of data			Δ				
XII.	Field duplicates							
XIII.	I. Field blanks			FB	= E B-	NBZ-55-	-041712	
XIII. Field blanks ND EB = EB NB Z - SS 0 4 17 12								
	SOL	T					T	
1	SL-017-NBZ-SS-0.0-0.5	11	MBUKIS		2		31	
2	SL-086-NBZ-SS-0.0-0.5	12	MB425		2		32	
3	SL-087-NBZ-SS-0.0-0.5	13			2		33	
4		14			2		34	
5	************************************	15			2		35	
6		16			2		36	
7		17			2		37	
8		18			2		38	
9		19			2		39	
10		20			3)	40	

Notes:

VALIDATION FINDINGS CHECKLIST

Page: /of Z Reviewer: F2 2nd Reviewer: A

Method: GC HPLC

Method: GC HPLC				
Validation Area	Yes	No	NA	Findings/Comments
L Technical holding times.				442
All technical holding times were met.	/			
Cooler temperature criteria was met.				
ii. Initial calibration	ı		1	
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?	<u></u>			
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.				
W Surrogate spikes		7		er (a. 1874). Oliver er e
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?				
MIII. 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?				
X. Regional Quality Assurance and Quality Control.				
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?			/	

VALIDATION FINDINGS CHECKLIST

Page: 2of 2
Reviewer: F2
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification	,,,,,			1 mungs/outments
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?	/	1		
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. Rield ⁱ blanks				April 1980
Field blanks were identified in this SDG.		W	2	
Target compounds were detected in the field blanks.	-		ملا	

2923008 LDC# SDG#

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page: 2nd Reviewer: Reviewer:

METHOD: GC_

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

CF = A/C average CF = sum of the CF/number of standards %RSD = $100 \cdot (S/\chi)$

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

L									
				Reported	Recalculated	Reported	Recalculated	Renorted	Recalculated
*	Standard ID	Calibration Date	Compound	CF (/eOstd)	CF (/o Cetd)	_	Average CF	%RSD	%RSD
-	7607	EFH (08-011)	EFH (08-011)	762%	(6252	11	23084/	8.01	8.01
T									
	-								
2									
6		-	-						
T									
F									
4									

Comments: Referto 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 #: 29 23008 SDG.#: for cour

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

Page: / of 2nd Reviewer: Reviewer:_

> HPLC METHOD: GC

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

using the following calculation:

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

Where: ave. CF = initial calibration average CF

CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV	0%	۵%
-	40017 CO7	71/54/h	TO401 EFH (C8-C40)	0.00	H1.86h	41.86+	0	0
	H2904207	4/22/12	7	O.vs	533.28	533.2%	7	7
74	1/34/h 4/10/100	4/28/12	7	O'as	540.33	540.33	7	Þ
				(20				
က	th/ 097 07	2/1/0/4	9	300.0	37.8	3.7.2	۸	2
4								
					The second secon			

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.

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677	cover
#. 4	3 #: see
LDC	SDG

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

METHOD: CC 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:

						
0	7.16	4.14	22.838	25	7	1kxq10sane
0	30.5	<i>5.03</i>	20.447	001	20	Bromohenzene
	Recalculated	Reported				
Percent Difference	Percent Recovery	Percent Recovery	Surrogate Found	Surrogate Spiked	Column/Detector	Surrogate

	Percent Difference			
		ılated		
	Percent Recovery	Recalculated		
	Percent Recovery	Reported		
	Surrogate Found			
	Surrogate Spiked			
	Column/Detector			
	Surrogate			
Sample ID:				

Sample ID:

	17	,	
Percent Difference			
Percent Recovery	Recalculated		
Percent Recovery	Reported		
Surrogate Found			25.
Surrogate Spiked			
Column/Detector			
Surrogate			

2923008 LDC#: SDG#:

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

Page: /of_ Reviewer:_ 2nd Reviewer:_

METHOD: CG HPLC

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

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

SC = Concentration

Where: SSC = Spiked sample concentration SA = Spike added Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

537 LCS/LCSD samples:

	S	oike	Spiked	Sample	II.	SOT	TCSD	SD	rcs	TCS/rCSD
Compound	Ad (mg	Added (mg//kg)	Conce	Concentration	Percent	Percent Recovery	Percent Recovery	Recovery		RPD
	rcs	LCSD	rcs	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 (4-e40)	0.05	O.W	1.34	40.7	. 06	90	. /8	18	01	01

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.

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2 92	3
LDC #.	SDG#:

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

7 10/		Å
Page:	Reviewer:	2nd Reviewer:

METHOD:

Y Z Z

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

Concentration=

(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.

623087

Concentration =

Compound Name

(23084.06471) (30) (0.703) 3.8 mg/kg

Ommants.	*	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations (Qualifications
Omments:						
Comments:						
omments.	<u> </u>					
Johnnents:						
Johnnents:	ŀ					
Johnnants.						
Ommants						
Commanie						
	COMME	ents:				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Nitroglycerine & PETN

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8332 for Nitroglycerine and PETN.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

Triplicate injections of the initial calibration were performed.

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

Retention time windows were evaluated and considered technically acceptable.

III. Continuing Calibration

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

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

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No nitroglycerine or PETN was found.

V. Surrogate Recovery

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

VI. Matrix Spike/(Matrix Spike) Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory Nitroglycerine & PETN - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Nitroglycerine & PETN - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Nitroglycerine & PETN - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

	t: 12D176 htory: EMAX Laborato	_ ories, Ir	<u>10.</u>	L	₋evel IV				R 2nd R	Page:/of eviewer:// eviewer:/
The sa	OD: HPLC Nitroglyce amples listed below w ion findings workshee	ere rev	-			•	areas. Validati	ion fin	dings are r	noted in attache
	Validatio	on Are	a				Comr	nents		
I.	Technical holding times			A-	Sampling d	lates:	4/19/12			
Ш	Initial calibration			Д			7 7			
III.	Calibration verification/IC	CV		A						
IV.	Blanks			A						
V	Surrogate recovery			Δ						
VI.	Matrix spike/Matrix spike	duplica	tes	\sim	ulie	nt	specife	بنيا		
VII.	Laboratory control samp	les		A	ic	sp	specife			
VIII.	Target compound identif	ication		Δ						
IX.	Compound quantitation/l	RL/LOQ	/LODs	Д						
X.	System Performance			A						
XI.	Overall assessment of d	ata		A						
XII.	Field duplicates			\mathcal{N}		-D-7				
XIII.	Field blanks			ND	EB=		<u> SB - 0</u>			
Note:	A = Acceptable N = Not provided/applica SW = See worksheet	able	R = Rin	o compounds sate eld blank	s detected	D =	/ 冯 2-SS- = Duplicate = Trip blank = Equipment bla			120154
validate	d Samples: 501L									<u> </u>
1 SL	-017-NBZ-SS-0.0-0.5	11	MBUKIS	•	21			31		
2 SL	-086-NBZ-SS-0.0-0.5	12			22			32		
3 SL	-087-NBZ-SS-0.0-0.5	13			23			33		
4		14			24			34		
5	·	15			25			35		
6		16			26			36		
7		17		· · · · · · · · · · · · · · · · · · ·	27			37		
8		18			28			38		
9		19			29			39		
10		20			30			40		
Notes:										

LDC #: 29230D24 VALIDATION COMPLETENESS WORKSHEET

LDC #:	29230P24	
SDG #:	per waren	

VALIDATION FINDINGS CHECKLIST

Page: /of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

	Г			
Validation Area	Yes	No	NA	Findings/Comments
Technical holding times		-		
All technical holding times were met.				
Cooler temperature criteria was met.			SAMOOT SECTION	
th. 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?				
IIV. 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.				i L
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 #: 29 230 D24 SDG #: pu cond

VALIDATION FINDINGS CHECKLIST

Validation Area	Yes	No	NA	Findings/Comments
X ilarget 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				drog kadaran di Santa da Santa
Overall assessment of data was found to be acceptable.	/			
XIV Field duplicates				All the second of the second o
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.		سمل		
Target compounds were detected in the field blanks.			٧	

27230024 LDC#: SDG#:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: _s Reviewer: Page:

METHOD: GC

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

average CF = sum of the CF/number of standards %RSD = 100 $^{\circ}$ (S/X) CF = A/C

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

				Reported	Recalculated	Reported	Recalculated	Renorted	Recalculated
#	Standard ID	Calibration Date	Compound	CF (2x2\std)	(2524d)		Average CF (initial)	ł	%RSD
-	181	11/01/2	nitroghann	701	701	X-101	X 101		7.5
T									
	•								
2									
6									
T									
					·				
4									

Comments: Referto 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#: 27230024 SDG.#, for cour

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Page: Reviewer:

METHOD: GC

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

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

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

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Сотроипа	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV		Д%
-	Asourad	71/54/4	n.troylyanin	750.0	727.66	727.66	5	3
			,		ı			
2	PLOXCYA	A/m/h	7	9'asL	750.63	23.052	0	0
ю		·						
							-	
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#. 27230024

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Reviewer: FT 2nd reviewer:

METHOD: GC HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

#

Sample ID: # /						
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1,2 - Dinitrobenzene	6-18	200	252.9	92/	37/	O
)						

Sample ID:

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

Sample ID:

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

2	
230	30
293	3
-DC#:	SDG #:

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

/ot/	B	A
Page:	Reviewer:	2nd Reviewer:

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

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

SC = Concentration

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples:_

	S	pike	Spiked	Sample	דנ	SJT	TC	LCSD	/SOT	TCS/FCSD
Compound	8 Z	Added,	Conce	Concentration	Percent	Percent Recovery	Percent	Percent Recovery	8	RPD
	SOT	TCSD	CSOT	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)										
Nitrogly com	7500	ass	. 0262	7970	. 501	701	. 901	701	\	` .
0										

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

2 9230PH LDC # SDG#

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

/ Of /	4	7
Page:	Reviewer:	2nd Reviewer:

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عات	
CO.	
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Were all reported results recalculated and verified for all level IV samples? Were all recalculated results for detected target compounds within 10% of the reported results?

Example:		Sample ID.
	٠	
(A)(Fv)(Df)	(RF)(Vs or Ws)(%S/100)	
Concentration=	_	

Compound Name

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

Concentration =_

Vs= Initial volume of the sample Ws= Initial weight of the sample %S= Percent Solid

	**	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
	╫					
	\vdash					
	╁╌					
	+					
	+					
	╁					
	+					,
	+					
	9	· ·				
Comments:	5	.3				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Explosives

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-017-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8330A for Explosives.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

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

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

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No explosive contaminants were found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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.

Santa Susana Field Laboratory Explosives - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-017-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Explosives - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Explosives - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

	#: <u>12D176</u> ratory: <u>EMAX Laborato</u>	_ ories, I	<u>1C.</u>	L	evel IV			Pa Revie	nge: <u>/</u> of_ wer: wer:
MET	HOD: HPLC Explosive	es (EPA	A SW 846 Me	thod 8330	A)			2nd Revie	wer:
The	samples listed below wation findings workshe	vere rev			,	ilidation areas. Va	alidation fir	ndings are noted	l in attache
	Validati	on Are	a				Comments	3	
I.	Technical holding times			Д	Sampling da		, 		
11	Initial calibration			Δ	%	psD <u>1</u> 20			
III.	Calibration verification/I	cv		Δ		jor/cove	22		
IV.	Blanks			Δ		•			
V	Surrogate recovery			Δ					
VI.	Matrix spike/Matrix spike	e duplica	tes	A	SL-0	12 - NBZ - SB	6-0-5-1	LS MS/D	
VII.	Laboratory control samp	oles		A	ice	10			
VIII	. Target compound identi	fication		Δ					
IX.	Compound quantitation/	RL/LOQ	/LODs	Α					
X.	System Performance			A					
XI.	Overall assessment of c	lata		Д					
XII.	Field duplicates			N					
XIII	. Field blanks			ND	FB=	EB-1-182	-3 <i>B - 0</i>	41712	
Note:	A = Acceptable N = Not provided/applic SW = See worksheet	able	R = Rin	o compounds sate eld blank	s detected	D = Duplicate TB = Trip blar EB = Equipme	nk	417/2 509 #	12P154
Valida	ted Samples: Sのル								
1 5	SL-017-NBZ-SS-0.0-0.5	11			21		31		
2 5	L-086-NBZ-SS-0.0-0.5	12			22		32		
3 8	L-087-NBZ-SS-0.0-0.5	13			23		33		
4		14			24		34		
5		15			25		35		
6		16			26		36		
7		17			27		37		
8		18			28		38		
9		19			29		39		
10		20			30		40	·	
Note	S:	-							

LDC #: 29230D40 VALIDATION COMPLETENESS WORKSHEET

VALIDATION FINDINGS CHECKLIST

Page:_/of_ Z Reviewer:_ F1_ 2nd Reviewer:_ A

Method: GC HPLC

Wetnod: Y' GCHPLC				
Validation Area	Yes	No	NA	Findings/Comments
l. Technical holding times				
All technical holding times were met.	_			
Cooler temperature criteria was met.				
II. Inittal 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?	<u> </u>		_	
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	1	I		
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 1 u				
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!	1			
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.			سلا	-
Was a MS/MSD analyzed every 20 samples of each matrix?	/		معط	
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				energy (1)
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				

LDC #: 29 230 040 SDG #: pu cond

VALIDATION FINDINGS CHECKLIST

Page: 2of 2
Reviewer: F1
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification	100	NO	, KA	1 indings/connitents
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 diplicates				
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.		مصلا	7	
Target compounds were detected in the field blanks.		/		

29230 BU SDG#: LDC#.

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page: Reviewer: 2nd Reviewer:

METHOD: GC

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

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

A = Area of compound,

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

				Reported	Recalculated	Reported	Recalculated	Renorted	Receiptated
#	Standard ID	Calibration Date	Compound	CF (れン std)	CF. (2んン std).	Average CF (initial)	Average CF (Initial)		%RSD
-	1001	4/2/12	#MX	2/3.76	2/3.76	230.494	230.494	D-£	7.0
	8/2		2,46-727	422.80	422.80	451.583	457.583	6-7	2-7
	-								
7									
T									
m									
	·								
T									
4									

Comments: Referto 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#: 292 30/04C.

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

130 2nd Reviewer: Reviewer:__ Page: /

METHOD: GC_

FLC

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

using the following calculation:

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

Where: ave. CF = initial calibration average CF

CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

Average CF(lcal)/ Compound CCV Conc.
Ooh
2,4,6-TNB WU

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.

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LDC#:	SDG #: se

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

FT	E
Reviewer:	2nd reviewer

Page: __of __

METHOD: __ GC __HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
1, 2 - Dinitrobenzenc	812	رمع	189.9	95.0	0.26	0

sample IU:							
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference	
				Reported	Recalculated		<u>г —</u>
							<u> </u>
							Т
							
							T

Sample ID:

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

LDC#: 2923004 SDG#:

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

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Page:_	Reviewer:	ind Reviewer:

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GC_HPLC METHOD:

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

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

SC = Concentration

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples:

	S	oike	Spiked	Sample	Γ(TCS	רכ	LCSD	'SOT	rcs/rcsp
Compound	Adde (1997)	Added Hay	Concel (744	Concentration (44)	Percent	Percent Recovery	Percent	Percent Recovery	~	RPD
	SOT	LCSD	TCS	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)	con	wo	2010	1960	001	JW)	86	76	8	~
2,4,6-Trinitrotoluene (8330)	ww	w	0881	0761	16	16	68	89	W	0
-	•		•		•		•			-

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

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VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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Page:	Reviewer:	and Davigwer

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METHOD:	X N N/A

ere all reported results recalculated and verified for all level IV samples? ere all recalculated results for detected target compounds within 10% of the reported results?

(RF)(Vs or Ws)(%S/100) (A)(Fv)(Df) Concentration=

Example:

Sample ID.

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

Concentration =

Compound Name

# Sample ID Compound Concentrations Concentration Concentrations Concentration Concentratio						
Somments:	#=	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations (Qualifications
Comments:	<u></u>					
Somments:						
Somments:		-				
Somments:						
Somments:	<u> </u>					
Comments:	1_					
Somments:	ļ. 					
Comments:						
	l mo	ents.				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Alcohols

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Alcohols.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

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

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

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No alcohol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	Α .

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory Alcohols - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Alcohols - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Alcohols - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

	#: <u>12D176</u> atory: <u>EMAX Laboratori</u> e	es, Ir	ıc.	L	.evel I\	/			2nd	Page:of_ Reviewer: Reviewer:
METH	HOD: GC Alcohols (EPA	SW	846 Method	8015B)					ZHU	Reviewer
	amples listed below wer tion findings worksheets		iewed for ea	ch of the fo	ollowing	validation a	reas. Validatio	on fir	ndings are	noted in attach
	Validation	Are	а				Comm	ents	.	
1.	Technical holding times			<u> </u>	Sampling		4/19/12			
	Initial calibration			Δ	%	BD = 20				
111.	Calibration verification/ICV			Δ			150			
IV.	Blanks			Δ		,				
V	Surrogate recovery			2	na	t ma	فنسب			
VI.	Matrix spike/Matrix spike du	uplicat	es	2	cl	ient V	specif	لو		
VII.	Laboratory control samples			A	vc	OIP	1 1			
VIII.	Target compound identifica	tion	·	<u> </u>						
IX.	Compound quantitation/RL	/LOQ/	LODs	A						
X.	System Performance			Δ						
XI.	Overall assessment of data	1		Δ						
XII.	Field duplicates			7						
XIII.	Field blanks		···	NP	EB	= 53-1	1 132 - S13 187 - SS	= 0	77772	
Note: Validat	A = Acceptable N = Not provided/applicable SW = See worksheet ed Samples:	е	R = Rin	o compounds sate eld blank		D = I TB =	ロ のネー S S Duplicate = Trip blank = Equipment blan			2 # 12PISU
7	SL-087-NBZ-SS-0.0-0.5	11	MBLKIS		21			31		
	<u> </u>	12	MISCELL		22			32		
3		13			23			33		
4		14			24			34		
5		15			25			35		
6		16		······································	26			36		
7		17			27			37		
8		18		ш.	28			38		
9		19			29			39		
10		20			30			40		
Notes										

LDC #: 29230D43 VALIDATION COMPLETENESS WORKSHEET

VALIDATION FINDINGS CHECKLIST

Page: /of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

Validation Area Yes No NA Findings/Comments IN 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? IN 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
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?
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?
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?
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?
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? IVA 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?
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?
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?
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?
Was a 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?
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?
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%? Were all the retention times within the acceptance windows?
Were all the retention times within the acceptance windows?
V. Blanks i
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?
What was the MAC and 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?
VIIIL 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?
X: Regional Quality Assurance and Quality Control.
Were performance evaluation (PE) samples performed?
Were the performance evaluation (PE) samples within the acceptance limits?

LDC #: 29230043 SDG #: pur cond

VALIDATION FINDINGS CHECKLIST

Page: _2of 2 Reviewer: _F2 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	T			# 1
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				office of a
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.		عمد	1	
Target compounds were detected in the field blanks.		/	X	

29230043 SDG#: LDC#

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

2nd Reviewer: Reviewer: Page:

> FPC METHOD: GC

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

CF = A/C

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

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

				Reported	Donolesilated	1000			
# Sta	Standard ID	Calibration Date	Compound	H	CF.	<u> </u>	Average CF	ARSD	RECRICINALED
<u>-</u>	18 L	4/9/12	e thanol	9301.30	9301.30 9201.30	i i	.	5.2	7.5
T							1 1		
	-	-							
7									
Ţ									
6	<u> </u>		-						
							-		
4									
1		1							
			,						

Comments: Referto 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 #. 292301043 SDG # / Cour

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

130 2nd Reviewer: Reviewer: Page: /

> HPLC METHOD: GC

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

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

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

					Reported	Recalculated	Renorted	Recalculated
Standard ID		Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV		Q%
\$020001A		4/20/12	-thanol	0	8.59	8.59	7-	7-
		•				-		
	_							
	ł						,	
	١							

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.

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29	3
LDC#:	SDG#:

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

Jo,	B	Z
Page:	Reviewer:_	Reviewer:
		2nd

GC HPLC METHOD:

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

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

SC = Concentration

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

16217 LCS/LCSD samples:_

	S	Spike	Spiked	Spiked Sample	דכ	rcs	rcsp	SD	rcs)	TCS/FCSD
Compound	Add (ng	dded 9 Key	Concentra (🎮)	ntration	Percent 6	Percent Recovery	Percent Recovery	Recovery	8	RPD
	SOT	CSD	SOT	CCSD	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)										
Ethamo	Qoool	00001	Oohol	015 6	, 501	104	. 26	93	=	. 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.

330043	ganer
292	3
#	#
2	SDG

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

/ot/		8
Page:	Reviewer:	2nd Reviewer:

GC HP	Were all rep	
METHOD:	X N N/A	

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

		٠
:	(A)(Fv)(Df)	(RF)(Vs or Ws)(%S/100)
	Soncentration≖	

Example:

Sample ID.

Compound Name

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

Concentration =

*	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations (Qualifications
				-	
	•				
ŀ					-
Comments:	ints:				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Glycols

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers one soil sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Glycols.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All holding time requirements were met.

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

II. Initial Calibration

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

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

Retention time windows were evaluated and considered technically acceptable.

III. Calibration Verification

Calibration verification was performed at required frequencies.

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

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

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

IV. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG 12D154) was identified as an equipment blank. No glycol contaminants were found.

V. Surrogate Recovery

Surrogates were not required by the method.

VI. Matrix Spike/Matrix Spike Duplicates

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.

Santa Susana Field Laboratory Glycols - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Glycols - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Glycols - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

LDC	#: 29230D45	V	ALIDATIO	N COMF	LETE	NESS WORKSHEET	Date: 2/2
SDG	#: 12D176			l	Level I	V	Page: /of /
Labo	ratory: <u>EMAX Laboratorie</u>	s In	<u>c.</u>				Reviewer: 7 2nd Reviewer: A
MET	HOD: GC Glycols (EPA S	sw 8	346 Method 8	015B)			2nd Reviewer:
The s	samples listed below were	e rev	iewed for ea	ch of the f	ollowing	g validation areas. Validatior	n findings are noted in attached
valida	ation findings worksheets	•					
	Validation	Are	а			Comme	ents
l.	Technical holding times			4	Samplin	ng dates: 4/19/12	
II	Initial calibration		·-···	A	•	% PSD = 30	
111.	Calibration verification/ICV			A		104/cw = 20	
iV.	Blanks			Д		•	
V	Surrogate recovery			\sim	n	ot required	
VI.	Matrix spike/Matrix spike du	plicat	es	\sim	u	lient specifie	rd
VII.	Laboratory control samples			A	u	es 10	
VIII	Target compound identification	tion		A			
IX.	Compound quantitation/RL/	LOQ/	LODs	4			
X.	System Performance			4			
XI.	Overall assessment of data			А			
XII.	Field duplicates			N,			
XIII.	Field blanks			No	FE	B = EB LUBE SB	- 0417/2
						= EB - NBZ - SS	- 041712
Note:	A = Acceptable N = Not provided/applicable SW = See worksheet)	R = Rins	o compound sate eld blank	s detecte	d D = Duplicate TB = Trip blank EB = Equipment blank	SDG # 12 D154
/alida	ted Samples: SOL						
1	SL-087-NBZ-SS-0.0-0.5	11	MBLKIS		21	3	1
2		12			22	3	2
3		13			23	3	3
4		14			24	3	4
5		15			25	3	5
6		16			26	3	6
7		17			27	3	7
8		18		····	28	3	8
ا ما		10			20		, I

Notes:_

LDC #: 29230 P45 SDG #: pu waren

VALIDATION FINDINGS CHECKLIST

Page: /of 2
Reviewer: F1
2nd Reviewer:

Method: GC HPLC

Wetnod: 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		ı		
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		1		
Was a method blank associated with every sample in this SDG?			٠ ,-	
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?	1	_	/	
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?		_		·
X Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				

LDC#: 29230 D45 SDG#: pu cond

VALIDATION FINDINGS CHECKLIST

Page: 7of 2
Reviewer: F7
2nd Reviewer: A

Validation Area	Yes	No		
X: Earget compound identification	res	NO	NA	Findings/Comments
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				ere a la companya di seriesa di s
Field blanks were identified in this SDG.		У	1	
Target compounds were detected in the field blanks.			Y	

2 9230 PUS SDG #: LDC #:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page: Reviewer. 2nd Reviewer:

> FPLC METHOD: GC

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

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

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

				Reported	Récalculated	Reported	Recalculated	Renorted	Receiculated
*	Standard ID	Calibration Date	Compound	CF (YOstd)	CF CF (4Ostd)	Average CF (initial)	Average CF (initial)		%RSD
-	127	2//8//	Propylene 9140	7536	7836	7684.4	7684.4	1	7.01
T		•							
T									
77									
				·					
(
ol.	<u> </u>								
\top							\.		
1					·				
4									
T									

Comments: Referto 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#: 29230045 SDG# w coun

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

100	C 22	3
Page:	Reviewer:	2nd Reviewer.

HPLC METHOD: GC_

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

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

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

					Reported	Recalculated	Reported	Recalculated
*	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.		CF/Conc. CCV	g%	0 %
-	TD20004D	2//02/4	Popylene 61400/	25:0		21.94	7/	12
7								
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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.

29230pm SDG#: LDC #:

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

Page: /of_ Reviewer:_

2nd Reviewer:

METHOD: / GC HPLC

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

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

Where: SSC = Spiked sample concentration SA = Spike added Laboratory control sample percent recovery

SC = Concentration

LCSD = Laboratory control sample duplicate percent recovery

LCS/LCSD samples:

	S	Spike	Spiked	Sample	רל	SOT	ΓÖ	rcsp	SOT	TCS/rcsD
Compound	₹ <u>₹</u>	Added ma/kg/	Conce (Concentration	Percent	Percent Recovery	Percent F	Percent Recovery	. E	RPD
	rcs	CSD CCSD	SOT	TCSD	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)										
Die Anglene Glyw/	0-25	S.0	2/2	41.4	60/	601	93	93	6	01

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.

2 32 3004T

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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Page:	Reviewer:

2nd Reviewer:

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SDG #: 467	<u> </u>	METHOD:

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

Example:	
(A)(Fv)(Df)	(RE)(Vs or Ws)(%S/100)
Concentration=	

Compound Name

Sample ID.

A= Area or height of the compound to be measured Fv= Final Volume of extract Df= Dilution Factor

Concentration =

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

*	Sample ID	Cómpound	Reported Concentrations	Recalculated Results Concentrations (Qualifications
					•
·					
					• *
Comments:	nts:				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 27, 2013

Matrix:

Soil

Parameters:

Perchlorate

Validation Level:

Level IV

Laboratory:

EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 12D176

Sample Identification

SL-012-NBZ-SS-0.0-0.5

Introduction

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

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

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

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

V. Blanks

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

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogate spikes were not required by the method.

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 12D176	All compounds reported below the RL.	J (all detects)	А

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.

Santa Susana Field Laboratory Perchlorate - Data Qualification Summary - SDG 12D176

SDG	Sample	Compound	Flag	A or P	Reason (Code)
12D176	SL-012-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Perchlorate - Laboratory Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Perchlorate - Field Blank Data Qualification Summary - SDG 12D176

No Sample Data Qualified in this SDG

SDG #	#: <u>29230D87</u> #: <u>12D176</u>	_	ALIDATIOI		PLETI Level		S WOR	KSHEET	Date:²/レ᠈ Page:/of_/
Labor	atory: <u>EMAX Laboratori</u>	es, I	<u>nc.</u>						Reviewer: /5
METH	IOD: LC/MS Perchlorate	(EP	A SW846 Me	ethod 685	50)				2nd Reviewer:
Tho c	amples listed below wors	rovi	owed for each	ah of the t	followin	a volid	lation area	a Validation findi	ngo are noted in attached
	tion findings worksheets.		ewed for eac	on the	Ollowii	ig vallu	alion area	s. validation illidii	ngs are noted in attached
<u> </u>	T				<u> </u>				
	Validation	Area						Comments	
1.	Technical holding times			A	Sampli	ing dates	S:	4/19/12	
11.	GC/MS Instrument performa	ance c	heck	Δ				,	
111.	Initial calibration			Δ		r2			
IV.	Continuing calibration/ICV			Δ		10	v /cw	4 15/50	LODV = 50
V.	Blanks			Δ					
VI.	Surrogate spikes			N	n	ot	regun	سا	
VII.	Matrix spike/Matrix spike du	plicate	es	~	c	lient	- Sp	ecified	
VIII.	Laboratory control samples			A	L	as /1	<u> </u>	/	
IX.	Regional Quality Assurance	and C	Quality Control	N					
X.	Internal standards			4					
XI.	Target compound identificati	ion		Δ					
XII.	Compound quantitation/RL/L	_OQ/L	ODs	Δ					
XIII.	Tentatively identified compo	unds	(TICs)	N					
XIV.	System performance			A					
XV.	Overall assessment of data			A					
XVI.	Field duplicates			N					
XVII.	Field blanks			N	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:						o blank			
1 S	L-012-NBZ-SS-0.0-0.5	11	MB		2	21		31	
2		12				22		32	
3		13				23		33	
4		14				24		34	
5		15				25		35	
			i			1		1 1	

1_	SL-012-NBZ-SS-0.0-0.5	11	MB	21	31	
2		12		22	32	
2 3 4 5		13		23	33	
4		14		24	34	
		15		25	35	
6	·	16		26	 36	
7		17		27	37	
8		18		28	 38	
9		19		29	39	
10		20		30	40	

LDC#: 29230P87

VALIDATION FINDINGS CHECKLIST

Page: /of 2
Reviewer: FT
2nd Reviewer: _____

Method: Semivolatiles (EPA SW 846 Method 8270C) Perchlorate 6850

Validation Area	Yes	No	NA	Findings/Comments
A THE MORE REPORTED IN THE PROPERTY OF THE PRO				
All technical holding times were met.	_			
Cooler temperature criteria was met.			20 81 12 112 112 112 112 112	
Were the DFTPP performance results reviewed and found to be within the specified criteria?	_			
Were all samples analyzed within the 12 hour clock criteria?		and solding on the		
MARAGED STORES		i		The second se
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) \leq 30% and relative response factors (RRF) \geq 0.05?				
IV Gordinuma contration with the Telegraphy All Market Contration (Contration)				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?		-		
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			/	
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?				,
XeBlanks				
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.				
W. Simophe spices				
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?				
At Matex spike Many spike diplicate construction and the construction of the construct				
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 Esbaisto), contra camana				
Was an LCS analyzed for this SDG?				

LDC#: 29230087

VALIDATION FINDINGS CHECKLIST

Page: 8f 2
Reviewer: FT
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?		-		· manga commenc
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		1		
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?	my - main estáneos.	- Totalis is in conse		
A THERMORENESS AND THE STATE OF				
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?			2010-2010	
Nt Taigetéannaann dheimitean ar ga agus an an Sanach an an an an an an an an an				ALCOHOLD STORY
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?			2.50	
All Compound standards (CP) . The Compound of				
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. rentitivoty identificativanisporto. Tripo karakteritiko 1766-1979 etile iliza ja e				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			_	
Were relative intensities of the major ions within \pm 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)?				
XV-Syrien ponomalicado de la companya del companya del companya de la companya de				
System performance was found to be acceptable.			aria alum had k	
XV. Cognial assessment or care. The same of the same o				
Overall assessment of data was found to be acceptable.				
XVIII ald phalicated the second later of 2 and 2			i.	
Field duplicate pairs were identified in this SDG.				
Target compounds were detected in the field duplicates.				
XVII THOIR HARRY				
Field blanks were identified in this SDG.		-		
Target compounds were detected in the field blanks.				

LDC# 29230D87 SDG# /20/76

Initial Calibration Calculation Verification **VALIDATION FINDINGS WORKSHEET**

6850 METHOD:

perchlorate Parameter:

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

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

LDC# 27230/87

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

o To	ᇤ	X
Page:	Reviewer:	2nd Reviewer:

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

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

% Difference = 100 * (ave. RRF - RRF)/ave. RRF RRF = $(A_x)(C_y)/(A_y)(C_x)$

ave. RRF = initial calibration average RRF RRF = continuing calibration RRF Where:

A_x = Area of compound, C_x = Concentration of compound,

 $A_{\rm ls}$ = Area of associated internal standard $C_{\rm ls}$ = Concentration of internal standard

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	RRF (CC)	RRF (CC)	%	%
-	ces 9.19	7//17/	Phenol (1st internal standard)	2.0	2.076	2.076	401	101
		•	Naphthalene (2nd integral standard)					
			Fluorene (3rd internal standard)					
			Pentachlopophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Renzotalpyrene (6th internal stathdard)					
7			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)					
ო			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# 29230/18/

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: of Reviewer: FT

METHOD: GC/MS BNA (EPA SW 846 Method 8270). /210/6/22 683

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

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

Where: SSC = Spike concentration SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC)

LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 162

	S	iike	ďS	ike	31	SO	01	1 CSD	/SO I	CS/I CSD
Compound	A A	Added (wg/K)	Concentra (~ //	ntration	Percent Recovery	Recovery	Percent I	Percent Recovery	2	RPD
	, 10s	, csp	, so I	U I CSD	Renorted	Recalc	Renorted	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene				٠						
Pentachlorophenol										
Pyrene	-									
Perchlorate	25.0	2.0	1-5%	24.4	Co/	201	80	26	Ŋ	~
				,						

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#: 29230187

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page:	of_	
Reviewer:	FT	
2nd reviewer:_	Δ	

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

Perchorati 6850

Y	Ń	N/A
Y	N	(N/A
		$\overline{}$

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

Conc	entratio	on = $(A_{o})(I_{o})(V_{o})(DF)(2.0)$ $(A_{io})(RRF)(V_{o})(V_{i})(%S)$	Example:
A _x	=	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D:
\mathbf{A}_{is}	= -	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = ()()()()()()
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)	$n \mathcal{N}$
Df	=	Dilution Factor.	192
%S	=	Percent solids, applicable to soil and solid matrices only.	
20	=	Factor of 2 to account for GPC cleanup	

2.0	= Factor of 2 to accou	ant for GPC cleanup			
#	Sample ID	Compound	Reported Concentration ()	Calculated Concentration ()	Qualification
		· · · · · · · · · · · · · · · · · · ·			
				,	
	· · · · · · · · · · · · · · · · · · ·				
				······································	
	· · · · · · · · · · · · · · · · · · ·				
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SAMPLE DELIVERY GROUP

12D192

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	3550B	8015B EFH	111
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	3550B	8081A	Ш
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	3550B	8082	Ш
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	3550B	8270C	111
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	3550B	8270C SIM	111
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	7471A	7471A	Ш
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	300.0	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	314.0	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	6850	!!!
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	7199	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	8151A	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	8330A	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	8332	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	GEN PREP	9014	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03	N	TOTAL	6020	111
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03R	N	GEN PREP	7199	Ш
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	D192-03W	N	TOTAL	6020	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	3550B	8081A	111
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	3550B	8082	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	3550B	8270C	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	3550B	8270C SIM	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	7471A	7471A	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	GEN PREP	300.0	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	GEN PREP	314.0	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	GEN PREP	6850	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	GEN PREP	7199	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	GEN PREP	8151A	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07	N	TOTAL	6020	III
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5MS	D192-07M	MS	3550B	8082	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07R	N	GEN PREP	7199	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5MSD	D192-07S	MSD	3550B	8082	Ш
20-Apr-2012	SL-202-NBZ-SS-0.0-0.5	D192-07W	N	TOTAL	6020	III
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	3550B	8081A	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	3550B	8082	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	3550B	8270C	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	3550B	8270C SIM	III
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	7471A	7471A	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	GEN PREP	300.0	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	GEN PREP	314.0	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	GEN PREP	6850	III
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	GEN PREP	7199	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	GEN PREP	8151A	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05	N	TOTAL	6020	Ш
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05R	N	GEN PREP	7199	111
20-Apr-2012	SL-170-NBZ-SS-0.0-0.5	D192-05W	N	TOTAL	6020	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	3550B	8015B EFH	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	3550B	8081A	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	3550B	8082	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	3550B	8270C	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	3550B	8270C SIM	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	7471A	7471A	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	300.0	Ш
•						

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	314.0	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	6850	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	7199	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	8151A	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	8330A	111
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	GEN PREP	8332	111
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	· N	GEN PREP	9014	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02	N	TOTAL	6020	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5MS	D192-02M	MS	GEN PREP	300.0	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5MS	D192-02M	MS	GEN PREP	314.0	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02R	N	GEN PREP	7199	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5MSD	D192-02S	MSD	GEN PREP	300.0	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5MSD	D192-02S	MSD	GEN PREP	314.0	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	D192-02W	N	TOTAL	6020	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	3550B	8015B EFH	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	3550B	8081A	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	3550B	8082	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	3550B	8270C	Ш
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	3550B	8270C SIM	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	7471A	7471A	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	300.0	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	314.0	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	6850	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	7199	Ш
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	8151A	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	8330A	III

*						
Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	8332	lil
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	GEN PREP	9014	Ш
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04	N	TOTAL	6020	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04R	N	GEN PREP	7199	III
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	D192-04W	N	TOTAL	6020	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	3550B	8081A	111
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	3550B	8082	ili
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	3550B	8270C	111
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	3550B	8270C SIM	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	7471A	7471A	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	300.0	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	314.0	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	6850	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	7199	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	8151A	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	8330A	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	8332	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	GEN PREP	9014	111
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01	N	TOTAL	6020	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01R	N	3550B	8015B EFH	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01R	N	GEN PREP	7199	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	D192-01W	N	TOTAL	6020	Ш
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	3550B	8081A	HI
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	3550B	8082	Ш
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	3550B	8270C	111
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	3550B	8270C SIM	111

 Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	7471A	7471A	III
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	GEN PREP	300.0	III
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	GEN PREP	314.0	III
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	GEN PREP	6850	Ш
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	GEN PREP	7199	III
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	GEN PREP	8151A	111
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06	N	TOTAL	6020	III
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06R	N	GEN PREP	7199	Ш
20-Apr-2012	SL-171-NBZ-SS-0.0-0.5	D192-06W	N	TOTAL	6020	Ш

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D192 Laboratory: EMXT

EDD Filename: Prep12D192R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: GENCHEM

Method: 300.0 Matrix: SO

Sample ID:SL-018-NBZ-SS-0.0-0.5 Collected: 4/20/2012 10:59:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FLUORIDE	0.811	J	0.607	MDL	1.21	PQL	MG/KG	J	Z

Method Category: GENCHEM

Method: 9014 Matrix: SC

Sample ID:SL-080-NBZ-SS-0.0-0.5 Collected: 4/20/2012 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
CYANIDE	0.431	J	0.291	MDL	0.581	PQL	MG/KG	J	Z

Method Category: METALS

Method: 6020 Matrix: SO

 Sample ID:SL-016-NBZ-SS-0.0-0.5
 Collected: 4/20/2012 12:10:00
 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	0.252		0.124	MDL	0.248	PQL	MG/KG	J	Q
BARIUM	93.3		0.248	MDL	0.497	PQL	MG/KG	J	Q
LEAD	15.7		0.124	MDL	0.248	PQL	MG/KG	J	Q
SILVER	0.0730	J	0.0621	MDL	0.124	PQL	MG/KG	J	Z
SODIUM	107	J	62.1	MDL	124	PQL	MG/KG	J	Z
Zirconium	6.21	U	3.11	MDL	6.21	PQL	MG/KG	UJ	Q

Sample ID:SL-018-NBZ-SS-0.0-0.5 Collected: 4/20/2012 10:59:00 Analysis Type: RES/TOT Dilution: 0,976

Campro 12102 010 1122 00 010 010					.,	,,			
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.240	STORES AND A STREET OF STREET OF STREET	0.118	MDL	0.237	PQL	MG/KG	J	Q
BARIUM	69.5		0.237	MDL	0.474	PQL	MG/KG	J	Q
BORON	3.46	J	2.96	MDL	5.92	PQL	MG/KG	J	Z
LEAD	10.5		0.118	MDL	0.237	PQL	MG/KG	J	Q
SODIUM	69.3	J	59.2	MDL	118	PQL	MG/KG	J	Z
Zirconium	5.92	U	2.96	MDL	5.92	PQL	MG/KG	UJ	Q

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D192 Laboratory: EMXT

EDD Filename: Prep12D192R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020 Matrix: SO

Sample ID: SL-080-NBZ-SS-0.0-0.5	Collec	ted: 4/20/2	Collected: 4/20/2012 9:50:00				/TOT	Dilution: 0.985	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.192	J	0.115	MDL	0.229	PQL	MG/KG	J	Z, Q
BARIUM	70.3		0.229	MDL	0.458	PQL	MG/KG	J	Q
BORON	2.95	J	2.86	MDL	5.73	PQL	MG/KG	J	Z
LEAD	9.40		0.115	MDL	0.229	PQL	MG/KG	J	Q
SODIUM	59.0	J	57.3	MDL	115	PQL	MG/KG	J	Z
Zirconium	5.73	U	2.86	MDL	5.73	PQL	MG/KG	UJ	Q

						<i>)</i>		_	0,000
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.254		0.112	MDL	0.224	PQL	MG/KG	J	Q
BARIUM	76.6		0.224	MDL	0.448	PQL	MG/KG	J	Q
BORON	3.38	J	2.80	MDL	5.60	PQL	MG/KG	J	Z
LEAD	13.1		0.112	MDL	0.224	PQL	MG/KG	J	Q
Zirconium	5.60	U	2.80	MDL	5.60	PQL	MG/KG	UJ	Q

Sample ID:SL-170-NBZ-SS-0.0-0.5 Collected: 4/20/2012 10:55:00 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	0.188	J	0.110	MDL	0.219	PQL	MG/KG	J	Z, Q
BARIUM	63.0		0.219	MDL	0.439	PQL	MG/KG	J	Q
LEAD	7.49		0.110	MDL	0.219	PQL	MG/KG	J	Q
Zirconium	5.48	U	2.74	MDL	5.48	PQL	MG/KG	UJ	Q

Sample ID:SL-171-NBZ-SS-0.0-0.5 Collected: 4/20/2012 1:25:00 Analysis Type: RES/TOT Dilution: 0.976

Imple ID. 3L-17 1-NBZ-33-0.0-0.3	Conec	teu. 4/20/2	012 1.20.	.00	naiyaia i	ypo. ital	<i>3</i> , 1 O 1	_	0.310
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.207	J	0.106	MDL	0.213	PQL	MG/KG	J	Z, Q
BARIUM	75.9		0.213	MDL	0.426	PQL	MG/KG	J	Q
LEAD	6.98		0.106	MDL	0.213	PQL	MG/KG	J	Q
SODIUM	54.7	J	53.2	MDL	106	PQL	MG/KG	J	Z
Zirconium	5.32	U	2.66	MDL	5.32	PQL	MG/KG	UJ	Q

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D192

Laboratory: EMXT

Dilution: 0 976

EDD Filename: Prep12D192R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS

Method: 6020

Matrix: SO

Analysis Type: RES/TOT

		2//4/10/11 0.5/10							
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
ANTIMONY	0.170	J	0.105	MDL	0.210	PQL	MG/KG	J	Z, Q
BARIUM	104		0.210	MDL	0.420	PQL	MG/KG	J	Q
LEAD	5.80		0.105	MDL	0.210	PQL	MG/KG	J	Q
SELENIUM	0.365	J	0.210	MDL	0.420	PQL	MG/KG	J	Z
Zirconium	5.25	IJ	2.63	MDL	5.25	POL	MG/KG	UJ	0

Collected: 4/20/2012 10:10:00

Method Category:

SVOA

Method: 8015B EFH Matrix: SO

Dilution: 1

Sample ID: SL-016-NBZ-SS-0.0-0.5	Collec	ted: 4/20/2	012 12:10	D:00 A	nalysis T	ype: RES	i		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
EFH(C8-C11)	0.88	J	0.63	MDL	1.3	PQL	MG/KG	J	Z		

Sample ID: SL-089-NBZ-SS-0.0-0.5

Collected: 4/20/2012 12:06:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
EFH(C8-C11)	0.58	J	0.57	MDL	1.1	PQL	MG/KG	J	Z

Method Category:

SVOA

Method: 8082

SO Matrix:

Dilution: 1

Sample ID: SL-089-NBZ-SS-0.0-0.5	Collec	ted: 4/20/2	012 12:00	6:00 A	nalysis T	ype: RES	i		Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
Aroclor 5460	3.6	J	1.9	MDL	3.7	PQL	UG/KG	J	Z

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

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D192 Laboratory: EMXT

EDD Filename: Prep12D192R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-018-NBZ-SS-0.0-0.5	Collected: 4/20/2012 10:59:00	Analysis Type: RES-BASE/NEUTRAL Dilution: 1
3anipie ID. 3L-0 10-NBZ-33-0.0-0.3	CONECTEU. 4/20/2012 10.55.00	Allarysis Type, RES-BASE/NEUTRAL Dilution.

Analyte '	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CHRYSENE	1.7	J	1.0	MDL	2.1	PQL	UG/KG	J	Z
PHENANTHRENE	1.4	J	1.0	MDL	2.1	PQL	UG/KG	J	Z

Sample ID:SL-080-NBZ-SS-0.0-0.5 Collected: 4/20/2012 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
INDENO(1,2,3-CD)PYRENE	1.7	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
NAPHTHALENE	1.1	J	0.99	MDL	2.0	PQL	UG/KG	J	Z
PHENANTHRENE	1.9	J	0.99	MDL	2.0	PQL	UG/KG	J	Z

Sample ID:SL-089-NBZ-SS-0.0-0.5 Collected: 4/20/2012 12:06:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	1.7	J	0.96	MDL	1.9	PQL	UG/KG	J	Z
Butylbenzylphthalate	14	J	9.5	MDL	19	PQL	UG/KG	J	Z

Sample ID:SL-170-NBZ-SS-0.0-0.5 Collected: 4/20/2012 10:55:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)ANTHRACENE	0.95	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
BENZO(K)FLUORANTHENE	1.0	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
Butylbenzylphthalate	13	J	9.2	MDL	18	PQL	UG/KG	J	Z
CHRYSENE	1.8	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
FLUORENE	1.5	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
PHENANTHRENE	1.6	J	0.93	MDL	1.9	PQL	UG/KG	J	Z

Sample ID:SL-171-NBZ-SS-0.0-0.5 Collected: 4/20/2012 1:25:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code
BENZO(A)PYRENE	1.0	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
BENZO(G,H,I)PERYLENE	1.8	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
Butylbenzylphthalate	15	J	9.2	MDL	18	PQL	UG/KG	J	Z
FLUORANTHENE	1.6	J	0.93	MDL	1.9	PQL	UG/KG	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: 12D192

Laboratory: EMXT

EDD Filename: Prep12D192R

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-171-NBZ-SS-0.0-0.5

Collected: 4/20/2012 1:25:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
INDENO(1,2,3-CD)PYRENE	1.5	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
PYRENE	1.5	J	0.93	MDL	1.9	PQL	UG/KG	J	Z

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Lab Reporting Batch ID: 12D192

Laboratory: EMXT

EDD Filename: Prep12D192R

eQAPP Name: CDM_SSFL_120730_EMAX

Reason Code Legend

Reason Code	Description
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D192

Reporting Limit Outliers

Lab Reporting Batch ID: 12D192

eQAPP Name: CDM_SSFL_120730_EMAX

EDD Filename: Prep12D192R

Laboratory: EMXT

Method: 300.0

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-018-NBZ-SS-0.0-0.5	FLUORIDE	J	0.811	1.21	PQL	MG/KG	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-016-NBZ-SS-0.0-0.5	SILVER SODIUM	J J	0.0730 107	0.124 124	PQL PQL	MG/KG MG/KG	J (all detects)
SL-018-NBZ-SS-0.0-0.5	BORON SODIUM	J	3.46 69.3	5.92 118	PQL PQL	MG/KG MG/KG	J (all detects)
SL-080-NBZ-SS-0.0-0.5	ANTIMONY BORON SODIUM))	0.192 2.95 59.0	0.229 5.73 115	PQL PQL PQL	MG/KG MG/KG MG/KG	J (all detects)
SL-089-NBZ-SS-0.0-0.5	BORON	J	3.38	5.60	PQL	MG/KG	J (all detects)
SL-170-NBZ-SS-0.0-0.5	ANTIMONY	J	0.188	0.219	PQL	MG/KG	J (all detects)
SL-171-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.207 54.7	0.213 106	PQL PQL	MG/KG MG/KG	J (all detects)
SL-202-NBZ-SS-0.0-0.5	ANTIMONY SELENIUM	7 7	0.170 0.365	0.210 0.420	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8015B EFH

Matrix: so

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-016-NBZ-SS-0.0-0.5	EFH(C8-C11)	J	0.88	1.3	PQL	MG/KG	J (all detects)
SL-089-NBZ-SS-0.0-0.5	EFH(C8-C11)	J	0.58	1.1	PQL	MG/KG	J (all detects)

Method: 8082

Matrix:

SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-089-NBZ-SS-0.0-0.5	Aroclor 5460	J	3.6	3.7	PQL	UG/KG	J (all detects)

Method: 8270C SIM

Matrix:

SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-018-NBZ-SS-0.0-0.5	CHRYSENE PHENANTHRENE	J J	1.7 1.4	2.1 2.1	PQL PQL	UG/KG UG/KG	J (all detects)

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

3/8/2013 12:00:56 PM

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Page 1 of 2

Reporting Limit Outliers

Lab Reporting Batch ID: 12D192 Laboratory: EMXT

EDD Filename: Prep12D192R eQAPP Name: CDM_SSFL_120730_EMAX

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-080-NBZ-SS-0.0-0.5	INDENO(1,2,3-CD)PYRENE NAPHTHALENE PHENANTHRENE	J J J	1.7 1.1 1.9	2.0 2.0 2.0	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)
SL-089-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE Butylbenzylphthalate	J	1.7 14	1.9 19	PQL PQL	UG/KG UG/KG	J (all detects)
SL-170-NBZ-SS-0.0-0.5	BENZO(A)ANTHRACENE BENZO(K)FLUORANTHENE Butylbenzylphthalate CHRYSENE FLUORENE PHENANTHRENE	1 1 1 1	0.95 1.0 13 1.8 1.5 1.6	1.9 1.9 18 1.9 1.9	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)
SL-171-NBZ-SS-0.0-0.5	BENZO(A)PYRENE BENZO(G,H,I)PERYLENE Butylbenzylphthalate FLUORANTHENE INDENO(1,2,3-CD)PYRENE PYRENE)))	1.0 1.8 15 1.6 1.5	1.9 1.9 18 1.9 1.9	PQL PQL PQL PQL PQL PQL	UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG	J (all detects)

Method: 9014

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-080-NBZ-SS-0.0-0.5	CYANIDE	J	0.431	0.581	PQL	MG/KG	J (all detects)

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LDC 7	# :	29230E4
	· · -	

VALIDATION COMPLETENESS WORKSHEET

	_	_		
Δ	Г)	R	

	_			
SDG	#:	1	2D1	192

Laboratory: EMAX Laboratories, Inc.

74718

Reviewer:

2nd Reviewer:

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

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

	Validation Area		Comments
l.	Technical holding times	_	Sampling dates: 4/26/17
II.	ICP/MS Tune	_	
111.	Calibration	_	
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis		, from
VI.	Matrix Spike Analysis	Slw	ms/D (SD6:12D197)
VII.	Duplicate Sample Analysis	N	
ViII.	Laboratory Control Samples (LCS)	N	US/O
IX.	Internal Standard (ICP-MS)	N	1 >
X.	Furnace Atomic Absorption QC	N	
XI.	ICP Serial Dilution	17	
XII.	Sample Result Verification	N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	_	~
XV	Field Blanks	SW	CB= EB-NBZ-SS-041712(120154)

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:

9011

	50, 1			 	
1	SL-016-NBZ-SS-0.0-0.5	11	21	31	
2	SL-018-NBZ-SS-0.0-0.5	12	22	32	
3	SL-080-NBZ-SS-0.0-0.5	13	 23	 33	,
4	SL-089-NBZ-SS-0.0-0.5	14	24	34	
5	SL-170-NBZ-SS-0.0-0.5	15	25	35	
6	SL-171-NBZ-SS-0.0-0.5	16	26	 36	
7	SL-202-NBZ-SS-0.0-0.5	17	 27	37	
8		18	 28	 38	
9		19	 29	 39	
10		20	30	40	

Notes:	 	 	

LDC #: 29230E4

VALIDATION FINDINGS WORKSHEET Field Blanks

Page: of Beviewer: Of 2nd Reviewer:

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

Blank units: mg/L Associated sample units: mg/Kg Sampling date: 4/17/12 Soil factor applied 100x Field blank type: (circle one) Field Blank / Rinsate / Other: Blank units: mg/L Asson Sampling date: 4/17/12

Associated Samples:

₹

Sample Identification No Qualifiers (>5x) Action Limit 24.6 0.3 0.7 EB-NBZ-SS-041712 0.000613 Blank ID 0.000255 0.0492 Analyte D C င္မ z

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".

29230E4eb.wpd

SAMPLE DELIVERY GROUP

12D197

Attachment I

Sample ID Cross Reference and Data Review Level

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	3550B	8081A	III
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N [°]	3550B	8082	III
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	3550B	8270C	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	3550B	8270C SIM	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	7471A	7471A	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	GEN PREP	300.0	III
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	GEN PREP	314.0	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	GEN PREP	7199	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	GEN PREP	8151A	III
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01	N	TOTAL	6020	111
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01R	N	GEN PREP	7199	Ш
23-Apr-2012	SL-199-NBZ-SS-0.0-0.5	D197-01W	N	TOTAL	6020	111
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	3550B	8081A	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	3550B	8082	III
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	3550B	8270C	III
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	3550B	8270C SIM	III
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	7471A	7471A	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	GEN PREP	300.0	111
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	GEN PREP	314.0	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	GEN PREP	7199	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	GEN PREP	8151A	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02	N	TOTAL	6020	Ш
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02R	N	GEN PREP	7199	III
23-Apr-2012	SL-200-NBZ-SS-0.0-0.5	D197-02W	N	TOTAL	6020	111
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	3550B	8081A	Ш
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	3550B	8082	III

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	3550B	8270C	[]]
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	3550B	8270C SIM	Ш
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	7471A	7471A	III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	GEN PREP	300.0	Ш
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	GEN PREP	314.0	Ш
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	GEN PREP	7199	· III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	GEN PREP	8151A	111
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03	N	TOTAL	6020	III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5MS	D197-03M	MS	TOTAL	6020	III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03R	N	GEN PREP	7199	Ш
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5MSD	D197-03S	MSD	TOTAL	6020	III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03T	N	3550B	8081A	III
23-Apr-2012	SL-201-NBZ-SS-0.0-0.5	D197-03W	N	TOTAL	6020	111
23-Apr-2012	EB-NBZ-SS-042312	D197-04	EB	3520C	8081A	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	3520C	8082	111
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	3520C	8270C	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	7470A	7470A	III
23-Apr-2012	EB-NBZ-SS-042312	D197-04	EB	GEN PREP	300.0	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	GEN PREP	7199	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	GEN PREP	8151A	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04	ЕВ	TOTAL	6020	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04R	EB	GEN PREP	314.0	Ш
23-Apr-2012	EB-NBZ-SS-042312	D197-04R	ЕВ	GEN PREP	7199	111

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: 12D197

Laboratory: EMXT

EDD Filename: Prep12D197R eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: METALS
Method: 6020

Matrix: AQ

Sample ID: EB-NBZ-SS-042312	Collect	Collected: 4/23/2012 3:30:00 A					/TOT	Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
CALCIUM	0.0303	J	0.0250	MDL	0.100	PQL	MG/L	J	Z	
COPPER	0.000579	J	0.00050	MDL	0.00100	PQL	MG/L	J	Z	
LEAD	0.000106	J	0.00010	MDL	0.00100	PQL	MG/L	J	Z	

Method Category: METALS

Method: 6020

Matrix: SO

Sample ID: SL-199-NBZ-SS-0.0-0.5

Collected: 4/23/2012 9:42:00

Analysis Type: RES/TOT

Dilution: 0.985

								0.000		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
ANTIMONY	0.278		0.107	MDL	0.213	PQL	MG/KG	J	Q	
BARIUM	63.2		0.213	MDL	0.427	PQL	MG/KG	J	Q	
LEAD	8.76		0.107	MDL	0.213	PQL	MG/KG	J	Q	
SELENIUM	0.253	J	0.213	MDL	0.427	PQL	MG/KG	J	Z	
SODIUM	64.1	J	53.4	MDL	107	PQL	MG/KG	J	Z	
Zirconium	5.34	υ	2.67	MDL	5.34	PQL	MG/KG	UJ	Q	

Sample ID: SL-200-NBZ-SS-0.0-0.5

Collected: 4/23/2012 10:39:00

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	0.131	J	0.107	MDL	0.215	PQL	MG/KG	J	Z, Q
BARIUM	79.3		0.215	MDL	0.429	PQL	MG/KG	J	Q
LEAD	7.99		0.107	MDL	0.215	PQL	MG/KG	J	Q
SODIUM	56.4	J	53.7	MDL	107	PQL	MG/KG	J	Z
Zirconium	5.37	U	2.68	MDL	5.37	PQL	MG/KG	UJ	Q

Sample ID: SL-201-NBZ-SS-0.0-0.5

Collected: 4/23/2012 11:10:00

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	0.438		0.117	MDL	0.234	PQL	MG/KG	J	Q	
BARIUM	96.6		0.234	MDL	0.469	PQL	MG/KG	J	Q	
LEAD	28.6		0.117	MDL	0.234	PQL	MG/KG	J	Q	
Zirconium	5.86	υ	2.93	MDL	5.86	PQL	MG/KG	UJ	Q	

^{*} denotes a non-reportable result

Lab Reporting Batch ID: 12D197

Laboratory: EMXT

EDD Filename: Prep12D197R eQAPP Nam

eQAPP Name: CDM_SSFL_120730_EMAX

Method Category: SVOA

Method: 8270C SIM Matrix: SO

Sample ID: SL-200-NBZ-SS-0.0-0.5 Collected: 4/23/2012 10:39:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
BENZO(B)FLUORANTHENE	1.0	J	0.93	MDL	1.9	PQL	UG/KG	J	Z
BIS(2-ETHYLHEXYL)PHTHALATE	17	J	9.2	MDL	18	PQL	UG/KG	J	Z

Sample ID: SL-201-NBZ-SS-0.0-0.5 Collected: 4/23/2012 11:10:00 Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1-METHYLNAPHTHALENE	1.5	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
ACENAPHTHYLENE	1.8	J	1.0	MDL	2.0	PQL	UG/KG	J	Z
DIBENZO(A,H)ANTHRACENE	1.4	J	1.0	MDL	2.0	PQL	UG/KG	J	Z

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Lab Reporting Batch ID: 12D197

Laboratory: EMXT eQAPP Name: CDM_SSFL_120730_EMAX

EDD Filename: Prep12D197R

Reason Code Legend

Reason Code	Description
*XIII	Exceeded Calibration Range
A	Professional Judgment
В	Method Blank Contamination
Q	Matrix Spike Lower Estimation
Q	Matrix Spike Lower Rejection
Q	Matrix Spike Upper Estimation
Z	Reporting Limit Trace Value

Page 3 of 3

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

12D197

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: 12D197

Laboratory: EMXT

EDD Filename: Prep12D197R eQAPF

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020 Matrix: SO		At House					
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-201-NBZ-SS-0.0-0.5MS (TOT) SL-201-NBZ-SS-0.0-0.5MSD (TOT) (SL-199-NBZ-SS-0.0-0.5 SL-200-NBZ-SS-0.0-0.5 SL-201-NBZ-SS-0.0-0.5)	BARIUM LEAD	- 128	143 128	75.00-125.00 75.00-125.00	- -	BARIUM LEAD	J (all detects)
SL-201-NBZ-SS-0.0-0.5MS (TOT) SL-201-NBZ-SS-0.0-0.5MSD (TOT) (SL-199-NBZ-SS-0.0-0.5 SL-200-NBZ-SS-0.0-0.5 SL-201-NBZ-SS-0.0-0.5)	TITANIUM	-49	266	75.00-125.00	-	TITANIUM	No Qual, 4X
SL-201-NBZ-SS-0.0-0.5MS (TOT) SL-201-NBZ-SS-0.0-0.5MSD (TOT) (SL-199-NBZ-SS-0.0-0.5 SL -200-NBZ-SS-0.0-0.5 SL -201-NBZ-SS-0.0-0.5)	ALUMINUM ANTIMONY IRON MANGANESE Zirconium	54 - 48 52 44	139 73 126 177 50	75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00 75.00-125.00	- - - -	ALUMINUM ANTIMONY IRON MANGANESE Zirconium	J(all detects) UJ(all non-detects) Al, Fe, Mn No Qual, >4X

3/12/2013 8:07:16 AM ADR version 1.7.0.207 Page 1 of 1

Reporting Limit Outliers

Lab Reporting Batch ID: 12D197

Laboratory: EMXT

EDD Filename: Prep12D197R eQAPP Name

eQAPP Name: CDM_SSFL_120730_EMAX

Method: 6020

Matrix: AQ

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SS-042312	CALCIUM COPPER LEAD	J	0.0303 0.000579 0.000106	0.100 0.00100 0.00100	PQL PQL PQL	MG/L MG/L MG/L	J (all detects)

Method: 6020

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-199-NBZ-SS-0.0-0.5	SELENIUM SODIUM	J	0.253 64.1	0.427 107	PQL PQL	MG/KG MG/KG	J (all detects)
SL-200-NBZ-SS-0.0-0.5	ANTIMONY SODIUM	J	0.131 56.4	0.215 107	PQL PQL	MG/KG MG/KG	J (all detects)

Method: 8270C SIM

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-200-NBZ-SS-0.0-0.5	BENZO(B)FLUORANTHENE BIS(2-ETHYLHEXYL)PHTHALATE	J	1.0 17	1.9 18	PQL PQL	UG/KG UG/KG	J (all detects)
SL-201-NBZ-SS-0.0-0.5	1-METHYLNAPHTHALENE ACENAPHTHYLENE DIBENZO(A,H)ANTHRACENE	J	1.5 1.8 1.4	2.0 2.0 2.0	PQL PQL PQL	UG/KG UG/KG UG/KG	J (all detects)

3/8/2013 12:24:25 PM ADR version 1.7.0.207 Page 1 of 1

LDC #: 29230F4

VALIDATION COMPLETENESS WORKSHEET

ADR

SDG #: 12D197 Laboratory: EMAX Laboratories, Inc.

74708/747/18

Date: <u>4774</u> (
Page: <u> </u> of <u> </u>
Reviewer: OL
2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6040B/6020A17900)

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
1.	Technical holding times	+	Sampling dates: 4/73/17
11.	ICP/MS Tune		
III.	Calibration		
IV.	Blanks	A	
V.	ICP Interference Check Sample (ICS) Analysis	-	
VI.	Matrix Spike Analysis	N	MS/D(A), Fe, Mr, T; >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 N	
XIII.	Overall Assessment of Data	N	
XIV.	Field Duplicates	_	
ΧV	Field Blanks	SW	63=4

NI.	-+	
IM	nte:	

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:
Vandated	Campics.

Valid	ated Samples:	1/2	/water			
1	SL-199-NBZ-SS-0.0-0.5	11		21	31	
2	SL-200-NBZ-SS-0.0-0.5	12		22	32	
3	SL-201-NBZ-SS-0.0-0.5	13		23	33	
4	EB-NBZ-SS-042312	14		24	 34	
5	SL-201-NBZ-SS-0.0-0.5MS	15		25	35	
6	SL-201-NBZ-SS-0.0-0.5MSD	16		26	 36	
7		17		27	 37	
8		18		28	38	
9		19		29	39	
10		20		30	40	

Notes:			
*			

LDC #: 29230F4

VALIDATION FINDINGS WORKSHEET Field Blanks

Page: \of \ 2nd Reviewer: 🥰

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

Associated sample units: mg/Kg Blank units: mg/L Associated sample units: mg/Kg Sampling date: 4/17/12 Soil factor applied 10| Field blank type: (circle one) Field Blank / Rinsate / Other:

Associated Samples:

All Soil

Associated Carriples.	Sample Identification												
isia ciamica timoaco canon.		No Qualifiers (>5x)		·									
(all all all all all all all all all all	Blank ID	4 Action		_									
	Analyte		Ca	nO	Pb								

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

DE296

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-Mar-2012	SL-003-NBZ-SS-0.0-0.5	6577278	N	3546	1625C	111
12-Mar-2012	SL-003-NBZ-SS-0.0-0.5	6577278	N	3550B	8015B	Ш
12-Mar-2012	SL-003-NBZ-SS-0.0-0.5	6577278	N	METHOD	8315A	III
12-Mar-2012	SL-003-NBZ-SB-4.0-5.0	6577279	N	3546	1625C	111
12-Mar-2012	SL-003-NBZ-SB-4.0-5.0	6577279	N	3550B	8015B	III
12-Mar-2012	SL-003-NBZ-SB-4.0-5.0	6577279	N	METHOD	8315A	111
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5	6577275	N	3546	1625C	111
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5	6577275	N	3550B	8015B	111
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5	6577275	N	METHOD	8315A	III
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5MSD	P577275M241827A	MSD	METHOD	8315A	111
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5MSD	P577275M261813	MSD	3546	1625C	111
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5MS	P577275R241817A	MS	METHOD	8315A	Ш
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5MS	P577275R261753	MS	3546	1625C	Ш
12-Mar-2012	SL-002-NBZ-SB-4.0-5.0	6577276	N	3546	1625C	111
12-Mar-2012	SL-002-NBZ-SB-4.0-5.0	6577276	N	3550B	8015B	111
12-Mar-2012	SL-002-NBZ-SB-4.0-5.0	6577276	N	METHOD	8315A	111
12-Mar-2012	SL-002-NBZ-SB-7.5-8.5	6577277	N	3546	1625C	111
12-Mar-2012	SL-002-NBZ-SB-7.5-8.5	6577277	N	3550B	8015B	III
12-Mar-2012	SL-002-NBZ-SB-7.5-8.5	6577277	N	METHOD	8315A	111
12-Mar-2012	SL-010-NBZ-SB-4.0-5.0	6577282	N	3546	1625C	Ш
12-Mar-2012	SL-010-NBZ-SB-4.0-5.0	6577282	N	3550B	8015B	Ш
12-Mar-2012	SL-010-NBZ-SB-4.0-5.0	6577282	N	METHOD	8315A	III
12-Mar-2012	SL-007-NBZ-SB-4.0-5.0	6577280	N	3546	1625C	111
12-Mar-2012	SL-007-NBZ-SB-4.0-5.0	6577280	N	3550B	8015B	Ш
12-Mar-2012	SL-007-NBZ-SB-4.0-5.0	6577280	N	METHOD	8315A	Ш
12-Mar-2012	SL-007-NBZ-SB-9.0-10.0	6577281	N	3546	1625C	Ш

Sample Cross Reference

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DE296

Laboratory: LL

EDD Filename: DE296_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 8315A Matrix: SO

Sample ID: SL-021-NBZ-SS-0.0-0.5	Collec	Collected: 3/13/2012 3:30:00				pe: RES		Dilution: 1	
	Lab	Lab		DL		RL	Data Review	Reason	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	740	J	620	MDL	1500	PQL	ug/Kg	J	Z

Lab Reporting Batch ID: DE296

Laboratory: LL

EDD Filename: DE296_v1

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE296

Reporting Limit Outliers

Lab Reporting Batch ID: DE296

Laboratory: LL

EDD Filename: DE296_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8315A							
<i>Matrix:</i> SO		Barrior (1995) Barrior (1995) (1995)	4	position in	MIT AT L	433	
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-NBZ-SS-0.0-0.5	FORMALDEHYDE	J	740	1500	PQL	ug/Kg	J (all detects)

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

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SAMPLE DELIVERY GROUP

DE297

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-Mar-2012	SL-019-NBZ-SS-0.0-0.5	6580645	N	3546	1625C	III
13-Mar-2012	SL-019-NBZ-SS-0.0-0.5	6580645	N	3550B	8015B	Ш
13-Mar-2012	SL-019-NBZ-SS-0.0-0.5	6580645	N	METHOD	8315A	Ш
13-Mar-2012	SL-019-NBZ-SS-0.0-0.5MSD	P580645M242141A	MSD	METHOD	8315A	111
13-Mar-2012	SL-019-NBZ-SS-0.0-0.5MS	P580645R242131A	MS	METHOD	8315A	III
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0	6580644	N	3546	1625C	III
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0	6580644	N	3550B	8015B	111
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0	6580644	6580644 N M		8315A	[1]
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0MSD	P580644M261307	MSD	3546	1625C	111
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0MS	P580644R261248	MS	3546	1625C	111
14-Mar-2012	SL-022-NBZ-SS-0.0-0.5	6580650	N	3546	1625C	111
14-Mar-2012	SL-022-NBZ-SS-0.0-0.5	6580650	N	3550B	8015B	!
14-Mar-2012	SL-022-NBZ-SS-0.0-0.5	6580650	N	METHOD	8315A	SII
14-Mar-2012	SL-022-NBZ-SB-4.0-5.0	6580646	N	3546	1625C	111
14-Mar-2012	SL-022-NBZ-SB-4.0-5.0	6580646	N	3550B	8015B	III
14-Mar-2012	SL-022-NBZ-SB-4.0-5.0	6580646	N	METHOD	8315A	111
14-Mar-2012	SL-022-NBZ-SB-9.0-10.0	6580647	N	3546	1625C	111
14-Mar-2012	SL-022-NBZ-SB-9.0-10.0	6580647	N	3550B	8015B	111
14-Mar-2012	SL-022-NBZ-SB-9.0-10.0	6580647	N	METHOD	8315A	III
14-Mar-2012	SL-024-NBZ-SS-0.0-0.5	6580652	N	3546	1625C	III
14-Mar-2012	SL-024-NBZ-SS-0.0-0.5	6580652	N	3550B	8015B	Ш
14-Mar-2012	SL-024-NBZ-SS-0.0-0.5	6580652	N	METHOD	8315A	HII
14-Mar-2012	SL-023-NBZ-SS-0.0-0.5	6580651	N	3546	1625C	Ш
14-Mar-2012	SL-023-NBZ-SS-0.0-0.5	6580651	N	3550B	8015B	Ш
14-Mar-2012	SL-023-NBZ-SS-0.0-0.5	6580651	N	METHOD	8315A	Ш
14-Mar-2012	SL-023-NBZ-SB-4.0-5.0	6580648	N	3546	1625C	III

Sample Cross Reference

Date Collected			Sample Type	Prep Method	Analytical Method	Review Level
14-Mar-2012	SL-023-NBZ-SB-4.0-5.0	6580648	N	3550B	8015B	111
14-Mar-2012	SL-023-NBZ-SB-4.0-5.0	6580648	N	METHOD	8315A	Ш
14-Mar-2012	SL-023-NBZ-SB-8.5-9.5	6580649	N	3546	1625C	111
14-Mar-2012	SL-023-NBZ-SB-8.5-9.5	6580649	N	3550B	8015B	III
14-Mar-2012	SL-023-NBZ-SB-8.5-9.5	6580649	N MET		8315A	Ш
14-Mar-2012	SL-030-NBZ-SS-0.0-0.5	6580653	3 N 3546		1625C	·
14-Mar-2012	SL-030-NBZ-SS-0.0-0.5	6580653	N	3550B	8015B	III
14-Mar-2012	SL-030-NBZ-SS-0.0-0.5	6580653	N	METHOD	8315A	III
15-Mar-2012	SL-029-NBZ-SS-0.0-0.5	6580654	N	3546	1625C	III
15-Mar-2012	SL-029-NBZ-SS-0.0-0.5	6580654	N	3550B	8015B	III
15-Mar-2012	SL-029-NBZ-SS-0.0-0.5	6580654	N	METHOD	8315A	HI
15-Mar-2012	SL-058-NBZ-SS-0.0-0.5	6580656	N	3546	1625C	III
15-Mar-2012	SL-058-NBZ-SS-0.0-0.5	6580656	N	3550B	8015B	III
15-Mar-2012	SL-058-NBZ-SS-0.0-0.5	6580656	N	METHOD	8315A	111
15-Mar-2012	SL-052-NBZ-SS-0.0-0.5	6580655	N	3546	1625C	111
15-Mar-2012	SL-052-NBZ-SS-0.0-0.5	6580655	N	3550B	8015B	Ш
15-Mar-2012	SL-052-NBZ-SS-0.0-0.5	6580655	N	METHOD	8315A	111
15-Mar-2012	EB-NBZ-SS-031512	6580658	ЕВ	3510C	8015B	III
15-Mar-2012	EB-NBZ-SS-031512	6580658	ЕВ	3520C	1625C	III
15-Mar-2012	EB-NBZ-SS-031512	6580658	ЕВ	METHOD	8315A	111
15-Mar-2012	EB-NBZ-SB-031512	6580657	ЕВ	3510C	8015B	111
15-Mar-2012	EB-NBZ-SB-031512	6580657	EB	3520C	1625C	111
15-Mar-2012	EB-NBZ-SB-031512	6580657	EB	METHOD	8315A	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DE297

Laboratory: LL

EDD Filename: DE297_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1625C Matrix: SO

Sample ID: SL-019-NBZ-SB-3.0-4.0

Collected: 3/13/2012 2:35:00

Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	17.7	U	17.7	MDL	35.4	PQL	ng/Kg	ΩΊ	Q

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DE297

EDD Filename: DE297_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
Q	Matrix Spike Lower Estimation
s	Surrogate/Tracer Recovery Upper Estimation

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE297

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE297

Laboratory: LL

EDD Filename: DE297_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1625C Matrix: SO			e e e e e e e e e e e e e e e e e e e	And the second			
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-019-NBZ-SB-3.0-4.0MS (SL-019-NBZ-SB-3.0-4.0)	N-NITROSODIMETHYLAMINE	67	-	70.00-130.00	-	N-NITROSODIMETHYLAMINE	J (all detects) UJ (all non-detects)

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SAMPLE DELIVERY GROUP

DE298

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Mar-2012	SL-053-NBZ-SS-0.0-0.5	6582497	N	3546	1625C	111
15-Mar-2012	SL-053-NBZ-SS-0.0-0.5	6582497	N	3550B	8015B	III
15-Mar-2012	SL-053-NBZ-SS-0.0-0.5	6582497	N	METHOD	8315A	IR
15-Mar-2012	SL-053-NBZ-SB-3.5-4.5	6582498	N	3546	1625C	III
15-Mar-2012	SL-053-NBZ-SB-3.5-4.5	6582498	N	3550B	8015B	III
15-Mar-2012	SL-053-NBZ-SB-3.5-4.5	6582498	N	METHOD	8315A	III
15-Mar-2012	SL-056-NBZ-SS-0.0-0.5	6582499	N	3546	1625C	III
15-Mar-2012	SL-056-NBZ-SS-0.0-0.5	6582499	N	3550B	8015B	III
15-Mar-2012	SL-056-NBZ-SS-0.0-0.5	6582499	N	METHOD	8315A	III
15-Mar-2012	SL-056-NBZ-SB-3.0-4.0	6582500	N	3546	1625C	Ш
15-Mar-2012	SL-056-NBZ-SB-3.0-4.0	6582500	N	3550B	8015B	Ш
15-Mar-2012	SL-056-NBZ-SB-3.0-4.0	6582500	N	METHOD	8315A	III
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5	6582502	N	3546	1625C	ill
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5	6582502	N	METHOD	8315A	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MS	6582503	MS	3546	1625C	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MS	6582503	MS	METHOD	8315A	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MSD	6582504	MSD	3546	1625C	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MSD	6582504	MSD	METHOD	8315A	Ш
16-Mar-2012	SL-067-NBZ-SB-1.5-2.5	6582501	N	3546	1625C	III
16-Mar-2012	SL-067-NBZ-SB-1.5-2.5	6582501	N	3550B	8015B	111
16-Mar-2012	SL-067-NBZ-SB-1.5-2.5	6582501	N	METHOD	8315A	III
16-Mar-2012	DUP-01-NBZ-QC-031612	6582508	FD	3546	1625C	III
16-Mar-2012	DUP-01-NBZ-QC-031612	6582508	FD	3550B	8015B	Ш
16-Mar-2012	DUP-01-NBZ-QC-031612	6582508	FD	METHOD	8315A	Ш
16-Mar-2012	SL-072-NBZ-SB-4.0-5.0	6582507	N	3546	1625C	Ш
16-Mar-2012	SL-072-NBZ-SB-4.0-5.0	6582507	N	3550B	8015B	Ш

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Mar-2012	SL-072-NBZ-SB-4.0-5.0	6582507	N	METHOD	8315A	III

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DE298

Laboratory: LL

EDD Filename: DE298_v1

Method:

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

8315A

Matrix: SO

Sample ID: SL-067-NBZ-SB-1.5-2.5	Collected: 3/16/2012 11:45:00 Analysis				nalysis T	ype: RES		Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	910	J	640	MDL	1600	PQL	ug/Kg	U	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DE298

Laboratory: LL eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DE298_v1

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
E	Laboratory Duplicate Precision
Q	Laboratory Duplicate Precision
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

Method Blank Outlier Report

Lab Reporting Batch ID: DE298

Laboratory: LL

EDD Filename: DE298_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8315A Matrix: SO								
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples				
P81813AB241915A	3/23/2012 7:15:00 PM	FORMALDEHYDE	1300 ug/Kg	DUP-01-NBZ-QC-031612 SL-053-NBZ-SB-3.5-4.5 SL-053-NBZ-SS-0.0-0.5 SL-056-NBZ-SB-3.0-4.0 SL-056-NBZ-SS-0.0-0.5 SL-067-NBZ-SB-1.5-2.5 SL-068-NBZ-SB-2.5-3.5 SL-072-NBZ-SB-4.0-5.0				

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-067-NBZ-SB-1.5-2.5(RES)	FORMALDEHYDE	910 ug/Kg	1600U ug/Kg

Reporting Limit Outliers

Lab Reporting Batch ID: DE298

Laboratory: LL

EDD Filename: DE298_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8315A Matrix: SO				e e mag		11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-067-NBZ-SB-1.5-2.5	FORMALDEHYDE	J	910	1600	PQL	ug/Kg	J (all detects)

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SAMPLE DELIVERY GROUP

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-Mar-2012	SL-071-NBZ-SB-4.0-5.0	6587615	N	3546	1625C	III
19-Mar-2012	SL-071-NBZ-SB-4.0-5.0	6587615	N	3550B	8015B	111
19-Mar-2012	SL-071-NBZ-SB-4.0-5.0	6587615	N	METHOD	8315A	III
19-Mar-2012	SL-071-NBZ-SB-4.0-5.0MSD	P587615M242157A	MSD	METHOD	8315A	111
19-Mar-2012	SL-071-NBZ-SB-4.0-5.0MS	P587615R242148A	MS	METHOD	8315A	111
19-Mar-2012	SL-074-NBZ-SB-0.5-1.5	6587618	N	3546	1625C	111
19-Mar-2012	SL-074-NBZ-SB-0.5-1.5	6587618	N	3550B	8015B	111
19-Mar-2012	SL-074-NBZ-SB-0.5-1.5	6587618	N	METHOD	8315A	1(1
19-Mar-2012	SL-073-NBZ-SB-9.0-10.0	6587617	N	3546	1625C	III
19-Mar-2012	SL-073-NBZ-SB-9.0-10.0	6587617	N	3550B	8015B	III
19-Mar-2012	SL-073-NBZ-SB-9.0-10.0	6587617	N	METHOD	8315A	III
19-Mar-2012	SL-073-NBZ-SB-4.0-5.0	6587616	N	3546	1625C	III
19-Mar-2012	SL-073-NBZ-SB-4.0-5.0	6587616	N	3550B	8015B	III
19-Mar-2012	SL-073-NBZ-SB-4.0-5.0	6587616	N	METHOD	8315A	111
20-Mar-2012	SL-075-NBZ-SS-0.0-0.5	6587621	N	3546	1625C	111
20-Mar-2012	SL-075-NBZ-SS-0.0-0.5	6587621	N	3550B	8015B	Ш
20-Mar-2012	SL-075-NBZ-SS-0.0-0.5	6587621	N	METHOD	8315A	III
20-Mar-2012	SL-076-NBZ-SS-0.0-0.5	6587622	N	3546	1625C	III
20-Mar-2012	SL-076-NBZ-SS-0.0-0.5	6587622	N	3550B	8015B	III
20-Mar-2012	SL-076-NBZ-SS-0.0-0.5	6587622	N	METHOD	8315A	111
20-Mar-2012	SL-077-NBZ-SS-0.0-0.5	6587623	N	3546	1625C	Ш
20-Mar-2012	SL-077-NBZ-SS-0.0-0.5	6587623	N	3550B	8015B	III
20-Mar-2012	SL-077-NBZ-SS-0.0-0.5	6587623	N	METHOD	8315A	III
20-Mar-2012	SL-077-NBZ-SB-2.5-3.5	6587624	N	3546	1625C	111
20-Mar-2012	SL-077-NBZ-SB-2.5-3.5	6587624	N	3550B	8015B	111
20-Mar-2012	SL-077-NBZ-SB-2.5-3.5	6587624	N	METHOD	8315A	III

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
20-Mar-2012	SL-069-NBZ-SB-3.0-4.0	6587619	N	3546	1625C	111
20-Mar-2012	SL-069-NBZ-SB-3.0-4.0	6587619	N	3550B	8015B	III
20-Mar-2012	SL-069-NBZ-SB-3.0-4.0	6587619	N	METHOD	8315A	111
20-Mar-2012	SL-070-NBZ-SS-0.0-0.5	6587620	N	3546	1625C	111
20-Mar-2012	SL-070-NBZ-SS-0.0-0.5	6587620	N	3550B	8015B	III
20-Mar-2012	SL-070-NBZ-SS-0.0-0.5	6587620	N	METHOD	8315A	Ш
21-Mar-2012	SL-066-NBZ-SB-2.0-3.0	6587626	N	3546	1625C	111
21-Mar-2012	SL-066-NBZ-SB-2.0-3.0	6587626	N	3550B	8015B	Ш
21-Mar-2012	SL-066-NBZ-SB-2.0-3.0	6587626	N	METHOD	8315A	III
21-Mar-2012	SL-065-NBZ-SB-1.0-2.0	6587625	N	3546	1625C	111
21-Mar-2012	SL-065-NBZ-SB-1.0-2.0	6587625	N	3550B	8015B	III
21-Mar-2012	SL-065-NBZ-SB-1.0-2.0	6587625	N	METHOD	8315A	III
21-Mar-2012	EB-NBZ-SS-032112	6587627	ЕВ	3510C	8015B	III
21-Mar-2012	EB-NBZ-SS-032112	6587627	EB	3520C	1625C	III
21-Mar-2012	EB-NBZ-SS-032112	6587627	EB	METHOD	8315A	Ш

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE299

Laboratory: LL

EDD Filename: DE299_v1

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE299

EDD Filename: DE299_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8015B Matrix: SO		in prince					
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P20885AY320010A (SL-065-NBZ-SB-1.0-2.0 SL-066-NBZ-SB-2.0-3.0 SL-069-NBZ-SS-0.0-0.5 SL-070-NBZ-SS-0.0-0.5 SL-071-NBZ-SB-4.0-5.0 SL-073-NBZ-SB-4.0-5.0 SL-073-NBZ-SB-9.0-10.0 SL-074-NBZ-SB-0.5-1.5 SL-075-NBZ-SS-0.0-5 SL-076-NBZ-SS-0.0-0.5 SL-077-NBZ-SS-0.0-0.5 SL-077-NBZ-SS-0.0-0.5	m-Terphenyl p-Terphenyl	-	117 116	64.00-111.00 69.00-109.00	-	m-Terphenyl p-Terphenyl	J (all detects)

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SAMPLE DELIVERY GROUP

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Mar-2012	SL-064-NBZ-SB-0.5-1.5	6589219	N	3546	1625C	111
21-Mar-2012	SL-064-NBZ-SB-0.5-1.5	6589219	N	3550B	8015B	Ш
21-Mar-2012	SL-064-NBZ-SB-0.5-1.5	6589219	N	METHOD	8315A	Ш
21-Mar-2012	SL-063-NBZ-SB-0.5-1.5	6589218	N	3546	1625C	Ш
21-Mar-2012	SL-063-NBZ-SB-0.5-1.5	6589218	N	3550B	8015B	HI
21-Mar-2012	SL-063-NBZ-SB-0.5-1.5	6589218	N	METHOD	8315A	111
21-Mar-2012	SL-062-NBZ-SB-2.5-3.5	6589217	N	3546	1625C	Ш
21-Mar-2012	SL-062-NBZ-SB-2.5-3.5	6589217	N	3550B	8015B	111
21-Mar-2012	SL-062-NBZ-SB-2.5-3.5	6589217	N	METHOD	8315A	III
22-Mar-2012	SL-061-NBZ-SB-1.0-2.0	6589224	N	3546	1625C	III
22-Mar-2012	SL-061-NBZ-SB-1.0-2.0	6589224	N	3550B	8015B	III
22-Mar-2012	SL-061-NBZ-SB-1.0-2.0	6589224	N	METHOD	8315A	111
22-Mar-2012	SL-060-NBZ-SS-0.0-0.5	6589223	N	3546	1625C	III
22-Mar-2012	SL-060-NBZ-SS-0.0-0.5	6589223	N	3550B	8015B	.III
22-Mar-2012	SL-060-NBZ-SS-0.0-0.5	6589223	N	METHOD	8315A	111
22-Mar-2012	SL-059-NBZ-SS-0.0-0.5	6589222	N	3546	1625C	111
22-Mar-2012	SL-059-NBZ-SS-0.0-0.5	6589222	N	3550B	8015B	Ш
22-Mar-2012	SL-059-NBZ-SS-0.0-0.5	6589222	N	METHOD	8315A	111
22-Mar-2012	SL-055-NBZ-SS-0.0-0.5	6589221	N	3546	1625C	III
22-Mar-2012	SL-055-NBZ-SS-0.0-0.5	6589221	N	3550B	8015B	III
22-Mar-2012	SL-055-NBZ-SS-0.0-0.5	6589221	N	METHOD	8315A	m
22-Mar-2012	SL-054-NBZ-SS-0.0-0.5	6589220	N	3546	1625C	111
22-Mar-2012	SL-054-NBZ-SS-0.0-0.5	6589220	N	3550B	8015B	Ш
22-Mar-2012	SL-054-NBZ-SS-0.0-0.5	6589220	N	METHOD	8315A	Ш
22-Mar-2012	EB-NBZ-SB-032212	6589225	ЕВ	3510C	8015B	III
22-Mar-2012	EB-NBZ-SB-032212	6589225	EB	3520C	1625C	III

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
22-Mar-2012	EB-NBZ-SB-032212	6589225	EB	METHOD	8315A	III

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE300

Laboratory: LL eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DE300_v1

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE300

Laboratory: LL

EDD Filename: DE300_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8015B Matrix: SO							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P20885AY320010A (SL-054-NBZ-SS-0.0-0.5 SL-055-NBZ-SS-0.0-0.5 SL-059-NBZ-SS-0.0-0.5 SL-060-NBZ-SS-0.0-0.5 SL-061-NBZ-SB-1.0-2.0 SL-062-NBZ-SB-2.5-3.5 SL-063-NBZ-SB-0.5-1.5 SL-064-NBZ-SB-0.5-1.5	m-Terphenyl p-Terphenyl	-	117 116	64.00-111.00 69.00-109.00	-	m-Terphenyl p-Terphenyl	J (all detects)

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SAMPLE DELIVERY GROUP

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5	6590844	N	3546	1625C	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5	6590844	N	3550B	8015B	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5	6590844	N	METHOD	8315A	Ш
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MS	6590845	MS	3546	1625C	ĦI
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MS	6590845	MS	METHOD	8315A	Ш
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MSD	6590846	MSD	3546	1625C	III
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MSD	6590846	MSD	METHOD	8315A	III
23-Mar-2012	DUP-02-NBZ-QC-032312	6590849	FD	3546	1625C	III
23-Mar-2012	DUP-02-NBZ-QC-032312	6590849	FD	3550B	8015B	III
23-Mar-2012	DUP-02-NBZ-QC-032312	6590849	FD	METHOD	8315A	III
23-Mar-2012	SL-051-NBZ-SB-1.5-2.5	6590843	N	3546	1625C	III
23-Mar-2012	SL-051-NBZ-SB-1.5-2.5	6590843	N	3550B	8015B	III
23-Mar-2012	SL-051-NBZ-SB-1.5-2.5	6590843	N	METHOD	8315A	111
23-Mar-2012	SL-049-NBZ-SB-2.0-3.0	6590842	N	3546	1625C	III
23-Mar-2012	SL-049-NBZ-SB-2.0-3.0	6590842	N	3550B	8015B	Ш
23-Mar-2012	SL-049-NBZ-SB-2.0-3.0	6590842	N	METHOD	8315A	Ш
23-Mar-2012	SL-048-NBZ-SS-0.0-0.5	6590840	N	3546	1625C	1111
23-Mar-2012	SL-048-NBZ-SS-0.0-0.5	6590840	N	3550B	8015B	111
23-Mar-2012	SL-048-NBZ-SS-0.0-0.5	6590840	N	METHOD	8315A	III
23-Mar-2012	SL-048-NBZ-SB-4.0-5.0	6590841	N	3546	1625C	III
23-Mar-2012	SL-048-NBZ-SB-4.0-5.0	6590841	N	3550B	8015B	III
23-Mar-2012	SL-048-NBZ-SB-4.0-5.0	6590841	N	METHOD	8315A	111
23-Mar-2012	SL-047-NBZ-SB-4.0-5.0	6590850	N	3546	1625C	III
23-Mar-2012	SL-047-NBZ-SB-4.0-5.0	6590850	N	3550B	8015B	III
23-Mar-2012	SL-047-NBZ-SB-4.0-5.0	6590850	N	METHOD	8315A	ŧII
23-Mar-2012	SL-047-NBZ-SB-4.0-5.0	6590850	N	METHOD	8315A	ŧII

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE301

Laboratory: LL

EDD Filename: DE301_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: VOA		
Method: 8015E	Matrix: SO	

Sample ID:DUP-02-NBZ-QC-032312	Collec	ted: 3/23/2	012 9:28:	:00	Analysis T	ype: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	5.4		1.6	MDL	3.8	PQL	mg/Kg	J	L

Sample ID:SL-057-NBZ-SS-0.0-0.5	Collec	ted: 3/23/2	012 9:20:	:00 <i>A</i>	nalysis T	ype: RES		i	Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
p-Terphenyl	4.7		1.7	MDL	3.9	PQL	mg/Kg	J	L

^{*} denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE301

Laboratory: LL

EDD Filename: DE301_v1

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
L	Laboratory Control Spike Upper Estimation

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE301

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DE301_v1

Method: 8015B Matrix: SO			Zavaji				
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P20901AQ321410A P20901AY321432A (DUP-02-NBZ-QC-032312 SL-047-NBZ-SB-4.0-5.0 SL-048-NBZ-SB-4.0-6.0 SL-048-NBZ-SS-0.0-0.5 SL-049-NBZ-SB-2.0-3.0 SL-051-NBZ-SB-1.5-2.5 SL-057-NBZ-SS-0.0-0.5 SL-057-NBZ-SS-0.0-0.5	m-Terphenyl p-Terphenyl	112 111	121 120	64.00-111.00 69.00-109.00	-	m-Terphenyl p-Terphenyl	J (all detects)

Field Duplicate RPD Report

Lab Reporting Batch ID: DE301

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DE301_v1
Method: 160.3M
Matrix: SO

	Concentra	ation (%)			
Analyte	SL-057-NBZ-SS-0.0-0.5	DUP-02-NBZ-QC- 032312	Sample RPD	eQAPP RPD	Flag
MOISTURE	9.1	7.2	23		No Qualifiers Applied

Иe	3.0		748		Y X	7-3
17451	481	6/8	m			1
	8300		9000			
				200	~~	
Mai	77			S	- 10	3.30.00
11/151		ж.			-	

matrix. 30	T	ion (mg/Kg)		EROSSISTES DE	
Analyte	SL-057-NBZ-SS-0.0-0.5	DUP-02-NBZ-QC- 032312	Sample RPD	eQAPP RPD	Flag
p-Terphenyl	4.7	5.4	14	50.00	No Qualifiers Applied

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SAMPLE DELIVERY GROUP

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
26-Mar-2012	SL-046-NBZ-SS-0.0-0.5	6595131	N	3546	1625C	III
26-Mar-2012	SL-046-NBZ-SS-0.0-0.5	6595131	N	3550B	8015B	III
26-Mar-2012	SL-046-NBZ-SS-0.0-0.5	6595131	N	METHOD	8315A	Ш
26-Mar-2012	SL-046-NBZ-SB-4.0-5.0	6595132	N	3546	1625C	III
26-Mar-2012	SL-046-NBZ-SB-4.0-5.0	6595132	N	3550B	8015B	III
26-Mar-2012	SL-046-NBZ-SB-4.0-5.0	6595132	N	METHOD	8315A	III
26-Mar-2012	SL-045-NBZ-SS-0.0-0.5	6595129	N	3546	1625C	III
26-Mar-2012	SL-045-NBZ-SS-0.0-0.5	6595129	N	3550B	8015B	lli
26-Mar-2012	SL-045-NBZ-SS-0.0-0.5	6595129	N	METHOD	8315A	tii
26-Mar-2012	SL-045-NBZ-SB-4.0-5.0	6595130	N	3546	1625C	111
26-Mar-2012	SL-045-NBZ-SB-4.0-5.0	6595130	N	3550B	8015B	111
26-Mar-2012	SL-045-NBZ-SB-4.0-5.0	6595130	N	METHOD	8315A	Ш
26-Mar-2012	SL-042-NBZ-SS-0.0-0.5	6595127	N	3546	1625C	111
26-Mar-2012	SL-042-NBZ-SS-0.0-0.5	6595127	N	3550B	8015B	III
26-Mar-2012	SL-042-NBZ-SS-0.0-0.5	6595127	N	METHOD	8315A	III
26-Mar-2012	SL-050-NBZ-SS-0.0-0.5	6595133	N	3546	1625C	111
26-Mar-2012	SL-050-NBZ-SS-0.0-0.5	6595133	N	3550B	8015B	111
26-Mar-2012	SL-050-NBZ-SS-0.0-0.5	6595133	N	METHOD	8315A	III
26-Mar-2012	SL-043-NBZ-SS-0.0-0.5	6595128	N	3546	1625C	m
26-Mar-2012	SL-043-NBZ-SS-0.0-0.5	6595128	N	3550B	8015B	111
26-Mar-2012	SL-043-NBZ-SS-0.0-0.5	6595128	N	METHOD	8315A	Ш
27-Mar-2012	SL-078-NBZ-SS-0.0-0.5	6595135	N	3546	1625C	III
27-Mar-2012	SL-078-NBZ-SS-0.0-0.5	6595135	N	3550B	8015B	Ш
27-Mar-2012	SL-078-NBZ-SS-0.0-0.5	6595135	N	METHOD	8315A	Ш
27-Mar-2012	SL-038-NBZ-SS-0.0-0.5	6595134	N	3546	1625C	Ш
27-Mar-2012	SL-038-NBZ-SS-0.0-0.5	6595134	N	3550B	8015B	HI

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
27-Mar-2012	SL-038-NBZ-SS-0.0-0.5	6595134	N	METHOD	8315A	HI
27-Mar-2012	EB-NBZ-SB-032712	6595136	ЕВ	3510C	8015B	Ш
27-Mar-2012	EB-NBZ-SB-032712	6595136	EB	3520C	1625C	Ш
27-Mar-2012	EB-NBZ-SB-032712	6595136	EB	METHOD	8315A	Ш
27-Mar-2012	EB-NBZ-SS-032712	6595137	ЕВ	3510C	8015B	Ш
27-Mar-2012	EB-NBZ-SS-032712	6595137	ЕВ	3520C	1625C	III
27-Mar-2012	EB-NBZ-SS-032712	6595137	EB	METHOD	8315A	III

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE302

Laboratory: LL

EDD Filename: DE302_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: Matrix: AQ

Sample ID: EB-NBZ-SB-032712	Collec	ted: 3/27/2	012 3:00	00 A	nalysis T	ype: RES			Dilution: 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	27	J	10	MDL	50	PQL	ug/L	U	В

^{*} denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE302

EDD Filename: DE302_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE302

Method Blank Outlier Report

Lab Reporting Batch ID: DE302

Laboratory: LL

EDD Filename: DE302_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8315 Matrix: AQ				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
P88886AB242126A	3/29/2012 9:26:00 PM	FORMALDEHYDE	33 ug/L	EB-NBZ-SB-032712 EB-NBZ-SS-032712

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-NBZ-SB-032712(RES)	FORMALDEHYDE	27 ug/L	50U ug/L

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Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE302

EDD Filename: DE302_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8015B Matrix: SO							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P20901AQ321410A P20901AY321432A (SL-038-NBZ-SS-0.0-0.5 SL-042-NBZ-SS-0.0-0.5 SL-045-NBZ-SS-0.0-0.5 SL-045-NBZ-SB-4.0-5.0 SL-046-NBZ-SB-4.0-5.0 SL-046-NBZ-SB-0.0-0.5 SL-050-NBZ-SS-0.0-0.5 SL-050-NBZ-SS-0.0-0.5 SL-078-NBZ-SS-0.0-0.5	m-Terphenyl p-Terphenyl	112 111	121 120	64.00-111.00 69.00-109.00	-	m-Terphenyl p-Terphenyl	J (all detects)

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Reporting Limit Outliers

Lab Reporting Batch ID: DE302

FORMALDEHYDE

Laboratory: LL

J (all detects)

EDD Filename: DE302_v1

EB-NBZ-SB-032712

eQAPP Name: CDM_SSFL_120718_Lan

ug/L

PQL

		Lah		Paparting	DI		
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE303

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DE303_v1

Method: 8315A Matrix: SO			Des es				
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-040-NBZ-SB-2.5-3.5 MS (SL-040-NBZ-SB-2.5-3.5)	FORMALDEHYDE	121	-	80.00-120.00	-	FORMALDEHYDE	J (all detects)

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Quality Control Outlier Reports

DE303

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Data Qualifier Summary

Lab Reporting Batch ID: DE303

Laboratory: LL

EDD Filename: DE303_v1

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Attachment II

Overall Data Qualification Summary

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Mar-2012	SL-037-NBZ-SB-3.0-4.0	6599818	N	METHOD	8315A	III

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
28-Mar-2012	SL-040-NBZ-SS-0.0-0.5	6599820	N	3546	1625C	III
28-Mar-2012	SL-040-NBZ-SS-0.0-0.5	6599820	N	3550B	8015B	111
28-Mar-2012	SL-040-NBZ-SS-0.0-0.5	6599820	N	METHOD	8315A	III
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5	6599821	N	3546	1625C	Ш
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5	6599821	N	3550B	8015B	151
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5	6599821	N	METHOD	8315A	Ш
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MS	6599822	MS	3546	1625C	III
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MS	6599822	MS	3550B	8015B	111
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MS	6599822	MS	METHOD	8315A	III
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MSD	6599823	MSD	3546	1625C	111
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MSD	6599823	MSD	3550B	8015B	III
28-Mar-2012	SL-040-NBZ-SB-2.5-3.5 MSD	6599823	MSD	METHOD	8315A	111
28-Mar-2012	DUP-03-NBZ-QC-032812	6599817	FD	3546	1625C	III
28-Mar-2012	DUP-03-NBZ-QC-032812	6599817	FD	3550B	8015B	III
28-Mar-2012	DUP-03-NBZ-QC-032812	6599817	FD	METHOD	8315A	111
28-Mar-2012	SL-036-NBZ-SB-4.0-5.0	6599815	N	3546	1625C	111
28-Mar-2012	SL-036-NBZ-SB-4.0-5.0	6599815	N	3550B	8015B	Ш
28-Mar-2012	SL-036-NBZ-SB-4.0-5.0	6599815	N	METHOD	8315A	Ш
28-Mar-2012	SL-036-NBZ-SB-7.5-8.5	6599816	N	3546	1625C	Ш
28-Mar-2012	SL-036-NBZ-SB-7.5-8.5	6599816	N	3550B	8015B	Ш
28-Mar-2012	SL-036-NBZ-SB-7.5-8.5	6599816	N	METHOD	8315A	Ш
28-Mar-2012	SL-039-NBZ-SB-2.0-3.0	6599819	N	3546	1625C	111
28-Mar-2012	SL-039-NBZ-SB-2.0-3.0	6599819	N	3550B	8015B	Ш
28-Mar-2012	SL-039-NBZ-SB-2.0-3.0	6599819	N	METHOD	8315A	Ш
28-Mar-2012	SL-037-NBZ-SB-3.0-4.0	6599818	N	3546	1625C	Ш
28-Mar-2012	SL-037-NBZ-SB-3.0-4.0	6599818	N	3550B	8015B	III

Attachment I

Sample ID Cross Reference and Data Review Level

SAMPLE DELIVERY GROUP

DE303

Lab Control Spike/Lab Control Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE303

Laboratory: LL

EDD Filename: DE303_v1 eQAPP Name

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8015B Matrix: SO							
QC Sample ID (Associated Samples)	Compound	LCS %R	LCSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
P20957AQ320828A (DUP-03-NBZ-QC-032812 SL -036-NBZ-SB-4.0-5.0 SL -036-NBZ-SB-3.0-4.0 SL -039-NBZ-SB-3.0-4.0 SL -039-NBZ-SB-2.0-3.0 SL -040-NBZ-SB-2.5-3.5 SL- 040-NBZ-SS-0.0-0.5)	p-Terphenyl	111	-	69.00-109.00	-	p-Terphenyl	J (all detects)

SAMPLE DELIVERY GROUP

DE304

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Mar-2012	SL-091-NBZ-SS-0.0-0.5	6599846	N	3546	1625C	Ш
29-Mar-2012	SL-091-NBZ-SS-0.0-0.5	6599846	N	3550B	8015B	Ш
29-Mar-2012	SL-091-NBZ-SS-0.0-0.5	6599846	N	METHOD	8315A	III
29-Mar-2012	DUP-05-NBZ-QC-032912	6599854	FD	3546	1625C	m
29-Mar-2012	DUP-05-NBZ-QC-032912	6599854	FD	3550B	8015B	III
29-Mar-2012	DUP-05-NBZ-QC-032912	6599854	FD	METHOD	8315A	III
29-Mar-2012	SL-091-NBZ-SB-4.0-5.0	6599847	N	3546	1625C	III
29-Mar-2012	SL-091-NBZ-SB-4.0-5.0	6599847	N	3550B	8015B	Ш
29-Mar-2012	SL-091-NBZ-SB-4.0-5.0	6599847	N	METHOD	8315A	Ш
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5	6599848	N	3546	1625C	111
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5	6599848	N	3550B	8015B	Ш
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5	6599848	N	METHOD	8315A	III
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MS	6599849	MS	3546	1625C	Ш
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MS	6599849	MS	3550B	8015B	. 111
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MS	6599849	MS	METHOD	8315A	III
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MSD	6599850	MSD	3546	1625C	III
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MSD	6599850	MSD	3550B	8015B	111
29-Mar-2012	SL-092-NBZ-SS-0.0-0.5 MSD	6599850	MSD	METHOD	8315A	111
29-Mar-2012	SL-044-NBZ-SS-0.0-0.5	6599845	N	3546	1625C	Ш
29-Mar-2012	SL-044-NBZ-SS-0.0-0.5	6599845	N	3550B	8015B	III
29-Mar-2012	SL-044-NBZ-SS-0.0-0.5	6599845	N	METHOD	8315A	III
29-Mar-2012	EB-NBZ-SB-032912	6599855	EB	3510C	8015B	Ш
29-Mar-2012	EB-NBZ-SB-032912	6599855	ЕВ	3520C	1625C	Ш
29-Mar-2012	EB-NBZ-SB-032912	6599855	EB	METHOD	8315A	m
29-Mar-2012	EB-NBZ-SS-032912	6599856	EB	3510C	8015B	Ш
29-Mar-2012	EB-NBZ-SS-032912	6599856	EB	3520C	1625C	Ш

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
29-Mar-2012	EB-NBZ-SS-032912	6599856	EB	METHOD	8315A	111

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE304

Laboratory: LL

EDD Filename: DE304_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: 8315A so

Matrix:

Sample ID:SL-044-NBZ-SS-0.0-0.5

Collected: 3/29/2012 1:11:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	1200	J	620	MDL	1500	PQL	ug/Kg	J	Z

^{*} denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE304

Laboratory: LL

EDD Filename: DE304_v1

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE304

Reporting Limit Outliers

Lab Reporting Batch ID: DE304

Analyte

FORMALDEHYDE

Laboratory: LL

Flag

J (all detects)

EDD Filename: DE304_v1

SampleID

SL-044-NBZ-SS-0.0-0.5

eQAPP Name: CDM_SSFL_120718_Lan

Units

ug/Kg

Method: 8315A Matrix: SO				
	Lab	Reporting	RL	

Qual

Result

1200

Limit

1500

Туре

PQL

9/11/2012 3:03:26 PM ADR version 1.6.0.188 Page 1 of 1

SAMPLE DELIVERY GROUP

DE305

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
30-Mar-2012	SL-079-NBZ-SS-0.0-0.5	6600769	N	3546	1625C	111
30-Mar-2012	SL-079-NBZ-SS-0.0-0.5	6600769	N	3550B	8015B	III
30-Mar-2012	SL-079-NBZ-SS-0.0-0.5	6600769	N	METHOD	8315A	Ш

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE305

Laboratory: LL

EDD Filename: DE305

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE305

(No Outliers)

SAMPLE DELIVERY GROUP

DE306

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
02-Apr-2012	SL-028-NBZ-SS-0.0-0.5	6605177	N	3546	1625C	IV
02-Apr-2012	SL-028-NBZ-SS-0.0-0.5	6605177	N	3550B	8015B	IV
02-Apr-2012	SL-028-NBZ-SS-0.0-0.5	6605177	N	METHOD	8315A	IV
02-Apr-2012	SL-025-NBZ-SS-0.0-0.5	6605174	N	3546	1625C	IV
02-Apr-2012	SL-025-NBZ-SS-0.0-0.5	6605174	N	3550B	8015B	IV
02-Apr-2012	SL-025-NBZ-SS-0.0-0.5	6605174	N	METHOD	8315A	IV
02-Apr-2012	SL-027-NBZ-SS-0.0-0.5	6605176	N	3546	1625C	IV
02-Apr-2012	SL-027-NBZ-SS-0.0-0.5	6605176	N	3550B	8015B	IV
02-Apr-2012	SL-027-NBZ-SS-0.0-0.5	6605176	N	METHOD	8315A	IV
02-Apr-2012	SL-025-NBZ-SS-0.0-0.5MSD	P605174M241946A	MSD	METHOD	8315A	iV
02-Apr-2012	SL-025-NBZ-SS-0.0-0.5MS	P605174R241937A	MS	METHOD	8315A	IV
02-Apr-2012	SL-026-NBZ-SS-0.0-0.5	6605175	N	3546	1625C	IV
02-Apr-2012	SL-026-NBZ-SS-0.0-0.5	6605175	N	3550B	8015B	IV
02-Apr-2012	SL-026-NBZ-SS-0.0-0.5	6605175	N	METHOD	8315A	IV
03-Apr-2012	SL-031-NBZ-SS-0.0-0.5	6605178	N	3546	1625C	IV
03-Apr-2012	SL-031-NBZ-SS-0.0-0.5	6605178	N	3550B	8015B	IV
03-Apr-2012	SL-031-NBZ-SS-0.0-0.5	6605178	N	METHOD	8315A	IV
03-Apr-2012	SL-033-NBZ-SS-0.0-0.5	6605179	N	3546	1625C	IV
03-Apr-2012	SL-033-NBZ-SS-0.0-0.5	6605179	N	3550B	8015B	IV
03-Apr-2012	SL-033-NBZ-SS-0.0-0.5	6605179	N	METHOD	8315A	IV
03-Apr-2012	SL-034-NBZ-SS-0.0-0.5	6605180	N	3546	1625C	IV
03-Apr-2012	SL-034-NBZ-SS-0.0-0.5	6605180	N	3550B	8015B	IV
03-Apr-2012	SL-034-NBZ-SS-0.0-0.5	6605180	N	METHOD	8315A	IV
03-Apr-2012	SL-032-NBZ-SS-0.0-0.5	6607516	N	3546	1625C	IV
03-Apr-2012	SL-032-NBZ-SS-0.0-0.5	6607516	N	3550B	8015B	IV
03-Apr-2012	SL-032-NBZ-SS-0.0-0.5	6607516	N	METHOD	8315A	IV

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
03-Apr-2012	SL-035-NBZ-SS-0.0-0.5	6607517	N	3546	1625C	IV
03-Apr-2012	SL-035-NBZ-SS-0.0-0.5	6607517	N	3550B	8015B	IV
03-Apr-2012	SL-035-NBZ-SS-0.0-0.5	6607517	N	METHOD	8315A	IV
03-Apr-2012	SL-035-NBZ-SB-2.0-3.0	6607518	N	3546	1625C	IV
03-Apr-2012	SL-035-NBZ-SB-2.0-3.0	6607518	N	3550B	8015B	IV
03-Apr-2012	SL-035-NBZ-SB-2.0-3.0	6607518	N	METHOD	8315A	IV
03-Apr-2012	SL-035-NBZ-SB-2.0-3.0MSD	P607518M261508	MSD	3546	1625C	IV
03-Apr-2012	SL-035-NBZ-SB-2.0-3.0MS	P607518R261449	MS	3546	1625C	IV
04-Apr-2012	SL-020-NBZ-SB-2.5-3.5	6607519	N	3546	1625C	IV
04-Apr-2012	SL-020-NBZ-SB-2.5-3.5	6607519	N	3550B	8015B	IV
04-Apr-2012	SL-020-NBZ-SB-2.5-3.5	6607519	N	METHOD	8315A	IV
04-Apr-2012	EB-NBZ-SB-040412	6607520	EB	3510C	8015B	IV
04-Apr-2012	EB-NBZ-SB-040412	6607520	EB	3520C	1625C	iV
04-Apr-2012	EB-NBZ-SB-040412	6607520	EB	METHOD	8315A	iV .
04-Apr-2012	EB-NBZ-SS-040412	6607521	EB	3510C	8015B	IV
04-Apr-2012	EB-NBZ-SS-040412	6607521.	EB	3520C	1625C	IV
04-Apr-2012	EB-NBZ-SS-040412	6607521	ЕВ	METHOD	8315A	IV

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE306

Laboratory: LL

EDD Filename: DE306_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 8315A Matrix: AQ	
--	--

Sample ID: EB-NBZ-SB-040412	Collec	Collected: 4/4/2012 2:30:00 PM Analysis Type: RES						Dilution: 1	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	10	U	10	MDL	50	PQL	ug/L	υJ	S

^{*} denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE306

EDD Filename: DE306_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
S	Surrogate/Tracer Recovery Lower Estimation
S	Surrogate/Tracer Recovery Upper Estimation

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE306

Surrogate Outlier Report

Lab Reporting Batch ID: DE306

Laboratory: LL

EDD Filename: DE306_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 16250 Matrix: AQ		Company of			
Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-NBZ-SB- 040412	N-Nitrosodimethylamine-d6	159	50.00-150.00	All Target Analytes	J (all detects)
EB-NBZ-SS- 040412	N-Nitrosodimethylamine-d6	155	50.00-150.00	All Target Analytes	J(all detects)
Method: 80158 Matrix: AQ					
Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-NBZ-SB- 040412	n-Triacontane-d62	146	46.00-100.00	All Target Analytes	J(all detects)
EB-NBZ-SS- 040412	n-Triacontane-d62	106	46.00-100.00	All Target Analytes	J(all detects)
Method: 8015 Matrix: SO					
Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
SL-035-NBZ-SS- 0.0-0.5	n-Triacontane-d62	232	19.00-152.00	All Target Analytes	J(all detects)
Method: 8315# Matrix: AQ					
Sample ID (Analysis Type)	Surrogate	Sample % Recovery	% Recovery Limits	Affected Compounds	Flag
EB-NBZ-SB- 040412	Butyraldehyde	11	45.00-145.00	All Target Analytes	J(all detects) UJ(all non-detects)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 2 through April 4, 2012

LDC Report Date: September 4, 2012

Matrix: Soil/Water

Parameters: N-Nitrosodimethylamine

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE306

Sample Identification

SL-025-NBZ-SS-0.0-0.5

SL-026-NBZ-SS-0.0-0.5

SL-027-NBZ-SS-0.0-0.5

SL-028-NBZ-SS-0.0-0.5

SL-031-NBZ-SS-0.0-0.5

SL-033-NBZ-SS-0.0-0.5

SL-034-NBZ-SS-0.0-0.5

SL-032-NBZ-SS-0.0-0.5

SL-035-NBZ-SS-0.0-0.5

SL-035-NBZ-SB-2.0-3.0

SL-020-NBZ-SB-2.5-3.5

EB-NBZ-SB-040412

EB-NBZ-SS-040412

SL-035-NBZ-SB-2.0-3.0MS

SL-035-NBZ-SB-2.0-3.0MSD

Introduction

This data review covers 13 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for N-Nitrosodimethylamine.

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 N-Nitrosodimethylamine.

The percent difference (%D) of the second source calibration standard were less than or equal to 30.0% for N-Nitrosodimethylamine.

V. Blanks

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

Samples EB-NBZ-SB-040412 and EB-NBZ-SS-040412 identified as equipment blanks. No N-nitrosodimethylamine was found.

VI. Surrogate Spikes

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

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
EB-NBZ-SB-040412	n-Nitrosodimethylamine-d6	159 (50-150)	N-Nitrosodimethylamine	J (all detects)	Р
EB-NBZ-SS-040412	n-Nitrosodimethylamine-d6	155 (50-150)	N-Nitrosodimethylamine	J (all detects)	Р

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE306	All compounds reported below the RL.	J (all detects)	А

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

XV. Overall Assessment

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

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory N-Nitrosodimethylamine - Data Qualification Summary - SDG DE306

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE306	EB-NBZ-SB-040412 EB-NBZ-SS-040412	N-Nitrosodimethylamine	J (all detects)	Р	Surrogate spikes (%R) (S)
DE306	SL-186-SA7-SB-27.0-28.0 SL-187-SA7-SB-27.5-28.5 SL-188-SA7-SB-18.5-19.5 SL-188-SA7-SB-22.0-23.0 DUP10-SA7-QC-022112 EB-SA7-SB-022212	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory

N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE306

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory

N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE306

No Sample Data Qualified in this SDG

		PLETENESS WORKSHEET Level IV Date: // page: / of
tory: Lancaster Laboratories	-	Reviewer:/
OD: GC/MS N-Nitrosodimethylamine (FP	A Method	2nd Reviewer:
·		,
mples listed below were reviewed for eac on findings worksheets.	ch of the f	ollowing validation areas. Validation findings are noted in attach
Validation Area		Comments
	<u> </u>	Sampling dates: 4/2 - 4/4/12
	N	not required
Initial calibration	Δ	% psp = 30
Continuing calibration/ICV	A	Cer £ 20 100 £ 30
Blanks	A	
Surrogate spikes	SW	
Matrix spike/Matrix spike duplicates	A	
Laboratory control samples	A	LUS/P
Regional Quality Assurance and Quality Control	N	,
Internal standards	1	
Target compound identification	Δ	
Compound quantitation(RL/LOQ/LODs	<u>A</u>	
Tentatively identified compounds (TICs)	ν	
System performance	\triangle	
Overall assessment of data	A	
Field duplicates	N	
Field blanks	NO	EB=12, 13
N = Not provided/applicable R = Rins	ate	TB = Trip blank
1.0	ilu biarik	EB = Equipment blank
SOIL + Water		
-025-NBZ-SS-0.0-0.5 11 ² SL-020-NBZ-S	SB-2.5-3.5	21 / SBLKL F096 31
	40412	W 22 7 SBLKLDIO / 32
027-NBZ-SS-0.0-0.5		V 23 3 5 B L K WHO 9 2 33
	DE306 tory: Lancaster Laboratories OD: GC/MS N-Nitrosodimethylamine (EP mples listed below were reviewed for eac on findings worksheets. Validation Area Technical holding times GC/MS Instrument performance check Initial calibration Continuing calibration/ICV Blanks Surrogate spikes Matrix spike/Matrix spike duplicates Laboratory control samples Regional Quality Assurance and Quality Control Internal standards Target compound identification Compound quantitation(RL) COQ/LODs Tentatively identified compounds (TICs) System performance Overall assessment of data Field duplicates Field blanks A = Acceptable N = Not provided/applicable SW = See worksheet R = Rins SW = See worksheet Samples: CO25-NBZ-SS-0.0-0.5 12 3 EB-NBZ-SB-0	Technical holding times GC/MS Instrument performance check Initial calibration/ICV Blanks Surrogate spikes Matrix spike/Matrix spike duplicates Laboratory control samples Regional Quality Assurance and Quality Control Internal standards Target compound identification Compound quantitation(R) CO/LODs Tentatively identified compounds (TICs) System performance A Coceptable N = Not provided/applicable N = See worksheet Samples: COE-NBZ-SS-0.0-0.5 112 SL-020-NBZ-SB-2.5-3.5 12 3 EB-NBZ-SB-040412

	SOIL + Walk			
1 1	SL-025-NBZ-SS-0.0-0.5	112 SL-020-NBZ-SB-2.5-3.5	21 / SBLKL FO96	31
21	SL-026-NBZ-SS-0.0-0.5	12 3 EB-NBZ-SB-040412 W	22 2 SBLKLD10/	32
<u>3</u> 1	SL-027-NBZ-SS-0.0-0.5	13 3 EB-NBZ-SS-040412 V	23 3 SBLKWHO92	333
41	SL-028-NBZ-SS-0.0-0.5	142 # 10 MS	24	34
5 /	SL-031-NBZ-SS-0.0-0.5	152 # 10 M517	25	35
6 1	SL-033-NBZ-SS-0.0-0.5	16	26	36
71	SL-034-NBZ-SS-0.0-0.5	17	27	37
82	SL-032-NBZ-SS-0.0-0.5	18	28	38
97	SL-035-NBZ-SS-0.0-0.5	19	29	39
102	-SL-035-NBZ-SB-2.0-3.0	20	30	40

LDC#: 28 268 Jac

VALIDATION FINDINGS CHECKLIST

Page: _/of_ Reviewer: _FT 2nd Reviewer: __

Method: Semivolatiles (EPA SW 846 Method-8270€) 162√3 <

Validation Area	Yes	No	NA	Findings/Comments
Procedure Committee of the Committee of				
All technical holding times were met.	/			
Cooler temperature criteria was met.				·
in DCMS the mineraperon many dress was the selection and the selection of				
Were the DFTPP performance results reviewed and found to be within the specified criteria?			_	
Were all samples analyzed within the 12 hour clock criteria?				
TRIBRO MINTALO,	l			AND SECTION OF THE SE
Did the laboratory perform a 5 point calibration prior to sample analysis?				
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			_	-
Was a curve fit used for evaluation?			_	
Did the initial calibration meet the curve fit acceptance criteria of > 0.990?				
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?				
IV: Continuings alleration set the process of the second s				Marie Carlo Berlin (1997) And
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?		_		
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			_	
Were all percent differences (%D) ≤25% and relative response factors (RRF) ≥ 0.05?	/	\		
V. Blanks: State of the Book of the Bo				
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 Spirogate spikee S				Control of the Contro
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?				
VIII Matex spike/Marrxspike(digiticates				
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 with solding the same and the same of the same				
Was an LCS analyzed for this SDG?	/			

LDC#: 268J2C

VALIDATION FINDINGS CHECKLIST

Page: _2of_ Reviewer: _FT 2nd Reviewer: ___

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
IX: Regional Quality-Assurance and Quality Control				
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?				
Were retention times within ± 30 seconds from the associated calibration standard?				
XI. Target compound identification				
Were relative retention times (RRT's) within \pm 0.06 RRT units of the standard?			سط	
Did compound spectra meet specified EPA "Functional Guidelines" criteria?		.,		
Were chromatogram peaks verified and accounted for?				
XII/ Compound quantitation/CRQLs	1			Carlo Paris Control Carlo Carl
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?			صلا	/
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 \pm 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		,		decre the section
Field duplicate pairs were identified in this SDG.				
Target compounds were detected in the field duplicates.				
XVII. Field blanks	9			
Field blanks were identified in this SDG.		_		
Target compounds were detected in the field blanks.				

LDC#. 28 268J&C

VALIDATION FINDINGS WORKSHEET

Surrogate Recovery

Reviewer: FT Page:

2nd Reviewer:

1626 METHOD: GC/MS-BNA (EPA SW 846 Method 8270C)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A". Were percent recoveries (%R) for surrogates 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?

	(5)			(2)						:														
Qualifications	1 /P de T	. /			•																			
- 1	(25/-05)	((())	("	lamine -96	(()	((((((()	((()	()	(()	
%R (Limits)	159			ر جحر)		rospdime thy lam																
Surrogate	数米			*				* N-Nitros																
Sample ID	જ/			7.3																				
Date																								
#																								
											-													

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VALIDATION FINDINGS WORKSHEET Initial Calibration Calculation Verification

- age.	Reviewer: FT	2nd Reviewer:
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METHOD: GC/MS BNA (EPA SW 846 Method 8279) 16 20 C

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 = $(A_x)(C_s)/(A_s)(C_x)$ 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

				Reported	Recalculated	Reported	Recalculated	Renorfed	Recalculated
		7:100		DOC	300	Average DDE	Average BBE	USA%	%Rsn
#	Standard ID	Date	Compound (Reference Internal Standard)	(24 std)	(2.5 std)	(initial)	(initial)		
-	7401	3/12/12	N-Mitte Sodime thy Round (1st internal standard)	6 80/	€€01	001	00.1	×	×
			Naphthalene (2nd internal standard)		-				
			Fluorene (3rd internal standard)						
			Pentachlorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Renzo(a)nvrene (8th internal standard)						
2			Phenol (1st internal standard)						
			Naphthalene (2nd internal standard)						
			Fluorene (3rd internal standard)						
			Pentachiorophenol (4th internal standard)						
			Bis(2-ethylhexyl)phthalate (5th internal standard)						
			Benzo(a)pyrene (6th internal standard)						
ေ			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.

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Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

Page: / of /	wer: FT	viewer:
Pag	Reviewer:	2nd Reviewer:

METHOD: GC/MS BNA (EPA SWV 846 Method 82796)

129/

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,)(C,s)/(A,s)(C,x)

ave. RRF = initial calibration average RRF RRF = continuing calibration RRF Where:

 A_x = Area of compound, C_x = Concentration of compound,

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

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	RRF (CC)	RRF (CC)	Д%	Q%
-	gev 14:34	7//0//	Pronof(1st internal standard)	0.99977	0.96393	6.96393	3,6%	3.68
		,,	Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
	cer 17:53	7	Pentachlerephench (4th internal standard)	4	1.08074	1.0807	8.0984	8.078
		•	Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Renzo(a)twene (6th internal standard)					
2	car 22:58	7	Phonol (1st internal standard)	7	1.02236	1.02236	2.26028	40 % Z
		, , ,	Naphthalene (2nd internal standard)					
	80:50 NO	1/11/7	Fluorene (3rs internal standard)	7	0.93616	0.936/6	6.362	6.362
		. / /	Pentachlorophenol (4th internal standard)					
		, , ,	Bis(2-ethylhexyl)phthalate (5th internal standard)					
	Cer 11:33	10/1	(2 Benzo(a)pyrene (6th internal standard)	1	0.47.990	016/1-0	1.787.1	1286-1
က			Phenol (1st internal standard)					
	cer 13.33	4/11/12	Nephthalene (2nd internal standard)	p	12966.0	12966:0	0.3555/	0.356
		, ,	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#: 28 26812C

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Page:_	_/	, _of_	/
Reviewer:	FT		
2nd reviewer:		<u>A</u>	_

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

16x5C

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

Sample ID:__

SS = Surrogate Spiked

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
N-Nitro sodime thylamine	X	25.179	101	101	0
2-Fluorobiphenyl					
Terphenyl d14					
Phenol- d 5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
4,2-Diehlerebenzene-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					

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Matrix Spike/Matrix Spike Duplicates Results Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	2nd Reviewer:

ノスツ 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

MSDC = Matrix spike duplicate concentration

SC = Sample concentation

MS/MSD samples: _

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

MSC = Matrix spike concentration

	Spike	Sample	Spiked Sample		Matrix Spike	Matrix Spike Duplicate	Duplicate	USM/SW	CS
Compound	Added (ng/kg)	Concentration (ng //en	Concentration		Percent Recovery	Percent Recovery	ecovery	RPD	
	MS WSD		MS WSD	Reported	Recalc	Reported	Recalc.	Reported	Recalculated
Phenol									•
N-Nitroso-di-n-propylamine									
4-Chloro-3-methylphenol									
Acenaphthene									
Pentachlorophenol									
Pyrene									
N-11. 18768 / HAM. 102041.11.81	18.768 18.768 /P	ON	939.8 944.64	111/	11/2	//3	113	\	
مسيلة									

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.

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LDC #:

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: Reviewer:

2nd Reviewer:

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

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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

SSC = Spike concentration SA = Spike added Where:

RPD = 1 LCSC - LCSDC I * 2/(LCSC + LCSDC)

LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 096 L F LC

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 #:_ 287	768 U20	_
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VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page:_	of
Reviewer:	FT
2nd reviewer:	<u> </u>

METHOD: GC/MS BNA-(EPA SW 846 Method 8270) 16 25 C

1	Υ	M	N/A
	Y	N	N/A

Were all reported results recalculated and verified for all level IV samples?

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

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

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).

V₁ = Volume of extract injected in microliters (ul)

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

Df = Dilution Factor.

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

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. #4 NDMA

Conc. = (5500)(25)(1000)

79 ng /kg

#	Sample ID	Compound	Reported Concentration	Calculated Concentration	01:6:4:
-	Sample 15	Compound			Qualification
ļ					
 					
			 		
	• • • • • • • • • • • • • • • • • • • •				
			<u> </u>	<u> </u>	<u></u>

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 2 through April 4, 2012

LDC Report Date:

September 4, 2012

Matrix:

Soil/Water

Parameters:

Terphenyls

Validation Level:

Level IV

Laboratory:

Lancaster Laboratories

Sample Delivery Group (SDG): DE306

Sample Identification

SL-025-NBZ-SS-0.0-0.5

SL-026-NBZ-SS-0.0-0.5

SL-027-NBZ-SS-0.0-0.5

SL-028-NBZ-SS-0.0-0.5

SL-031-NBZ-SS-0.0-0.5

SL-033-NBZ-SS-0.0-0.5

SL-034-NBZ-SS-0.0-0.5

SL-032-NBZ-SS-0.0-0.5

SL-035-NBZ-SS-0.0-0.5

SL-035-NBZ-SB-2.0-3.0

SL-020-NBZ-SB-2.5-3.5

EB-NBZ-SB-040412

EB-NBZ-SS-040412

Introduction

This data review covers 11 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

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.

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 terphenyl contaminants were found in the method blanks.

Samples EB-NBZ-SB-040412 and EB-NBZ-SS-040412 were identified as equipment blanks. No terphenyl contaminants were found.

V. Surrogate Recovery

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

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-035-NBZ-SS-0.0-0.5	n-Triacontane-d62	232 (19-152)	All TCL compounds	J (all detects)	Р
PBLK24100	n-Triacontane-d62	233 (46-100)	All TCL compounds	J (all detects)	Р
EB-NBZ-SB-040412	n-Triacontane-d62	146 (46-100)	All TCL compounds	J (all detects)	Р
EB-NBZ-SS-040412	n-Triacontane-d62	106 (46-100)	All TCL compounds	J (all detects)	Р

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE306	All compounds reported below the RL.	J (all detects)	Α

X. System Performance

The system performance was acceptable.

XI. Overall Assessment of Data

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

XII. Field Duplicates

No field duplicates were identified in this SDG.

Santa Susana Field Laboratory Terphenyls - Data Qualification Summary - SDG DE306

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE306	SL-035-NBZ-SS-0.0-0.5 EB-NBZ-SB-040412 EB-NBZ-SS-040412	All TCL compounds	J (all detects)	Р	Surrogate spikes (%R) (S)
DE306	SL-025-NBZ-SS-0.0-0.5 SL-026-NBZ-SS-0.0-0.5 SL-027-NBZ-SS-0.0-0.5 SL-028-NBZ-SS-0.0-0.5 SL-031-NBZ-SS-0.0-0.5 SL-033-NBZ-SS-0.0-0.5 SL-034-NBZ-SS-0.0-0.5 SL-035-NBZ-SS-0.0-0.5 SL-035-NBZ-SS-0.0-0.5 SL-020-NBZ-SB-2.0-3.0 SL-020-NBZ-SB-2.5-3.5 EB-NBZ-SB-040412 EB-NBZ-SS-040412	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE306

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Terphenyls - Field Blank Data Qualification Summary - SDG DE306

No Sample Data Qualified in this SDG

Laboi METI The s	#:28268J41VAL #:DE306 ratory: Lancaster Laboratories HOD: GC Terphenyls (EPA SW ramples listed below were reviewation findings worksheets.	846 N	lethoo	L d 8015B)	evel IV		ORKSHEET n areas. Validation find		Date:
	Validation Area						Comments		
I.	Technical holding times		A	2500	Sampling date	es:	1	112	
11	Initial calibration			Δ	1		= 20	<u></u>	
III.	Calibration verification/			Δ	•	cer	1 と20		
IV.	Blanks			A					
V	Surrogate recovery			sω					
VI.	Matrix spike/Matrix spike duplicates			2	client		speciful		
VII.	Laboratory control samples		Α	-S-VV	دعا	ID	1		
VIII.	Target compound identification			Λ					
IX.	Compound quantitation DLOQ/LOI	Os		Δ					
_ X.	System Performance								
XI.	Overall assessment of data			Δ_{\prime}					
XII.	Field duplicates			N					
XIII.	Field blanks			ND	EB=	12	, 13		
Note: √alidat	A = Acceptable N = Not provided/applicable SW = See worksheet ed Samples: SOIL + Wall	R=	Rinsa	compounds ate d blank	s detected	T) = Duplicate B = Trip blank B = Equipment blank		
1 /	SL-025-NBZ-SS-0.0-0.5	11 2	SL-02	:0-NBZ-SB-	2.5-3.5	27 /	PBLK04096	31	
21	SL-026-NBZ-SS-0.0-0.5	_		BZ-SB-0404		222		32	
3 /	SL-027-NBZ-SS-0.0-0.5			BZ-SS-0404		23	PBLKZYJOU	33	
4 1	SL-028-NBZ-SS-0.0-0.5	14				24		34	
5 /	SL-031-NBZ-SS-0.0-0.5	15				25		35	

	SOIL + Wall						
1 /	SL-025-NBZ-SS-0.0-0.5	11 2	SL-020-NBZ-SB-2.5-3.5	21 /	PBLK04096	31	
2 1	SL-026-NBZ-SS-0.0-0.5	12 3	EB-NBZ-SB-040412 🕠	222	PBLK23102	32	
3 /	SL-027-NBZ-SS-0.0-0.5	133	EB-NBZ-SS-040412 ~	- 23	PBLK2410U	33	
4 1	SL-028-NBZ-SS-0.0-0.5	14		24		34	
5 /	SL-031-NBZ-SS-0.0-0.5	15		25		35	
6	SL-033-NBZ-SS-0.0-0.5	16		26		36	
7 l	SL-034-NBZ-SS-0.0-0.5	17		27		37	
8 2	SL-032-NBZ-SS-0.0-0.5	18		28		38	
9 2	SL-035-NBZ-SS-0.0-0.5	19		29		39	
10 2	SL-035-NBZ-SB-2.0-3.0	20		30		40	

Notes:___

LDC #: 28 268 J4/ SDG #: pu waren

VALIDATION FINDINGS CHECKLIST

Page: / of Z Reviewer: F1 2nd Reviewer: _ £

Method: GC HPLC

Method: / GCHPLC	T ====	<u> </u>		7
Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times	ı	ı		
All technical holding times were met.	/	Ī		
Cooler temperature criteria was met.		<u> </u>		
II. Initial calibration:	ı			
Did the laboratory perform a 5 point calibration prior to sample analysis?				
Were all percent relative standard deviations (%RSD) ≤ 20%?				
Was a curve fit used for evaluation?				
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?			_	
Were the RT windows properly established?				
IV, Continuing calibration				
Was a continuing calibration analyzed daily?				
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?				
Were all the retention times within the acceptance windows?				
V. Blanks:				
Was a method blank associated with every sample in this SDG?				
Was a method blank analyzed for each matrix and concentration?				
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.				
VII Surrogate spikes.				
Were all surrogate %R within the QC limits?	_			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?				
VIIs 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			1	
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?	i			

LDC #: 28 268 J4 | SDG #: per cond

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2 Reviewer: F 7
2nd Reviewer: $^{}$

Validation Area	Yes	No	NA	Findings/Comments
X. Target compound identification				
Were the retention times of reported detects within the RT windows?			1	
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.	7	_		
Target compounds were detected in the field blanks.				

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VALIDATION FINDINDS WORKSHEET Surrogate Recovery

Reviewer: FT 2nd Reviewer:_

Page: of

or No_ METHOD: __GC __HPLC Are surrogates required by the method? Yes__

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

YNA Were surrogates spiked into all samples and blanks?

YNA N/A Did all surrogate recoveries (%R) meet the OC limits?

Were surrogates spiked into all samples and blanks? Did all surrogate recoveries (%R) meet the QC limits?

) #	Sample ID	Detector/ Column	or/ in	Surrogate Compound		%R (Limits)	ts)			Qualifications	
	b	NS		n-Triacontan	1.1	d62 232	-61)	-152)	1/1	det	(5)
								(,		
)				
	PBLKZYIOU	4		1		688	9h)	~1001°	77	1	(5)
											,
	7)	7		7		961		(1	3	1	(5)
	(3	1		p	-	701		()	7		(s)
								(/
								(
								(
								(
)			
)			
					_			(
								(
					4						
					_)	(
	Surrogate Compound		Surrog	Surrogate Compound		Surrogate Compound		Surrogate (Surrogate Compound		
∢	Chlorobenzene (CBZ)	ŋ	ŏ	Octacosane	Σ	Benzo(e)Pyrene	S	1-Chloro-3-f	1-Chloro-3-Nitrobenzene Y	/ Tetrachloro-m- xylene	n- xylene
В	4-Bromofluorobenzene (BFB)	Ξ	Out	Ortho-Terphenyi	z	Terphenyl-D14	-	3,4-Dinitr	3,4-Dinitrotoluene		
O	a,a,a-Trifluorotoluene	_	Fluorc	Fluorobenzene (FBZ)	0	Decachlorobiphenyl (DCB)	О	Triper	Tripentyltin		3
а	Bromochlorobenene	7	Ė	n-Triacontane	4	1-methylnaphthalene	>	Tri-n-propyltin	ropyltin		
Ш	1,4-Dichlorobutane	×	I	Hexacosane	ø	Dichlorophenyl Acetic Acid (DCAA)	A) W	Tributyl Phosphate	hosphate		
L	1,4-Difluorobenzene (DFB)		Brc	Bromobenzene	Я	4-Nitrophenol	×	Triphenyl Phosphate	Phosphate		

14582281 SDG #: LDC #:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

7 of 7	JE)	Ψ,
Page:	Reviewer:	2nd Reviewer:

HPLC_ METHOD: GC

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

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

A = Area of compound,

C ≈ Concentration of compound, S ≈ Standard deviation of the CF X ≈ Mean of the CFs

L									
				Reported	Recalculated	Reported	Recalculated	Renorted	Recalculated
*	Standard ID	Calibration Date	Compound	CF (24-77 s 8d)	CF (24.77.38d) (24.77.38d)		Average CF (initial)	%RSD	!
-	[cAL	3/60/5	0- terphony	3.02 X104	2.02 ×104	208 KIDY	2-0KX104	5.3	んじ
				(12.00)	(, et)				
2	ICAL	c1/91/ h	7	12-19×10 4-19×10	2.19x10	2.18X10 4	0.18.810	1.6	76
T									
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1									
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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#: 2826814/ SDG#: [w coun

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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HPLC METHOD: GC_

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:

ave, CF = initial calibration average CF Where:

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

CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

					Reported	Recalculated	Reported	Recalculated
*	Standard ID	Calibration Date	Compound,	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV	. a%	%۵
-	the cert	71/9/1	0 - Terp hony	60.66	166.92	106.92	7.9	62
	07:5							
2	cer 13:26 4/6/12	4/6/12	P	1	97.53	87.53	9:/	7.1
က	3 ecy 15:00	4/16/12	1	74.37	90.33	90.33	4.3	4-3
4	aev 19:04	4/10/12	7	94.37	9/-30	91.30	3.3	3,3

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

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VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Page: / of /	Reviewer: FT	2nd reviewer:
	<u>~</u>	2

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

METHOD: CGC HPLC

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID: # /		oo - oanogale opiked	2				
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference	F
				Reported	Recalculated		
n- Triguntane dl2	\ S	0.331	0. 268798	1/8	180	0	1
							T
							1
							T
						The second secon	Ĭ

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

Sample ID:

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

LDC# 28 26818/

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicate Results Verification

2nd Reviewer:_ Reviewer:

> GC HPLC METHOD:

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

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

SC = Concentration

LCSD = Laboratory control sample duplicate percent recovery

76010501 LCS/LCSD samples:__

	S.	pike	Spiked	Sample	רכ	SOT	רכ	rcsp	/CS/	LCS/LCSD
Compound	(mg	Maged (mg//m	Concen (72	Concentration (mg//Fb	Percent	Percent Recovery	Percent	Percent Recovery	æ	RPD
	, SDT	LCSD	SOT	CSD	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)										
0- Terpheny/	8-36	AA	./5-8	NA	. 701	102	, \$ X			
5										

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

LDC#: 2876874/4/ SDG #:

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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Page:	Reviewer:

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GC HPL	Were all repor Were all recal
(ETHOD:	N N N

suffer recalculated and verified for all level IV samples?

Y N/N/K Were all recalculated resured to the control of the contro	were all repolited lesuits for detected target compounds within 10% of the reported results? Were all recalculated results for detected target compounds within 10% of the reported results?	% of the reported results?
Concentration= (A)(Fv)(Df)	Example:	
(KF)(VS OI VVS)(765/100)	Sample ID.	Compound Name
A= Area or height of the compound to be measured Fv= Final Volume of extract Pf= Dilitation Earter		
RF= Average response factor of the compound	Concentration =	
In the initial calibration		
Ws= Initial weight of the sample		
%S= Percent Solid		

Comments:	*	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
Comments:	<u>_</u>					
Comments:						
Comments:						
Comments:						
Comments:	<u> </u>					-
Comments:						
Comments:	<u> </u>					
Comments:	<u></u>					
Comments:						
	Comm	ents:				

Laboratory Data Consultants, Inc. **Data Validation Report**

Project/Site Name: Santa Susana Field Laboratory

Collection Date: April 2 through April 4, 2012

September 4, 2012 LDC Report Date:

Matrix: Soil/Water

Parameters: Formaldehyde

Validation Level: Level IV

Laboratory: Lancaster Laboratories

Sample Delivery Group (SDG): DE306

Sample Identification

SL-025-NBZ-SS-0.0-0.5

SL-026-NBZ-SB-0.0-0.5

SL-027-NBZ-SB-0.0-0.5

SL-028-NBZ-SS-0.0-0.5

SL-031-NBZ-SB-0.0-0.5

SL-033-NBZ-SB-0.0-0.5

SL-034-NBZ-SB-0.0-0.5

SL-032-NBZ-SB-0.0-0.5

SL-035-NBZ-SB-0.0-0.5

SL-035-NBZ-SB-2.0-3.0

SL-020-NBZ-SB-2.5-3.5

EB-NBZ-SB-040412 EB-NBZ-SS-040412

SL-025-NBZ-SS-0.0-0.5MS

SL-025-NBZ-SS-0.0-0.5MSD

Introduction

This data review covers 13 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 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 EB-NBZ-SB-040412 and EB-NBZ-SS-040412 were identified as equipment blanks. No formaldehyde was found.

V. Surrogate Recovery

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

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
EB-NBZ-SB-040412	Not specified	Butyraldehyde	11 (45-145)	Formaldehyde	J (all detects) UJ (all non-detects)	Р

VI. Matrix Spike/Matrix Spike Duplicates

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

VII. Laboratory Control Samples

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

VIII. Target Compound Identification

All target compound identifications were within validation criteria.

IX. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE306	All compounds reported below the RL.	J (all detects)	А

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 DE306

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE306	EB-NBZ-SB-040412	Formaldehyde	J (all detects) UJ (all non-detects)	Р	Surrogate spikes (%R) (S)
DE306	SL-025-NBZ-SS-0.0-0.5 SL-026-NBZ-SB-0.0-0.5 SL-027-NBZ-SB-0.0-0.5 SL-028-NBZ-SS-0.0-0.5 SL-031-NBZ-SB-0.0-0.5 SL-033-NBZ-SB-0.0-0.5 SL-034-NBZ-SB-0.0-0.5 SL-032-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5 SL-035-NBZ-SB-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE306

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory
Formaldehyde - Field Blank Data Qualification Summary - SDG DE306

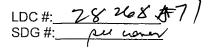
No Sample Data Qualified in this SDG

LDC # SDG : Labor	9	.IDA		PLETENE _evel IV	SS W	ORKSHEET	2nc	Date: 9/4/ Page: of / Reviewer: 5
METH	IOD: HPLC Formaldehyde (EP	A SW	846 Method 8	315A)			2110	Treviewer.
The s	amples listed below were review	ved fo	or each of the fo	ollowing val	idatior	n areas. Validation findi	ngs ar	e noted in attached
valida	tion findings worksheets.							
	Validation Area					Comments	·	
I.	Technical holding times		A	Sampling dat	es:	4/2- 4/4	/12	
11	Initial calibration		A			= 20		
III.	Calibration verification/ICV		A	1cv/	CW	= 20		
IV.	Blanks		A					
V	Surrogate recovery		-sω					
VI.	Matrix spike/Matrix spike duplicates		A					
VII.	Laboratory control samples		A	Les	10			
VIII.	Target compound identification							
IX.	Compound quantitation/RJ/LOQ/LOI	Os	A					
Χ.	System Performance		<u> </u>					
XI.	Overall assessment of data		Δ					
XII.	Field duplicates		\mathcal{N}					
XIII.	Field blanks		MD	€B	= /	12, 13		
Note:	A = Acceptable N = Not provided/applicable SW = See worksheet	R	D = No compound: = Rinsate B = Field blank	s detected	Т	e = Duplicate B = Trip blank B = Equipment blank		
Validate	ed Samples:	Tus						
1 /	SL-025-NBZ-SS-0.0-0.5	11	SL-020-NBZ-SB-	-2.5-3.5	21 /	PBLKOSIOD	31	
2	SL-026-NBZ-SS-0.0-0.5	12 2	EB-NBZ-SB-040	412	222	PBLK01098	32	
3	SL-027-NBZ-SS-0.0-0.5	13	EB-NBZ-SS-040	412	23		33	
4	SL-028-NBZ-SS-0.0-0.5	14	#/MS		24		34	
5	SL-031-NBZ-SS-0.0-0.5	15	#/MJ)		25		35	
6	SL-033-NBZ-SS-0.0-0.5	16			26		36	
7	SL-034-NBZ-SS-0.0-0.5	17			27		37	
8	SL-032-NBZ-SS-0.0-0.5	18			28		38	

Notes:	 			
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SL-035-NBZ-SS-0.0-0.5

SL-035-NBZ-SB-2.0-3.0



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Reviewer: F1
2nd Reviewer:

Method:	GC	HPLC

Wetnod: GC	HPLC				
Validation Area	V	Yes	No	NA	Findings/Comments
l. Technical holding times					
All technical holding times were met.					
Cooler temperature criteria was met.	1997-35-10-0				
II. Initial calibration:					
Did the laboratory perform a 5 point calibration prior	to sample analysis?	_			
Were all percent relative standard deviations (%RSI	D) < 20%?				
Was a curve fit used for evaluation?					
Did the initial calibration meet the curve fit acceptan	ce criteria of ≥ 0.990?				
Were the RT windows properly established?					and the state of t
IV. Continuing calibration	7.00				
Was a continuing calibration analyzed daily?					
Were all percent differences (%D) < 20%.0 or perce	nt recoveries 80-120%?				
Were all the retention times within the acceptance w	vindows?				According to the All Marks To Late State And State Sta
V. Blanks.					
Was a method blank associated with every sample	in this SDG?				
Was a method blank analyzed for each matrix and c	concentration?				
Was there contamination in the method blanks? If you validation completeness worksheet.	es, please see the Blanks				
VI. Surrogate spikes:					
Were all surrogate %R within the QC limits?		A	V		
If the percent recovery (%R) for one or more surroga a reanalysis performed to confirm samples with %R	ates was out of QC limits, was outside of criteria?				
VII. Matrix spike/Matrix spike duplicates					
Were a matrix spike (MS) and matrix spike duplicate matrix in this SDG? If no, indicate which matrix does MS/MSD. Soil / Water.	e (MSD) analyzed for each s not have an associated		-		
Was a MS/MSD analyzed every 20 samples of each	matrix?				
Were the MS/MSD percent recoveries (%R) and the (RPD) within the QC limits?	relative percent differences		,		
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 within the QC limits?	percent difference (RPD)				
IX. Regional Quality Assurance and Quality Control		1	1		
Were performance evaluation (PE) samples perform	ed?				
Were the performance evaluation (PE) samples with	in the acceptance limits?				

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VALIDATION FINDINGS CHECKLIST

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Reviewer: F7
2nd Reviewer: A

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

LDC# 28268 \$71

VALIDATION FINDINDS WORKSHEET Surrogate Recovery

Page: _of _ Reviewer: FT 2nd Reviewer:

or No_ METHOD: __GC __HPLC Are surrogates required by the method? Yes_

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?

	_	,	_	_			_	_					,															_
Qualifications	(5)																						Tetrachloro-m- xylene					
	(m//																					Surrogate Compound	1-Chloro-3-Nitrobenzene Y	3,4-Dinitrotoluene	Tripentyltin	Tri-n-propyltin	Tributyi Phosphate	
	15/1-54	((((((((((((((((()	Surrogate						
	7																						S	⊢	⊃	^	≯	
%R (Limits)	//)))))))))))))))	Surrogate Compound	Benzo(e)Pyrene	Terphenyl-D14	Decachlorobiphenyl (DCB)	1-methylnaphthalene	Dichlorophenyl Acetic Acid (DCAA)	
	4	Ц							-														Μ	z	0	۵	ø	ı
Surrogate Compound	Butyrablehy)																				Surrogate Compound	Octacosane	Ortho-Terphenyl	Fluorobenzene (FBZ)	n-Triacontane	Hexacosane	
									Ī													Surro	O	ō	Fluor			
stector/ olumn	52																									\perp		
Detector/ Column																							5	Ι	-	_	ᅩ	
Sample ID	رم/	_																				Surrogate Compound	Chlorobenzene (CBZ)	4-Bromofluorobenzene (BFB)	a,a,a-Trifluorotoluene	Bromochlorobenene	1,4-Dichlorobutane	
) #																							٧	В	C	О	E	L
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Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

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Reviewer:	2nd Reviewer

HPLC METHOD: GC

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

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

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

				Reported	Recalculated	Reported	Recalculated	Renorted	Receivilated
#	Standard ID	Calibration Date	punoduoo	200 Z U CF (std)	2 002.0 CF (std)		Average CF (initial)	%RSD	%RSD
-	75)	4/6/4	Formaldehyde	S.96×10	5.7610'		C.95.40	0.11	7:1
7	181	4/11/12	p	6.48 XIO	, OXXX.9	01×52.9 OXXX.9	6.75.40	9.0	2.6
\parallel		-							
m	 :								
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

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Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	and Reviewer

HPLC METHOD: GC_

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:

Where: % Difference = 100 * (ave, CF - CF)/ave, CF CF = A/C

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

Reported
'/Conc. CCV
1710-12

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.

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VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

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METHOD: GC HPLC

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

% Recovery: SF/SS * 100

SF = Surrogate Found SS = Surrogate Spiked Where:

Sample ID:

Percent Difference 0 Recalculated Percent Recovery Percent Recovery Reported 4397.817 Surrogate Found Surrogate Spiked 2000 Column/Detector 7 Bulyr Ablehyde Surrogate

				Ī
	Percent Difference			
	Percent Recovery	Recalculated		
	Percent Recovery	Reported		
	Surrogate Found			
	Surrogate Spiked			
	Column/Detector			
Sample IU:	Surrogate			

Sample ID:

ent			
Percent			
Percent	Recalculated		
Percent Recovery	Reported		
Surrogate Found			ž.
Surrogate Spiked			
Column/Detector			
Surrogate			

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Matrix Spike/Matrix Spike Duplicates Results Verification VALIDATION FINDINGS WORKSHEET

Reviewer:_

Page: /of / 2nd Reviewer:_

METHOD:

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

the following calculation: %Recovery = 100 * (SSC - SC)/SA

Where

SSC = Spiked sample concentration SA = Spike added MS = Matrix spike

SC = Sample concentration

RPD =(((SSCMS - SSCMSD) * 2) / (SSCMS + SSCMSD))*100 + MS/MSD samples:

MSD = Matrix spike duplicate

	Spike		Sample	Spike Sample	ample	Matrix spike	spike	Matrix Spike Duplicate	e Duplicate	QSW/SW	dsi
Compound	Added (1897)	(29)	Concles	Concentration (Mg/K)	tration in	Percent Recovery	lecovery	Percent Recovery	Recovery	RPD	٥
	. O SW	/ 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.	Lvas	SON	W	1732.67	5290.77	16	34	191	101	٨	~

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

Page: Reviewer:

2nd Reviewer:

GC HPLC METHOD:

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

% Recovery = 100* (SSC-SC)/SA RPD = 1 LCS - LCSD 1 * 2/(LCS + LCSD)

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

SC = Concentration

LCS/LCSD samples: LCS/LCSD samples:

	S	Spike	Spiked S	Sample	Γ	SOT	LC	rcsp	/SOT	TCS/FCSD
Compound	A(Ndded //	Concent (ルタ)	itretion //	Percent	Percent Recovery	Percent l	Percent Recovery	R	RPD
	SOT	CCSD	SOT	TCSD	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	Sas	AN	(0 00Lh	MA	. 16	16	- AN			

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.

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VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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/ VIV	N/A/	<u> </u>
z	N	
<u> </u>	_	ì

d results?

•	(RF)(Vs or Ws)(%S/100)	
Example:	(A)(Fv)(Df)	Concentration≖
Were all recalculated results for detected target compounds within 10% of the reportec	Were all recalculated result	X N N/A
Were all reported results recalculated and verified for all level IV salliples?	Were all reported results re-	/ W/W /

Compound Name_

Sample ID.

Area or height of the compound to be measured Final Volume of extract

A= Area or height of t Fv= Final Volume of e 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

Concentration =_

Qualifications			
Recalculated Results Concentrations			
Reported Concentrations			
Compound			
Sample ID			
*			

omments:	

SAMPLE DELIVERY GROUP

DE307

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-Apr-2012	SL-020-NBZ-SS-0.0-0.5	6608611	N	3546	1625C	111
04-Apr-2012	SL-020-NBZ-SS-0.0-0.5	6608611	N	3550B	8015B	Ш
04-Apr-2012	SL-020-NBZ-SS-0.0-0.5	6608611	N	METHOD	8315A	111

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE307

Laboratory: LL

EDD Filename: DE307_v1 eQAPP

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE307

(No Outliers)

SAMPLE DELIVERY GROUP

DE308

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
09-Apr-2012	SL-001-NBZ-SS-0.0-0.5	6612342	N	3546	1625C	Ш
09-Apr-2012	SL-001-NBZ-SS-0.0-0.5	6612342	N	3550B	8015B	111
09-Apr-2012	SL-001-NBZ-SS-0.0-0.5	6612342	N	METHOD	8315A	111
10-Apr-2012	DUP-07-NBZ-QC-041012	6612348	FD	3546	1625C	III
10-Apr-2012	DUP-07-NBZ-QC-041012	6612348	FD	3550B	8015B	III
10-Apr-2012	DUP-07-NBZ-QC-041012	6612348	FD	METHOD	8315A	III
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5	6612343	N	3546	1625C	111
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5	6612343	N	3550B	8015B	111
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5	6612343	N	METHOD	8315A	Ш
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MS	6612344	MS	3546	1625C	Ш
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MS	6612344	MS	3550B	8015B	Ш
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MS	6612344	MS	METHOD	8315A	Ш
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MSD	6612345	MSD	3546	1625C	III
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MSD	6612345	MSD	3550B	8015B	111
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 MSD	6612345	MSD	METHOD	8315A	III
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 RLM	6612346	MS	3550B	8015B	111
10-Apr-2012	SL-009-NBZ-SS-0.0-0.5 RLM	6612346	MS	METHOD	8315A	Ш

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE308

Laboratory: LL

EDD Filename: PrepDE308_v2

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Matrix: SO Method: 8315A

Sample ID:SL-009-NBZ-SS-0.0-0.5	Collected: 4/10/2012 9:30:00			Analysis T	ype: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
FORMALDEHYDE	680	U	680	MDL	1700	PQL	ug/Kg	J	Z

^{*} denotes a non-reportable result

Data Qualifier Summary

Lab Reporting Batch ID: DE308 EDD Filename: PrepDE308_v2

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
S	Surrogate/Tracer Recovery Upper Estimation
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE308

Reporting Limit Outliers

Lab Reporting Batch ID: DE308

Laboratory: LL

EDD Filename: PrepDE308_v2

eQAPP Name: CDM_SSFL_120718_Lan

Method: 8315A

Matrix: SO

The state of the s							
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
	FORMALDEHYDE	U	680	1700	PQL	ug/Kg	J (all detects)

SAMPLE DELIVERY GROUP

DE309

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-Apr-2012	SL-085-NBZ-SS-0.0-0.5	6615656	N	3546	1625C	111
10-Apr-2012	SL-085-NBZ-SS-0.0-0.5	6615656	N	3550B	8015B	· III
10-Apr-2012	SL-085-NBZ-SS-0.0-0.5	6615656	N	METHOD	8315A	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	6615657	N	3546	1625C	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	6615657	N	3550B	8015B	Ш
12-Apr-2012	SL-011-NBZ-SS-0.0-0.5	6615657	N	METHOD	8315A	Ш
12-Apr-2012	EB-NBZ-SS-041212	6615658	ЕВ	3510C	8015B	HI
12-Apr-2012	EB-NBZ-SS-041212	6615658	ЕВ	3520C	1625C	Ш
12-Apr-2012	EB-NBZ-SS-041212	6615658	EB	METHOD	8315A	111

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE309

Laboratory: LL

EDD Filename: DE309_v1

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE309

(No Outliers)

SAMPLE DELIVERY GROUP

DE310

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	6620874	N	3546	1625C	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	6620874	N	3550B	8015B	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5	6620874	N	METHOD	8315A	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MSD	P620874M242323A	MSD	METHOD	8315A	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MSD	P620874M261342	MSD	3546	1625C	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MSD	P620874M322343A	MSD	3550B	8015B	Ш
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MS	P620874R242314A	MS	METHOD	8315A	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MS	P620874R261323	MS	3546	1625C	III
16-Apr-2012	SL-013-NBZ-SS-0.0-0.5MS	P620874R322259A	MS	3550B	8015B	III
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	6620875	N	3546	1625C	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	6620875	N	3550B	8015B	Ш
17-Apr-2012	SL-014-NBZ-SS-0.0-0.5	6620875	N	METHOD	8315A	111
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	6620876	N	3546	1625C	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	6620876	N	3550B	8015B	III
17-Apr-2012	SL-088-NBZ-SS-0.0-0.5	6620876	N	METHOD	8315A	III
17-Apr-2012	EB-NBZ-SS-041712	6620878	EB	3510C	8015B	Ш
17-Apr-2012	EB-NBZ-SS-041712	6620878	EB	3520C	1625C	Ш
17-Apr-2012	EB-NBZ-SS-041712	6620878	EB	METHOD	8315A	Ш
17-Apr-2012	EB-NBZ-SB-041712	6620877	EB	3510C	8015B	Ш
17-Apr-2012	EB-NBZ-SB-041712	6620877	EB	3520C	1625C	Ш
17-Apr-2012	EB-NBZ-SB-041712	6620877	EB	METHOD	8315A	Ш

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE310

Laboratory: LL

EDD Filename: DE310

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA
Method: 1625C

Matrix: SO

Sample ID: \$L-013-NBZ-\$\$-0.0-0.5

Analysis Type: RES-BASE/NEUTRAL Diluti	ion: 10
--	---------

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
N-NITROSODIMETHYLAMINE	248	υ	248	MDL	496	PQL	ng/Kg	UJ	Q

Data Qualifier Summary

Lab Reporting Batch ID: DE310

Laboratory: LL

EDD Filename: DE310

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description				
E	Matrix Spike Precision				
Q	Matrix Spike Lower Estimation				
Q	Matrix Spike Precision				
S	Surrogate/Tracer Recovery Upper Estimation				

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE310

Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DE310 Laboratory: LL

EDD Filename: DE310 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1625C Matrix: SO							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-013-NBZ-SS-0.0-0.5MSD (SL-013-NBZ-SS-0.0-0.5)	N-NITROSODIMETHYLAMINE	-	55	70.00-130.00	31 (30.00)	N-NITROSODIMETHYLAMINE	J (all detects) UJ (all non-detects)

Page 1 of 1

SAMPLE DELIVERY GROUP

DE311

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	6622559	N	3546	1625C	III
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	6622559	N	3550B	8015B	Ш
17-Apr-2012	SL-090-NBZ-SS-0.0-0.5	6622559	N	METHOD	8315A	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	6622560	N	3546	1625C	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	6622560	N	3550B	8015B	Ш
18-Apr-2012	SL-008-NBZ-SB-4.0-5.0	6622560	N	METHOD	8315A	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	6622561	N	3546	1625C	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	6622561	N	3550B	8015B	Ш
18-Apr-2012	SL-081-NBZ-SS-0.0-0.5	6622561	N	METHOD	8315A	Ш
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	6622562	N	3546	1625C	III
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	6622562	N	3550B	8015B	Ш
18-Apr-2012	SL-082-NBZ-SS-0.0-0.5	6622562	N	METHOD	8315A	111
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	6622563	N	3546	1625C	111
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	6622563	N	3550B	8015B	Ш
18-Apr-2012	SL-082-NBZ-SB-2.5-3.5	6622563	N	METHOD	8315A	Ш
18-Apr-2012	SL-083-NBZ-SB-0.0-0.5	6622564	N	3546	1625C	111
18-Apr-2012	SL-083-NBZ-SB-0.0-0.5	6622564	N	3550B	8015B	III
18-Apr-2012	SL-083-NBZ-SB-0.0-0.5	6622564	N	METHOD	8315A	III

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE311

Laboratory: LL

EDD Filename: DE311_v1

eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE311

(No Outliers)

SAMPLE DELIVERY GROUP

DE312

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-Apr-2012	SL-012-NBZ-SS-0.0-0.5	6624301	N	3546	1625C	IV
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	6624301	N	3550B	8015B	IV
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5	6624301	N	METHOD	8315A	IV
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5MSD	P624301M240127A	MSD	METHOD	8315A	IV
19-Apr-2012	SL-012-NBZ-SS-0.0-0.5MS	P624301R240108A	MS	METHOD	8315A	IV
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	6624302	N	3546	1625C	Ш
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	6624302	N	3550B	8015B	111
19-Apr-2012	SL-012-NBZ-SB-0.5-1.5	6624302	N	METHOD	8315A	111
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	6624304	N	3546	1625C	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	6624304	N	3550B	8015B	IV
19-Apr-2012	SL-087-NBZ-SS-0.0-0.5	6624304	N	METHOD	8315A	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	6624303	N	3546	1625C	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	6624303	N	3550B	8015B	IV
19-Apr-2012	SL-086-NBZ-SS-0.0-0.5	6624303	N	METHOD	8315A	IV

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DE312 Laboratory: LL

EDD Filename: DE312_v1 eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE312

(No Outliers)

Enclosure II

Level IV Validation Reports

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 26, 2013

Matrix:

Soil

Parameters:

N-Nitrosodimethylamine

Validation Level:

Level IV

Laboratory:

Lancaster Laboratories

Sample Delivery Group (SDG): DE312

Sample Identification

SL-012-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 1625C for N-Nitrosodimethylamine.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance check is not required for by this method.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for N-Nitrosodimethylamine.

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 N-Nitrosodimethylamine.

The percent difference (%D) of the second source calibration standard were less than or equal to 30.0% for N-Nitrosodimethylamine.

V. Blanks

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

Sample EB-NBZ-SS-041712 (from SDG DE310) was identified as an equipment blank. No N-nitrosodimethylamine was found with the following exceptions:

Blank ID	Sampling Date	Compound	Concentration	Associated Samples
EB-NBZ-SS-041712	4/17/12	N-Nitrosodimethylamine	2.36 ng/L	All samples in SDG DE312

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. Surrogate recoveries (%R) were not within QC limits for all samples. Since the samples were diluted out, no data were qualified.

VII. Matrix Spike/Matrix Spike Duplicates

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

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and RLs

All compound quantitation and RLs were within validation criteria.

All compounds reported below the RL were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG DE312	All compounds reported below the RL.	J (all detects)	Α

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was within validation criteria.

Santa Susana Field Laboratory N-Nitrosodimethylamine - Data Qualification Summary - SDG DE312

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE312	SL-012-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	A	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory N-Nitrosodimethylamine - Laboratory Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory N-Nitrosodimethylamine - Field Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

VALIDATION COMPLETENESS WORKSHEET LDC #: 29239E2c Level IV SDG #: **DE312**

Laboratory: Eurofins Lancaster Laboratories

METHOD: GC/MS N-Nitrosodimethylamine (EPA Method 1625C)

2nd Reviewer

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
1.	Technical holding times	A	Sampling dates: 4/19/12
II.	GC/MS Instrument performance check	7	Sampling dates: 4/19/12 not reagaired 1/2 PSD 5 2 0
III.	Initial calibration	4	% PSD = 30
IV.	Continuing calibration/ICV	Δ	100 = 30 CCV = 20
V.	Blanks	4	
VI.	Surrogate spikes	3 3	
VII.	Matrix spike/Matrix spike duplicates	2	dient specified
VIII.	Laboratory control samples	A	client specified
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	Д	
XII.	Compound quantitation/RL/LOQ/LODs	A	
XIII.	Tentatively identified compounds (TICs)	λ	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks SW	NQ	FB = EB - NB2 -55 - 041712

Note:

A = Acceptable

N = Not provided/applicable SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

504# DE 310

D = Duplicate TB = Trip blank

EB = Equipment blank

Validated Samples:

	501L				 	
1	SL-012-NBZ-SS-0.0-0.5	11	SBLKAIL	21	31	
2	SL-086-NBZ-SS-0.0-0.5	12		22	32	
3	SL-087-NBZ-SS-0.0-0.5	13		23	33	
4		14		24	34	
5		15		25	35	
6		16		26	36	
7		17		27	 37	
8		18		28	38	
9		19		29	39	
10		20		30	40	

LDC#: 29239E2C

VALIDATION FINDINGS CHECKLIST

Page:/	of
Reviewer: FT	
2nd Reviewer:	<i>A</i>

Method: Semivolatiles (EPA-SW 846 Method 8270C) 16 25 C

			_	
Validation Area	Yes	No	NA	Findings/Comments
Technicarbornus moras Lean de Asia de Carlos d				
All technical holding times were met.	/			
Cooler temperature criteria was met.				
H-SCOVE INSTITUTION OF THE BOOK OF THE STATE				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	_			
Were all samples analyzed within the 12 hour clock criteria?	/			
Mishbergudaum (2004)				The state of the s
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) \leq 30% and relative response factors (RRF) \geq 0.05?				
IV Continuing salismon - 13 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?			_	
Were all percent differences (%D) < 25% and relative response factors (RRF) ≥ 0.05?				(
Visiants				
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.				
Viriginogale sprice				
Were all surrogate %R within QC limits?	-		<u>-</u> .	
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?			_/	
Will Marrix spikeracijas pike dipulsalės () ir išskie ir iš 1981. iš 1981.				
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 Asbiratory control estimates and the second se				
Was an LCS analyzed for this SDG?				

LDC#: 29239E2C

VALIDATION FINDINGS CHECKLIST

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

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?				
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		1		
Ke Regional Chaus Associance and second Commercial Comm				
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				
Anacinal state as the second s				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	/			
Were retention times within \pm 30 seconds from the associated calibration standard?		tun etetata a Million	_	
28. Hais Psecondatum sakundu suraksis keril 1922 - 1924 - 1925 - 1926 - 1926 - 1926 - 1926 - 1926 - 1926 - 192				
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 Gemponneksikanna (en 630 ili. 18 metal 2000) en 18 metal 2000 ili.				
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 semaliyay dening 28 organisa artsa 200 km (200 km)				and the second second
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			_/	
Were relative intensities of the major ions within \pm 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)?			\	
XV:System noman page. 18,5 by 20,000				
System performance was found to be acceptable.				
XV-(oce)alkasezeen oot organist.				
Overall assessment of data was found to be acceptable.				
AVIII talain dugligates				
Field duplicate pairs were identified in this SDG.				
		-/-		
Target compounds were detected in the field duplicates.				
XXII Ereld blanks multi-street to the street of the street				
Field blanks were identified in this SDG.				
Target compounds were detected in the field blanks.				

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VALIDATION FINDINGS WORKSHEET Field Blanks

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

Were field blanks identified in this SDG?

Were target compounds detected in the field blanks?

Associated sample units: $\frac{1}{2}$ te: Y N/A Y/N N/A

Sampling date: Blank units:

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

Associated Samples:

EB = EB - NB3-55-04/7/2

fion					
Sample Identification					
Š					
Blank ID	EB	78.00 3			
Compound		N- Nitro sodime thy Amine			CRQL

Associated sample units: Blank units:

Sampling date:

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

Sample Identification Associated Samples: Blank ID Compound CRQL

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

LDC# 2723962C

VALIDATION FINDINGS WORKSHEET Surrogate Recovery

Page: / of

2nd Reviewer: Reviewer:___

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

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

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? Were percent recoveries (%R) for surrogates within QC limits?

//N) N ≻

	ΙT	<u> </u>	TT			Ī	Ī					1							•		
Qualifications						and the second s														teritoria de la compansión	
%R (Limits)				()	()		()	(()	()	()	()	()	()	()	()	()	()	()	()	()
maside 1																					
Surrogate	,																				
Sample ID A //																					
Date																					
#	- I T		1				1		l l					- 1	ı J			I			

SUR.2S

QC Limits (Water) 21-100 10-123 33-110* 16-110*

QC Limits (Soil) 25-121 19-122 20-130* 20-130*

S5 (2FP)= 2-Fluorophenol S6 (TBP) = 2,4,6-Tribromophenol S7 (2CP) = 2-Chlorophenol-44 S8 (DCB) = 1,2-Dichlorobenzene-44

QC Limits (Water) 35-114 43-116 33-141 10-94

23-120 30-115 18-137 24-113

QC Limits (Soil)

* QC limits are advisory

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VALIDATION FINDINGS WORKSHEET Initial Calibration Calculation Verification

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-bage:	Reviewer:	2nd Reviewer:

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

calculations:

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

RRF = $(A_x)(C_y)/(A_y)(C_x)$ average RRF = sum of the RRFs/number of standards $C_x = \text{Concentration of comp}$ %RSD = 100 * (S/X)

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

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

Recalculated %RSD Reported %RSD 7 Average RRF (initial) Recalculated 1.00 Average RRF (initial) Reported 00.1 std) Recalculated 1.033 器'次| std) Reported RRF 0 2 72 Compound (Reference Internal Standard) Bis(2-ethylhexyl)phthalate (5th internal standard) Bis(2-ethylhexyl)phthalate (5th internal standard) Bis(2-etbyffexyl)phthalate (5th internal standard) Pentachlorophenol (4th internal standard) Pentachloropheper (4th internal standard) Pentachlorophenol (4th internal standard) Benzo(a)pyrene (6th internal standard) Benzo(a)pyrene (6th internal standard) Benzo(a)pyrene (6th internal standard Naphthalene (2nd internal standard) Naphthalene (2nd internal standard) Naphthalene (2nd Internal standaya) Fluorene (3rd internal standard) Fluorene (3rd internal standard) Fluorene (3rd internal standard) Phenol (1st internal standard) Phenol (1st internal standard) んりんみ A Phenol (1st internal standard) Calibration 3/28/12 Date Standard ID 1cD/

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# 29239EAC

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

Page: __of __ 2nd Reviewer: 🔀 Reviewer:___

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)・ ハクメ4 ルンC

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 = $(A_y)(C_{|y|}/(A_{|v|})(C_x)$

ave. RRF = initial calibration average RRF RRF = continuing calibration RRF A_x = Area of compound, A_s = Concentration of compound, G_s Where:

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

					Reported	Recalculated	Reported	Recaiculated
#	CI brobacto	Calibration	Compound (Reference Internal	Average RRF	RRF	RRF	Q%	Q%
	Oranical a la		W W THE	(IIIIIIII)	(20)	(22)	17.60.07. 4	0/: (
-	4011/100	7///7/	Phenol (1st internal standard)	7.0	1004	1.024/6	×- Y / Y/8	1.47
		1. 1	Naphthalone (2nd internal standard)	(6.99777)				
			Fluorene (3rd internal standard)	,				
			Pentachloropheper (4th internal standard)					
			Bis(2-etty/ffexyl)phthalate (5th internal standard)					
			Redesofe homens (Bit Internal standard)					
7	dey 1126	\ta\\\\\\\\\	Phenol (1st Internal standers) NN	7	118860	0.93811	/ 799/-9	791.9
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlopaphenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Bertzufahrwene (6th Internal standard)					
က	ear 15:54	21/21/1	Phonol (1st internal stangard) NJ M A	1	1	8/2060	0.90378 F7	7.43
		, , ,	Naphthalene (2nd infernal standard)				9.43084	
			Fluorene (3rd/internal standard)					
			Pentachforophenol (4th internal standard)					
			Bjs(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#: 29239E2C

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

Page:_	of_	_
Reviewer:	FT	
2nd reviewer:		

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

1625C

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

#1 Sample ID:

10X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5 NDMA-DL	250	42.614	טרו	170	O
2-Fluorobipheryl					
Terphenyl-014					
Phenol-da					
2-Fluorophenol					
2,4,6-Tribromophenol				-	
2-Chlorophenol-d4					
4,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5	Орікси	l	, topottou		·
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Commis ID.

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14				<u> </u>	
Phenoi-d5			_		
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC# 29239EDC

VALIDATION FINDINGS WORKSHEET

Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

[]	FT	
Page:	Reviewer:	2nd Reviewer.

METHOD: GC/MS BNA (EPA SW 846 Method 8270) /6 パー

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

% Recovery = 100 * (SC/SA

Where: SSC = Spike concentration SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC)

LCSC = Laboraotry control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 1

	ďs	ike	Spi	ke	01	SO	01	CSD	/SOI	CS/I CSD
Compound	PA (199	Added (ng/kg)	Concentra	itration	Percent Recovery	Recovery	Percent I	Percent Recovery	_ R	RPD
		LCSD	1.08	csn	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol							:			
Acenaphthene										
Pentachlorophenol										
Pyrene										
N-Nitrosodimethy/mine 833.33	mine 832.33	ΑΛ	865.72	42	101	/0/	1 42			
ז										
		-	-	`						

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#: 29239E2c

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page:_	/of	1
Reviewer:	FT	
2nd reviewer:	A	
	<u> </u>	

METHOD: GC/MS BNA (EPA SW 846 Method 8270) /625 C

Υ	N	N/A)
Y		(N/A
		$\overline{}$

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

Сопс	entrati	on = $(A_{i})(I_{s})(V_{i})(DF)(2.0)$ $(A_{is})(RRF)(V_{o})(V_{i})(%S)$	Example:
A_{x}	=	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D;
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = ()()()()()()
V _o	±	Volume or weight of sample extract in milliliters (ml) or grams (g).	M
V_{l}	=	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	

#	Sample ID	Compound	Reported Concentration	Calculated Concentration	Qualification
	Cumple 15	Compound	1		Quanneation
	· · · · · · · · · · · · · · · · · · ·				
				,	
 					

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 26, 2013

Matrix:

Soil

Parameters:

Terphenyls

Validation Level:

Level IV

Laboratory:

Eurofins Lancaster Laboratories

Sample Delivery Group (SDG): DE312

Sample Identification

SL-012-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

Introduction

This data review covers 3 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Terphenyls.

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

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

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- NJ Presumptive evidence of presence of the compound at an estimated quantity.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Initial Calibration

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

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

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 terphenyl contaminants were found in the method blanks.

Sample EB-NBZ-SS-041712 (from SDG DE310) was identified as an equipment blank. No terphenyl contaminants were found.

V. Surrogate Recovery

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

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
SL-012-NBZ-SS-0.0-0.5	n-Triacontane-d62	158 (19-152)	All TCL compounds	J (all detects)	Р

Santa Susana Field Laboratory Terphenyls - Data Qualification Summary - SDG DE312

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE312	SL-012-NBZ-SS-0.0-0.5	All TCL compounds	J (all detects)	Р	Surrogate spikes (%R) (S)
DE312	SL-012-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Terphenyls - Laboratory Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Terphenyls - Field Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

SDG # _abor: METH The sa	#:	<u>oratories</u> V 846 M	L ethod 8015B)	₋evel IV		ORKSHEET areas. Validation find		Date: 2/2 Page: _/of _ Reviewer: _/ d Reviewer: _/
	Validation Area	<u> </u>				Comments		
l.	Technical holding times		Ą	Sampling date	es:	4/19/12		
II	Initial calibration		Δ	%	PSD	/ /		
III.	Calibration verification/ICV		A	,		/cc/ = 20		
IV.	Blanks		A					
٧	Surrogate recovery		SIAV					
VI.	Matrix spike/Matrix spike duplicate	s	\sim	clie	nt	Specified		
VII.	Laboratory control samples		A	LCS		1 0		
VIII.	Target compound identification		A					
IX.	Compound quantitation/RL/LOQ/L	ODs	4					
Χ.	System Performance		A					
XI.	Overall assessment of data		A					
XII.	Field duplicates		N,					
XIII.	Field blanks	_	ND	FB:	= E	B - NBZ - SS SDG	-04	17/2
lote: /alidate	A = Acceptable N = Not provided/applicable SW = See worksheet ed Samples:	R =	= No compounds Rinsate = Field blank		D T	S DG = Duplicate B = Trip blank B = Equipment blank	₽ P	E 310
7	SL-012-NBZ-SS-0.0-0.5	11	PBLKO	2/15	21		31	
	SL-086-NBZ-SS-0.0-0.5	12	PBLKO PBLKI	5116	22		32	
_	SL-087-NBZ-SS-0.0-0.5	13			23		33	
4		14			24		34	
5		15			25		35	
6		16			26		36	
7		17			27		37	
8		18			28		38	
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Notes:_

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VALIDATION FINDINGS CHECKLIST

Page: / of Z Reviewer: F1 2nd Reviewer: _ _____

Method: GC HPLC

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?	-	ļ		
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?	ļ			
Were the RT windows properly established?				
IV Continuing calibration	1 -	i i		
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	Т —			
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?				
Will. Matrix spike/Matrix spike duplicates	T			
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	1		-	
(RPD) within the QC limits?				
VIII. Laboratory control samples			"	
Was an LCS analyzed for this SDG?				
Was an LCS analyzed per extraction batch?	1			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				
IX: Regional Quality Assurance and Quality Control:	- 2			
Were performance evaluation (PE) samples performed?				
Were the performance evaluation (PE) samples within the acceptance limits?				

LDC #: 29239E4)
SDG #: su cond

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: F2
2nd Reviewer: A

				
Validation Area	Yes	_No	NA	Findings/Comments
X Harget compound identification				
Were the retention times of reported detects within the RT windows?				<u> </u>
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. Överälliassessment 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# 29239EY/

VALIDATION FINDINDS WORKSHEET Surrogate Recovery

Page: _of_ 2nd Reviewer: Reviewer: FT

code = 1' "

Y MAY		recover	ies (%R) n	Did all surrogate recoveries (%R) meet the QC limits?	ای					
) #	S	Detector/ Column	or/ nn	Surrogate Compound		%R (Limits)			_	Qualifications
	/	2 N		n-Iriauntane	8) 85/	1-61	152)	1/199	Pdet
				- 462	_			(
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	Surrogate Compound		Surrog	Surrogate Compound		Surrogate Compound		Surrogate Compound	Compound	-
٨	Chlorobenzene (CBZ)	9	Ō	Octacosane	Σ	Benzo(e)Pyrene	S	1-Chloro-3-h	1-Chloro-3-Nitrobenzene Y	Tetrachloro-m-xylene
В	4-Bromofluorobenzene (BFB)	Η	Ю	Ortho-Terphenyl	z	Terphenyi-D14	۲	3,4-Dinitr	3,4-Dinitrotoluene	
U	a,a,a-Trifluorotoluene	_	Fluor	Fluorobenzene (FBZ)	0	Decachlorobiphenyl (DCB)	٦	Tripei	Tripentyltin	
٥	Bromochlorobenene	n	ä	n-Triacontane	а	1-methylnaphthalene	>	Tri-n-propyllin	ropyltin	
Ε	1,4-Dichlorobutane	×	1	Hexacosane	ø	Dichlorophenyl Acetic Acid (DCAA)	≱	Tributyl Phosphate	hosphate	
Ш.	1.4-Difluorobenzene (DFB)	_	Br	Bromobenzene	В	4-Nitrophenol	×	Triphenyl Phosphate	Phosphate	

LDC# 29239E4/ SDG#:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

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Page:	Reviewer:	2nd Reviewer:

METHOD: GC

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

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

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

CFS	
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				41					
				41	Recalculated	Reported	Recalculated	Renorted	Recalculated
#	Standard (D	Calibration Date	Compound	CF CF (std)	CF. std).	Average CF (Initial)	Average CF (Initial)	%RSD	%RSD
-	76)	4/11/13	0- Temphony /		1	2-18×10+	2.18x07.	9.4	7.6
		_			Π				
	-								
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က									
4									
\Box									

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# 49 239 EV, SDG# (oun

VALIDATION FINDINGS WORKSHEET Continuing Calibration Results Verification

Page: __of___ Reviewer: __£____ 2nd Reviewer: __<

METHOD: GC HPLC

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

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

Where: ave. CF = initial calibration average CF

CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

1				16				
					Reported	Recalculated	Reported	Recalculated
*	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV	CF/Conc. CCV	. a%	д %
	21/27/4 Stol Nos	21/27/4	0- Tenpheny	13.59	23-52	23-52	0.3	0.3
			٥					
	aer 14.28	7	7	7	24. 25	7.15	2-5	2.5
	cen 18:32	·	7	7	24.75	24.75	6%	6 %
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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.

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METHOD: CGC HPLC

VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
n- Trig conterne -d62	\$ <i>A</i>	0.33195	0. Sayyed	85/	83/	0
						خننت و درو برجه ساده ساده ساده خدم درا باد برای برای درای برای در این برای در این برای در این در این در این در
		-				

Sample ID:							
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference	
				Reported	Recalculated		ır—
							
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Sample ID:

 	ı,	<u> </u>		-	
Percent Difference		•			
Percent Recovery	Recalculated				
Percent Recovery	Reported				
Surrogate Found					Po
Surrogate Spiked					
Column/Detector					
Surrogate					

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

Page: _/of_ Reviewer:_

2nd Reviewer:

GC HPLC METHOD:

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

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

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

SC = Concentration

LCS/LCSD samples:

	S	pike	Spiked Sam	Sample	דכ	rcs	TC	LCSD	/SOT	TCS/FCSD
Compound	A W	Added (ms ///	Conce	centration	Percent F	Percent Recovery	Percent I	Percent Recovery	R	RPD
	SOT	TCSD	SOT	rcsp /	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)										
0- Terpheny /	8.36	ν4	7.9	N4	16	16	- 4N			
>										

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.

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LDC #:	SDG #:

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

/ot	4	X-X
Page:	Reviewer:	2nd Reviewer:

METHOD:

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

Example:	-	Sample ID.
(A)(Fv)(Df)	(RF)(Vs or Ws)(%S/100)	
Concentration≖	_	

Compound Name

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

Concentration =_

Vs= Initial volume of the sample Ws= Initial weight of the sample %S= Percent Solid in the initial calibration

#	Sample 10	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
				-	
<u> </u>					
\perp					
<u>.</u>					
					-
Somm	Comments:				

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name:

Santa Susana Field Laboratory

Collection Date:

April 19, 2012

LDC Report Date:

February 26, 2013

Matrix:

Soil

Parameters:

Formaldehyde

Validation Level:

Level IV

Laboratory:

Eurofins Lancaster Laboratories

Sample Delivery Group (SDG): DE312

Sample Identification

SL-012-NBZ-SS-0.0-0.5

SL-086-NBZ-SS-0.0-0.5

SL-087-NBZ-SS-0.0-0.5

SL-012-NBZ-SS-0.0-0.5MS

SL-012-NBZ-SS-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 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.

Sample EB-NBZ-SS-041712 (from SDG DE310) was identified as an equipment blank. No formaldehyde was found.

V. Surrogate Recovery

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

VI. Matrix Spike/Matrix Spike Duplicates

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.

Santa Susana Field Laboratory Formaldehyde - Data Qualification Summary - SDG DE312

SDG	Sample	Compound	Flag	A or P	Reason (Code)
DE312	SL-012-NBZ-SS-0.0-0.5 SL-086-NBZ-SS-0.0-0.5 SL-087-NBZ-SS-0.0-0.5	All compounds reported below the RL.	J (all detects)	А	Compound quantitation and RLs (Z)

Santa Susana Field Laboratory Formaldehyde - Laboratory Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

Santa Susana Field Laboratory Formaldehyde - Field Blank Data Qualification Summary - SDG DE312

No Sample Data Qualified in this SDG

SDG	#: <u>29239E71</u> VA #: <u>DE312</u> ratory: <u>Eurofins Lancaster Lab</u>				LETENES evel IV	SS V	VORKSHEET		Date: 2/2 Page: /of / Reviewer: /
MET	HOD: HPLC Formaldehyde (El	PA SW	846 M	lethod 83	315A)			2nd	Reviewer:
	samples listed below were revieution findings worksheets.	ewed for	r each	of the fo	ollowing valid	datio	n areas. Validation fin	dings are	e noted in attached
	Validation Area						Comments		
1.	Technical holding times			<u> </u>	Sampling date	es:	4/19/12		
11	Initial calibration			Δ	0/.	25	SP = W		
111.	Calibration verification/ICV			Δ		10	v/ccv = 20		
IV.	Blanks			Δ					
V	Surrogate recovery			A					
VI.	Matrix spike/Matrix spike duplicate	s		A					
VII.	Laboratory control samples			Ą	res		=		
VIII.	Target compound identification			A					
IX.	Compound quantitation/RL/LOQ/Lo	ODs		A					
X.	System Performance			A					
XI.	Overall assessment of data			A					
XII.	Field duplicates			\mathcal{N}					
XIII.	Field blanks			NP	EB =	E	3- NBZ - SS-0	041712	
Note:	e: A = Acceptable ND = No compounds detected N = Not provided/applicable SW = See worksheet ND = No compounds detected R = Rinsate TB = Trip blank EB = Equipment blank								
Valida	ted Samples:								
1	SL-012-NBZ-SS-0.0-0.5	11	PE	3LKO	2/15	21		31	
2	SL-086-NBZ-SS-0.0-0.5	12				22		32	
3	SL-087-NBZ-SS-0.0-0.5	13				23		33	
4	SL-012-NBZ-SS-0.0-0.5MS	14				24		34	
5	SL-012-NBZ-SS-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	S:								

LDC #: 29239E71 SDG #: pu ware

VALIDATION FINDINGS CHECKLIST

Page: /of Z Reviewer: F1 2nd Reviewer: A

Method: GC HPLC

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.	-			
U. 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. Confiniting calibration	-			
Was a continuing calibration analyzed daily?	/			
Were all percent differences (%D) ≤ 20%.0 or percent recoveries 80-120%?	1/		<u> </u>	
Were all the retention times within the acceptance windows?				
V. Blanks				
Was a method blank associated with every sample in this SDG?	<u> -</u>	<u> </u>		
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.				
M. 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?				
MIII Laboratory control samples	1			and the state of t
Was an LCS analyzed for this SDG?	1			
Was an LCS analyzed per extraction batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?				·
X: Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?	ļ			
Were the performance evaluation (PE) samples within the acceptance limits?				

VALIDATION FINDINGS CHECKLIST

Page: 2of 2 Reviewer: F2 2nd Reviewer: _____

Validation Area	Yes	No	NA	Findings/Comments
X Target compound identification				ų.
Were the retention times of reported detects within the RT windows?				
XI. Compound quantitation/CRQLs				A Company of the Comp
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				And the second s
Overall assessment of data was found to be acceptable.		,		
XIV. Field duplicates				200 - 100 -
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.				

923927 **1** LDC#: SDG#:

Initial Calibration Calculation Verification VALIDATION FINDINGS WORKSHEET

Page: 2nd Reviewer: Reviewer:

> FPC METHOD: GC_

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

CF = A/C average CF = sum of the CF/number of standards %RSD = 100 $^{\circ}$ (S/X)

A = Area of compound,

C ≈ Concentration of compound, S ≈ Standard deviation of the CF X ≈ Mean of the CFs

				Reported	Recalculated	Reported	Recalculated	Renorted	Recalculated
#	Standard ID	Calibration Date	Compound	ンション CF (std)	کر تحمیر CF (std)	1	Average CF (initial)	%RSD	%RSD
-	1451	21/20/12	For maldohyde	6.46×10	6.46×101	1	s. 79x/0	6.1	7.9
2									
ო			•						
4									

Comments: Referto 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#. 29239E71 SDG# (Laur

Continuing Calibration Results Verification VALIDATION FINDINGS WORKSHEET

120	(H)	8
Page:	Reviewer:	2nd Reviewer:

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

using the following calculation:

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

Where: ave. CF = initial calibration average CF

CF ≈ continuing calibration CF
A ≈ Area of compound
C ≈ Concentration of compound

1					Reported	Recalculated	Reported	Recalculated
1	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	CF/Conc. CCV		С%	0 %
9	dav 1:17	21/29/1	Formaldehydl	0.5 an	1919.25		1.4	/ *
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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.

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VALIDATION FINDINGS WORKSHEET Surrogate Results Verification

METHOD: GC HPLC

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

% Recovery: SF/SS * 100

Where: SF = Surrogate Found SS = Surrogate Spiked

Sample ID:

Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference
				Reported	Recalculated	
Butyraldehyde	N>	3990	3912.764893	86	86	0

Sample ID:							
Surrogate	Column/Detector	Surrogate Spiked	Surrogate Found	Percent Recovery	Percent Recovery	Percent Difference	r ==
				Reported	Recalculated		<u> </u>
							T
							T
							T

Sample ID:

,		·		
Percent Difference		•		
Percent Recovery	Recalculated			
Percent Recovery	Reported			
Surrogate Found				- 8
Surrogate Spiked				
Column/Detector				
Surrogate				

1127511 SDG#: Les comes LDC#:

Matrix Spike/Matrix Spike Duplicates Results Verification VALIDATION FINDINGS WORKSHEET

7 2nd Reviewer:

Page: / of / Reviewer:

METHOD:

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

SSC = Spiked sample concentration SA = Spike added MS = Matrix spike

Where

SC = Sample concentration

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

MSD = Matrix spike duplicate

4451 MS/MSD samples:

WSD Concentration (127/k) WSD — MS MSD Rep WSD — WS	Spike		Sample	Spike Sample	ımple	Matrix spike	spike	Matrix Spike Duplicate) Duplicate	MS/MSD	ası
MSD	Adder	7)	Cong.	Concent (12%)	ration (A)	Percent Recovery	lecovery	Percent Recovery	acovery	RPD	٥
Ine (8015) (8015) (8015) (8015) (8015) (8021B) (8021B	MS /	ISD S		S		Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
nne (8015) (8021B) (8021B) (8151) </td <td>(8015)</td> <td></td>	(8015)										
ne (8021B) (8151) <td>(8015)</td> <td></td>	(8015)										
ne (RSK-175) (8151)	(8021B)										
eb (8151) halene (8310) scene (8310) Trinitrotoluene (8330) Trinitro	(RSK-175)										
eb (8151) thalene (8310) acene (8310) (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330) Trinitrotoluene (8330)	(8151)										
thalene (8310) acene (8310) (8330) Trinitrotoluene (8330) nqlde hyde sox sox (100) The sox	(8151)										
acene (8310) (8330) Trinitrotoluene (8330) (8330) nqlde.hyde 50x sox 50x 10 4%29.57 4%29.57 4703.52											
Trinitrotoluene (8330) Trinitrotoluene (8330) Indide hyde Sox Sox (1703.32) Thin itrotoluene (8330)	(8310)										
TEALH KEERH CIN SUS NOS	(8330)										
75.80TH \V.9.924 CUU 2502 702	itoluene (8330)										
	302	کز	CIM	4829.34	4703.34	76	96	16	16	۳)	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.

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

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Page:	Reviewer:	2nd Reviewer:

METHOD: GC HPLC

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

% Recovery = 100* (SSC-SC)/SA RPD = 1 LCS - LCSD 1 * 2/(LCS + LCSD)

SC = Concentration

Where: SSC = Spiked sample concentration SA = Spike added LCS = Laboratory control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

165 LCS/LCSD samples:

	.	Spike	Spiked	Sample	TCS	S	רכ	LCSD	/SOT	LCS/LCSD
Compound	•	radea va/A	Conce (7)	Concentration (M/ ()	Percent Recovery	Recovery	Percent	Percent Recovery	22	RPD
	SOT	, LCSD	SOT	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)										
Diesel (8015)				. 15						
Benzene (8021B)										
Methane (RSK-175)										
2,4-D (8151)										
Dinoseb (8151)										
Naphthalene (8310)										
Anthracene (8310)										
HMX (8330)										
2,4,6-Trinitrotoluene (8330)										
Formaldehyde	_Se 05	AV	85.hs1.h	47	. 56	756	- AU			
D										

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.

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VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

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Page:	Reviewer:	2nd Reviewer:

METHOD:

	>	>	
	N AVA	N/N/W	

Vere all recalculated results for detected target compounds within 10% of the reported results? Vere all reported results recalculated and verified for all level IV samples?

Compound Name_

A= Area or height of the compound to be measured Fv= Final Volume of extract Df≈ Dilution Factor

Concentration =_

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

# Sample ID Compound Concentrations Concentrations Concentrations Concentrations						
Comments:	*	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
Comments:						
Comments:						
Comments:						
Comments:						
Comments:						
Comments:						
Comments:	<u> </u>					
Comments:						
Comments:						
	Comme	ints:				

SAMPLE DELIVERY GROUP

DE313

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-Apr-2012	SL-017-NBZ-SS-0.0-0.5	6625144	N	3546	1625C	III
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	6625144	N	3550B	8015B	Ш
19-Apr-2012	SL-017-NBZ-SS-0.0-0.5	6625144	N	METHOD	8315A	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	6625147	N	3546	1625C	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	6625147	N	3550B	8015B	III
20-Apr-2012	SL-080-NBZ-SS-0.0-0.5	6625147	N	METHOD	8315A	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	6625146	N	3546	1625C	Ш
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	6625146	Ň	3550B	8015B	III
20-Apr-2012	SL-018-NBZ-SS-0.0-0.5	6625146	N	METHOD	8315A	Ш
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	6625148	N	3546	1625C	Ш
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	6625148	N	3550B	8015B	111
20-Apr-2012	SL-089-NBZ-SS-0.0-0.5	6625148	N	METHOD	8315A	Ш
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	6625145	N	3546	1625C	111
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	6625145	N	3550B	8015B	III
20-Apr-2012	SL-016-NBZ-SS-0.0-0.5	6625145	N	METHOD	8315A	111

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DE313 Laboratory: LL

EDD Filename: DE313_v1 eQAPP Name: CDM_SSFL_120718_Lan

No Data Review Qualifiers Applied.

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DE313

(No Outliers)

SAMPLE DELIVERY GROUP

DX159

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-Mar-2012	SL-003-NBZ-SS-0.0-0.5	6577293	N	METHOD	1613B	m				
12-Mar-2012	SL-003-NBZ-SB-4.0-5.0	6577294	N	METHOD	1613B	111				
12-Mar-2012	SL-002-NBZ-SS-0.0-0.5	6577290	N	METHOD	1613B	111				
12-Mar-2012	SL-002-NBZ-SB-4.0-5.0	6577291	N	METHOD	1613B	Ш				
12-Mar-2012	SL-002-NBZ-SB-7.5-8.5	6577292	N	METHOD	1613B	111				
12-Mar-2012	SL-010-NBZ-SB-4.0-5.0	6577297	N	METHOD	1613B	Ш				
12-Mar-2012	SL-007-NBZ-SB-4.0-5.0	6577295	N	METHOD	1613B	Ш				
12-Mar-2012	SL-007-NBZ-SB-9.0-10.0	6577296	N	METHOD	1613B	111				
13-Mar-2012	SL-006-NBZ-SB-3.0-4.0	6577299	N	METHOD	1613B	III				
13-Mar-2012	SL-005-NBZ-SB-4.0-5.0	6577298	N	METHOD	1613B	III				
13-Mar-2012	SL-015-NBZ-SS-0.0-0.5	6577300	N	METHOD	1613B	III				
13-Mar-2012	SL-021-NBZ-SS-0.0-0.5	6577301	N	METHOD	1613B	ш				
13-Mar-2012	SL-021-NBZ-SB-4.0-5.0	6577302	N	METHOD	1613B	Ш				

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: Matrix: SO

Matrix: SO

Sample ID:SL-002-NBZ-SB-4.0-5.0

Collected: 3/12/2012 11:30:00 Analysis Type: RES Dilution: 1

Oumple 15:02-002-1152-05-4.0-0.0	Conce	100. 01 12/1	.012 11.00	7.00 A	naiyaia i	ype. ILL	pe. NES Dilation.				
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3,4,6,7,8-HPCDD	0.354	JB	0.0227	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,4,6,7,8-HPCDF	0.125	JB	0.00903	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,4,7,8,9-HPCDF	0.0444	JBQ	0.0128	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,4,7,8-HXCDF	0.0439	JBQ	0.0109	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,6,7,8-HXCDD	0.0775	JB	0.0212	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,6,7,8-HXCDF	0.0238	JBQ	0.0112	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,7,8,9-HXCDD	0.0455	JBQ	0.0201	MDL	5.32	PQL	ng/Kg	U	В		
1,2,3,7,8-PECDF	0.0429	JB	0.0163	MDL	5.32	PQL	ng/Kg	U	В		
2,3,4,6,7,8-HXCDF	0.0553	JBQ	0.0104	MDL	5.32	PQL	ng/Kg	U	В		
2,3,4,7,8-PECDF	0.0775	JB	0.0148	MDL	5.32	PQL	ng/Kg	U	В		
OCDD	0.743	JB	0.0258	MDL	10.6	PQL	ng/Kg	U	В		
OCDF	0.131	JBQ	0.0281	MDL	10.6	PQL	ng/Kg	U	В		

Sample ID: SL-002-NBZ-SB-7.5-8.5

Collected: 3/12/2012 11:40:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.354	JBQ	0.0237	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.127	JB	0.00893	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0336	JBQ	0.0138	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0340	JBQ	0.0215	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0382	JB	0.0112	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0471	JBQ	0.0236	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0303	JB	0.0103	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0804	JB	0.0224	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0413	JBQ	0.0124	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0302	JBQ	0.0280	MDL	5.44	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0750	JBQ	0.0146	MDL	5.44	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0296	JBQ	0.0103	MDL	5.44	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0778	JBQ	0.0133	MDL	5.44	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0321	JBQ	0.0267	MDL	1.09	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0319	JB	0.0275	MDL	1.09	PQL	ng/Kg	U	В
OCDD	0.982	JB	0.0271	MDL	10.9	PQL	ng/Kg	U	В
OCDF	0.141	JB	0.0219	MDL	10.9	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 8/30/2012 12:02:27 PM ADR version 1.6.0.188

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID:SL-0	02-NBZ-SS-0.0-0.5
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Sample ID:SL-002-NBZ-SS-0.0-0.5	Collec	ted: 3/12/2	012 11:15	5:00 <i>A</i>	nalysis T	ype: RES		Dilution: 1		
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	1.63	JB	0.0353	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.473	JB	0.0151	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0695	JB	0.0207	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.0587	JB	0.0363	MDL	5.15	PQL	ng/Kg	υ	В	
1,2,3,4,7,8-HXCDF	0.544	JB	0.0308	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDD	0.298	JB	0.0371	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDF	0.390	JB	0.0303	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,7,8,9-HXCDD	0.365	JB	0.0372	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,7,8,9-HXCDF	0.132	JB	0.0304	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDD	0.0604	JBQ	0.0372	MDL	5.15	PQL	ng/Kg	υ	В	
1,2,3,7,8-PECDF	3.84	JB	0.0520	MDL	5.15	PQL	ng/Kg	J	Z	
2,3,4,6,7,8-HXCDF	0.122	JBQ	0.0291	MDL	5.15	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.400	JB	0.0476	MDL.	5.15	PQL	ng/Kg	J	Z	
2,3,7,8-TCDF	0.608	JB	0.117	MDL	1.03	PQL	ng/Kg	J	Z	
OCDD	10.1	JB	0.0244	MDL	10.3	PQL	ng/Kg	J	Z	
OCDF	0.751	JB	0.0277	MDL.	10.3	PQL	ng/Kg	J	Z	

Sample ID: SL-003-NBZ-SB-4.0-5.0

Collected: 3/12/2012 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	0.258	JBQ	0.0179	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0769	JBQ	0.00840	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0399	JBQ	0.0129	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0514	JB	0.0205	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0954	JB	0.0124	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0387	JBQ	0.0224	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0731	JBQ	0.0116	MDL	5.21	PQL	ng/Kg	υ	В
1,2,3,7,8,9-HXCDD	0.0880	JBQ	0.0201	MDL	5.21	PQL	ng/Kg	υ	В
1,2,3,7,8,9-HXCDF	0.0466	JBQ	0.0109	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.111	JBQ	0.0276	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.136	JBQ	0.0116	MDL	5.21	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0503	JBQ	0.00935	MDL	5.21	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.123	JB	0.0108	MDL	5.21	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0281	JBQ	0.0244	MDL	1.04	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX159

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Laboratory: LL

Page 3 of 9

Method Category: SVOA

Matrix: Method: SO

Sample ID:SL-003-NBZ-SB-4.0-5.0	Collec	ted: 3/12/2	012 9:50	:00 A	nalysis	Гуре: RES	Data Review	Dilution: 1	
	Lab	Lab		DL		RL			Reason
Analyte	Result	Qual	וח	Type	₽I	Type	Unite	Qual	Codo

Analyte	Lab Result	Lab Qual	DL	DL Type	RL_	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.0386	JBQ	0.0169	MDL	1.04	PQL	ng/Kg	U	В
OCDD	0.555	JB	0.0218	MDL	10.4	PQL	ng/Kg	υ	В
OCDF	0.153	JB	0.0232	MDL	10.4	PQL	ng/Kg	U	В

Sample ID: SL-003-NBZ-SS-0.0-0.5 Collected: 3/12/2012 8:50:00 Analysis Type: RES Dilution: 1

Oumpro 12:02 000 1122 00 0.0 0.0	Analysis Type. NEO						Dianon. 1		
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	1.36	JB	0.0276	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.379	JBQ	0.0132	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0656	JBQ	0.0215	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0672	JB	0.0275	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.156	JBQ	0.0182	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.128	JB	0.0290	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0807	JB	0.0162	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.106	JBQ	0.0282	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0589	JB	0.0186	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0837	JB	0.0295	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.207	JB	0.0200	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0844	JBQ	0.0172	MDL	5.21	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.101	JBQ	0.0194	MDL	5.21	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0296	JB	0.0256	MDL	1.04	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0979	JB	0.0292	MDL	1.04	PQL	ng/Kg	U	В
OCDD	9.41	JB	0.0245	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.624	JB	0.0268	MDL	10.4	PQL	ng/Kg	U	В

Sample ID: SL-005-NBZ-SB-4.0-5.0 Collected: 3/13/2012 10:25:00 Analysis Type: RES Dilution: 1

Campic 1D: CL-000-NDL-CD-4.0-0.0	001100	tcu. or 10/2	.012 10.20	,.uu	nunyono n	ypo. ILLO		Diadon					
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	0.340	JB	0.0235	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,4,6,7,8-HPCDF	0.129	JB	0.00847	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,4,7,8,9-HPCDF	0.0524	JBQ	0.0173	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,4,7,8-HxCDD	0.0621	JB	0.0221	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,4,7,8-HXCDF	0.103	JB	0.0132	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,6,7,8-HXCDD	0.124	JB	0.0242	MDL	5.42	PQL	ng/Kg	U	В				
1,2,3,6,7,8-HXCDF	0.0799	JB	0.0119	MDL	5.42	PQL	ng/Kg	U	В				

^{*} denotes a non-reportable result

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

ADR version 1.6.0.188 8/30/2012 12:02:27 PM

Lab Reporting Batch ID: DX159

eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DX159_v1.

Laboratory: LL

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID:SL-005-NBZ-SB-4.0-5.0 Analyte	Collec	ted: 3/13/2	2012 10:2	5:00 <i>A</i>	nalysis 1	ype: RES	;	i	Dilution: 1
	Lab Result	Lab Qual	DL.	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,7,8,9-HXCDD	0.0983	JBQ	0.0223	MDL	5.42	PQL	ng/Kg	υ	В
1,2,3,7,8,9-HXCDF	0.110	JB	0.0143	MDL	5.42	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.138	JB	0.0231	MDL	5.42	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.152	JB	0.0131	MDL	5.42	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0865	JB	0.0120	MDL	5.42	PQL	ng/Kg	υ	В
2,3,4,7,8-PECDF	0.164	JBQ	0.0129	MDL	5.42	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0398	JBQ	0.0231	MDL	1.08	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0291	JB	0.0210	MDL	1.08	PQL	ng/Kg	U	В
OCDD	0.633	JBQ	0.0245	MDL	10.8	PQL	ng/Kg	U	В
OCDE	0.221	IBO	0.0340	MIDL	10.9	BOI	na/Ka	11	

Sample ID: SL-006-NBZ-SB-3.0-4.0

Collected: 3/13/2012 9:00:00

Analysis Type: RES

Dilution: 1

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	Lab	Lab		DL		RL		Data Review	Reason
Analyte	Result	Qual	DL	Туре	RL	Туре	Units	Qual	Code
1,2,3,4,6,7,8-HPCDD	0.254	JB	0.0217	MDL	5.36	PQL	ng/Kg	υ	В
1,2,3,4,6,7,8-HPCDF	0.0943	JB	0.00815	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0404	JB	0.0146	MDL	5.36	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HxCDD	0.0260	JBQ	0.0177	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0428	JBQ	0.0102	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0410	JBQ	0.0193	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0203	JBQ	0.00901	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0502	JBQ	0.0185	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0366	JB	0.0112	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0291	JBQ	0.0280	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0216	JB	0.0137	MDL	5.36	PQL	ng/Kg	υ	В
2,3,4,6,7,8-HXCDF	0.0357	JBQ	0.00912	MDL	5.36	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0624	JBQ	0.0130	MDL	5.36	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0264	JBQ	0.0227	MDL	1.07	PQL	ng/Kg	υ	В
2,3,7,8-TCDF	0.0313	JB	0.0214	MDL	1.07	PQL	ng/Kg	U	В
OCDD	0.571	JB	0.0280	MDL	10.7	PQL	ng/Kg	U	В
OCDF	0.176	JBQ	0.0225	MDL	10.7	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: 1613B Matrix: SO

Sample ID:SL-007-NBZ-SB-4.0-5.0 Collected: 3/12/2012 3:50:00 Analysis Type: RES Dilution: 1

						71			
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	0.310	JBQ	0.0233	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0708	JB	0.00804	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0301	JBQ	0.0112	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0394	JB	0.0205	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0359	JBQ	0.0109	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0710	JB	0.0184	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0308	JBQ	0.0122	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0448	JBQ	0.0259	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0384	JBQ	0.0128	MDL	5.43	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0498	JB	0.0107	MDL	5.43	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0835	JBQ	0.0126	MDL	5.43	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0279	JB -	0.0196	MDL	1.09	PQL	ng/Kg	U	В
OCDD	0.590	JB	0.0272	MDL	10.9	PQL	ng/Kg	U	В
OCDF	0.231	JB	0.0286	MDL	10.9	PQL	ng/Kg	U	В

Sample ID:SL-007-NBZ-SB-9.0-10.0 Collected: 3/12/2012 4:00:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.316	JBQ	0.0229	MDL	5.46	PQL	ng/Kg	υ	В
1,2,3,4,6,7,8-HPCDF	0.0763	JB	0.00713	MDL	5.46	PQL	ng/Kg	υ	В
1,2,3,4,7,8,9-HPCDF	0.0183	JBQ	0.0134	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0236	JBQ	0.0192	MDL	5.46	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.0398	JBQ	0.0106	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0391	JB	0.0206	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0257	JBQ	0.00976	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0498	JBQ	0.0202	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0556	JBQ	0.0116	MDL	5.46	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0412	JBQ	0.0133	MDL	5.46	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0240	JBQ	0.00998	MDL	5.46	PQL.	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0772	JB	0.0124	MDL	5.46	PQL	ng/Kg	U	В
OCDD	0.753	JB	0.0243	MDL	10.9	PQL	ng/Kg	υ	В
OCDF	0.163	JB	0.0251	MDL	10.9	PQL	ng/Kg	υ	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX159 Laboratory: LL

EDD Filename: DX159_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-010-NBZ-SB-4.0-5.0	Collec	ted: 3/12/2	2012 2:26:	00 A	nalysis T	ype: RES			Dilution: 1
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	0.325	JВ	0.0220	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.101	JBQ	0.00758	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0405	JBQ	0.0149	MDL	5.22	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HxCDD	0.0596	JBQ	0.0176	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0614	JBQ	0.0102	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0420	JBQ	0.0190	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0765	JBQ	0.00961	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0650	JBQ	0.0110	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.109	JBQ	0.0237	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.111	JB	0.0129	MDL	5.22	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0768	JBQ	0.00961	MDL	5.22	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.121	JB	0.0123	MDL	5.22	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0442	JBQ	0.0219	MDL	1.04	PQL	ng/Kg	υ	В
OCDD	0.678	JB	0.0225	MDL	10.4	PQL	ng/Kg	υ	В
OCDF	0.119	JB	0.0306	MDL	10.4	PQL	ng/Kg	U	В

Sample ID:SL-015-NBZ-SS-0.0-0.5 Collected: 3/13/2012 11:30:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.88	JB	0.0303	MDL	5.01	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.414	JB	0.0109	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0985	JBQ	0.0237	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0677	JBQ	0.0271	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.117	JBQ	0.0196	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.167	JB	0.0295	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0632	JBQ	0.0175	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.173	JBQ	0.0272	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0481	JBQ	0.0220	MDL	5.01	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0925	JBQ	0.0182	MDL	5.01	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0736	JBQ	0.0179	MDL	5.01	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0785	JBQ	0.0181	MDL	5.01	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0338	JBQ	0.0227	MDL	1.00	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0420	JBQ	0.0339	MDL	1.00	PQL	ng/Kg	U	В
OCDF	0.826	JB	0.0395	MDL	10.0	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX159

1613B

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

SO Matrix:

Method:

Sample ID:SL-021-NBZ-SB-4.0-5.0	Collec	Collected: 3/13/2012 3:45:00 Analysis Type: RES Dilutio							
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	0.259	JB	0.0171	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.101	JB	0.00708	MDL	5.07	PQL	ng/Kg	υ	В
1,2,3,4,7,8,9-HPCDF	0.0302	JBQ	0.0130	MDL	5.07	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HxCDD	0.0326	JBQ	0.0153	MDL	5.07	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.0494	JBQ	0.00947	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0434	JBQ	0.0156	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0556	JB	0.00864	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0420	JBQ	0.0153	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0245	JBQ	0.0104	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0518	JB	0.0213	MDL	5.07	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.106	JB	0.0110	MDL	5.07	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0368	JBQ	0.00905	MDL	5.07	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.114	JBQ	0.0105	MDL	5.07	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0374	JBQ	0.0197	MDL	1.01	PQL	ng/Kg	υ	В
OCDD	0.576	JB	0.0248	MDL	10.1	PQL	ng/Kg	U	В
OCDF	0.168	JB	0.0237	MDL	10.1	PQL	ng/Kg	υ	В

Sample ID: SL-021-NBZ-SS-0.0-0.5

Collected: 3/13/2012 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
1,2,3,4,6,7,8-HPCDD	2.43	JB	0.0358	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.593	JB	0.0127	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0794	JB	0.0220	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0843	JBQ	0.0276	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0992	JB	0.0184	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.128	JB	0.0299	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0715	JBQ	0.0180	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.184	JB	0.0287	MDL	5.11	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0611	JBQ	0.0249	MDL	5.11	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0875	JB	0.0195	MDL	5.11	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0895	JB	0.0177	MDL	5.11	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.107	JBQ	0.0186	MDL	5.11	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0573	JBQ	0.0279	MDL	1.02	PQL	ng/Kg	U	В
OCDF	1.27	JB	0.0353	MDL	10.2	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

* denotes a non-reportable result

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DX159

Lab Reporting Batch ID: DX159

EDD Filename: DX159_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO Method Blank **Associated Analysis Date** Sample ID Analyte Result Samples BLK0770B370105 3/20/2012 1:05:00 AM 1,2,3,4,6,7,8-HPCDD 0.357 ng/Kg SL-002-NBZ-SB-4.0-5.0 1,2,3,4,6,7,8-HPCDF 0.113 ng/Kg SL-002-NBZ-SB-7.5-8.5 1,2,3,4,7,8,9-HPCDF 0.0388 ng/Kg SL-002-NBZ-SS-0.0-0.5 1,2,3,4,7,8-HxCDD 0.0320 ng/Kg SL-003-NBZ-SB-4.0-5.0 1,2,3,4,7,8-HXCDF 0.0427 ng/Kg SL-003-NBZ-SS-0.0-0.5 1,2,3,6,7,8-HXCDD 0.0336 ng/Kg SL-005-NBZ-SB-4.0-5.0 1,2,3,6,7,8-HXCDF 0.0334 ng/Kg SL-006-NBZ-SB-3.0-4.0 1,2,3,7,8,9-HXCDD 0.0362 ng/Kg SL-007-NBZ-SB-4.0-5.0 1,2,3,7,8,9-HXCDF 0.0258 ng/Kg SL-007-NBZ-SB-9.0-10.0 1,2,3,7,8-PECDD 0.0531 ng/Kg SL-010-NBZ-SB-4.0-5.0 1,2,3,7,8-PECDF 0.0381 ng/Kg SL-015-NBZ-SS-0.0-0.5 2,3,4,6,7,8-HXCDF 0.0429 ng/Kg SL-021-NBZ-SB-4.0-5.0 2,3,4,7,8-PECDF 0.0452 ng/Kg SL-021-NBZ-SS-0.0-0.5 0.0271 ng/Kg 2,3,7,8-TCDD

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

2,3,7,8-TCDF

OCDD OCDF 0.0304 ng/Kg

1.25 ng/Kg

0.149 ng/Kg

Sample ID	Analyte	Reported Result	Modified Final Result
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.354 ng/Kg	0.354U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.125 ng/Kg	0.125U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0444 ng/Kg	0.0444U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0439 ng/Kg	0.0439U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0775 ng/Kg	0.0775U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0238 ng/Kg	0.0238U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0455 ng/Kg	0.0455U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0429 ng/Kg	0.0429U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0553 ng/Kg	0.0553U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0775 ng/Kg	0.0775U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	OCDD	0.743 ng/Kg	0.743U ng/Kg
SL-002-NBZ-SB-4.0-5.0(RES)	OCDF	0.131 ng/Kg	0.131U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDD	0.354 ng/Kg	0.354U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,4,6,7,8-HPCDF	0.127 ng/Kg	0.127U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0336 ng/Kg	0.0336U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,4,7,8-HxCDD	0.0340 ng/Kg	0.0340U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,4,7,8-HXCDF	0.0382 ng/Kg	0.0382U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,6,7,8-HXCDD	0.0471 ng/Kg	0.0471U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,6,7,8-HXCDF	0.0303 ng/Kg	0.0303U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,7,8,9-HXCDD	0.0804 ng/Kg	0.0804U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,7,8,9-HXCDF	0.0413 ng/Kg	0.0413U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,7,8-PECDD	0.0302 ng/Kg	0.0302U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	1,2,3,7,8-PECDF	0.0750 ng/Kg	0.0750U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	2,3,4,6,7,8-HXCDF	0.0296 ng/Kg	0.0296U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	2,3,4,7,8-PECDF	0.0778 ng/Kg	0.0778U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	2,3,7,8-TCDD	0.0321 ng/Kg	0.0321U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	2,3,7,8-TCDF	0.0319 ng/Kg	0.0319U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	OCDD	0.982 ng/Kg	0.982U ng/Kg
SL-002-NBZ-SB-7.5-8.5(RES)	OCDF	0.141 ng/Kg	0.141U ng/Kg

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

8/30/2012 12:01:37 PM

Laboratory: LL

Lab Reporting Batch ID: DX159 Laboratory: LL

EDD Filename: DX159_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO	A CHARLES			
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-002-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	1.63 ng/Kg	1.63U ng/Kg
SL-002-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.473 ng/Kg	0.473U ng/Kg
SL-002-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0695 ng/Kg	0.0695U ng/Kg
SL-002-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0587 ng/Kg	0.0587U ng/Kg
SL-002-NBZ-SS-0.0-0.5(RES)	. 1,2,3,7,8-PECDD	0.0604 ng/Kg	0.0604U ng/Kg
SL-002-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.122 ng/Kg	0.122U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.258 ng/Kg	0.258U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0769 ng/Kg	0.0769U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0399 ng/Kg	0.0399U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0514 ng/Kg	0.0514U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0954 ng/Kg	0.0954U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0387 ng/Kg	0.0387U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0731 ng/Kg	0.0731U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0880 ng/Kg	0.0880U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0466 ng/Kg	0.0466U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.111 ng/Kg	0.111U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.136 ng/Kg	0.136U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0503 ng/Kg	0.0503U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.123 ng/Kg	0.123U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0281 ng/Kg	0.0281U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0386 ng/Kg	0.0386U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	OCDD	0.555 ng/Kg	0.555U ng/Kg
SL-003-NBZ-SB-4.0-5.0(RES)	OCDF	0.153 ng/Kg	0.153U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	1.36 ng/Kg	1.36U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.379 ng/Kg	0.379U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0656 ng/Kg	0.0656U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0672 ng/Kg	0.0672U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.156 ng/Kg	0.156U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.128 ng/Kg	0.128U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0807 ng/Kg	0.0807U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.106 ng/Kg	0.106U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0589 ng/Kg	0.0589U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0837 ng/Kg	0.0837U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0844 ng/Kg	0.0844U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.101 ng/Kg	0.101U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0296 ng/Kg	0.0296U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0979 ng/Kg	0.0979U ng/Kg
SL-003-NBZ-SS-0.0-0.5(RES)	OCDF	0.624 ng/Kg	0.624U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.340 ng/Kg	0.340U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.129 ng/Kg	0.129U ng/Kg

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Lab Reporting Batch ID: DX159 Laboratory: LL

EDD Filename: DX159_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0524 ng/Kg	0.0524U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0621 ng/Kg	0.0621U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.103 ng/Kg	0.103U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.124 ng/Kg	0.124U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0799 ng/Kg	0.0799U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0983 ng/Kg	0.0983U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.110 ng/Kg	0.110U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.138 ng/Kg	0.138U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.152 ng/Kg	0.152U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0865 ng/Kg	0.0865U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.164 ng/Kg	0.164U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0398 ng/Kg	0.0398U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0291 ng/Kg	0.0291U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	OCDD	0.633 ng/Kg	0.633U ng/Kg
SL-005-NBZ-SB-4.0-5.0(RES)	OCDF	0.221 ng/Kg	0.221U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.254 ng/Kg	0.254U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0943 ng/Kg	0.0943U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0404 ng/Kg	0.0404U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HxCDD	0.0260 ng/Kg	0.0260U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0428 ng/Kg	0.0428U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.0410 ng/Kg	0.0410U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0203 ng/Kg	0.0203U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.0502 ng/Kg	0.0502U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.0366 ng/Kg	0.0366U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.0291 ng/Kg	0.0291U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.0216 ng/Kg	0.0216U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.0624 ng/Kg	0.0624U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	2,3,7,8-TCDD	0.0264 ng/Kg	0.0264U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	2,3,7,8-TCDF	0.0313 ng/Kg	0.0313U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	OCDD	0.571 ng/Kg	0.571U ng/Kg
SL-006-NBZ-SB-3.0-4.0(RES)	OCDF	0.176 ng/Kg	0.176U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.310 ng/Kg	0.310U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0708 ng/Kg	0.0708U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0301 ng/Kg	0.0301U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0394 ng/Kg	0.0394U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0359 ng/Kg	0.0359U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0710 ng/Kg	0.0710U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0308 ng/Kg	0.0308U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0448 ng/Kg	0.0448U ng/Kg

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Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

B. 41 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-007-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0384 ng/Kg	0.0384U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0498 ng/Kg	0.0498U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0835 ng/Kg	0.0835U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0279 ng/Kg	0.0279U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	OCDD	0.590 ng/Kg	0.590U ng/Kg
SL-007-NBZ-SB-4.0-5.0(RES)	OCDF	0.231 ng/Kg	0.231U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.316 ng/Kg	0.316U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0763 ng/Kg	0.0763U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0183 ng/Kg	0.0183U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0236 ng/Kg	0.0236U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0398 ng/Kg	0.0398U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0391 ng/Kg	0.0391U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0257 ng/Kg	0.0257U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0498 ng/Kg	0.0498U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0556 ng/Kg	0.0556U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0412 ng/Kg	0.0412U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0240 ng/Kg	0.0240U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0772 ng/Kg	0.0772U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	OCDD	0.753 ng/Kg	0.753U ng/Kg
SL-007-NBZ-SB-9.0-10.0(RES)	OCDF	0.163 ng/Kg	0.163U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	. 0.325 ng/Kg	0.325U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.101 ng/Kg	0.101U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0405 ng/Kg	0.0405U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0596 ng/Kg	0.0596U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0614 ng/Kg	0.0614U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0420 ng/Kg	0.0420U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0765 ng/Kg	0.0765U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0650 ng/Kg	0.0650U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.109 ng/Kg	0.109U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.111 ng/Kg	0.111U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0768 ng/Kg	0.0768U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.121 ng/Kg	0.121U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0442 ng/Kg	0.0442U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	OCDD	0.678 ng/Kg	0.678U ng/Kg
SL-010-NBZ-SB-4.0-5.0(RES)	OCDF	0.119 ng/Kg	0.119U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.414 ng/Kg	0.414U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0985 ng/Kg	0.0985U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0677 ng/Kg	0.0677U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.117 ng/Kg	0.117U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.167 ng/Kg	0.167U ng/Kg

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

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Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
				•

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0632 ng/Kg	0.0632U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.173 ng/Kg	0.173U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0481 ng/Kg	0.0481U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0925 ng/Kg	0.0925U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0736 ng/Kg	0.0736U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0785 ng/Kg	0.0785U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0338 ng/Kg	0.0338U ng/Kg
SL-015-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0420 ng/Kg	0.0420U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.259 ng/Kg	0.259U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.101 ng/Kg	0.101U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0302 ng/Kg	0.0302U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0326 ng/Kg	0.0326U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0494 ng/Kg	0.0494U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0434 ng/Kg	0.0434U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0556 ng/Kg	0.0556U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0420 ng/Kg	0.0420U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0245 ng/Kg	0.0245U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0518 ng/Kg	0.0518U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.106 ng/Kg	0.106U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0368 ng/Kg	0.0368U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.114 ng/Kg	0.114U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0374 ng/Kg	0.0374U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	OCDD	0.576 ng/Kg	0.576U ng/Kg
SL-021-NBZ-SB-4.0-5.0(RES)	OCDF	0.168 ng/Kg	0.168U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0794 ng/Kg	0.0794U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0843 ng/Kg	0.0843U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0992 ng/Kg	0.0992U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.128 ng/Kg	0.128U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0715 ng/Kg	0.0715U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0611 ng/Kg	0.0611U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0875 ng/Kg	0.0875U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0895 ng/Kg	0.0895U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.107 ng/Kg	0.107U ng/Kg
SL-021-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0573 ng/Kg	0.0573U ng/Kg

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Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

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		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Type	Units	Flag
SL-002-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.354	5.32	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.125	5.32	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0444	5.32	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0439	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0775	5.32	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0238	5.32	PQL	ng/Kg	1 (-11 -1 - 44 -)
	1,2,3,7,8,9-HXCDD	JBQ	0.0455	5.32	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	0.0429	5.32	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0553	5.32	PQL	ng/Kg	
· ·	2,3,4,7,8-PECDF	JB	0.0775	5.32	PQL	ng/Kg	
	OCDD	JB	0.743	10.6	PQL	ng/Kg	
	OCDF	JBQ	0.131	10.6	PQL	ng/Kg	
SL-002-NBZ-SB-7.5-8.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.354	5.44	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.127	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0336	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0340	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0382	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0471	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0303	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0804	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0413	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0302	5.44	PQL	ng/Kg	,
	1,2,3,7,8-PECDF	JBQ	0.0750	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0296	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0778	5.44	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0321	1.09	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0319	1.09	PQL	ng/Kg	
	OCDD	JB	0.982	10.9	PQL	ng/Kg	
	OCDF	JB	0.141	10.9	PQL	ng/Kg	
SL-002-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.63	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.473	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JВ	0.0695	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0587	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.544	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.298	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.390	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.365	5.15	PQL	ng/Kg	1 /- 11 -1 - 44 - 1
	1,2,3,7,8,9-HXCDF	JB	0.132	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0604	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	3.84	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.122	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.400	5.15	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.608	1.03	PQL	ng/Kg	
	OCDD	JB	10.1	10.3	PQL	ng/Kg	
	OCDF	JB	0.751	10.3	PQL	ng/Kg	

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

			4,5,4,4			1	
01-10	A	Lab	5 "	Reporting	_RL		 .
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-003-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDF	JBQ JBQ JBQ JB	0.258 0.0769 0.0399 0.0514 0.0954	5.21 5.21 5.21 5.21	PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg	
	1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD	JBQ JBQ JBQ JBQ JBQ JBQ	0.0387 0.0731 0.0880 0.0466 0.111	5.21 5.21 5.21 5.21 5.21 5.21	PQL PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
	1,2,3,7,8-PECDF 2,3,4,6,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD	JBQ JBQ JB JBQ JBQ	0.136 0.0503 0.123 0.0281 0.0386	5.21 5.21 5.21 5.21 1.04 1.04	PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	
	OCDD OCDF	JB JB	0.555 0.153	10.4 10.4	PQL PQL	ng/Kg ng/Kg	
SL-003-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-TCDF 2,3,7,8-TCDF 0CDD 0CDF	计等等的数据电话的语言的语言	1.36 0.379 0.0656 0.0672 0.156 0.128 0.0807 0.106 0.0589 0.0837 0.207 0.0844 0.101 0.0296 0.0979 9.41 0.624	5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21	PQL	ng/Kg	J (all detects)
SL-005-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD OCDF	医医胃性性性性性性性性性性性性性	0.340 0.129 0.0524 0.0621 0.103 0.124 0.0799 0.0983 0.110 0.138 0.152 0.0865 0.164 0.0398 0.0291 0.633 0.221	5.42 5.42 5.42 5.42 5.42 5.42 5.42 5.42	PQL	ng/Kg	J (all detects)

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO		Settle	es de la companya de	and the second second	etta (hoc		
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-006-NBZ-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-TCDD 2,3,7,8-TCDD 0CDD OCDF	2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	0.254 0.0943 0.0404 0.0260 0.0428 0.0410 0.0203 0.0502 0.0366 0.0291 0.0216 0.0357 0.0624 0.0264 0.0313 0.571 0.176	5.36 5.36 5.36 5.36 5.36 5.36 5.36 5.36	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg	J (all detects)
SL-007-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-PECDF 2,3,7,8-TCDF OCDD OCDF	LA L	0.310 0.0708 0.0301 0.0394 0.0359 0.0710 0.0308 0.0448 0.0384 0.0498 0.0835 0.0279 0.590 0.231	5.43 5.43 5.43 5.43 5.43 5.43 5.43 5.43	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-007-NBZ-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF OCDD OCDF	SE S	0.316 0.0763 0.0183 0.0236 0.0398 0.0391 0.0257 0.0498 0.0556 0.0412 0.0240 0.0772 0.753 0.163	5.46 5.46 5.46 5.46 5.46 5.46 5.46 5.46	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)

Lab Reporting Batch ID: DX159

Laboratory: LL

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

				1			
		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-010-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.325	5.22	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JBQ	0.101	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0405	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0596	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0614	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0420	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0765	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0650	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.109	5.22	PQL	ng/Kg	,
	1,2,3,7,8-PECDF	JB	0.111	5.22	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0768	5.22	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.121	5.22	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0442	1.04	PQL	ng/Kg	
	OCDD	JB	0.678	10.4	PQL	ng/Kg	
	OCDF	JB	0.119	10.4	PQL	ng/Kg	
SL-015-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.88	5.01	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.414	5.01	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0985	5.01	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0677	5.01	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.117	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.167	5.01	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0632	5.01	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.173	5.01	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0481	5.01	PQL	ng/Kg	, ,
	1,2,3,7,8-PECDF	JBQ	0.0925	5.01	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0736	5.01	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0785	5.01	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0338	1.00	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0420	1.00	PQL	ng/Kg	
	OCDF	JB	0.826	10.0	PQL	ng/Kg	
SL-021-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.259	5.07	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.101	5.07	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0302	5.07	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0326	5.07	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0494	5.07	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0434	5.07	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0556	5.07	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0420	5.07	PQL	ng/Kg	1 (-11 -1 -4 - 4 -)
	1,2,3,7,8,9-HXCDF	JBQ	0.0245	5.07	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0518	5.07	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JВ	0.106	5.07	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0368	5.07	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.114	5.07	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0374	1.01	PQL	ng/Kg	
	OCDD	JB	0.576	10.1	PQL	ng/Kg	
	OCDF	JB	0.168	10.1	PQL	ng/Kg	
	1			1 1	- ~-	1	

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Lab Reporting Batch ID: DX159

1,2,3,4,7,8-HXCDF

1,2,3,6,7,8-HXCDD

1,2,3,6,7,8-HXCDF

1,2,3,7,8,9-HXCDD

1,2,3,7,8-PECDD

1,2,3,7,8-PECDF

2,3,4,7,8-PECDF

2,3,7,8-TCDF

OCDF

2,3,4,6,7,8-HXCDF

Laboratory: LL

J (all detects)

EDD Filename: DX159_v1.

eQAPP Name: CDM_SSFL_120718_Lan

ng/Kg

ng/Kg

ng/Kg

ng/Kg

ng/Kg

ng/Kg

ng/Kg ng/Kg ng/Kg

ng/Kg

Method: 1613B		4 1		100			
Matrix: SO		Manera.		يون وفقيت	معانفانها ويوزو	Mi	
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-021-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD	JB JB JB JBQ	2.43 0.593 0.0794 0.0843	5.11 5.11 5.11 5.11	PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg	

JΒ

JB

JBQ

JB

JBQ

JB

JΒ

JBQ

JBQ

JB

0.0992

0.128

0.0715

0.184

0.0611

0.0875

0.0895

0.107

0.0573

1.27

5.11

5.11

5.11

5.11

5.11

5.11

5.11

5.11

1.02

10.2

PQL

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PQL

SAMPLE DELIVERY GROUP

DX160

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-Mar-2012	SL-019-NBZ-SS-0.0-0.5	6580735	N	METHOD	1613B	III
13-Mar-2012	SL-019-NBZ-SB-3.0-4.0	6580734	N	METHOD	1613B	Ш
14-Mar-2012	SL-022-NBZ-SS-0.0-0.5	6580740	N	METHOD	1613B	III
14-Mar-2012	SL-022-NBZ-SB-4.0-5.0	6580736	N	METHOD	1613B	Ш
14-Mar-2012	SL-022-NBZ-SB-9.0-10.0	6580737	N	METHOD	1613B	III
14-Mar-2012	SL-024-NBZ-SS-0.0-0.5	6580742	N	METHOD	1613B	111
14-Mar-2012	SL-023-NBZ-SS-0.0-0.5	6580741	N	METHOD	1613B	Ш
14-Mar-2012	SL-023-NBZ-SB-4.0-5.0	6580738	N	METHOD	1613B	Ш
14-Mar-2012	SL-023-NBZ-SB-8.5-9.5	6580739	N	METHOD	1613B	111
14-Mar-2012	SL-030-NBZ-SS-0.0-0.5	6580743	N	METHOD	1613B	111
15-Mar-2012	SL-029-NBZ-SS-0.0-0.5	6580744	N	METHOD	1613B	111
15-Mar-2012	SL-058-NBZ-SS-0.0-0.5	6580746	N	METHOD	1613B	111
15-Mar-2012	SL-052-NBZ-SS-0.0-0.5	6580745	N	METHOD	1613B	Ш
15-Mar-2012	EB-NBZ-SS-031512	6580748	ЕВ	METHOD	1613B	Ш
15-Mar-2012	EB-NBZ-SB-031512	6580747	EB	METHOD	1613B	111

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: AQ

Sample ID: EB-NBZ-SB-031512	Collec	ted: 3/15/2	012 3:00:	00 A	nalysis T	ype: RES			Dilution: 1
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	2.82	JB	0.154	MDL	9.91	PQL	pg/L	U	В
1,2,3,4,6,7,8-HPCDF	1.29	JB	0.0904	MDL	9.91	PQL	pg/L	U	В
1,2,3,4,7,8,9-HPCDF	0.342	JB	0.101	MDL	9.91	PQL	pg/L	υ	В
1,2,3,4,7,8-HxCDD	0.287	JBQ	0.142	MDL	9.91	PQL	pg/L	U	В
1,2,3,4,7,8-HXCDF	0.377	JBQ	0.0918	MDL	9.91	PQL	pg/L	· U	В
1,2,3,6,7,8-HXCDD	0.292	JB	0.155	MDL	9.91	PQL	pg/L	U	В
1,2,3,6,7,8-HXCDF	0.361	JBQ	0.0984	MDL	9.91	PQL	pg/L	U	В
1,2,3,7,8,9-HXCDD	0.534	JBQ	0.144	MDL	9.91	PQL	pg/L	U	В
1,2,3,7,8,9-HXCDF	0.305	JBQ	0.0932	MDL	9.91	PQL	pg/L	U	В
1,2,3,7,8-PECDD	0.235	JBQ	0.204	MDL	9.91	PQL	pg/L	U	В
1,2,3,7,8-PECDF	0.271	JBQ	0.127	MDL	9.91	PQL	pg/L	υ	В
2,3,4,6,7,8-HXCDF	0.501	JBQ	0.0843	MDL	9.91	PQL	pg/L	· U	В
2,3,4,7,8-PECDF	0.607	JB	0.119	MDL	9.91	PQL	pg/L	U	В
2,3,7,8-TCDF	0.219	JB	0.187	MDL	1.98	PQL	pg/L	U	В
OCDD	4.27	JB	0.135	MDL	19.8	PQL	pg/L	U	В
OCDF	1.37	JB	0.174	MDL	19.8	PQL	pg/L	U	В

Sample ID: EB-NBZ-SS-031512 Collected: 3/15/2012 2:30:00 Analysis Type: RES Dilution: 1 Data Lab Lab DLRL Review Reason Analyte Result DLRL *Typ*e Units Qual Type Qual Code 1,2,3,4,6,7,8-HPCDD 3.53 JB 0.221 MDL 9.85 **PQL** pg/L U В 1.76 JBQ 0.102 MDL 9.85 PQL U В 1,2,3,4,6,7,8-HPCDF pg/L 1,2,3,4,7,8,9-HPCDF 0.424 JB 0.115 MDL 9.85 PQL pg/L U В 1,2,3,4,7,8-HxCDD 0.313 **JBQ** 0.199 MDL 9.85 **PQL** pg/L U В 1,2,3,4,7,8-HXCDF 0.472 0.124 MDL 9.85 PQL U JB pg/L В 1,2,3,6,7,8-HXCDD 0.543 JBQ 0.220 MDL 9.85 **PQL** pg/L U В 1,2,3,6,7,8-HXCDF 0.595 **JBQ** 0.122 MDL 9.85 **PQL** pg/L U MDL U 1,2,3,7,8,9-HXCDD 0.503 JB 0.214 9.85 **PQL** pg/L В MDL U В 1,2,3,7,8,9-HXCDF 0.416 **JBQ** 0.124 9.85 PQL pg/L 1,2,3,7,8-PECDD 0.354 JBQ 0.305 MDL 9.85 **PQL** pg/L U В PQL 2,3,4,6,7,8-HXCDF 0.512 JB 0.108 MDL 9.85 pg/L U В U 2,3,4,7,8-PECDF 0.494 **JBQ** 0.164 MDL 9.85 **PQL** pg/L В 0.279 2,3,7,8-TCDD 0.289 JQ MDL 1.97 **PQL** pg/L Z 2,3,7,8-TCDF 0.371 JB 0.231 MDL 1.97 PQL pg/L U

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

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

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Matrix: AQ

Sample ID: EB-NBZ-SS-031512

Collected: 3/15/2012 2:30:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
OCDD	6.23	JB	0.248	MDL	19.7	PQL	pg/L	U	В
OCDF	1.67	JBQ	0.266	MDL	19.7	PQL	pg/L	U	В

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID: SL-019-NBZ-SB-3.0-4.0

Collected: 3/13/2012 2:35:00

Analysis Type: RES

Dilution: 1

		2012 2.35.	· · ·	, 0.0 .	ype. KES			Dilution. 1
Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code
0.270	JB	0.0184	MDL	5.23	PQL	ng/Kg	U	В
0.152	JB	0.00605	MDL	5.23	PQL	ng/Kg	U	В
0.0466	JBQ	0.0130	MDL	5.23	PQL	ng/Kg	U	В
0.0436	JB	0.0145	MDL	5.23	PQL	ng/Kg	U	В
0.0774	JB	0.0130	MDL	5.23	PQL	ng/Kg	U	В
0.0482	JBQ	0.0150	MDL	5.23	PQL	ng/Kg	U	В
0.0529	JBQ	0.0106	MDL	5.23	PQL	ng/Kg	U	В
0.0588	JB	0.0151	MDL	5.23	PQL	ng/Kg	U	В
0.0531	JB	0.0155	MDL	5.23	PQL	ng/Kg	U	В
0.0489	JB	0.0211	MDL	5.23	PQL	ng/Kg	U	В
0.0400	JB	0.0119	MDL	5.23	PQL	ng/Kg	U	В
0.0681	JBQ	0.0110	MDL	5.23	PQL	ng/Kg	υ	В
0.0712	JB	0.0127	MDL	5.23	PQL	ng/Kg	U	В
0.0267	JQ	0.0196	MDL	1.05	PQL	ng/Kg	J	Z
0.519	JB	0.0123	MDL	10.5	PQL	ng/Kg	U	В
0.234	JB	0.0285	MDL	10.5	PQL	ng/Kg	U	В
	Result 0.270 0.152 0.0466 0.0436 0.0774 0.0482 0.0529 0.0588 0.0531 0.0489 0.0400 0.0681 0.0712 0.0267 0.519	Result Qual 0.270 JB 0.152 JB 0.0466 JBQ 0.0436 JB 0.0774 JB 0.0482 JBQ 0.0529 JBQ 0.0588 JB 0.0531 JB 0.0489 JB 0.0400 JB 0.0681 JBQ 0.0712 JB 0.0267 JQ 0.519 JB	Result Qual DL 0.270 JB 0.0184 0.152 JB 0.00605 0.0466 JBQ 0.0130 0.0436 JB 0.0145 0.0774 JB 0.0130 0.0482 JBQ 0.0150 0.0529 JBQ 0.0106 0.0588 JB 0.0151 0.0531 JB 0.0155 0.0489 JB 0.0211 0.0681 JBQ 0.0119 0.0712 JB 0.0127 0.0267 JQ 0.0196 0.519 JB 0.0123	Result Qual DL Type 0.270 JB 0.0184 MDL 0.152 JB 0.00605 MDL 0.0466 JBQ 0.0130 MDL 0.0436 JB 0.0145 MDL 0.0774 JB 0.0130 MDL 0.0482 JBQ 0.0150 MDL 0.0529 JBQ 0.0106 MDL 0.0588 JB 0.0151 MDL 0.0531 JB 0.0155 MDL 0.0489 JB 0.0211 MDL 0.0400 JB 0.0119 MDL 0.0681 JBQ 0.0110 MDL 0.0267 JQ 0.0196 MDL 0.519 JB 0.0123 MDL	Result Qual DL Type RL 0.270 JB 0.0184 MDL 5.23 0.152 JB 0.00605 MDL 5.23 0.0466 JBQ 0.0130 MDL 5.23 0.0436 JB 0.0145 MDL 5.23 0.0774 JB 0.0130 MDL 5.23 0.0482 JBQ 0.0150 MDL 5.23 0.0529 JBQ 0.0106 MDL 5.23 0.0588 JB 0.0151 MDL 5.23 0.0531 JB 0.0155 MDL 5.23 0.0489 JB 0.0211 MDL 5.23 0.0400 JB 0.0119 MDL 5.23 0.0681 JBQ 0.0110 MDL 5.23 0.0712 JB 0.0127 MDL 5.23 0.0597 JQ 0.0196 MDL 1.05 0.519 JB 0.0123 MDL <td>Result Qual DL Type RL Type 0.270 JB 0.0184 MDL 5.23 PQL 0.152 JB 0.00605 MDL 5.23 PQL 0.0466 JBQ 0.0130 MDL 5.23 PQL 0.0436 JB 0.0145 MDL 5.23 PQL 0.0774 JB 0.0130 MDL 5.23 PQL 0.0482 JBQ 0.0150 MDL 5.23 PQL 0.0529 JBQ 0.0106 MDL 5.23 PQL 0.0588 JB 0.0151 MDL 5.23 PQL 0.0531 JB 0.0155 MDL 5.23 PQL 0.0489 JB 0.0211 MDL 5.23 PQL 0.0681 JBQ 0.0119 MDL 5.23 PQL 0.0712 JB 0.0127 MDL 5.23 PQL 0.0267 JQ 0.0196</td> <td>Result Qual DL Type RL Type Units 0.270 JB 0.0184 MDL 5.23 PQL ng/Kg 0.152 JB 0.00605 MDL 5.23 PQL ng/Kg 0.0466 JBQ 0.0130 MDL 5.23 PQL ng/Kg 0.0436 JB 0.0145 MDL 5.23 PQL ng/Kg 0.0774 JB 0.0130 MDL 5.23 PQL ng/Kg 0.0482 JBQ 0.0150 MDL 5.23 PQL ng/Kg 0.0529 JBQ 0.0106 MDL 5.23 PQL ng/Kg 0.0588 JB 0.0151 MDL 5.23 PQL ng/Kg 0.0531 JB 0.0155 MDL 5.23 PQL ng/Kg 0.0489 JB 0.0211 MDL 5.23 PQL ng/Kg 0.0681 JBQ 0.0119 MDL 5.23 <</td> <td>Lab Result Lab Qual DL DL Type RL Type RL Type RL Type Review Qual 0.270 JB 0.0184 MDL 5.23 PQL ng/Kg U 0.152 JB 0.00605 MDL 5.23 PQL ng/Kg U 0.0466 JBQ 0.0130 MDL 5.23 PQL ng/Kg U 0.0436 JB 0.0145 MDL 5.23 PQL ng/Kg U 0.0774 JB 0.0130 MDL 5.23 PQL ng/Kg U 0.0482 JBQ 0.0150 MDL 5.23 PQL ng/Kg U 0.0529 JBQ 0.0166 MDL 5.23 PQL ng/Kg U 0.0588 JB 0.0151 MDL 5.23 PQL ng/Kg U 0.0489 JB 0.0211 MDL 5.23 PQL ng/Kg U 0.0400 JB 0.0119</td>	Result Qual DL Type RL Type 0.270 JB 0.0184 MDL 5.23 PQL 0.152 JB 0.00605 MDL 5.23 PQL 0.0466 JBQ 0.0130 MDL 5.23 PQL 0.0436 JB 0.0145 MDL 5.23 PQL 0.0774 JB 0.0130 MDL 5.23 PQL 0.0482 JBQ 0.0150 MDL 5.23 PQL 0.0529 JBQ 0.0106 MDL 5.23 PQL 0.0588 JB 0.0151 MDL 5.23 PQL 0.0531 JB 0.0155 MDL 5.23 PQL 0.0489 JB 0.0211 MDL 5.23 PQL 0.0681 JBQ 0.0119 MDL 5.23 PQL 0.0712 JB 0.0127 MDL 5.23 PQL 0.0267 JQ 0.0196	Result Qual DL Type RL Type Units 0.270 JB 0.0184 MDL 5.23 PQL ng/Kg 0.152 JB 0.00605 MDL 5.23 PQL ng/Kg 0.0466 JBQ 0.0130 MDL 5.23 PQL ng/Kg 0.0436 JB 0.0145 MDL 5.23 PQL ng/Kg 0.0774 JB 0.0130 MDL 5.23 PQL ng/Kg 0.0482 JBQ 0.0150 MDL 5.23 PQL ng/Kg 0.0529 JBQ 0.0106 MDL 5.23 PQL ng/Kg 0.0588 JB 0.0151 MDL 5.23 PQL ng/Kg 0.0531 JB 0.0155 MDL 5.23 PQL ng/Kg 0.0489 JB 0.0211 MDL 5.23 PQL ng/Kg 0.0681 JBQ 0.0119 MDL 5.23 <	Lab Result Lab Qual DL DL Type RL Type RL Type RL Type Review Qual 0.270 JB 0.0184 MDL 5.23 PQL ng/Kg U 0.152 JB 0.00605 MDL 5.23 PQL ng/Kg U 0.0466 JBQ 0.0130 MDL 5.23 PQL ng/Kg U 0.0436 JB 0.0145 MDL 5.23 PQL ng/Kg U 0.0774 JB 0.0130 MDL 5.23 PQL ng/Kg U 0.0482 JBQ 0.0150 MDL 5.23 PQL ng/Kg U 0.0529 JBQ 0.0166 MDL 5.23 PQL ng/Kg U 0.0588 JB 0.0151 MDL 5.23 PQL ng/Kg U 0.0489 JB 0.0211 MDL 5.23 PQL ng/Kg U 0.0400 JB 0.0119

Sample ID: SL-019-NBZ-SS-0.0-0.5

Collected: 3/13/2012 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-HPCDF	1.09	JB	0.0101	MDL	5.02	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.134	JBQ	0.0203	MDL	5.02	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.123	JB	0.0199	MDL	5.02	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.200	JB	0.0183	MDL	5.02	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.264	JBQ	0.0205	MDL	5.02	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

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

9/13/2012 2:33:21 PM ADR version 1.6.0.188 Page 2 of 10

Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-019-NBZ-SS-0.0-0.5	Collec	ted: 3/13/2	012 1:50:	00 A	nalysis T	ype: 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	0.140	JBQ	0.0157	MDL	5.02	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.261	JB	0.0202	MDL	5.02	PQL	ng/Kg	J	Z	
1,2,3,7,8,9-HXCDF	0.0547	JB	0.0216	MDL	5.02	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.0650	JBQ	0.0206	MDL	5.02	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDF	0.165	JB	0.0203	MDL	5.02	PQL	ng/Kg	J	Z	
2,3,4,6,7,8-HXCDF	0.194	JBQ	0.0165	MDL	5.02	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.148	JBQ	0.0218	MDL	5.02	PQL	ng/Kg	U	В .	
2,3,7,8-TCDF	0.171	J	0.0358	MDL	1.00	PQL	ng/Kg	J	Z	
OCDF	1.90	JB	0.0250	MDL	10.0	PQL	ng/Kg	j	Z	

Sample ID:SL-022-NBZ-SB-4.0-5.0 Collected: 3/14/2012 10:10:00 Analysis Type: RES Dilution: 1

Campic ID. GE-GEE-NDE-GD-4.0-5.0	Conce	100. 0/ 1-7/2	.012 10.10	10.00 Analysis Type: NEO				Diadon. 1		
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	0.345	JBQ	0.0203	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.190	JB	0.00714	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0393	JB	0.0128	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.0182	JBQ	0.0145	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.0447	JB	0.0129	MDL	5.11	PQL	ng/Kg	υ	В	
1,2,3,6,7,8-HXCDD	0.0317	JB	0.0160	MDL	5.11	PQL	ng/Kg	υ	В	
1,2,3,6,7,8-HXCDF	0.0393	JBQ	0.0117	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0471	JBQ	0.0152	MDL	5.11	PQL	ng/Kg	υ	В	
1,2,3,7,8,9-HXCDF	0.0337	JBQ	0.0149	MDL	5.11	PQL	ng/Kg	υ	В	
1,2,3,7,8-PECDD	0.0364	JBQ	0.0216	MDL	5.11	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDF	0.0278	JBQ	0.0142	MDL	5.11	PQL	ng/Kg	U	В	
2,3,4,6,7,8-HXCDF	0.0596	JBQ	0.0119	MDL	5.11	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0798	JBQ	0.0138	MDL	5.11	PQL	ng/Kg	υ	В	
2,3,7,8-TCDF	0.0364	JQ	0.0177	MDL	1.02	PQL	ng/Kg	J	Z	
OCDD	0.935	JB	0.0131	MDL	10.2	PQL	ng/Kg	U	В	
OCDF	0.178	JB	0.0239	MDL	10.2	PQL	ng/Kg	U	В	

Sample ID:SL-022-NBZ-SB-9.0-10.0 Collected: 3/14/2012 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	0.333	JB	0.0155	MDL	5.23	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.158	JB	0.00529	MDL	5.23	PQL	ng/Kg	U	В

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^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX160 EDD Filename: PrepDX160_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method:

SO Matrix:

Sample ID: SL-022-NBZ-SB-9.0-10.0

Collected: 3/14/2012 10:20:00

Analysis Type: RES

Dilution: 1

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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	0.0711	JB	0.0107	MDL	5.23	PQL	ng/Kg	υ	В	
1,2,3,4,7,8-HxCDD	0.0359	JBQ	0.0135	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.0681	JB	0.0100	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDD	0.0386	JBQ	0.0137	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.0515	JBQ	0.00920	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0416	JBQ	0.0134	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDF	0.0355	JB	0.0122	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.0401	JBQ	0.0152	MDL	5.23	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDF	0.0202	JB	0.0110	MDL	5.23	PQL	ng/Kg	Ü	В	
2,3,4,6,7,8-HXCDF	0.0669	JB	0.00994	MDL	5.23	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0577	JBQ	0.0118	MDL	5.23	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0249	JQ	0.0145	MDL	1.05	PQL	ng/Kg	J	Z	
OCDD	0.577	JBQ	0.0126	MDL	10.5	PQL	ng/Kg	U	В	
OCDF	0.224	JB	0.0243	MDL	10.5	PQL	ng/Kg	U	В	

Sample ID: SL-022-NBZ-SS-0.0-0.5

Collected: 3/14/2012 9:03:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	1.21	JB	0.0140	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.113	JB	0.0216	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.166	JB	0.0220	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.247	JB	0.0147	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.383	JBQ	0.0241	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.157	JB	0.0143	MDL	5.21	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.339	JBQ	0.0224	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0390	JQ	0.0160	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.145	J	0.0209	MDL	5.21	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.199	J	0.0195	MDL	5.21	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.157	JB	0.0136	MDL	5.21	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.142	JB	0.0201	MDL	5.21	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0958	J	0.0268	MDL	1.04	PQL	ng/Kg	J	Z
OCDF	2.27	JB	0.0186	MDL	10.4	PQL	ng/Kg	J	Z

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling ADR version 1.6.0.188 9/13/2012 2:33:21 PM

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-023-NBZ-SB-4.0-5.0 Collected: 3/14/2012 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	0.284	JBQ	0.0147	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.135	JB	0.00578	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0544	JBQ	0.0106	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0387	JB	0.0122	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0758	JB	0.0100	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0458	JBQ	0.0138	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0498	JB	0.00836	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0464	JBQ	0.0131	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0446	JBQ	0.0112	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0643	JBQ	0.0162	MDL	5.03	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0867	JB	0.00980	MDL	5.03	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0784	JB	0.00857	MDL	5.03	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0777	JBQ	0.0102	MDL	5.03	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0219	JB	0.0149	MDL	1.01	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0286	JQ	0.0146	MDL	1.01	PQL	ng/Kg	J	Z
OCDD	0.539	JB	0.0117	MDL	10.1	PQL	ng/Kg	U	В
OCDF	0.229	JBQ	0.0202	MDL	10.1	PQL	ng/Kg	U	В

Sample ID:SL-023-NBZ-SB-8.5-9.5 Collected: 3/14/2012 12:55:00 Analysis Type: RES Dilution: 1

					···· , -·· -	71			
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	0.278	JB	0.0176	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.169	JB	0.00577	MDL	5.12	PQL	ng/Kg	υ	В
1,2,3,4,7,8,9-HPCDF	0.0357	JBQ	0.0126	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0547	JBQ	0.0131	MDL	5.12	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.0936	JB	0.0107	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0753	JBQ	0.0130	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0727	JB	0.00986	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0653	JBQ	0.0129	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0752	JB	0.0125	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0767	JBQ	0.0164	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.104	JBQ	0.0109	MDL	5.12	PQL	ng/Kg	υ	В
2,3,4,6,7,8-HXCDF	0.0765	JBQ	0.0101	MDL	5.12	PQL	ng/Kg	υ	В
2,3,4,7,8-PECDF	0.129	JBQ	0.0111	MDL	5.12	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 9/13/2012 2:33:21 PM ADR version 1.6.0.188

Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-023-NBZ-SB-8.5-9.5 Collected: 3/14/2012 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
2,3,7,8-TCDF	0.0188	J	0.0146	MDL	1.02	PQL	ng/Kg	J	Z
OCDD	0.427	JB	0.00997	MDL	10.2	PQL	ng/Kg	U	В
OCDF	0.233	JB	0.0247	MDL	10.2	PQL	ng/Kg	U	В

Sample ID:SL-023-NBZ-SS-0.0-0.5 Collected: 3/14/2012 11:38:00 Analysis Type: RES Dilution: 1

Conected. 3/14/2012 11.36.00 Analysis Type. RE3 Dilution. 1									
Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
0.945	JB	0.0387	MDL	5.13	PQL	ng/Kg	J	Z	
1.04	JB	0.0366	MDL	5.13	PQL	ng/Kg	J	Z	
0.693	JB	0.0311	MDL	5.13	PQL	ng/Kg	J	Z	
2.81	JB	0.0381	MDL	5.13	PQL	ng/Kg	J	Z	
0.552	JB	0.0308	MDL	5.13	PQL	ng/Kg	J	Z	
1.84	JB	0.0392	MDL	5.13	PQL	ng/Kg	J	Z	
0.0716	JB	0.0335	MDL	5.13	PQL	ng/Kg	υ	В	
0.567	JB	0.0394	MDL	5.13	PQL	ng/Kg	J	Z	
0.510	JB	0.0324	MDL	5.13	PQL	ng/Kg	J	Z	
0.719	JB	0.0281	MDL	5.13	PQL	ng/Kg	J	Z	
0.212	JB	0.0299	MDL	5.13	PQL	ng/Kg	υ	В	
0.0391	JBQ	0.0219	MDL	1.03	PQL	ng/Kg	υ	В	
0.232	J	0.0407	MDL	1.03	PQL	ng/Kg	J	Z	
	Result 0.945 1.04 0.693 2.81 0.552 1.84 0.0716 0.567 0.510 0.719 0.212 0.0391	Result Qual 0.945 JB 1.04 JB 0.693 JB 2.81 JB 0.552 JB 1.84 JB 0.0716 JB 0.567 JB 0.510 JB 0.719 JB 0.212 JB 0.0391 JBQ	Result Qual DL 0.945 JB 0.0387 1.04 JB 0.0366 0.693 JB 0.0311 2.81 JB 0.0381 0.552 JB 0.0308 1.84 JB 0.0392 0.0716 JB 0.0335 0.567 JB 0.0394 0.510 JB 0.0324 0.719 JB 0.0291 0.0391 JBQ 0.0219	Result Qual DL Type 0.945 JB 0.0387 MDL 1.04 JB 0.0366 MDL 0.693 JB 0.0311 MDL 2.81 JB 0.0381 MDL 0.552 JB 0.0308 MDL 1.84 JB 0.0392 MDL 0.0716 JB 0.0335 MDL 0.567 JB 0.0394 MDL 0.510 JB 0.0324 MDL 0.719 JB 0.0281 MDL 0.212 JB 0.0299 MDL 0.0391 JBQ 0.0219 MDL	Result Qual DL Type RL 0.945 JB 0.0387 MDL 5.13 1.04 JB 0.0366 MDL 5.13 0.693 JB 0.0311 MDL 5.13 2.81 JB 0.0381 MDL 5.13 0.552 JB 0.0308 MDL 5.13 1.84 JB 0.0392 MDL 5.13 0.0716 JB 0.0335 MDL 5.13 0.567 JB 0.0394 MDL 5.13 0.510 JB 0.0324 MDL 5.13 0.719 JB 0.0281 MDL 5.13 0.212 JB 0.0299 MDL 5.13 0.0391 JBQ 0.0219 MDL 1.03	Result Qual DL Type RL Type 0.945 JB 0.0387 MDL 5.13 PQL 1.04 JB 0.0366 MDL 5.13 PQL 0.693 JB 0.0311 MDL 5.13 PQL 2.81 JB 0.0381 MDL 5.13 PQL 0.552 JB 0.0308 MDL 5.13 PQL 1.84 JB 0.0392 MDL 5.13 PQL 0.0716 JB 0.0335 MDL 5.13 PQL 0.567 JB 0.0394 MDL 5.13 PQL 0.510 JB 0.0324 MDL 5.13 PQL 0.719 JB 0.0281 MDL 5.13 PQL 0.212 JB 0.0299 MDL 5.13 PQL 0.0391 JBQ 0.0219 MDL 1.03 PQL	Result Qual DL Type RL Type Units 0.945 JB 0.0387 MDL 5.13 PQL ng/Kg 1.04 JB 0.0366 MDL 5.13 PQL ng/Kg 0.693 JB 0.0311 MDL 5.13 PQL ng/Kg 2.81 JB 0.0381 MDL 5.13 PQL ng/Kg 0.552 JB 0.0308 MDL 5.13 PQL ng/Kg 1.84 JB 0.0392 MDL 5.13 PQL ng/Kg 0.0716 JB 0.0335 MDL 5.13 PQL ng/Kg 0.567 JB 0.0394 MDL 5.13 PQL ng/Kg 0.510 JB 0.0324 MDL 5.13 PQL ng/Kg 0.719 JB 0.0281 MDL 5.13 PQL ng/Kg 0.212 JB 0.0299 MDL 5.13 PQL	Lab Result Lab Qual DL DL Type RL Type RL Type RL Type Review Qual 0.945 JB 0.0387 MDL 5.13 PQL ng/Kg J 1.04 JB 0.0366 MDL 5.13 PQL ng/Kg J 0.693 JB 0.0311 MDL 5.13 PQL ng/Kg J 2.81 JB 0.0381 MDL 5.13 PQL ng/Kg J 0.552 JB 0.0308 MDL 5.13 PQL ng/Kg J 1.84 JB 0.0392 MDL 5.13 PQL ng/Kg J 0.0716 JB 0.0335 MDL 5.13 PQL ng/Kg U 0.567 JB 0.0394 MDL 5.13 PQL ng/Kg J 0.510 JB 0.0324 MDL 5.13 PQL ng/Kg J 0.719 JB 0.0281 MDL 5.13	

Sample ID:SL-024-NBZ-SS-0.0-0.5 Collected: 3/14/2012 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
1,2,3,4,6,7,8-HPCDD	2.27	JB	0.0202	MDL	5.15	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.452	JB	0.0140	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.107	JB	0.0248	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.112	JBQ	0.0186	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0935	JBQ	0.0137	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.134	JB	0.0202	MDL	5.15	PQL	ng/Kg	υ	В
1,2,3,6,7,8-HXCDF	0.0969	JB	0.0124	MDL	5.15	PQL	ng/Kg	U	. В
1,2,3,7,8,9-HXCDD	0.125	JBQ	0.0197	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0674	JBQ	0.0168	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.120	JB	0.0190	MDL	5.15	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.108	JB	0.0123	MDL	5.15	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

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Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-024-NBZ-SS-0.0-0.5 Collected: 3/14/2012 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
2,3,4,6,7,8-HXCDF	0.106	JBQ	0.0122	MDL	5.15	PQL	ng/Kg	υ	В
2,3,4,7,8-PECDF	0.132	JB	0.0126	MDL	5.15	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0269	JBQ	0.0136	MDL	1.03	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0276	J	0.0182	MDL	1.03	PQL	ng/Kg	J	Z
OCDF	0.688	JB	0.0245	MDL	10.3	PQL	ng/Kg	U	В

Sample ID:SL-029-NBZ-SS-0.0-0.5 Collected: 3/15/2012 9:00:00 Analysis Type: RES Dilution: 1

Sample ID. SL-025-NBZ-33-0.0-0.5	Conec	teu. 3/13/2	.012 9.00.	00 A	iiaiysis i	ype. KLS			Diludon. 1
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDF	3.17	JB	0.0155	MDL	5.05	PQL	ng/Kg	J	z
1,2,3,4,7,8,9-HPCDF	0.364	JB	0.0240	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.245	JBQ	0.0242	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.09	JB	0.0270	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.755	JB	0.0258	MDL	5.05	PQL	ng/Kg	J	z
1,2,3,6,7,8-HXCDF	0.312	JB	0.0232	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.501	JB	0.0239	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.123	JB	0.0260	MDL	5.05	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.197	JBQ	0.0259	MDL	5.05	PQL	ng/Kg	J	z
1,2,3,7,8-PECDF	0.797	JB	0.0301	MDL	5.05	PQL	ng/Kg	J	Z .
2,3,4,6,7,8-HXCDF	0.381	JB	0.0214	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.531	JB	0.0303	MDL	5.05	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0285	JB	0.0158	MDL	1.01	PQL	ng/Kg	Ü	В
2,3,7,8-TCDF	0.396	J	0.0427	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	6.03	JB	0.0233	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID:SL-030-NBZ-SS-0.0-0.5 Collected: 3/14/2012 3:00:00 Analysis Type: RES Dilution: 1

04///pic 12:02 000 11BE 00 010 010	0000	7yor. 1.ypo. 1.20								
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	3.71	ЈВ	0.0164	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,4,7,8,9-HPCDF	0.375	JBQ	0.0277	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,4,7,8-HxCDD	0.247	JB	0.0225	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,4,7,8-HXCDF	0.794	JB	0.0210	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDD	0.772	JВ	0.0252	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDF	0.342	JB	0.0195	MDL	5.05	PQL	ng/Kg	J	Z	
1,2,3,7,8,9-HXCDD	0.462	JB	0.0233	MDL	5.05	PQL	ng/Kg	J	Z	

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX160 Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-030-NBZ-SS-0.0-0.5 Collected: 3/14/2012 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-HXCDF	0.0853	JB	0.0229	MDL	5.05	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.179	JB	0.0264	MDL	5.05	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.09	JB	0.0266	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.377	JB	0.0191	MDL	5.05	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.518	JB	0.0264	MDL	5.05	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.310	J	0.0312	MDL	1.01	PQL	ng/Kg	J	Z
OCDF	7.46	JB	0.0217	MDL	10.1	PQL	ng/Kg	J	Z

Sample ID:SL-052-NBZ-SS-0.0-0.5 Collected: 3/15/2012 12:05:00 Analysis Type: RES Dilution: 1

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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	0.535	JB	0.0324	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.380	JB	0.0215	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.808	JB	0.0237	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.27	JB	0.0249	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.516	JB	0.0205	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.31	JB	0.0229	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.198	JBQ	0.0283	MDL	4.97	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.477	JB	0.0346	MDL	4.97	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.31	JB	0.0290	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.434	JB	0.0203	MDL	4.97	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.743	JB	0.0285	MDL	4.97	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0719	JBQ	0.0221	MDL	0.993	PQL	ng/Kg	U	В

Sample ID:SL-058-NBZ-SS-0.0-0.5 Collected: 3/15/2012 11:30:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.297	JB	0.0147	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.174	JB	0.0103	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0334	JBQ	0.0164	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0281	JBQ	0.0132	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0649	JBQ	0.0105	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0470	JBQ	0.0142	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0484	JBQ	0.00992	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0505	JB	0.0132	MDL	5.16	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method:

Matrix:

SO

Sample ID: SL-058-NBZ-SS-0.0-0.5

Collected: 3/15/2012 11:30:00

Analysis Type: RES

		Thanyone Types 1120							Direction.	
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,7,8,9-HXCDF	0.0427	JBQ	0.0125	MDL	5.16	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.0314	JBQ	0.0169	MDL	5.16	PQL	ng/Kg	υ	В	
1,2,3,7,8-PECDF	0.0473	JBQ	0.0108	MDL	5.16	PQL	ng/Kg	U	В	
2,3,4,6,7,8-HXCDF	0.0606	JBQ	0.00971	MDL	5.16	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0502	JBQ	0.0108	MDL	5.16	PQL	ng/Kg	U	В	
2,3,7,8-TCDD	0.0142	JBQ	0.0141	MDL	1.03	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0148	J	0.0148	MDL	1.03	PQL	ng/Kg	J	Z	
OCDD	0.645	JB	0.0129	MDL	10.3	PQL	ng/Kg	U	В	
OCDF	0.161	JB	0.0190	MDL	10.3	PQL	ng/Kg	U	В	

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX160 EDD Filename: PrepDX160_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
Z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DX160

Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613 Matrix: AQ	В			
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0830B372354	3/26/2012 11:54:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF CODD OCDF	3.73 pg/L 1.70 pg/L 0.578 pg/L 0.578 pg/L 0.305 pg/L 0.545 pg/L 0.887 pg/L 0.426 pg/L 0.597 pg/L 0.526 pg/L 0.425 pg/L 0.502 pg/L 0.502 pg/L 0.521 pg/L 0.418 pg/L 0.418 pg/L 6.73 pg/L 1.47 pg/L	EB-NBZ-SB-031512 EB-NBZ-SS-031512

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-NBZ-SB-031512(RES)	1,2,3,4,6,7,8-HPCDD	2.82 pg/L	2.82U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,4,6,7,8-HPCDF	1.29 pg/L	1.29U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,4,7,8,9-HPCDF	0.342 pg/L	0.342U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,4,7,8-HxCDD	0.287 pg/L	0.287U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,4,7,8-HXCDF	0.377 pg/L	0.377U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,6,7,8-HXCDD	0.292 pg/L	0.292U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,6,7,8-HXCDF	0.361 pg/L	0.361U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,7,8,9-HXCDD	0.534 pg/L	0.534U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,7,8,9-HXCDF	0.305 pg/L	0.305U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,7,8-PECDD	0.235 pg/L	0.235U pg/L
EB-NBZ-SB-031512(RES)	1,2,3,7,8-PECDF	0.271 pg/L	0.271U pg/L
EB-NBZ-SB-031512(RES)	2,3,4,6,7,8-HXCDF	0.501 pg/L	0.501U pg/L
EB-NBZ-SB-031512(RES)	2,3,4,7,8-PECDF	0.607 pg/L	0.607U pg/L
EB-NBZ-SB-031512(RES)	2,3,7,8-TCDF	0.219 pg/L	0.219U pg/L
EB-NBZ-SB-031512(RES)	OCDD	4.27 pg/L	4.27U pg/L
EB-NBZ-SB-031512(RES)	OCDF	1.37 pg/L	1.37U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,4,6,7,8-HPCDD	3.53 pg/L	3.53U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,4,6,7,8-HPCDF	1.76 pg/L	1.76U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,4,7,8,9-HPCDF	0.424 pg/L	0.424U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,4,7,8-HxCDD	0.313 pg/L	0.313U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,4,7,8-HXCDF	0.472 pg/L	0.472U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,6,7,8-HXCDD	0.543 pg/L	0.543U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,6,7,8-HXCDF	0.595 pg/L	0.595U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,7,8,9-HXCDD	0.503 pg/L	0.503U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,7,8,9-HXCDF	0.416 pg/L	0.416U pg/L
EB-NBZ-SS-031512(RES)	1,2,3,7,8-PECDD	0.354 pg/L	0.354U pg/L
EB-NBZ-SS-031512(RES)	2,3,4,6,7,8-HXCDF	0.512 pg/L	0.512U pg/L
EB-NBZ-SS-031512(RES)	2,3,4,7,8-PECDF	0.494 pg/L	0.494U pg/L
EB-NBZ-SS-031512(RES)	2,3,7,8-TCDF	0.371 pg/L	0.371U pg/L

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: AQ	A William To be a pack			
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
EB-NBZ-SS-031512(RES)	OCDD	6.23 pg/L	6.23U pg/L
EB-NBZ-SS-031512(RES)	OCDF	1.67 pg/L	1.67U pg/L

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0870B371454	3/30/2012 2:54:00 PM	2,3,7,8-TCDF	0.0471 ng/Kg	SL-019-NBZ-SB-3.0-4.0 SL-019-NBZ-SS-0.0-0.5 SL-022-NBZ-SB-4.0-5.0 SL-022-NBZ-SB-9.0-10.0 SL-023-NBZ-SB-4.0-5.0 SL-023-NBZ-SB-8.5-9.5 SL-023-NBZ-SS-0.0-0.5 SL-024-NBZ-SS-0.0-0.5 SL-029-NBZ-SS-0.0-0.5 SL-030-NBZ-SS-0.0-0.5 SL-052-NBZ-SS-0.0-0.5 SL-052-NBZ-SS-0.0-0.5
BLK0870B371830	3/28/2012 6:30:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD 0,3,4,7,8-PECDD	0.290 ng/Kg 0.196 ng/Kg 0.0431 ng/Kg 0.0369 ng/Kg 0.0629 ng/Kg 0.0442 ng/Kg 0.0353 ng/Kg 0.0499 ng/Kg 0.0627 ng/Kg 0.0268 ng/Kg 0.0251 ng/Kg 0.0731 ng/Kg 0.0600 ng/Kg 0.0251 ng/Kg 0.0251 ng/Kg 0.0251 ng/Kg	SL-019-NBZ-SB-3.0-4.0 SL-019-NBZ-SS-0.0-0.5 SL-022-NBZ-SB-4.0-5.0 SL-022-NBZ-SB-9.0-10.0 SL-023-NBZ-SB-4.0-5.0 SL-023-NBZ-SB-8.5-9.5 SL-023-NBZ-SS-0.0-0.5 SL-024-NBZ-SS-0.0-0.5 SL-029-NBZ-SS-0.0-0.5 SL-030-NBZ-SS-0.0-0.5 SL-052-NBZ-SS-0.0-0.5 SL-058-NBZ-SS-0.0-0.5
BLK0890B371818	3/30/2012 6:18:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF 1,2,3,6,7,8-HXCDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD OCDD OCDF	0.266 ng/Kg 0.0992 ng/Kg 0.0489 ng/Kg 0.0274 ng/Kg 0.0430 ng/Kg 0.0499 ng/Kg 0.0457 ng/Kg 0.0288 ng/Kg 0.0515 ng/Kg 0.0673 ng/Kg 0.0304 ng/Kg 0.447 ng/Kg 0.184 ng/Kg	SL-022-NBZ-SS-0.0-0.5

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.270 ng/Kg	0.270U ng/Kg
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.152 ng/Kg	0.152U ng/Kg

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO			And the second	
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-019-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0466 ng/Kg	0.0466U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HxCDD	0.0436 ng/Kg	0.0436U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.0774 ng/Kg	0.0774U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.0482 ng/Kg	0.0482U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.0529 ng/Kg	0.0529U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.0588 ng/Kg	0.0588U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.0531 ng/Kg	0.0531U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.0489 ng/Kg	0.0489U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.0400 ng/Kg	0.0400U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.0681 ng/Kg	0.0681U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.0712 ng/Kg	0.0712U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	OCDD	0.519 ng/Kg	0.519U ng/Kg	
SL-019-NBZ-SB-3.0-4.0(RES)	OCDF	0.234 ng/Kg	0.234U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.134 ng/Kg	0.134U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.123 ng/Kg	0.123U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.200 ng/Kg	0.200U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.140 ng/Kg	0.140U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0547 ng/Kg	0.0547U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0650 ng/Kg	0.0650U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.194 ng/Kg	0.194U ng/Kg	
SL-019-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.148 ng/Kg	0.148U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.345 ng/Kg	0.345U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.190 ng/Kg	0.190U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0393 ng/Kg	0.0393U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0182 ng/Kg	0.0182U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0447 ng/Kg	0.0447U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0317 ng/Kg	0.0317U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0393 ng/Kg	0.0393U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0471 ng/Kg	0.0471U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0337 ng/Kg	0.0337U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0364 ng/Kg	0.0364U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0278 ng/Kg	0.0278U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0596 ng/Kg	0.0596U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0798 ng/Kg	0.0798U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	OCDD	0.935 ng/Kg	0.935U ng/Kg	
SL-022-NBZ-SB-4.0-5.0(RES)	OCDF	0.178 ng/Kg	0.178U ng/Kg	
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.333 ng/Kg	0.333U ng/Kg	
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.158 ng/Kg	0.158U ng/Kg	
SL-022-NBZ-SB-9,0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0711 ng/Kg	0.0711U ng/Kg	
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8-HxCDD	0.0359 ng/Kg	0.0359U ng/Kg	

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

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Lab Reporting Batch ID: DX160 EDD Filename: PrepDX160_v1

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0681 ng/Kg	0.0681U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0386 ng/Kg	0.0386U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0515 ng/Kg	0.0515U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0416 ng/Kg	0.0416U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0355 ng/Kg	0.0355U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8-PECDD	0.0401 ng/Kg	0.0401U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0202 ng/Kg	0.0202U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0669 ng/Kg	0.0669U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0577 ng/Kg	0.0577U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	OCDD	0.577 ng/Kg	0.577U ng/Kg
SL-022-NBZ-SB-9.0-10.0(RES)	OCDF	0.224 ng/Kg	0.224U ng/Kg
SL-022-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.113 ng/Kg	0.113U ng/Kg
SL-022-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-022-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-022-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.142 ng/Kg	0.142U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.284 ng/Kg	0.284U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.135 ng/Kg	0.135U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0544 ng/Kg	0.0544U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0387 ng/Kg	0.0387U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0758 ng/Kg	0.0758U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0458 ng/Kg	0.0458U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0498 ng/Kg	0.0498U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0464 ng/Kg	0.0464U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0446 ng/Kg	0.0446U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0643 ng/Kg	0.0643U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0867 ng/Kg	0.0867U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0784 ng/Kg	0.0784U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0777 ng/Kg	0.0777U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0219 ng/Kg	0.0219U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	OCDD	0.539 ng/Kg	0.539U ng/Kg
SL-023-NBZ-SB-4.0-5.0(RES)	OCDF	0.229 ng/Kg	0.229U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,4,6,7,8-HPCDD	0.278 ng/Kg	0.278U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,4,6,7,8-HPCDF	0.169 ng/Kg	0.169U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0357 ng/Kg	0.0357U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,4,7,8-HxCDD	0.0547 ng/Kg	0.0547U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,4,7,8-HXCDF	0.0936 ng/Kg	0.0936U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,6,7,8-HXCDD	0.0753 ng/Kg	0.0753U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,6,7,8-HXCDF	0.0727 ng/Kg	0.0727U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,7,8,9-HXCDD	0.0653 ng/Kg	0.0653U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,7,8,9-HXCDF	0.0752 ng/Kg	0.0752U ng/Kg

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1

eQAPP Name: CDM_SSFL_120718_Lan

Matrix: SO Method Blank Associated		Analysis Date	Analyte	Result	Samples
Matrix: SO	Method Blank				Associated
Method: 1613B			Salaria Karistan		

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-023-NBZ-SB-8,5-9,5(RES)	1,2,3,7,8-PECDD	0.0767 ng/Kg	0.0767U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	1,2,3,7,8-PECDF	0.104 ng/Kg	0.104U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	2,3,4,6,7,8-HXCDF	0.0765 ng/Kg	0.0765U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	2,3,4,7,8-PECDF	0.129 ng/Kg	0.129U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	OCDD	0.427 ng/Kg	0.427U ng/Kg
SL-023-NBZ-SB-8.5-9.5(RES)	OCDF	0.233 ng/Kg	0.233U ng/Kg
SL-023-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0716 ng/Kg	0.0716U ng/Kg
SL-023-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.212 ng/Kg	0.212U ng/Kg
SL-023-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0391 ng/Kg	0.0391U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.452 ng/Kg	0.452U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.107 ng/Kg	0.107U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.112 ng/Kg	0.112U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0935 ng/Kg	0.0935U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.134 ng/Kg	0.134U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0969 ng/Kg	0.0969U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.125 ng/Kg	0.125U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0674 ng/Kg	0.0674U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.120 ng/Kg	0.120U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.108 ng/Kg	0.108U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.106 ng/Kg	0.106U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.132 ng/Kg	0.132U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0269 ng/Kg	0.0269U ng/Kg
SL-024-NBZ-SS-0.0-0.5(RES)	OCDF	0.688 ng/Kg	0.688U ng/Kg
SL-029-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.123 ng/Kg	0.123U ng/Kg
SL-029-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0285 ng/Kg	0.0285U ng/Kg
SL-030-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0853 ng/Kg	0.0853U ng/Kg
SL-052-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.198 ng/Kg	0.198U ng/Kg
SL-052-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0719 ng/Kg	0.0719U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDD	0.297 ng/Kg	0.297U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,4,6,7,8-HPCDF	0.174 ng/Kg	0.174U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0334 ng/Kg	0.0334U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0281 ng/Kg	0.0281U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.0649 ng/Kg	0.0649U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.0470 ng/Kg	0.0470U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.0484 ng/Kg	0.0484U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.0505 ng/Kg	0.0505U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0427 ng/Kg	0.0427U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.0314 ng/Kg	0.0314U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDF	0.0473 ng/Kg	0.0473U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.0606 ng/Kg	0.0606U ng/Kg

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: PrepDX160_v1 eQAPP Name

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-058-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0502 ng/Kg	0.0502U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0142 ng/Kg	0.0142U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	OCDD	0.645 ng/Kg	0.645U ng/Kg
SL-058-NBZ-SS-0.0-0.5(RES)	OCDF	0.161 ng/Kg	0.161U ng/Kg

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: DX160_v1.

eQAPP Name: CDM_SSFL_120718_Lan

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SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SB-031512	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF OCDD OCDF	田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田	2.82 1.29 0.342 0.287 0.377 0.292 0.361 0.534 0.305 0.235 0.271 0.501 0.607 0.219 4.27 1.37	9.91 9.91 9.91 9.91 9.91 9.91 9.91 9.91	PQL	pg/L pg/L pg/L pg/L pg/L pg/L pg/L pg/L	J (all detects)
EB-NBZ-SS-031512	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-PECDD 2,3,4,6,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 0,3,7,8-TCDF 0CDD 0CDF	田田 できません ひょうしゅん ひょうしゅん ひょうしょう ほうしゅう しゅうしゅう しゅうしゅう しゅうしゅう しゅうしゅう しょうしゅう しょうしょう しょう	3.53 1.76 0.424 0.313 0.472 0.543 0.595 0.503 0.416 0.354 0.512 0.494 0.289 0.371 6.23 1.67	9.85 9.85 9.85 9.85 9.85 9.85 9.85 9.85	PQL	pg/L pg/L pg/L pg/L pg/L pg/L pg/L pg/L	J (all detects)

Method: 1613B

Matrix: SO

		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-019-NBZ-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.270	5.23	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.152	5.23	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0466	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0436	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0774	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0482	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0529	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0588	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.0531	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.0489	5.23	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0400	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0681	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0712	5.23	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0267	1.05	PQL	ng/Kg	
	OCDD	JB	0.519	10.5	PQL	ng/Kg	
1	OCDF	JB	0.234	10.5	PQL	ng/Kg	

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: DX160_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

Matrix: 50	CA THE SPACE SERVICE SERVICE SERVICES		and the second	African	MARIE AND A		Lettersk Let
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-019-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.09	5.02	PQL	ng/Kg	riag
	1,2,3,4,7,8,9-HPCDF	JBQ	0.134	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.123	5.02	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.200	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.264	5.02	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.140	5.02	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB JB	0.261 0.0547	5.02	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD	JBQ	0.0547	5.02 5.02	PQL PQL	ng/Kg ng/Kg	, ,
	1,2,3,7,8-PECDF	JB	0.0050	5.02	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.194	5.02	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.148	5.02	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.171	1.00	PQL	ng/Kg	
	OCDF	JB	1.90	10.0	PQL	ng/Kg	
SL-022-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.345	5.11	PQL	ng/Kg	
01 011 112 02 110 010	1,2,3,4,6,7,8-HPCDF	JB	0.190	5.11	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.0393	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0182	5.11	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0447	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0317	5.11	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0393	5.11	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0471	5.11	PQL.	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0337	5.11	PQL	ng/Kg	o (an actobio)
	1,2,3,7,8-PECDD	JBQ	0.0364	5.11	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0278	5.11	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0596	5.11	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0798 0.0364	5.11	PQL PQL	ng/Kg	
	2,3,7,8-TCDF OCDD	JQ JB	0.0364	1.02 10.2	PQL	ng/Kg ng/Kg	
	OCDF	JB	0.933	10.2	PQL	ng/Kg	
SL-022-NBZ-SB-9.0-10.0		JB		 	PQL	ng/Kg	
SL-022-NBZ-3B-9.0-10.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF	JB JB	0.333 0.158	5.23 5.23	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.138	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0359	5.23	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0681	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0386	5.23	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0515	5.23	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0416	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.0355	5.23	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0401	5.23	PQL	ng/Kg	
1 2 2	1,2,3,7,8-PECDF	JB	0.0202	5.23	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0669	5.23	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0577	5.23	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0249	1.05	PQL	ng/Kg	
	OCDD	JBQ	0.577	10.5	PQL	ng/Kg	
	OCDF	JB	0.224	10.5	PQL	ng/Kg	

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: DX160_v1.

eQAPP Name: CDM_SSFL_120718_Lan

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Matrix: SO		A Carrier	industry, miles	<u> </u>	Kenada ja		Saladar .
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-022-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	1.21	5.21	PQL	ng/Kg	riag
	1,2,3,4,7,8,9-HPCDF	JB	0.113	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.166	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.247	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF	JBQ JB	0.383 0.157	5.21 5.21	PQL PQL	ng/Kg ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.137	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JQ	0.0390	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	Ĵ	0.145	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	Ĵ	0.199	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.157	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.142	5.21	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0958	1.04	PQL	ng/Kg	
	OCDF	JB	2.27	10.4	PQL	ng/Kg	
SL-023-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JBQ	0.284	5.03	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.135	5.03	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0544	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.0387	5.03	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB JBQ	0.0758 0.0458	5.03 5.03	PQL PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF	JB	0.0498	5.03	PQL	ng/Kg ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0490	5.03	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0446	5.03	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0643	5.03	PQL	ng/Kg	o (a ao to oto)
	1,2,3,7,8-PECDF	JB	0.0867	5.03	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0784	5.03	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0777	5.03	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0219	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	JQ	0.0286	1.01	PQL	ng/Kg	
	OCDD	JB	0.539	10.1	PQL	ng/Kg	
01 000 1107 00 0 5 0 5	OCDF	JBQ	0.229	10.1	PQL	ng/Kg	
SL-023-NBZ-SB-8.5-9.5	1,2,3,4,6,7,8-HPCDD	JB	0.278	5.12	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF	JB JBQ	0.169 0.0357	5.12 5.12	PQL PQL	ng/Kg ng/Kg	
	1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD	JBQ	0.0557	5.12	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0936	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0753	5.12	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0727	5.12	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0653	5.12	PQL	ng/Kg	L(all dotoets)
	1,2,3,7,8,9-HXCDF	JB	0.0752	5.12	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0767	5.12	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.104	5.12	PQL	ng/Kg	
2	2,3,4,6,7,8-HXCDF	JBQ	0.0765	5.12	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.129	5.12	PQL	ng/Kg	
	2,3,7,8-TCDF OCDD	J JB	0.0188 0.427	1.02	PQL PQL	ng/Kg ng/Kg	,
	OCDF	JB	0.427	10.2	PQL	ng/Kg	
	JOOD!		0.200	10.2	1 0(1	ן פיייפיי	

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Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: DX160_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Type	Units	Flag
SL-023-NBZ-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF	JB	0.945	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	1.04	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.693	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.81	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.552	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.84	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0716	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.567	5.13	PQL	ng/Kg	- (
	1,2,3,7,8-PECDF	JB	0.510	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.719	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.212	5.13	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0391	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.232	1.03	PQL	ng/Kg	
SL-024-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	2.27	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.452	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.107	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.112	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0935	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.134	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0969	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.125	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0674	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.120	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.108	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.106	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.132	5.15	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0269	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0276	1.03	PQL	ng/Kg	
	OCDF	JB	0.688	10.3	PQL	ng/Kg	
SL-029-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.17	5.05	PQL	ng/Kg	
02 020 1122 00 0.0 0.0	1,2,3,4,7,8,9-HPCDF	JB	0.364	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.245	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.09	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.755	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.312	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.501	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.123	5.05	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.197	5.05	PQL	ng/Kg	o (dil dotooto)
	1,2,3,7,8-PECDF	JB	0.797	5.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.381	5.05	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.531	5.05	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0285	1.01	PQL	ng/Kg	
	2,3,7,8-TCDF	Ĵ	0.396	1.01	PQL	ng/Kg	
	OCDF	JВ	6.03	10.1	PQL	ng/Kg	
SL-030-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	3.71	5.05	PQL	ng/Kg	
02-000-1122-00-0.0-0.0	1,2,3,4,7,8,9-HPCDF	JBQ	0.375	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.373	5.05	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.794	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.734	5.05	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.772	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.462	5.05	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0853	5.05	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.179	5.05	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	1.09	5.05	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.377	5.05	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.518	5.05	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.310	1.01	PQL	ng/Kg	
	OCDF	JB	7.46	10.1	PQL	ng/Kg	
	1			L		9	

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

Lab Reporting Batch ID: DX160

Laboratory: LL

EDD Filename: DX160_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO			i.		a ella	Resid	GO STATE	
	 	1		1			 T	

matrix.	CALL PROCESSOR SAN ER CONTRACTOR						
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-052-NBZ-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD	2000年1000年100日日日日日日日日日日日日日日日日日日日日日日日日日日日	0.535 0.380 0.808 1.27 0.516 1.31 0.198 0.477 1.31 0.434 0.743	4.97 4.97 4.97 4.97 4.97 4.97 4.97 4.97	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-058-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 0CDF	######################################	0.297 0.174 0.0334 0.0281 0.0649 0.0470 0.0484 0.0505 0.0427 0.0314 0.0473 0.0606 0.0502 0.0142 0.0148 0.645 0.161	5.16 5.16 5.16 5.16 5.16 5.16 5.16 5.16	PQL	ng/Kg	J (all detects)

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SAMPLE DELIVERY GROUP

DX161

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
15-Mar-2012	SL-053-NBZ-SS-0.0-0.5	6582509	N	METHOD	1613B	III
15-Mar-2012	SL-053-NBZ-SB-3.5-4.5	6582510	N	METHOD	1613B	III
15-Mar-2012	SL-056-NBZ-SS-0.0-0.5	6582511	N	METHOD	1613B	III
15-Mar-2012	SL-056-NBZ-SB-3.0-4.0	6582512	N	METHOD	1613B	III
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5	6582514	N	METHOD	1613B	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MS	6582515	MS	METHOD	1613B	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5 MSD	6582516	MSD	METHOD	1613B	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5MSD	P582514M370619	MSD	METHOD	1613B	111
16-Mar-2012	SL-068-NBZ-SB-2.5-3.5MS	P582514R370523	MS	METHOD	1613B	Ш
16-Mar-2012	SL-067-NBZ-SB-1.5-2.5	6582513	N	METHOD	1613B	Ш
16-Mar-2012	DUP-01-NBZ-QC-031612	6582518	FD	METHOD	1613B	III
16-Mar-2012	SL-072-NBZ-SB-4.0-5.0	6582517	N	METHOD	1613B	III
19-Mar-2012	SL-071-NBZ-SB-4.0-5.0	6587633	N	METHOD	1613B	III
19-Mar-2012	SL-074-NBZ-SB-0.5-1.5	6587636	N	METHOD	1613B	III
19-Mar-2012	SL-073-NBZ-SB-9.0-10.0	6587635	N	METHOD	1613B	III
19-Mar-2012	SL-073-NBZ-SB-4.0-5.0	6587634	N	METHOD	1613B	III
20-Mar-2012	SL-075-NBZ-SS-0.0-0.5	6587639	. N	METHOD	1613B	III
20-Mar-2012	SL-076-NBZ-SS-0.0-0.5	6587640	N	METHOD	1613B	111
20-Mar-2012	SL-077-NBZ-SS-0.0-0.5	6587641	N	METHOD	1613B	Ш
20-Mar-2012	SL-077-NBZ-SB-2.5-3.5	6587642	N	METHOD	1613B	111
20-Mar-2012	SL-069-NBZ-SB-3.0-4.0	6587637	N	METHOD	1613B	III
20-Mar-2012	SL-070-NBZ-SS-0.0-0.5	6587638	N	METHOD	1613B	III
21-Mar-2012	SL-066-NBZ-SB-2.0-3.0	6587644	N	METHOD	1613B	111
21-Mar-2012	SL-065-NBZ-SB-1.0-2.0	6587643	N	METHOD	1613B	111
21-Mar-2012	EB-NBZ-SS-032112	6587645	EB	METHOD	1613B	Ш

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

> Matrix: ΑQ

Method:

Sample ID: EB-NBZ-SS-032112	Collec	ted: 3/21/2	012 3:00:0	0 A	nalysis Ty	/pe: RES		Dilution: 1		
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	3.73	JB	0.278	MDL	9.50	PQL	pg/L	U	В	
1,2,3,4,6,7,8-HPCDF	1.55	JB	0.131	MDL	9.50	PQL	pg/L	U	В	
1,2,3,4,7,8,9-HPCDF	0.411	JBQ	0.157	MDL	9.50	PQL	pg/L	U	В	
1,2,3,4,7,8-HXCDF	0.720	JBQ	0.160	MDL	9.50	PQL	pg/L	U	В	
1,2,3,6,7,8-HXCDD	0.522	JB	0.220	MDL	9.50	PQL	pg/L	U	В	
1,2,3,6,7,8-HXCDF	0.530	JBQ	0.165	MDL	9.50	PQL	pg/L	υ	В	
1,2,3,7,8,9-HXCDD	0.557	JBQ	0.212	MDL	9.50	PQL	pg/L	U	В	
1,2,3,7,8,9-HXCDF	0.333	JB	0.163	MDL	9.50	PQL	pg/L	U	В	
1,2,3,7,8-PECDD	0.415	JBQ	0.347	MDL	9.50	PQL	pg/L	U	В	
1,2,3,7,8-PECDF	0.447	JBQ	0.199	MDL	9.50	PQL	pg/L	U	В	
2,3,4,6,7,8-HXCDF	0.382	JB	0.139	MDL	9.50	PQL	pg/L	Ü	В	
2,3,4,7,8-PECDF	0.541	JBQ	0.169	MDL	9.50	PQL	pg/L	U	В	
OCDD	6.15	JB	0.233	MDL	19.0	PQL	pg/L	U	В	
OCDF	1.72	JB	0.292	MDL	19.0	PQL	pg/L	U	В	

Method Category: SVOA Method: 1613B

SO Matrix:

Sample ID: DUP-01-NBZ-QC-031612	Collect	ted: 3/16/2	012 11:45:	00 A	nalysis Ty	/pe: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,4,6,7,8-HPCDD	0.265	JB	0.0165	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.150	JB	0.00874	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0920	JBQ	0.0170	MDL	5.33	PQL	ng/Kg	UJ	B, FD	
1,2,3,4,7,8-HxCDD	0.118	JB	0.0187	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.210	JBQ	0.0156	MDL	5.33	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDD	0.151	JB	0.0200	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.163	JBQ	0.0129	MDL	5.33	PQL	ng/Kg	υ	В	
1,2,3,7,8,9-HXCDD	0.155	JB	0.0202	MDL	5.33	PQL	ng/Kg	υ	В	
1,2,3,7,8,9-HXCDF	0.156	JB	0.0190	MDL	5.33	PQL	ng/Kg	υ	В	
1,2,3,7,8-PECDD	0.252	JQ	0.0269	MDL	5.33	PQL	ng/Kg	J	FD	
1,2,3,7,8-PECDF	0.283	JB	0.0152	MDL	5.33	PQL	ng/Kg	J	FD	
2,3,4,6,7,8-HXCDF	0.139	JB	0.0136	MDL	5.33	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.290	JB	0.0162	MDL	5.33	PQL	ng/Kg	UJ	FD	

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA
Method: 1613B

Sample ID: DUP-01-NBZ-QC-031612

Matrix: SO

Collected: 3/16/2012 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-TCDD	0.0911	JB	0.0299	MDL	1.07	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0556	JB	0.0271	MDL	1.07	PQL	ng/Kg	U	В
OCDD	0.462	JB	0.0154	MDL	10.7	PQL	ng/Kg	U	В
OCDF	0.161	JB	0.0245	MDL	10.7	PQL	ng/Kg	U	В

Sample ID: SL-053-NBZ-SB-3.5-4.5

Collected: 3/15/2012 3:00:00

Analysis Type: RES

Dilution: 1

Campio 12. CE CCC 1122 CE CIC 110	This year type it					2//445/11				
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	0.788	JB	0.0245	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.109	JB	0.00990	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0497	JBQ	0.0178	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.0564	JBQ	0.0213	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.0782	JBQ	0.0173	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDD	0.0440	JBQ	0.0219	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.0540	JBQ	0.0151	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0761	JB	0.0216	MDL	5.15	PQL	ng/Kg	υ	В	
1,2,3,7,8,9-HXCDF	0.0811	JBQ	0.0178	MDL	5.15	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.0470	J	0.0370	MDL	5.15	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDF	0.0982	JBQ	0.0195	MDL	5.15	PQL	ng/Kg	U	В	
2,3,4,6,7,8-HXCDF	0.0407	JBQ	0.0150	MDL	5.15	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0920	JB	0.0192	MDL	5.15	PQL	ng/Kg	U	В	
OCDD	3.98	JB	0.0169	MDL	10.3	PQL	ng/Kg	J	Z	
OCDF	0.197	JB	0.0279	MDL	10.3	PQL	ng/Kg	U	В	

Sample ID: SL-053-NBZ-SS-0.0-0.5

Collected: 3/15/2012 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	0.912	JB	0.0291	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.314	JB	0.0227	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.40	JB	0.0280	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.14	JB	0.0242	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.45	JB	0.0251	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.721	JB	0.0238	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.307	J	0.0323	MDL	5.04	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	3.06	JB	0.0430	MDL	5.04	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID: SL-053-NBZ-SS-0.0-0.5	Collec	ted: 3/15/2	012 2:20:0)0 A	nalysis T		i		Dilution: 1
Analuto	Lab Result	Lab	וח	DL Type	DI	RL Type	Unite	Data Review	Reason

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Review Qual	Reason Code
2,3,4,6,7,8-HXCDF	0.828	JB	0.0252	MDL	5.04	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	3.22	JB	0.0424	MDL	5.04	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.198	JB	0.0258	MDL	1.01	PQL	ng/Kg	U	В

Sample ID: SL-056-NBZ-SB-3.0-4.0 Collected: 3/15/2012 3:50:00 Analysis Type: RES Dilution: 1

				31.						
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	0.475	JB	0.0240	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.179	JB	0.0111	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0840	JBQ	0.0196	MDL	6.10.	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.0661	JBQ	0.0234	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.178	JB	0.0187	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDD	0.127	JBQ	0.0260	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.123	JB	0.0162	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.132	JBQ	0.0239	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDF	0.145	JB	0.0193	MDL	6.10	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.159	JQ	0.0317	MDL	6.10	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDF	0.197	JBQ	0.0206	MDL	6.10	PQL	ng/Kg	U	В	
2,3,4,6,7,8-HXCDF	0.101	JBQ	0.0157	MDL	6.10	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.208	JBQ	0.0206	MDL	6.10	PQL	ng/Kg	U	В	
2,3,7,8-TCDD	0.0638	JBQ	0.0330	MDL	1.22	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0555	JBQ	0.0371	MDL	1.22	PQL	ng/Kg	U	В	
OCDD	2.43	JB	0.0186	MDL	12.2	PQL	ng/Kg	J	Z	
OCDF	0.266	JBQ	0.0293	MDL	12.2	PQL	ng/Kg	U	В	

Sample ID: SL-056-NBZ-SS-0.0-0.5 Collected: 3/15/2012 3:35:00 Analysis Type: RES Dilution: 1

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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	6.42	JB	0.0196	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,4,7,8,9-HPCDF	0.961	JB	0.0302	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,4,7,8-HxCDD	0.511	JB	0.0361	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,4,7,8-HXCDF	3.41	JB	0.0402	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,6,7,8-HXCDD	1.48	JB	0.0364	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,6,7,8-HXCDF	1.84	JB	0.0372	MDL	6.45	PQL	ng/Kg	J	Z				
1,2,3,7,8,9-HXCDD	1.25	JB	0.0366	MDL	6.45	PQL.	ng/Kg	J	Z				

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161 Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID: SL-056-NBZ-SS-0.0-0.5	Collec	ted: 3/15/2	012 3:35:0	00 A	nalysis T	ype: 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	0.432	J	0.0453	MDL	6.45	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	4.63	JB	0.0579	MDL	6.45	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	1.08	JB	0.0369	MDL	6.45	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	4.70	JB	0.0587	MDL	6.45	PQL	ng/Kg	J	Z

0.0354

MDL

1.29

PQL

ng/Kg

В

JΒ

0.133

Sample ID: SL-065-NBZ-SB-1.0-2.0	Collec	ted: 3/21/2	012 10:55:	00 A	nalysis Ty	/pe: RES			Dilution: 1
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	1.33	JB	0.0208	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.534	JB	0.00870	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.212	JBQ	0.0155	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.192	JB	0.0179	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.408	JB	0.0160	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.288	JB	0.0180	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.220	JB	0.0139	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.392	JB	0.0181	MDL	5.26	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.193	JB	0.0185	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.200	JB	0.0195	MDL	5.26	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.309	JB	0.0171	MDL	5.26	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.238	JB	0.0150	MDL	5.26	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.445	JB	0.0174	MDL	5.26	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0370	JB	0.0172	MDL	1.05	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0989	JB	0.0323	MDL	1.05	PQL	ng/Kg	U	В
OCDD	8.53	JB	0.0103	MDL	10.5	PQL	ng/Kg	J	Z
OCDF	1.08	JB	0.0190	MDL	10.5	PQL	ng/Kg	J	Z

Sample ID: SL-066-NBZ-SB-2.0-3.0	Collect	 012 9:30:00	A	nalysis Ty	-		Dilution: 1
			D./		57	Data	

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.336	JBQ	0.0174	MDL	5.14	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.113	JBQ	0.00566	MDL	5.14	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0284	JBQ	0.0107	MDL	5.14	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0206	JB	0.0118	MDL	5.14	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0654	JB	0.00957	MDL	5.14	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

2,3,7,8-TCDD

Lab Reporting Batch ID: DX161 Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: so

Sample ID: SL-066-NBZ-SB-2.0-3.0 Collected: 3/21/2012 9:30:00 Analysis Type: RES Dilution: 1 Data Lab Lab DL RLReview Reason Analyte DL Result Qual RL Type Туре Units Qual Code 1,2,3,6,7,8-HXCDD 0.0649 **JBQ** 0.0122 MDL 5.14 PQL ng/Kg U 1,2,3,6,7,8-HXCDF 0.0473 JBQ 0.00885 MDL 5.14 **PQL** ng/Kg U В 1,2,3,7,8,9-HXCDD 0.0591 0.0117 JB MDL 5.14 **PQL** ng/Kg U В 1,2,3,7,8,9-HXCDF 0.0539 JB 0.0115 MDL 5.14 **PQL** ng/Kg U В 1,2,3,7,8-PECDD 0.0604 **JBQ** 0.0162 MDL 5.14 PQL U ng/Kg В 1,2,3,7,8-PECDF ng/Kg 0.0515 **JBQ** 0.0111 MDL 5.14 **PQL** U В 2,3,4,6,7,8-HXCDF 0.0508 JB 0.00926 MDL 5.14 **PQL** U В ng/Kg 2,3,4,7,8-PECDF MDL 0.0582 JB 0.0115 5.14 **PQL** ng/Kg U В 2,3,7,8-TCDD 0.0164 JBQ 0.0148 MDL 1.03 **PQL** ng/Kg U В 2,3,7,8-TCDF 0.0166 JBQ 0.0157 MDL 1.03 **PQL** ng/Kg U В OCDD 0.824 JB 0.0114 MDL 10.3 **PQL** ng/Kg U В OCDF

Sample ID: SL-067-NBZ-SB-1.5-2.5 Collected: 3/16/2012 11:45:00 Analysis Type: RES Dilution: 1

JB

0.0207

MDL

10.3

PQL

ng/Kg

U

В

0.185

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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3,4,6,7,8-HPCDD	0.320	JBQ	0.0165	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,4,6,7,8-HPCDF	0.110	JB	0.00866	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,4,7,8,9-HPCDF	0.0482	JBQ	0.0136	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,4,7,8-HxCDD	0.0244	JBQ	0.0172	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,4,7,8-HXCDF	0.0477	JB	0.0113	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,6,7,8-HXCDD	0.0697	JB	0.0174	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,6,7,8-HXCDF	0.0538	JB	0.0106	MDL	5.35	PQL	ng/Kg	υ	В		
1,2,3,7,8,9-HXCDD	0.0446	JB	0.0172	MDL	5.35	PQL	ng/Kg	υ	В,		
1,2,3,7,8,9-HXCDF	0.0649	JB	0.0127	MDL	5.35	PQL	ng/Kg	U	В		
1,2,3,7,8-PECDD	0.0728	JQ	0.0219	MDL	5.35	PQL	ng/Kg	J	Z		
1,2,3,7,8-PECDF	0.0621	JBQ	0.0134	MDL	5.35	PQL	ng/Kg	U	В		
2,3,4,6,7,8-HXCDF	0.0415	JB	0.0103	MDL	5.35	PQL	ng/Kg	U -	В		
2,3,4,7,8-PECDF	0.0830	JB	0.0139	MDL	5.35	PQL	ng/Kg	U	В		
OCDD	0.823	JB	0.0135	MDL	10.7	PQL	ng/Kg	U	В		
OCDF ·	0.136	JB	0.0177	MDL	10.7	PQL	ng/Kg	U	В		

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA
Method: 1613B

Matrix: SO

Sample ID: SL-068-NBZ-SB-2.5-3.5	Collec	ted: 3/16/2	012 10:15	00 A	nalysis Ty	/pe: RES		Dilution: 1					
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	0.342	JB	0.0179	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,4,6,7,8-HPCDF	0.110	JB	0.00734	MDL	5.43	PQL	ng/Kg	· U	В				
1,2,3,4,7,8,9-HPCDF	0.0242	JBQ	0.0127	MDL	5.43	PQL	ng/Kg	UJ	B, FD				
1,2,3,4,7,8-HxCDD	0.0799	JBQ	0.0180	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,4,7,8-HXCDF	0.147	JBQ	0.0134	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,6,7,8-HXCDD	0.114	JBQ	0.0194	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,6,7,8-HXCDF	0.0979	JB	0.0114	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,7,8,9-HXCDD	0.115	JB	0.0180	MDL	5.43	PQL	ng/Kg	U	В				
1,2,3,7,8,9-HXCDF	0.118	JB	0.0150	MDL	5.43	PQL	ng/Kg	Ü	В				
1,2,3,7,8-PECDD	0.148	J	0.0242	MDL	5.43	PQL	ng/Kg	J	FD				
1,2,3,7,8-PECDF	0.155	JB	0.0137	MDL	5.43	PQL	ng/Kg	UJ	B, FD				
2,3,4,6,7,8-HXCDF	0.108	JBQ	0.0119	MDL	5.43	PQL	ng/Kg	· U	В				
2,3,4,7,8-PECDF	0.149	JB	0.0142	MDL	5.43	PQL	ng/Kg	UJ	B, FD				
2,3,7,8-TCDD	0.0599	JB	0.0291	MDL	1.09	PQL	ng/Kg	U	В				
2,3,7,8-TCDF	0.0577	JB	0.0228	MDL	1.09	PQL	ng/Kg	U	В				
OCDD	0.563	JB	0.0149	MDL	10.9	PQL	ng/Kg	U	В				
OCDF	0.189	JB	0.0211	MDL	10.9	PQL	ng/Kg	U	В				

Sample ID: SL-069-NBZ-SB-3.0-4.0

Collected: 3/20/2012 2:30:00

Analysis Type: RES

16							[I	
Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
0.665	JB	0.0171	MDL	5.21	PQL	ng/Kg	U	В
0.192	JB	0.00651	MDL	5.21	PQL	ng/Kg	U	В
0.151	JB	0.0132	MDL	5.21	PQL	ng/Kg	U	В
0.177	JBQ	0.0155	MDL	5.21	PQL	ng/Kg	U	В
0.185	JB	0.0122	MDL	5.21	PQL	ng/Kg	U	В
0.206	JBQ	0.0171	MDL	5.21	PQL	ng/Kg	U	В
0.169	JBQ	0.0103	MDL	5.21	PQL	ng/Kg	U	В
0.210	JB	0.0162	MDL	5.21	PQL	ng/Kg	υ	В
0.177	JB	0.0136	MDL	5.21	PQL	ng/Kg	υ	В
0.217	JB	0.0183	MDL	5.21	PQL	ng/Kg	υ	В
0.221	JB	0.0111	MDL	5.21	PQL	ng/Kg	U	В
0.157	JB	0.0111	MDL	5.21	PQL	ng/Kg	υ	В
0.220	JB	0.0120	MDL	5.21	PQL	ng/Kg	U	В
	0.665 0.192 0.151 0.177 0.185 0.206 0.169 0.210 0.177 0.217 0.221 0.157	Result Qual 0.665 JB 0.192 JB 0.151 JB 0.177 JBQ 0.185 JB 0.206 JBQ 0.169 JBQ 0.210 JB 0.177 JB 0.217 JB 0.221 JB 0.157 JB	Result Qual DL 0.665 JB 0.0171 0.192 JB 0.00651 0.151 JB 0.0132 0.177 JBQ 0.0155 0.185 JB 0.0122 0.206 JBQ 0.0171 0.169 JBQ 0.0103 0.210 JB 0.0162 0.177 JB 0.0136 0.217 JB 0.0183 0.221 JB 0.0111 0.157 JB 0.0111	Result Qual DL Type 0.665 JB 0.0171 MDL 0.192 JB 0.00651 MDL 0.151 JB 0.0132 MDL 0.177 JBQ 0.0155 MDL 0.185 JB 0.0122 MDL 0.206 JBQ 0.0171 MDL 0.169 JBQ 0.0103 MDL 0.210 JB 0.0162 MDL 0.177 JB 0.0136 MDL 0.217 JB 0.0183 MDL 0.221 JB 0.0111 MDL 0.157 JB 0.0111 MDL	Result Qual DL Type RL 0.665 JB 0.0171 MDL 5.21 0.192 JB 0.00651 MDL 5.21 0.151 JB 0.0132 MDL 5.21 0.177 JBQ 0.0155 MDL 5.21 0.185 JB 0.0122 MDL 5.21 0.206 JBQ 0.0171 MDL 5.21 0.169 JBQ 0.0103 MDL 5.21 0.210 JB 0.0162 MDL 5.21 0.177 JB 0.0136 MDL 5.21 0.217 JB 0.0183 MDL 5.21 0.221 JB 0.0111 MDL 5.21 0.157 JB 0.0111 MDL 5.21	Result Qual DL Type RL Type 0.665 JB 0.0171 MDL 5.21 PQL 0.192 JB 0.00651 MDL 5.21 PQL 0.151 JB 0.0132 MDL 5.21 PQL 0.177 JBQ 0.0155 MDL 5.21 PQL 0.185 JB 0.0122 MDL 5.21 PQL 0.206 JBQ 0.0171 MDL 5.21 PQL 0.169 JBQ 0.0103 MDL 5.21 PQL 0.210 JB 0.0162 MDL 5.21 PQL 0.177 JB 0.0162 MDL 5.21 PQL 0.217 JB 0.0183 MDL 5.21 PQL 0.221 JB 0.0111 MDL 5.21 PQL 0.157 JB 0.0111 MDL 5.21 PQL	Result Qual DL Type RL Type Units 0.665 JB 0.0171 MDL 5.21 PQL ng/Kg 0.192 JB 0.00651 MDL 5.21 PQL ng/Kg 0.151 JB 0.0132 MDL 5.21 PQL ng/Kg 0.177 JBQ 0.0155 MDL 5.21 PQL ng/Kg 0.185 JB 0.0122 MDL 5.21 PQL ng/Kg 0.206 JBQ 0.0171 MDL 5.21 PQL ng/Kg 0.169 JBQ 0.0103 MDL 5.21 PQL ng/Kg 0.210 JB 0.0162 MDL 5.21 PQL ng/Kg 0.177 JB 0.0136 MDL 5.21 PQL ng/Kg 0.217 JB 0.0183 MDL 5.21 PQL ng/Kg 0.221 JB 0.0111 MDL 5.21 PQL <td>Result Qual DL Type RL Type Units Qual 0.665 JB 0.0171 MDL 5.21 PQL ng/Kg U 0.192 JB 0.00651 MDL 5.21 PQL ng/Kg U 0.151 JB 0.0132 MDL 5.21 PQL ng/Kg U 0.177 JBQ 0.0155 MDL 5.21 PQL ng/Kg U 0.185 JB 0.0122 MDL 5.21 PQL ng/Kg U 0.206 JBQ 0.0171 MDL 5.21 PQL ng/Kg U 0.169 JBQ 0.0103 MDL 5.21 PQL ng/Kg U 0.210 JB 0.0162 MDL 5.21 PQL ng/Kg U 0.177 JB 0.0136 MDL 5.21 PQL ng/Kg U 0.210 JB 0.0183 MDL 5.21</td>	Result Qual DL Type RL Type Units Qual 0.665 JB 0.0171 MDL 5.21 PQL ng/Kg U 0.192 JB 0.00651 MDL 5.21 PQL ng/Kg U 0.151 JB 0.0132 MDL 5.21 PQL ng/Kg U 0.177 JBQ 0.0155 MDL 5.21 PQL ng/Kg U 0.185 JB 0.0122 MDL 5.21 PQL ng/Kg U 0.206 JBQ 0.0171 MDL 5.21 PQL ng/Kg U 0.169 JBQ 0.0103 MDL 5.21 PQL ng/Kg U 0.210 JB 0.0162 MDL 5.21 PQL ng/Kg U 0.177 JB 0.0136 MDL 5.21 PQL ng/Kg U 0.210 JB 0.0183 MDL 5.21

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID	: SL	-069-NB	Z-SB-3	.0-4.0
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Collected:	3/20/2012	2:30:00

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Dilution: 1

	00.,00	0,20,2	Dilution.						
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDD	0.0509	JBQ	0.0182	MDL	1.04	PQL	ng/Kg	U	В
OCDD	8.68	JB	0.0143	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.437	JB	0.0214	MDL	10.4	PQL	ng/Kg	U	В

Sample ID: SL-070-NBZ-SS-0.0-0.5

Collected: 3/20/2012 3:25:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HxCDD	0.648	JB	0.0375	MDL	5.67	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	1.51	JB	0.0326	MDL	5.67	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	5.48	JB	0.0392	MDL	5.67	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.33	JB	0.0291	MDL	5.67	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.17	JB	0.0377	MDL	5.67	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.348	JB	0.0388	MDL	5.67	PQL	ng/Kg	j	Z
1,2,3,7,8-PECDD	0.145	JB	0.0269	MDL	5.67	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	1.01	JB	0.0211	MDL	5.67	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	2.14	JB	0.0306	MDL	5.67	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.300	JB	0.0231	MDL	5.67	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0545	JBQ	0.0197	MDL.	1.13	PQL	ng/Kg	υ	В
2,3,7,8-TCDF	0.0944	JBQ	0.0328	MDL	1.13	PQL	ng/Kg	υ	В

Sample ID: SL-071-NBZ-SB-4.0-5.0

Collected: 3/19/2012 9:35:00

Analysis Type: RES

•					-	-			
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	0.316	JB	0.0157	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0902	JB	0.00735	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0442	JBQ	0.0119	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0420	JBQ	0.0144	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0638	JB	0.00994	MDL	5.13	PQL	ng/Kg	υ	В
1,2,3,6,7,8-HXCDD	0.0659	JBQ	0.0152	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0644	JB	0.00942	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0660	JB	0.0145	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0463	JBQ	0.0120	MDL	5.13	PQL	ng/Kg	υ	В
1,2,3,7,8-PECDD	0.0588	JBQ	0.0192	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.0918	JB	0.0115	MDL	5.13	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0414	JB	0.00963	MDL	5.13	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA
Method: 1613B

Matrix: SO

Sample ID: \$	SL-071-NB	Z-SB-4.0-5.0
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Collected:	3/19/2012	9:35:00

Analysis Type: RES

Dilution: 1

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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
2,3,4,7,8-PECDF	0.0881	JB	0.0114	MDL	5.13	PQL	ng/Kg	U	В	
2,3,7,8-TCDD	0.0286	JB	0.0172	MDL	1.03	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0272	JB	0.0185	MDL	1.03	PQL	ng/Kg	υ	В	
OCDD	0.661	JB	0.0133	MDL	10.3	PQL	ng/Kg	U	В	
OCDF	0.128	JB	0.0204	MDL	10.3	PQL	ng/Kg	υ	В	

Sample ID: SL-072-NBZ-SB-4.0-5.0

Collected: 3/16/2012 2:45:00

Analysis Type: RES

Dilution: 1

Salliple ID. SE-VIZ-NBZ-SB-4.0-5.0	Conec	Collected. 3/10/2012 2.43.00 /					Allalysis Type. NES			
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	0.436	JB	0.0162	MDL	5.44	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.212	JB	0.00744	MDL	5.44	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.184	JB	0.0142	MDL	5.44	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.215	JB	0.0147	MDL	5.44	PQL	ng/Kg	J	Z	
1,2,3,4,7,8-HXCDF	0.314	JB	0.0142	MDL	5.44	PQL	ng/Kg	J	Z	
1,2,3,6,7,8-HXCDD	0.238	JB	0.0159	MDL	5.44	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.287	JB	0.0120	MDL	5.44	PQL	ng/Kg	J	z	
1,2,3,7,8,9-HXCDD	0.260	JB	0.0147	MDL	5.44	PQL	ng/Kg	J	_. Z	
1,2,3,7,8,9-HXCDF	0.278	JBQ	0.0156	MDL	5.44	PQL	ng/Kg	U	В	
1,2,3,7,8-PECDD	0.348	J	0.0230	MDL	5.44	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDF	0.428	JB	0.0134	MDL	5.44	PQL	ng/Kg	J	Z	
2,3,4,6,7,8-HXCDF	0.229	JB	0.0127	MDL	5.44	PQL	ng/Kg	J	Z	
2,3,4,7,8-PECDF	0.371	JB	0.0134	MDL	5.44	PQL	ng/Kg	U	В	
2,3,7,8-TCDD	0.0875	JB	0.0250	MDL	1.09	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0865	JB	0.0222	MDL	1.09	PQL	ng/Kg	U	В	
OCDD	0.833	JB.	0.0139	MDL	10.9	PQL	ng/Kg	U	В	
OCDF	0.376	JB	0.0209	MDL	10.9	PQL	ng/Kg	U	В	

Sample ID: SL-073-NBZ-SB-4.0-5.0

Collected: 3/19/2012 2:40:00

Analysis Type: RES

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	0.257	JB	0.0181	MDL	5.41	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0946	JB	0.00670	MDL	5.41	PQL	ng/Kg	υ	В
1,2,3,4,7,8,9-HPCDF	0.0372	JBQ	0.0123	MDL	5.41	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0211	JBQ	0.0160	MDL	5.41	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0465	JBQ	0.0103	MDL	5.41	PQL	ng/Kg	C	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method:

1613B

so Matrix:

Sample ID: SL-073-NBZ-SB-4.0-5.0

Collected: 3/19/2012 2:40:00

Analysis Type: RES

Dilution: 1

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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,6,7,8-HXCDD	0.0666	JBQ	0.0166	MDL	5.41	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0539	JBQ	0.0168	MDL	5.41	PQL	ng/Kg	υ	В	
1,2,3,7,8,9-HXCDF	0.0428	JBQ	0.0115	MDL	5.41	PQL	ng/Kg	υ	В	
1,2,3,7,8-PECDF	0.0275	JBQ	0.0106	MDL	5.41	PQL	ng/Kg	υ	В	
2,3,4,6,7,8-HXCDF	0.0300	JBQ	0.00951	MDL	5.41	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0728	JB	0.0107	MDL	5.41	PQL	ng/Kg	υ	В	
2,3,7,8-TCDD	0.0275	JBQ	0.0166	MDL	1.08	PQL	ng/Kg	U	В	
OCDD	0.568	JB	0.0137	MDL	10.8	PQL	ng/Kg	U	В	
OCDF	0.152	JBQ	0.0208	MDL	10.8	PQL	ng/Kg	U	В	

Sample ID: SL-073-NBZ-SB-9.0-10.0

Collected: 3/19/2012 1:40:00

Analysis Type: RES

Dilution: 1

										
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,4,6,7,8-HPCDD	0.254	JB	0.0164	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.0752	JB	0.00602	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0391	JB	0.0128	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.0371	JBQ	0.00952	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDD	0.0461	JBQ	0.0140	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.0330	JB	0.00755	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0431	JBQ	0.0139	MDL	5.33	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDF	0.0337	JBQ	0.0116	MDL	5.33	PQL	ng/Kg	Ų	В	
1,2,3,7,8-PECDF	0.0440	JBQ	0.00941	MDL	5.33	PQL	ng/Kg	U	В	
2,3,4,6,7,8-HXCDF	0.0301	JB	0.00821	MDL	5.33	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0663	JBQ	0.0101	MDL	5.33	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0254	JBQ	0.0152	MDL	1.07	PQL	ng/Kg	U	В	
OCDD	0.496	JB	0.0120	MDL	10.7	PQL	ng/Kg	U	В	
OCDF	0.119	JB	0.0209	MDL	10.7	PQL	ng/Kg	U	В	

Sample ID: SL-074-NBZ-SB-0.5-1.5

Collected: 3/19/2012 10:55:00

Analysis Type: RES

A <i>nalyt</i> e	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.336	JBQ	0.0237	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0655	JB	0.00942	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0419	JBQ	0.0157	MDL	5.13	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0247	JBQ	0.0138	MDL	5.13	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID: SL-074-NBZ-SB-0.5-1.5

Collected: 3/19/2012 10:55:00

Analysis Type: RES

Dilution: 1

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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code		
1,2,3,6,7,8-HXCDD	0.0977	JBQ	0.0227	MDL	5.13	PQL	ng/Kg	U	В		
1,2,3,7,8,9-HXCDD	0.279	JB	0.0231	MDL	5.13	PQL	ng/Kg	U	В		
1,2,3,7,8,9-HXCDF	0.0456	JB	0.0157	MDL	5.13	PQL	ng/Kg	U	В		
1,2,3,7,8-PECDD	0.0564	JQ	0.0323	MDL	5.13	PQL	ng/Kg	J	Z		
1,2,3,7,8-PECDF	0.0279	JB	0.0186	MDL	5.13	PQL	ng/Kg	U	В		
2,3,4,6,7,8-HXCDF	0.0289	JBQ	0.0125	MDL	5.13	PQL	ng/Kg	υ	В		
2,3,4,7,8-PECDF	0.0698	JBQ	0.0179	MDL	5.13	PQL	ng/Kg	U	В		
OCDD	0.538	JB	0.0170	MDL	10.3	PQL	ng/Kg	υ	В		
OCDF	0.153	JB	0.0281	MDL	10.3	PQL	ng/Kg	U	В		

Sample ID: SL-075-NBZ-SS-0.0-0.5

Collected: 3/20/2012 9:00:00

Analysis Type: RES

Dilution: 1

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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	2.04	JB	0.0142	MDL	5.43	PQL	ng/Kg	J	z
1,2,3,4,7,8,9-HPCDF	0.144	JB	0.0228	MDL	5.43	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HxCDD	0.219	JB	0.0266	MDL	5.43	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.390	JBQ	0.0206	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.503	JB	0.0290	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.224	JB	0.0182	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.329	JBQ	0.0274	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0679	JB	0.0226	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0956	JBQ	0.0282	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.922	JB	0.0289	MDL	5.43	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.206	JB	0.0180	MDL	5.43	PQL	ng/Kg	U	В.
2,3,4,7,8-PECDF	0.291	JB	0.0283	MDL	5.43	PQL	ng/Kg	υ	В
2,3,7,8-TCDD	0.0273	JBQ	0.0217	MDL	1.09	PQL	ng/Kg	υ	В
2,3,7,8-TCDF	0.161	JB	0.0402	MDL	1.09	PQL	ng/Kg	U	В
OCDF	6.08	JB	0.0234	MDL	10.9	PQL	ng/Kg	J	Z

Sample ID: SL-076-NBZ-SS-0.0-0.5

Collected: 3/20/2012 9:35:00

Analysis Type: RES

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	2.90	JB	0.0213	MDL	5.69	PQL	ng/Kg	j	Z
1,2,3,4,7,8,9-HPCDF	0.214	JB	0.0372	MDL	5.69	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.273	JB	0.0254	MDL	5.69	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: 1613B

Matrix: SO

Sample ID: SL-076-NBZ-SS-0.0-0.5

Collected: 3/20/2012 9:35:00

Analysis Type: RES

Dilution: 1

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Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8-HXCDF	0.544	JB	0.0245	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.727	JB	0.0286	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.340	JB	0.0227	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.485	JB	0.0266	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.113	JB	0.0290	MDL	5.69	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.261	JB	0.0318	MDL	5.69	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.15	JB	0.0299	MDL	5.69	PQL	ng/Kg	j	Z
2,3,4,6,7,8-HXCDF	0.299	JB	0.0233	MDL	5.69	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.605	JB	0.0320	MDL	5.69	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0584	JB	0.0221	MDL	1.14	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.272	JB	0.0487	MDL	1.14	PQL	ng/Kg	J	Z
OCDF	9.40	JB	0.0228	MDL	11.4	PQL	ng/Kg	J	Z

Sample ID: SL-077-NBZ-SB-2.5-3.5

Collected: 3/20/2012 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
1,2,3,4,6,7,8-HPCDD	1.20	JBQ	0.0263	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.295	JB	0.00981	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0571	JB	0.0193	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0273	JB	0.0198	MDL	5.29	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.0950	JB	0.0152	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0798	JBQ	0.0203	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0486	JBQ	0.0140	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0657	JB	0.0200	MDL	5.29	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0414	JBQ	0.0208	MDL	5.29	PQL	ng/Kg	U.	В
1,2,3,7,8-PECDF	0.166	JB	0.0152	MDL	5.29	PQL	ng/Kg	U	В
2,3,4,6,7,8-HXCDF	0.0450	JB	0.0145	MDL	5.29	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0733	JB	0.0160	MDL	5.29	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0272	JBQ	0.0203	MDL	1.06	PQL	ng/Kg	U	В
OCDF	0.823	JB	0.0281	MDL	10.6	PQL	ng/Kg	J	Z

Sample ID: SL-077-NBZ-SS-0.0-0.5

Collected: 3/20/2012 10:20:00

Analysis Type: RES

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	4.71	JВ	0.0166	MDL	5.76	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Camala	ın.	C I	077 ND7	00.0	0 O E	
Samble	IU:	SL.	.077-NBZ	-55-0.	U-U.5	

Sample ID: SL-077-NBZ-SS-0.0-0.5	Collec	ted: 3/20/2	012 10:20:	:00 A	nalysis Ty	/pe: 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	0.415	JB	0.0322	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.378	JB	0.0290	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.892	JB	0.0273	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.937	JB	0.0310	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.517	JB	0.0231	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.705	JB	0.0284	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.176	JB	0.0315	MDL	5.76	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.278	JB	0.0336	MDL	5.76	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.55	JB	0.0357	MDL	5.76	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.589	JB	0.0249	MDL	5.76	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.960	JB	0.0376	MDL	5.76	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0762	JB	0.0236	MDL	1.15	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.584	JB	0.0679	MDL	1.15	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX161 EDD Filename: DX161_v1.

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
FD	Field Duplicate Precision
z	Reporting Limit Trace Value

^{*} denotes a non-reportable result

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DX161

Lab Reporting Batch ID: DX161 Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: AQ				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0830B372354	3/26/2012 11:54:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-PECDF 2,3,7,8-PECDF 2,3,7,8-TCDF 0CDD 0CDF	3.73 pg/L 1.70 pg/L 0.578 pg/L 0.578 pg/L 0.305 pg/L 0.545 pg/L 0.887 pg/L 0.426 pg/L 0.597 pg/L 0.526 pg/L 0.425 pg/L 0.502 pg/L 0.521 pg/L 0.418 pg/L 0.392 pg/L 6.73 pg/L 1.47 pg/L	EB-NBZ-SS-032112

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-NBZ-SS-032112(RES)	1,2,3,4,6,7,8-HPCDD	3.73 pg/L	3.73U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,4,6,7,8-HPCDF	1.55 pg/L	1.55U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,4,7,8,9-HPCDF	0.411 pg/L	0.411U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,4,7,8-HXCDF	0.720 pg/L	0.720U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,6,7,8-HXCDD	0.522 pg/L	0.522U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,6,7,8-HXCDF	0.530 pg/L	0.530U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,7,8,9-HXCDD	0.557 pg/L	0.557U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,7,8,9-HXCDF	0.333 pg/L	0.333U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,7,8-PECDD	0.415 pg/L	0.415U pg/L
EB-NBZ-SS-032112(RES)	1,2,3,7,8-PECDF	0.447 pg/L	0.447U pg/L
EB-NBZ-SS-032112(RES)	2,3,4,6,7,8-HXCDF	0.382 pg/L	0.382U pg/L
EB-NBZ-SS-032112(RES)	2,3,4,7,8-PECDF	0.541 pg/L	0.541U pg/L
EB-NBZ-SS-032112(RES)	OCDD	6.15 pg/L	6.15U pg/L
EB-NBZ-SS-032112(RES)	OCDF	1.72 pg/L	1.72U pg/L

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0810B371847	3/22/2012 6:47:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD OCDD OCDF	0.270 ng/Kg 0.113 ng/Kg 0.0630 ng/Kg 0.0387 ng/Kg 0.0386 ng/Kg 0.0857 ng/Kg 0.0509 ng/Kg 0.0559 ng/Kg 0.0742 ng/Kg 0.0445 ng/Kg 0.0971 ng/Kg 0.0482 ng/Kg 0.0415 ng/Kg 0.0415 ng/Kg 0.350 ng/Kg 0.350 ng/Kg	DUP-01-NBZ-QC-031612 SL-053-NBZ-SB-3.5-4.5 SL-053-NBZ-SS-0.0-0.5 SL-056-NBZ-SB-3.0-4.0 SL-056-NBZ-SS-0.0-0.5 SL-067-NBZ-SB-1.5-2.5 SL-068-NBZ-SB-2.5-3.5 SL-072-NBZ-SB-4.0-5.0

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 161: Matrix: SO		<u>ARTILLES</u>		
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0880B370247	3/30/2012 2:47:00 AM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0	0.281 ng/Kg 0.0794 ng/Kg 0.0794 ng/Kg 0.0468 ng/Kg 0.0486 ng/Kg 0.0440 ng/Kg 0.0445 ng/Kg 0.0447 ng/Kg 0.0582 ng/Kg 0.0487 ng/Kg 0.0457 ng/Kg 0.0457 ng/Kg 0.0505 ng/Kg 0.0505 ng/Kg 0.0203 ng/Kg 0.0203 ng/Kg 0.0434 ng/Kg 0.389 ng/Kg 0.147 ng/Kg	SL-065-NBZ-SB-1.0-2.0 SL-066-NBZ-SB-2.0-3.0 SL-069-NBZ-SB-3.0-4.0 SL-070-NBZ-SS-0.0-0.5 SL-071-NBZ-SB-4.0-5.0 SL-073-NBZ-SB-4.0-5.0 SL-073-NBZ-SB-9.0-10.0 SL-075-NBZ-SS-0.0-0.5 SL-076-NBZ-SS-0.0-0.5 SL-077-NBZ-SB-2.5-3.5 SL-077-NBZ-SS-0.0-0.5
BLK0970B371831	4/9/2012 6:31:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-PECDD OCDD OCDF	0.325 ng/Kg 0.0852 ng/Kg 0.0714 ng/Kg 0.0341 ng/Kg 0.0368 ng/Kg 0.0590 ng/Kg 0.0599 ng/Kg 0.0673 ng/Kg 0.0266 ng/Kg 0.0426 ng/Kg 0.0494 ng/Kg 0.0492 ng/Kg 0.0465 ng/Kg 0.480 ng/Kg	SL-074-NBZ-SB-0.5-1.5

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

Sample ID	Analyte	Reported Result	Modified Final Result
DUP-01-NBZ-QC-031612(RES)	1,2,3,4,6,7,8-HPCDD	0.265 ng/Kg	0.265U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,4,6,7,8-HPCDF	0.150 ng/Kg	0.150U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,4,7,8,9-HPCDF	0.0920 ng/Kg	0.0920U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,4,7,8-HxCDD	0.118 ng/Kg	0.118U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,6,7,8-HXCDD	0.151 ng/Kg	0.151U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,6,7,8-HXCDF	0.163 ng/Kg	0.163U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,7,8,9-HXCDD	0.155 ng/Kg	0.155U ng/Kg
DUP-01-NBZ-QC-031612(RES)	1,2,3,7,8,9-HXCDF	0.156 ng/Kg	0.156U ng/Kg
DUP-01-NBZ-QC-031612(RES)	2,3,4,6,7,8-HXCDF	0.139 ng/Kg	0.139U ng/Kg
DUP-01-NBZ-QC-031612(RES)	2,3,4,7,8-PECDF	0.290 ng/Kg	0.290U ng/Kg
DUP-01-NBZ-QC-031612(RES)	2,3,7,8-TCDD	0.0911 ng/Kg	0.0911U ng/Kg
DUP-01-NBZ-QC-031612(RES)	2,3,7,8-TCDF	0.0556 ng/Kg	0.0556U ng/Kg
DUP-01-NBZ-QC-031612(RES)	OCDD	0.462 ng/Kg	0.462U ng/Kg
DUP-01-NBZ-QC-031612(RES)	OCDF	0.161 ng/Kg	0.161U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,4,6,7,8-HPCDD	0.788 ng/Kg	0.788U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,4,6,7,8-HPCDF	0.109 ng/Kg	0.109U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0497 ng/Kg	0.0497U ng/Kg
SL-053-NBZ-SB-3,5-4.5(RES)	1,2,3,4,7,8-HxCDD	0.0564 ng/Kg	0.0564U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,4,7,8-HXCDF	0.0782 ng/Kg	0.0782U ng/Kg

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO	e de la companya dela companya dela companya dela companya de la c			
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-053-NBZ-SB-3.5-4.5(RES)	1,2,3,6,7,8-HXCDD	0.0440 ng/Kg	0.0440U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,6,7,8-HXCDF	0.0540 ng/Kg	0.0540U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,7,8,9-HXCDD	0.0761 ng/Kg	0.0761U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,7,8,9-HXCDF	0.0811 ng/Kg	0.0811U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	1,2,3,7,8-PECDF	0.0982 ng/Kg	0.0982U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	2,3,4,6,7,8-HXCDF	0.0407 ng/Kg	0.0407U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	2,3,4,7,8-PECDF	0.0920 ng/Kg	0.0920U ng/Kg
SL-053-NBZ-SB-3.5-4.5(RES)	OCDF	0.197 ng/Kg	0.197U ng/Kg
SL-053-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.198 ng/Kg	0.198U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.475 ng/Kg	0.475U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.179 ng/Kg	0.179U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0840 ng/Kg	0.0840U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HxCDD	0.0661 ng/Kg	0.0661U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.178 ng/Kg	0.178U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.127 ng/Kg	0.127U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.123 ng/Kg	0.123U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.132 ng/Kg	0.132U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.145 ng/Kg	0.145U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.197 ng/Kg	0.197U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.101 ng/Kg	0.101U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.208 ng/Kg	0,208U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	2,3,7,8-TCDD	0.0638 ng/Kg	0.0638U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	2,3,7,8-TCDF	· 0.0555 ng/Kg	0.0555U ng/Kg
SL-056-NBZ-SB-3.0-4.0(RES)	OCDF	0.266 ng/Kg	0.266U ng/Kg
SL-056-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.133 ng/Kg	0.133U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDD	1.33 ng/Kg	1.33U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,4,7,8,9-HPCDF	0.212 ng/Kg	0.212U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,4,7,8-HxCDD	0.192 ng/Kg	0.192U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,6,7,8-HXCDF	0.220 ng/Kg	0.220U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,7,8,9-HXCDF	0.193 ng/Kg	0.193U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	1,2,3,7,8-PECDD	0.200 ng/Kg	0.200U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	2,3,4,6,7,8-HXCDF	0.238 ng/Kg	0.238U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	2,3,7,8-TCDD	0.0370 ng/Kg	0.0370U ng/Kg
SL-065-NBZ-SB-1.0-2.0(RES)	2,3,7,8-TCDF	0.0989 ng/Kg	0.0989U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDD	0.336 ng/Kg	0.336U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	0.113 ng/Kg	0.113U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0284 ng/Kg	0.0284U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8-HxCDD	0.0206 ng/Kg	0.0206U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8-HXCDF	0.0654 ng/Kg	0.0654U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDD	0.0649 ng/Kg	0.0649U ng/Kg

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

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Lab Reporting Batch ID: DX161

Laboratory: LL

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EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDF	0.0473 ng/Kg	0.0473U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDD	0.0591 ng/Kg	0.0591U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,7,8,9-HXCDF	0.0539 ng/Kg	0.0539U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,7,8-PECDD	0.0604 ng/Kg	0.0604U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	1,2,3,7,8-PECDF	0.0515 ng/Kg	0.0515U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.0508 ng/Kg	0.0508U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	2,3,4,7,8-PECDF	0.0582 ng/Kg	0.0582U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	2,3,7,8-TCDD	0.0164 ng/Kg	0.0164U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	2,3,7,8-TCDF	0.0166 ng/Kg	0.0166U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	OCDD	0.824 ng/Kg	0.824U ng/Kg
SL-066-NBZ-SB-2.0-3.0(RES)	OCDF	0.185 ng/Kg	0.185U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDD	0.320 ng/Kg	0.320U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0482 ng/Kg	0.0482U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8-HxCDD	0.0244 ng/Kg	0.0244U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8-HXCDF	0.0477 ng/Kg	0.0477U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDD	0.0697 ng/Kg	0.0697U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDF	0.0538 ng/Kg	0.0538U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDD	0.0446 ng/Kg	0.0446U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDF	0.0649 ng/Kg	0.0649U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	1,2,3,7,8-PECDF	0.0621 ng/Kg	0.0621U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	2,3,4,6,7,8-HXCDF	0.0415 ng/Kg	0.0415U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	2,3,4,7,8-PECDF	0.0830 ng/Kg	0.0830U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	OCDD	0.823 ng/Kg	0.823U ng/Kg
SL-067-NBZ-SB-1.5-2.5(RES)	OCDF	0.136 ng/Kg	0.136U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	0.342 ng/Kg	0.342U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.110 ng/Kg	0.110U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0242 ng/Kg	0.0242U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0799 ng/Kg	0.0799U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.147 ng/Kg	0.147U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.114 ng/Kg	0.114U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0979 ng/Kg	0.0979U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.115 ng/Kg	0.115U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDF	0.118 ng/Kg	0.118U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.155 ng/Kg	0.155U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.108 ng/Kg	0.108U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.149 ng/Kg	0.149U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	2,3,7,8-TCDD	0.0599 ng/Kg	0.0599U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	2,3,7,8-TCDF	0.0577 ng/Kg	0.0577U ng/Kg
SL-068-NBZ-SB-2.5-3.5(RES)	OCDD	0.563 ng/Kg	0.563U ng/Kg

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

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-068-NBZ-SB-2.5-3.5(RES)	OCDF	0.189 ng/Kg	0.189U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDD	0.665 ng/Kg	0.665U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,4,6,7,8-HPCDF	0.192 ng/Kg	0.192U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8,9-HPCDF	0.151 ng/Kg	0.151U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HxCDD	0.177 ng/Kg	0.177U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,4,7,8-HXCDF	0.185 ng/Kg	0.185U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDD	0.206 ng/Kg	0.206U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,6,7,8-HXCDF	0.169 ng/Kg	0.169U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDD	0.210 ng/Kg	0.210U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8,9-HXCDF	0.177 ng/Kg	0.177U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDD	0.217 ng/Kg	0.217U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	1,2,3,7,8-PECDF	0.221 ng/Kg	0.221U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	2,3,4,6,7,8-HXCDF	0.157 ng/Kg	0.157U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	2,3,4,7,8-PECDF	0.220 ng/Kg	0.220U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	2,3,7,8-TCDD	0.0509 ng/Kg	0.0509U ng/Kg
SL-069-NBZ-SB-3.0-4.0(RES)	OCDF	0.437 ng/Kg	0.437U ng/Kg
SL-070-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.145 ng/Kg	0.145U ng/Kg
SL-070-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.300 ng/Kg	0.300U ng/Kg
SL-070-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0545 ng/Kg	0.0545U ng/Kg
SL-070-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.0944 ng/Kg	0.0944U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.316 ng/Kg	0.316U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0902 ng/Kg	0.0902U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0442 ng/Kg	0.0442U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0420 ng/Kg	0.0420U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0638 ng/Kg	0.0638U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0659 ng/Kg	0.0659U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0644 ng/Kg	0.0644U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0660 ng/Kg	0.0660U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0463 ng/Kg	0.0463U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDD	0.0588 ng/Kg	0.0588U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0918 ng/Kg	0.0918U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0414 ng/Kg	0.0414U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0881 ng/Kg	0.0881U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0286 ng/Kg	0.0286U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0272 ng/Kg	0.0272U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	OCDD	0.661 ng/Kg	0.661U ng/Kg
SL-071-NBZ-SB-4.0-5.0(RES)	OCDF	0.128 ng/Kg	0.128U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.436 ng/Kg	0.436U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.212 ng/Kg	0.212U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.184 ng/Kg	0.184U ng/Kg

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result
SL-072-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.238 ng/Kg	0.238U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.278 ng/Kg	0.278U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.371 ng/Kg	0.371U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0875 ng/Kg	0.0875U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDF	0.0865 ng/Kg	0.0865U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	OCDD	0.833 ng/Kg	0.833U ng/Kg
SL-072-NBZ-SB-4.0-5.0(RES)	OCDF	0.376 ng/Kg	0.376U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.257 ng/Kg	0.257U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0946 ng/Kg	0.0946U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0372 ng/Kg	0.0372U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0211 ng/Kg	0.0211U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0465 ng/Kg	0.0465U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0666 ng/Kg	0.0666U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0539 ng/Kg	0.0539U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDF	0.0428 ng/Kg	0.0428U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8-PECDF	0.0275 ng/Kg	0.0275U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0300 ng/Kg	0.0300U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0728 ng/Kg	0.0728U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0275 ng/Kg	0.0275U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	OCDD	0.568 ng/Kg	0.568U ng/Kg
SL-073-NBZ-SB-4.0-5.0(RES)	OCDF	0.152 ng/Kg	0.152U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDD	0.254 ng/Kg	0.254U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0752 ng/Kg	0.0752U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0391 ng/Kg	0.0391U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,4,7,8-HXCDF	0.0371 ng/Kg	0.0371U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDD	0.0461 ng/Kg	0.0461U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,6,7,8-HXCDF	0.0330 ng/Kg	0.0330U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDD	0.0431 ng/Kg	0.0431U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8,9-HXCDF	0.0337 ng/Kg	0.0337U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	1,2,3,7,8-PECDF	0.0440 ng/Kg	0.0440U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	2,3,4,6,7,8-HXCDF	0.0301 ng/Kg	0.0301U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	2,3,4,7,8-PECDF	0.0663 ng/Kg	0.0663U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	2,3,7,8-TCDF	0.0254 ng/Kg	0.0254U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	OCDD	0.496 ng/Kg	0.496U ng/Kg
SL-073-NBZ-SB-9.0-10.0(RES)	OCDF	0.119 ng/Kg	0.119U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDD	0.336 ng/Kg	0.336U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDF	0.0655 ng/Kg	0.0655U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0419 ng/Kg	0.0419U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8-HXCDF	0.0247 ng/Kg	0.0247U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDD	0.0977 ng/Kg	0.0977U ng/Kg

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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO	and the same and t			
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-074-NBZ-SB-0.5-1.5(RES)	1,2,3,7,8,9-HXCDD	0.279 ng/Kg	0.279U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,7,8,9-HXCDF	0.0456 ng/Kg	0.0456U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	1,2,3,7,8-PECDF	0.0279 ng/Kg	0.0279U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	2,3,4,6,7,8-HXCDF	0.0289 ng/Kg	0.0289U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	2,3,4,7,8-PECDF	0.0698 ng/Kg	0.0698U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	OCDD	0.538 ng/Kg	0.538U ng/Kg
SL-074-NBZ-SB-0.5-1.5(RES)	OCDF	0.153 ng/Kg	0.153U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.144 ng/Kg	0.144U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.219 ng/Kg	0.219U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.0679 ng/Kg	0.0679U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	. 0.0956 ng/Kg	0.0956U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.206 ng/Kg	0.206U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.291 ng/Kg	0.291U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0273 ng/Kg	0.0273U ng/Kg
SL-075-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDF	0.161 ng/Kg	0.161U ng/Kg
SL-076-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.214 ng/Kg	0.214U ng/Kg
SL-076-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.113 ng/Kg	0.113U ng/Kg
SL-076-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0584 ng/Kg	0.0584U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDD	1.20 ng/Kg	1.20U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,4,6,7,8-HPCDF	0.295 ng/Kg	0.295U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0571 ng/Kg	0.0571U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0273 ng/Kg	0.0273U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8-HXCDF	0.0950 ng/Kg	0.0950U ng/Kg
SL-077-NBZ-SB-2,5-3,5(RES)	1,2,3,6,7,8-HXCDD	0.0798 ng/Kg	0.0798U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDF	0.0486 ng/Kg	0.0486U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8,9-HXCDD	0.0657 ng/Kg	0.0657U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8-PECDD	0.0414 ng/Kg	0.0414U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	1,2,3,7,8-PECDF	0.166 ng/Kg	0.166U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	2,3,4,6,7,8-HXCDF	0.0450 ng/Kg	0.0450U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	2,3,4,7,8-PECDF	0.0733 ng/Kg	0.0733U ng/Kg
SL-077-NBZ-SB-2.5-3.5(RES)	2,3,7,8-TCDD	0.0272 ng/Kg	0.0272U ng/Kg
SL-077-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDF	0.176 ng/Kg	0.176U ng/Kg
SL-077-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0762 ng/Kg	0.0762U ng/Kg

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Field Duplicate RPD Report

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 160.3M Matrix: SO

Method: 1613B

Matrix: SO

	Concentrati	on (ng/Kg)			
Analyte	SL-068-NBZ-SB-2.5-3.5	DUP-01-NBZ-QC- SL-068-NBZ-SB-2.5-3.5 031612		eQAPP RPD	Flag
1,2,3,4,6,7,8-HPCDD	0.342	0.265	25	50.00	
1,2,3,4,6,7,8-HPCDF	0.110	0.150	31	50.00	
1,2,3,4,7,8-HxCDD	0.0799	0.118	39	50.00	
I,2,3,4,7,8-HXCDF	0.147	0.210	35	50.00	
1,2,3,6,7,8-HXCDD	0.114	0.151	28	50.00	
,2,3,6,7,8-HXCDF	0.0979	0.163	50	50.00	
,2,3,7,8,9-HXCDD	0.115	0.155	30	50.00	No Qualifiers Applied
,2,3,7,8,9-HXCDF	0.118	0.156	28	50.00	
,3,4,6,7,8-HXCDF	0.108	0.139	25	50.00	
,3,7,8-TCDD	0.0599	0.0911	41	50.00	
.3,7,8-TCDF	0.0577	0.0556	4	50.00	
OCDD	0.563	0.462	20	50.00	
OCDF	0.189	0.161	16	50.00	
,2,3,4,7,8,9-HPCDF	0.0242	0.0920	117	50.00	
,2,3,7,8-PECDD	0.148	0.252	52	50.00	J(all detects)
,2,3,7,8-PECDF	0.155	0.283	58	50.00	, ,
2,3,4,7,8-PECDF	0.149	0.290	64	50.00	

Lab Reporting Batch ID: DX161 Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B			
Matrix: AQ	SALCOUNT MATERIAL STATES	San Francisco de la Companya del Companya del Companya de la Compa	

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SS-032112	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF OCDD OCDF	JB JBQ JBQ JBQ JBQ JBQ JBQ JBQ JBQ JBQ J	3.73 1.55 0.411 0.720 0.522 0.530 0.557 0.333 0.415 0.447 0.382 0.541 6.15 1.72	9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50	PQL	pg/L pg/L pg/L pg/L pg/L pg/L pg/L pg/L	J (all detects)

Method: 1613B Matrix: SO

		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
DUP-01-NBZ-QC-031612	1,2,3,4,6,7,8-HPCDD	JB	0.265	5.33	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.150	5.33	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0920	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.118	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.210	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.151	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.163	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.155	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.156	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.252	5.33	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.283	5.33	PQL	ng/Kg	:
	2,3,4,6,7,8-HXCDF	JB	0.139	5.33	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.290	5.33	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0911	1.07	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0556	1.07	PQL	ng/Kg	
	OCDD	JB	0.462	10.7	PQL	ng/Kg	
	OCDF	JB	0.161	10.7	PQL	ng/Kg	
SL-053-NBZ-SB-3.5-4.5	1,2,3,4,6,7,8-HPCDD	JB	0.788	5.15	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.109	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0497	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0564	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0782	5.15	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0440	5.15	PQL	ng/Kg	
•	1,2,3,6,7,8-HXCDF	JBQ	0.0540	5.15	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0761	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0811	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDD	J	0.0470	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JBQ	0.0982	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0407	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0920	5.15	PQL	ng/Kg	
	OCDD	JB	3.98	10.3	PQL	ng/Kg	
	OCDF	JB	0.197	10.3	PQL	ng/Kg	
				ı			

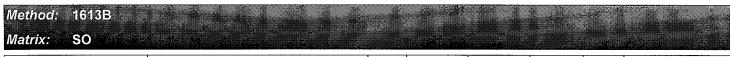
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Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan



SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-053-NBZ-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF	JB J	0.912 0.314 2.40 1.14 1.45 0.721 0.307 3.06 0.828 3.22 0.198	5.04 5.04 5.04 5.04 5.04 5.04 5.04 5.04	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-056-NBZ-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 0CDD	JB JBQ JBQ JBQ JBQ JBQ JBQ JBQ JBQ JBQ J	0.475 0.179 0.0840 0.0661 0.178 0.127 0.123 0.132 0.145 0.159 0.197 0.101 0.208 0.0638 0.0555 2.43 0.266	6.10 6.10 6.10 6.10 6.10 6.10 6.10 6.10	PQL	ng/Kg	J (all detects)
SL-056-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF		6.42 0.961 0.511 3.41 1.48 1.84 1.25 0.432 4.63 1.08 4.70 0.133	6.45 6.45 6.45 6.45 6.45 6.45 6.45 6.45	PGL PGL PGL PGL PGL PGL PGL PGL PGL PGL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-065-NBZ-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,5,8-TCDD 2,3,7,8-TCDD 2,3,7,8-TCDD 0CDF	JB JBQ JB JB JB JB JB JB JB JB JB JB JB JB	1.33 0.534 0.212 0.192 0.408 0.288 0.220 0.392 0.193 0.200 0.309 0.238 0.445 0.0370 0.0989 8.53 1.08	5.26 5.26 5.26 5.26 5.26 5.26 5.26 5.26	PQL	ng/Kg	J (ali detects)

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

8/30/2012 1:05:54 PM

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-066-NBZ-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 0,3,7,8-TCDD 0,0,0,0	JBQ JBQ JBQ JBQ JBQ JBQ JBB JBQ JBB JBQ JBB JBQ JBB	0.336 0.113 0.0284 0.0206 0.0654 0.0649 0.0473 0.0591 0.0539 0.0604 0.0515 0.0582 0.0164 0.0166 0.824 0.185	5.14 5.14 5.14 5.14 5.14 5.14 5.14 5.14	PQL	ng/Kg	J (all detects)
SL-067-NBZ-SB-1.5-2.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF 0CDD OCDF	JBQ JBQ JBQ JBB JBB JBB JBB JBB JBB JBB	0.320 0.110 0.0482 0.0244 0.0477 0.0697 0.0538 0.0446 0.0649 0.0728 0.0621 0.0415 0.0830 0.823 0.136	5.35 5.35 5.35 5.35 5.35 5.35 5.35 5.35	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-068-NBZ-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD OCDD OCDF	JB JBQ JBQ JB	0.342 0.110 0.0242 0.0799 0.147 0.114 0.0979 0.115 0.118 0.148 0.155 0.108 0.149 0.0599 0.0577 0.563 0.189	5.43 5.43 5.43 5.43 5.43 5.43 5.43 5.43	PQL	ng/Kg	J (all detects)

Lab Reporting Batch ID: DX161

Laboratory: LL

EDD Filename: DX161_v1.

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-069-NBZ-SB-3.0-4.0	1,2,3,4,6,7,8-HPCDD	JB	0.665	5.21	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.192	5.21	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JВ	0.151	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.177	5.21	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.185	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.206	5.21	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.169	5.21	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.210	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JB	0.177	5.21	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JB	0.217	5.21	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.221	5.21	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.157	5.21	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.220	5.21	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0509	1.04	PQL	ng/Kg	
	OCDD	JB	8.68	10.4	PQL	ng/Kg	
	OCDF	JB :	0.437	10.4	PQL	ng/Kg	
SL-070-NBZ-SS-0.0-0.5	1,2,3,4,7,8-HxCDD	JB	0.648	5.67	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.51	5.67	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	5.48	5.67	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	1.33	5.67	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.17	5.67	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.348	5.67	PQL	ng/Kg	I (all doto ato)
	1,2,3,7,8-PECDD	JB	0.145	5.67	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JB	1.01	5.67	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	2.14	5.67	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.300	5.67	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0545	1.13	PQL	ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0944	1.13	PQL	ng/Kg	
SL-071-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.316	5.13	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0902	5.13	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0442	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0420	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.0638	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0659	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.0644	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.0660	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0463	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.0588	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0918	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0414	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0881	5.13	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0286	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	JB	0.0272	1.03	PQL	ng/Kg	
	OCDD	JB	0.661	10.3	PQL	ng/Kg	
	OCDF	JB	0.128	10.3	PQL	ng/Kg	

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Lab Reporting Batch ID: DX161 Laboratory: LL

EDD Filename: DX161_v1. eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

		Lab		Poporting	RL		
SampleID	Analyte	Qual	Result	Reporting Limit	Type	Units	Flag
SL-072-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.436	5.44	PQL	ng/Kg	9
	1,2,3,4,6,7,8-HPCDF	JB	0.430	5.44	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.184	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.215	5.44	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.314	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.238	5.44	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.287	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.260	5.44	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.278	5.44	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.348	5.44	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.428	5.44	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.229	5.44	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB JB	0.371 0.0875	5.44	PQL PQL	ng/Kg	
	2,3,7,8-TCDD 2,3,7,8-TCDF	JB J	0.0865	1.09 1.09	PQL	ng/Kg ng/Kg	
	OCDD	JB	0.833	10.9	PQL	ng/Kg	
	OCDF	JB	0.376	10.9	PQL	ng/Kg	
01, 070 ND7 00, 40, 50				 			
SL-073-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.257	5.41	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0946	5.41	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0372	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0211	5.41	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD	JBQ JBQ	0.0465 0.0666	5.41 5.41	PQL PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0539	5.41	PQL	ng/Kg ng/Kg	
	1,2,3,7,8,9-HXCDF	JBQ	0.0333	5.41	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JBQ	0.0425	5.41	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0300	5.41	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.0728	5.41	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0275	1.08	PQL	ng/Kg	
	OCDD	JB	0.568	10.8	PQL	ng/Kg	
	OCDF	JBQ	0.152	10.8	PQL	ng/Kg	
SL-073-NBZ-SB-9.0-10.0	1,2,3,4,6,7,8-HPCDD	JB	0.254	5.33	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0752	5.33	PQL	ng/Kg	•
	1,2,3,4,7,8,9-HPCDF	JB	0.0391	5.33	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0371	5.33	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0461	5.33	PQL	ng/Kg	+
	1,2,3,6,7,8-HXCDF	JB	0.0330	5.33	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JBQ	0.0431	5.33	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	JBQ	0.0337	5.33	PQL	ng/Kg	` ,
	1,2,3,7,8-PECDF	JBQ JB	0.0440 0.0301	5.33 5.33	PQL PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF	JBQ	0.0663	5.33	PQL	ng/Kg ng/Kg	
	2,3,7,8-TCDF	JBQ	0.0003	1.07	PQL	ng/Kg	
	OCDD	JB	0.496	10.7	PQL	ng/Kg	
	OCDF	JB	0.119	10.7	PQL	ng/Kg	
SL-074-NBZ-SB-0.5-1.5	1,2,3,4,6,7,8-HPCDD	JBQ	0.336	5.13	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.0655	5.13	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0419	5.13	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0247	5.13	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.0977	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.279	5.13	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	JB	0.0456	5.13	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0564	5.13	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JB	0.0279	5.13	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.0289	5.13	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0698	5.13	PQL	ng/Kg	
	OCDD	JB	0.538	10.3	PQL	ng/Kg	i
	OCDF	JB	0.153	10.3	PQL	ng/Kg	

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

Lab Reporting Batch ID: DX161

EDD Filename: DX161_v1.

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

		1 - 1					N 82 1 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-075-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD		2.04 0.144 0.219 0.390 0.503 0.224 0.329 0.0679 0.0956 0.922 0.206 0.291 0.0273 0.161	5.43 5.43 5.43 5.43 5.43 5.43 5.43 5.43	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-076-NBZ-SS-0.0-0.5	2,3,7,8-TCDF OCDF 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 2,3,7,8-TCDD		0.161 6.08 2.90 0.214 0.273 0.544 0.727 0.340 0.485 0.113 0.261 1.15 0.299 0.605 0.0584 0.272 9.40	1.09 10.9 5.69 5.69 5.69 5.69 5.69 5.69 5.69 5.	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-077-NBZ-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD OCDF	ងខ្លួងមង្គង្គង្គង្គង្គង	1.20 0.295 0.0571 0.0273 0.0950 0.0798 0.0486 0.0657 0.0414 0.166 0.0450 0.0733 0.0272 0.823	5.29 5.29 5.29 5.29 5.29 5.29 5.29 5.29	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-077-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 2,3,7,8-TCDD	的话语语语语语语语语语语语语	4.71 0.415 0.378 0.892 0.937 0.517 0.705 0.176 0.278 1.55 0.589 0.960 0.0762 0.584	5.76 5.76 5.76 5.76 5.76 5.76 5.76 5.76	PQL	ng/Kg	J (all detects)

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

SAMPLE DELIVERY GROUP

DX162

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Date Collected	Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
21-Mar-2012	SL-064-NBZ-SB-0.5-1.5	6589249	N	METHOD	1613B	III
21-Mar-2012	SL-104-NBZ-SS-0.0-0.5	6589250	N	METHOD	1613B	Ш
21- M ar-2012	SL-063-NBZ-SB-0.5-1.5	6589248	N	METHOD	1613B	Ш
21-Mar-2012	SL-062-NBZ-SB-2.5-3.5	6589247	N	METHOD	1613B	Ш
22-Mar-2012	SL-061-NBZ-SB-1.0-2.0	6589255	N	METHOD	1613B	III
22-Mar-2012	SL-060-NBZ-SS-0.0-0.5	6589254	N	METHOD	1613B	Ш
22-Mar-2012	SL-059-NBZ-SS-0.0-0.5	6589253	N	METHOD	1613B	111
22-Mar-2012	SL-055-NBZ-SS-0.0-0.5	6589252	N	METHOD	1613B	Ш
22-Mar-2012	SL-054-NBZ-SS-0.0-0.5	6589251	N	METHOD	1613B	111
22-Mar-2012	SL-116-NBZ-SS-0.0-0.5	6589256	N	METHOD	1613B	Ш
22-Mar-2012	EB-NBZ-SB-032212	6589257	EB	METHOD	1613B	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5	6590855	N	METHOD	1613B	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MS	6590856	MS	METHOD	1613B	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5 MSD	6590857	MSD	METHOD	1613B	111
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5MSD	P590855M370856	MSD	METHOD	1613B	III
23-Mar-2012	SL-057-NBZ-SS-0.0-0.5MS	P590855R370759	MS	METHOD	1613B	III
23-Mar-2012	DUP-02-NBZ-QC-032312	6590858	FD	METHOD	1613B	III
23-Mar-2012	SL-051-NBZ-SB-1.5-2.5	6590854	N	METHOD	1613B	III
23-Mar-2012	SL-049-NBZ-SB-2.0-3.0	6590853	N	METHOD	1613B	III
23-Mar-2012	SL-048-NBZ-SS-0.0-0.5	6590851	N	METHOD	1613B	111
23-Mar-2012	SL-048-NBZ-SB-4.0-5.0	6590852	N	METHOD	1613B	111
23-Mar-2012	SL-047-NBZ-SB-4.0-5.0	6590859	N	METHOD	1613B	m

Attachment II

Overall Data Qualification Summary

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix:

Sample ID: EB-NBZ-SB-032212

Anal	vsis	Type:	RES
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Dilution: 1

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	3.75	JB	0.207	MDL	9.44	PQL	pg/L	U	В
1,2,3,4,6,7,8-HPCDF	1.24	JBQ	0.101	MDL	9.44	PQL	pg/L	U	В
1,2,3,4,7,8,9-HPCDF	0.361	JBQ	0.123	MDL	9.44	PQL	pg/L	U	В
1,2,3,4,7,8-HXCDF	0.316	JB	0.108	MDL	9.44	PQL	pg/L	U	В
1,2,3,6,7,8-HXCDD	0.467	JBQ	0.180	MDL	9.44	PQL	pg/L	U	В
1,2,3,6,7,8-HXCDF	0.233	JBQ	0.112	MDL	9.44	PQL	pg/L	U	В
1,2,3,7,8,9-HXCDD	0.507	JBQ	0.179	MDL.	9.44	PQL	pg/L	U	В
1,2,3,7,8,9-HXCDF	0.144	JBQ	0.111	MDL	9.44	PQL	pg/L	U	В
1,2,3,7,8-PECDD	0.423	JQ	0.195	MDL	9.44	PQL	pg/L	J	Z
1,2,3,7,8-PECDF	0.321	JB	0.131	MDL	9.44	PQL	pg/L	U	В
2,3,4,6,7,8-HXCDF	0.425	JBQ	0.0996	MDL	9.44	PQL	pg/L	U	В
2,3,4,7,8-PECDF	0.385	JBQ	0.114	MDL	9.44	PQL	pg/L	U	В
2,3,7,8-TCDF	0.209	J	0.160	MDL	1.89	PQL	pg/L	J	Z
OCDD	8.78	JB	0.181	MDL	18.9	PQL	pg/L	U	В.
OCDF	1.46	JB	0.221	MDL	18.9	PQL	pg/L	U	В

Method Category:

Method:

SVOA

1613B

Matrix: so

Sample ID: DUP-02-NBZ-QC-032312	Collected: 3/23/2012 9:28:00			00 <i>A</i>	nalysis T	ype: REA	Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	1.78	С	0.203	MDL	1.06	PQL	ng/Kg	J	FD

Sample ID: DUP-02-NBZ-QC-032312

Collected: 3/23/2012 9:28:00

Analysis Type: RES

Dilution: 1

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	1.11	JB	0.0237	MDL	5.31	PQL	ng/Kg	UJ	B, FD
1,2,3,4,6,7,8-HPCDF	0.836	JB	0.0106	MDL	5.31	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8,9-HPCDF	0.492	JB	0.0225	MDL	5.31	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HxCDD	0.0763	JB	0.0204	MDL	5.31	PQL	ng/Kg	ΠΊ	B, FD
1,2,3,4,7,8-HXCDF	1.99	JB	0.0284	MDL	5.31	PQL	ng/Kg	J	Z, FD

^{*} denotes a non-reportable result

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

9/5/2012 2:11:02 PM

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

> Analysis Type: RES Dilution: 1

Sample ID: DUP-02-NBZ-QC-032312	Collec	ted: 3/23/2	012 9:28:	00 A	nalysis T	ype: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,6,7,8-HXCDD	0.125	JB	0.0213	MDL	5.31	PQL	ng/Kg	UJ	B, FD	
1,2,3,6,7,8-HXCDF	0.882	JB	0.0258	MDL	5.31	PQL	ng/Kg	J	Z, FD	
1,2,3,7,8,9-HXCDD	0.120	JB	0.0209	MDL	5.31	PQL	ng/Kg	UJ	B, FD	
1,2,3,7,8,9-HXCDF	0.361	JQ	0.0356	MDL	5.31	PQL	ng/Kg	J	Z, FD	
1,2,3,7,8-PECDD	0.0948	J	0.0278	MDL	5.31	PQL	ng/Kg	J	Z, FD	
1,2,3,7,8-PECDF	2.10	J	0.0467	MDL	5.31	PQL	ng/Kg	j	Z, FD	
2,3,4,6,7,8-HXCDF	0.412	JB	0.0269	MDL	5.31	PQL	ng/Kg	J	Z, FD	
2,3,4,7,8-PECDF	2.70	JB	0.0529	MDL	5.31	PQL	ng/Kg	J	Z, FD	
2,3,7,8-TCDD	0.0454	JB	0.0238	MDL	1.06	PQL	ng/Kg	UJ	B, FD	
OCDD	7.02	JB	0.0163	MDL	10.6	PQL	ng/Kg	J	Z, FD	
OCDF	1.27	JB	0.0287	MDL	10.6	PQL	ng/Kg	J	Z, FD	

Sample ID: SL-047-NBZ-SB-4.0-5.0

Collected: 3/23/2012 3:20:00

Analysis Type: RES

Dilution: 1

					, , , , , , , , , , , , , , , , , , ,	,,		, 		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,4,6,7,8-HPCDD	0.320	JB	0.0230	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,4,6,7,8-HPCDF	0.0644	JB	0.00865	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,4,7,8,9-HPCDF	0.0270	JBQ	0.0165	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HxCDD	0.0292	JBQ	0.0185	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,4,7,8-HXCDF	0.0450	JB	0.0123	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDD	0.0578	JBQ	0.0198	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.0329	JBQ	0.0113	MDL	5.10	PQL.	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.0562	JBQ	0.0194	MDL	5.10	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDF	0.0310	JQ	0.0152	MDL	5.10	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDF	0.0473	JQ	0.0140	MDL	5.10	PQL	ng/Kg	J	Z	
2,3,4,6,7,8-HXCDF	0.0305	JBQ	0.0113	MDL	5.10	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.0794	JB	0.0147	MDL	5.10	PQL	ng/Kg	U	В	
2,3,7,8-TCDD	0.0238	JBQ	0.0219	MDL	1.02	PQL	ng/Kg	U	В	
OCDD	0.781	JB	0.0171	MDL	10.2	PQL	ng/Kg	U	В	
OCDF	0.119	JBQ	0.0270	MDL	10.2	PQL	ng/Kg	U	В	

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling ADR version 1.6.0.188 9/5/2012 2:11:02 PM

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: Matrix: SO

Sample ID:SL-048-NBZ-SB-4.0-5.0 Collected: 3/23/2012 12:30:00 Analysis Type: RES Dilution: 1

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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	0.383	JB	0.0299	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.0748	JBQ	0.00966	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0244	JBQ	0.0189	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.0455	JBQ	0.0146	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.0451	JB	0.0239	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.0621	JBQ	0.0133	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.109	JB	0.0228	MDL	5.22	PQL	ng/Kg	U	В
1,2,3,7,8-PECDD	0.0449	JQ	0.0265	MDL	5.22	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.0536	JQ	0.0188	MDL	5.22	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.0489	JBQ	0.0143	MDL	5.22	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0872	JBQ	0.0187	MDL	5.22	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.0218	JB	0.0202	MDL	1.04	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.0457	J	0.0264	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	1.40	JB	0.0248	MDL	10.4	PQL	ng/Kg	U	В
OCDF	0.157	JBQ	0.0327	MDL	10.4	PQL	ng/Kg	U	В

Sample ID:SL-048-NBZ-SS-0.0-0.5 Collected: 3/23/2012 12:00:00 Analysis Type: RES Dilution: 1

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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	2.28	JB	0.0195	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.182	JB	0.0281	MDL	5.40	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.424	JB	0.0385	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.484	JB	0.0286	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.29	JB	0.0402	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.350	JB	0.0283	MDL	5.40	PQL.	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.01	JB	0.0400	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0955	J	0.0306	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.301	J	0.0482	MDL	5.40	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.753	J	0.0463	MDL	5.40	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.299	JB	0.0266	MDL	5.40	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	0.715	JB	0.0457	MDL	5.40	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0466	JBQ	0.0295	MDL	1.08	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 9/5/2012 2:11:02 PM ADR version 1.6.0.188

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Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-048-NBZ-SS-0.0-0.5 Collected: 3/23/2012 12:00:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.906	J	0.0677	MDL	1.08	PQL	ng/Kg	J	Z
OCDF	4.78	JB	0.0290	MDL	10.8	PQL	ng/Kg	J	Z

Sample ID: SL-049-NBZ-SB-2.0-3.0 Collected: 3/23/2012 11:15:00 Analysis Type: RES Dilution: 1 Data Lab Lab DL RL Review Reason Analyte Result Qual DL Type RLUnits Qual Type Code 1,2,3,4,6,7,8-HPCDD 0.293 JB 0.0175 MDL 5.15 PQL ng/Kg U В 0.0897 JB 0.00806 MDL. 5.15 **PQL** U В 1,2,3,4,6,7,8-HPCDF ng/Kg 1,2,3,4,7,8,9-HPCDF 0.0461 JBQ 0.0142 MDL 5.15 PQL U В ng/Kg 1,2,3,4,7,8-HxCDD 0.0265 JBQ 0.0145 MDL 5.15 U PQL ng/Kg В 5.15 0.0111 MDL U 1,2,3,4,7,8-HXCDF 0.0993 **JBQ PQL** ng/Kg В U В 0.141 JΒ 0.0155 MDL 5.15 **PQL** 1,2,3,6,7,8-HXCDD ng/Kg 1,2,3,6,7,8-HXCDF 0.0783 JB 0.0105 MDL 5.15 PQL ng/Kg U В 1,2,3,7,8,9-HXCDD 0.225 JB 0.0158 MDL 5.15 **PQL** J Z ng/Kg MDL Z 1,2,3,7,8,9-HXCDF JQ 0.0134 5.15 PQL J 0.0681 ng/Kg J 1,2,3,7,8-PECDD 0.0840 JQ 0.0187 MDL PQL Z 5.15 ng/Kg 0.102 Z 1,2,3,7,8-PECDF JQ 0.0158 MDL 5.15 **PQL** ng/Kg J U 2,3,4,6,7,8-HXCDF JB 0.0108 MDL 5.15 **PQL** В 0.0569 ng/Kg JΒ 0.0150 MDL 5.15 PQL U В 2,3,4,7,8-PECDF 0.127 ng/Kg U 2,3,7,8-TCDD 0.0200 JBQ 0.0179 MDL 1.03 **PQL** В ng/Kg **PQL** Z 2,3,7,8-TCDF 0.0445 J 0.0244 MDL 1.03 ng/Kg J 0.0168 OCDD 0.804 MDL 10.3 **PQL** U В JB ng/Kg

Sample ID:SL-051-NBZ-SB-1.5-2.5 Collected: 3/23/2012 10:15:00 Analysis Type: RES Dilution: 1

JB

0.150

Campic 12.02 001 1122 02 1.0 2.0	00,,00					, p 0,		-	
Analyte	Lab Result	Lab Qual	DL	D L Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	0.701	JB	0.0223	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.157	JB	0.00810	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0357	JBQ	0.0167	MDL	5.12	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0683	JBQ	0.0212	MDL	5.12	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	0.114	JB	0.0138	MDL	5.12	PQL	ng/Kg	U	В

0.0241

MDL

10.3

PQL

ng/Kg

OCDF

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 9/5/2012 2:11:02 PM ADR version 1.6.0.188

U

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: SO

Sample ID: SL-051-NBZ-SB-1.5-2.5	Collec	ted: 3/23/2	012 10:15	5:00 A	nalysis T	ype: RES		Dilution: 1		
Analyte	Lab Result	Lab Qual	DL	DL Type	RL.	RL Type	Units	Data Review Qual	Reason Code	
1,2,3,6,7,8-HXCDD	0.147	JBQ	0.0224	MDL	5.12	PQL	ng/Kg	U	В	
1,2,3,6,7,8-HXCDF	0.0979	JB	0.0124	MDL	5.12	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDD	0.120	JВ	0.0215	MDL	5.12	PQL	ng/Kg	U	В	
1,2,3,7,8,9-HXCDF	0.0746	J	0.0176	MDL	5.12	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDD	0.120	J	0.0227	MDL	5.12	PQL	ng/Kg	J	Z	
1,2,3,7,8-PECDF	0.162	J	0.0159	MDL	5.12	PQL	ng/Kg	J	Z	
2,3,4,6,7,8-HXCDF	0.0729	JBQ	0.0130	MDL	5.12	PQL	ng/Kg	U	В	
2,3,4,7,8-PECDF	0.181	JB	0.0170	MDL	5.12	PQL	ng/Kg	U	В	
2,3,7,8-TCDF	0.0807	J	0.0243	MDL	1.02	PQL	ng/Kg	J	Z	
OCDD	2.96	JB	0.0163	MDL	10.2	PQL	ng/Kg	J	Z	
OCDF	0.402	JB	0.0269	MDL	10.2	PQL	ng/Kg	U	В	

Sample ID: SL-054-NBZ-SS-0.0-0.5

Collected: 3/22/2012 1:45:00

Analysis Type: REA

Dilution: 1

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	Lab	Lab		DL		RL		Data Review	Reason
						_ ^_		11011011	
Analyte	Result	Qual	DL	Type	RL	Type	Units	Qual	Code

2,3,7,8-TCDF	0.796	JC	0.105	MDL	1.07	PQL	ng/Kg	J	Z

Sample ID:SL-054-NBZ-SS-0.0-0.5

Collected: 3/22/2012 1:45:00

Analysis Type: RES

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,7,8,9-HPCDF	0.818	JB	0.0267	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.553	JB	0.0267	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	2.06	JB	0.0265	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	1.89	JB	0.0294	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	1.12	JB	0.0258	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.72	JB	0.0269	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.705	J	0.0387	MDL	5.37	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.20	J	0.0384	MDL	5.37	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.743	JB	0.0249	MDL	5.37	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	2.34	JB	0.0374	MDL	5.37	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.151	JBQ	0.0239	MDL	1.07	PQL	ng/Kg	U	В

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B

Matrix: so

Sample ID: SL-055-NBZ-SS-0.0-0.5

Collected: 3/22/2012 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-HPCDF	1.67	JB	0.0156	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.164	JBQ	0.0255	MDL	5.53	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.201	JB	0.0313	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HXCDF	0.381	JB	0.0258	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.447	JBQ	0.0350	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.274	JB	0.0236	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.498	JB	0.0326	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.103	J	0.0297	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.297	J	0.0360	MDL	5.53	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.355	J	0.0324	MDL	5.53	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.235	JB	0.0230	MDL	5.53	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.549	JB	0.0327	MDL	5.53	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0738	JBQ	0.0279	MDL	1.11	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.386	J	0.0579	MDL	1.11	PQL	ng/Kg	J	Z
OCDF	3.14	JB	0.0298	MDL	11.1	PQL	ng/Kg	J	Z

Sample ID: SL-057-NBZ-SS-0.0-0.5

Collected: 3/23/2012 9:20:00

Analysis Type: REA

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	10.3	С	0.440	MDL	1.10	PQL	ng/Kg	J	Q, FD

Sample ID: SL-057-NBZ-SS-0.0-0.5

Collected: 3/23/2012 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-HPCDD	8.71	В	0.0248	MDL	5.48	PQL	ng/Kg	J	FD
1,2,3,4,6,7,8-HPCDF	8.06	В	0.0144	MDL	5.48	PQL	ng/Kg	J	FD
1,2,3,4,7,8,9-HPCDF	4.26	JB	0.0287	MDL	5.48	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HxCDD	0.216	JB	0.0235	MDL	5.48	PQL	ng/Kg	J	Z, FD
1,2,3,4,7,8-HXCDF	15.9	В	0.0421	MDL	5.48	PQL	ng/Kg	J	FD
1,2,3,6,7,8-HXCDD	0.531	JB	0.0256	MDL	5.48	PQL	ng/Kg	J	Z, FD
1,2,3,6,7,8-HXCDF	7.24	В	0.0371	MDL	5.48	PQL	ng/Kg	J	FD
1,2,3,7,8,9-HXCDD	0.465	JB	0.0242	MDL	5.48	PQL	ng/Kg	J	Z, FD

^{*} denotes a non-reportable result

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

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: S
Method: 1

SVOA 1613B

Matrix: SO

Sample ID: SL-057-NBZ-SS-0.0-0.5

Collected: 3/23/2012 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	
1,2,3,7,8,9-HXCDF	0.0550	U	0.0550	MDL	5.48	PQL	ng/Kg	UJ	FD	
1,2,3,7,8-PECDD	0.260	J	0.0526	MDL	5.48	PQL	ng/Kg	J	Z, FD	
1,2,3,7,8-PECDF	17.8		0.0729	MDL	5.48	PQL	ng/Kg	J	FD	
2,3,4,6,7,8-HXCDF	2.99	JB	0.0396	MDL	5.48	PQL	ng/Kg	J	Z, FD	
2,3,4,7,8-PECDF	23.2	В	0.0823	MDL	5.48	PQL	ng/Kg	J	FD	
2,3,7,8-TCDD	0.0762	JB	0.0426	MDL	1.10	PQL	ng/Kg	UJ	B, FD	
OCDD	57.2	В	0.0183	MDL	11.0	PQL	ng/Kg	J	FD	
OCDF	12.0	В	0.0226	MDL	11.0	PQL	ng/Kg	J	FD	

Sample ID: SL-059-NBZ-SS-0.0-0.5

Collected: 3/22/2012 10:50:00

Analysis Type: RES

Dilution: 1

Sample ID: SL-059-NBZ-SS-0.0-0.5	Conec	tea: 3/22/2	012 10:50	J:UU A	naiysis i	ype: RES	1		Dilution: 1
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	1.45	JB	0.0270	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.751	JB	0.0139	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.132	JB	0.0245	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0506	JBQ	0.0210	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.521	JB	0.0278	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.145	JBQ	0.0234	MDL	5.36	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.308	JB .	0.0238	MDL	5.36	PQL	ng/Kg	J	Ζ .
1,2,3,7,8,9-HXCDD	0.148	JB	0.0240	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.0721	J	0.0328	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.109	J	0.0278	MDL	5.36	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	1.12	J	0.0323	MDL	5.36	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.149	JB	0.0240	MDL	5.36	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	1.01	JB	0.0347	MDL	5.36	PQL	ng/Kg	J	Z
2,3,7,8-TCDF	0.844	J	0.0709	MDL	1.07	PQL	ng/Kg	J	Z
OCDD	9.74	JB	0.0190	MDL	10.7	PQL	ng/Kg	J	Z
OCDF	1.08	JB	0.0290	MDL	10.7	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA
Method: 1613B

Matrix: SO

Sample ID: SL-060-NBZ-SS-0.0-0.5

Collected: 3/22/2012 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-HxCDD	0.717	JB	0.0519	MDL	5.25	PQL	ng/Kg	j	Z
1,2,3,6,7,8-HXCDD	2.29	JB	0.0533	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	1.54	JB	0.0491	MDL	5.25	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.522	JBQ	0.0881	MDL	5.25	PQL	ng/Kg	U	В
2,3,7,8-TCDD	0.171	J	0.0751	MDL	1.05	PQL	ng/Kg	J	Z

Sample ID:SL-061-NBZ-SB-1.0-2.0

Collected: 3/22/2012 9:30:00

Analysis Type: RES

Dilution: 1

Jampie ID. OL-001-NDZ-OD-1.0-Z.0	0000	teu. Dizziz		Dilation. 1					
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	1.11	JB	0.0257	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,4,6,7,8-HPCDF	0.459	JB	0.0137	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,4,7,8,9-HPCDF	0.0491	JBQ	0.0259	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDĐ	0.0424	JBQ	0.0254	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.301	JB	0.0248	MDL	5.19	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.108	JBQ	0.0259	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.165	JBQ	0.0230	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.0870	JBQ	0.0265	MDL	5.19	PQL	ng/Kg	U	В
1,2,3,7,8-PECDF	0.338	JQ	0.0326	MDL	5.19	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.210	JBQ	0.0241	MDL	5.19	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.697	JB	0.0336	MDL	5.19	PQL	ng/Kg	J	Z
2,3,7,8-TCDD	0.0437	JBQ	0.0253	MDL	1.04	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.278	J	0.0662	MDL	1.04	PQL	ng/Kg	J	Z
OCDD	6.77	JB	0.0221	MDL	10.4	PQL	ng/Kg	J	Z
OCDF	0.808	JB	0.0329	MDL	10.4	PQL	ng/Kg	U	В

Sample ID: SL-062-NBZ-SB-2.5-3.5

Collected: 3/21/2012 3:40:00

Analysis Type: REA

Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
2,3,7,8-TCDF	0.363	JC	0.130	MDL	1.03	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID:SL-062-NBZ-SB-2.5-3.5	Collec	ted: 3/21/2	012 3:40:	ype: RES	ES Dilution: 1				
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	3.28	JB	0.0233	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	1.05	JB	0.00944	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.451	JB	0.0194	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,4,7,8-HxCDD	0.0911	JBQ	0.0199	MDL	5.16	PQL	ng/Kg	υ	В
1,2,3,4,7,8-HXCDF	1.49	JB ·	0.0210	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.167	JB	0.0203	MDL	5.16	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.591	JB	0.0192	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDD	0.158	JB	0.0206	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0722	J	0.0235	MDL	5.16	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	2.49	J	0.0405	MDL	5.16	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.299	JB	0.0209	MDL	5.16	PQL	ng/Kg	J	Z
2,3,4,7,8-PECDF	1.87	JB	0.0442	MDL	5.16	PQL	ng/Kg	J	Z
OCDF	2.10	JB	0.0230	MDL	10.3	PQL	ng/Kg	J	Z

Sample ID:SL-063-NBZ-SB-0.5-1.5 Collected: 3/21/2012 2:45:00 Analysis Type: RES Dilution: 1

Analyte	Lab Result	Lab Qual	DL.	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
1,2,3,4,6,7,8-HPCDD	2.84	JB	0.0240	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.940	JB	0.0109	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.125	JB	0.0195	MDL	5.58	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0544	JB	0.0201	MDL	5.58	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.226	JB	0.0178	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.169	JBQ	0.0223	MDL	5.58	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.193	JB	0.0158	MDL	5.58	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.155	JBQ	0.0209	MDL	5.58	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0319	J	0.0248	MDL	5.58	PQL	ng/Kg	J	Z.
1,2,3,7,8-PECDF	0.295	J	0.0248	MDL	5.58	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.198	JB	0.0162	MDL	5.58	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.313	JB	0.0255	MDL	5.58	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.277	J	0.0474	MDL	1.12	PQL	ng/Kg	J	Z
OCDF	1.70	JB	0.0224	MDL	11.2	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 9/5/2012 2:11:02 PM ADR version 1.6.0.188

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA

Method: 1613B

Sample ID: SL-064-NBZ-SB-0.5-1.5 Collected: 3/21/2012 1:30:00 Analysis Type: RES Dilution: 1 Data Lab DL RL Lab Review Reason Analyte Result Qual DL RLUnits Туре Type Qual Code 1,2,3,4,6,7,8-HPCDD 0.629 JB 0.0205 MDL 5.21 **PQL** ng/Kg В 1,2,3,4,6,7,8-HPCDF 0.203 JΒ 0.00665 MDL 5.21 PQL ng/Kg U В 1,2,3,4,7,8,9-HPCDF 0.0116 MDL 5.21 0.0510 JB **PQL** ng/Kg U В JB 0.0138 MDL U 1,2,3,4,7,8-HxCDD 0.0236 5.21 **PQL** В ng/Kg 0.0124 U 1,2,3,4,7,8-HXCDF 0.0763 JB MDL 5.21 PQL ng/Kg В 0.0149 1,2,3,6,7,8-HXCDD 0.0702 **JBQ** MDL 5.21 **PQL** ng/Kg U В 0.0110 U 1,2,3,6,7,8-HXCDF 0.0556 **JBQ** MDL 5.21 **PQL** В ng/Kg ng/Kg 1,2,3,7,8,9-HXCDD 0.0741 JB 0.0146 MDL 5.21 **PQL** U В ng/Kg Z 1,2,3,7,8,9-HXCDF 0.0393 JQ 0.0138 MDL 5.21 PQL J Z J 0.0143 MDL 5.21 J 1,2,3,7,8-PECDF 0.0812 PQL ng/Kg 0.0119 U 2,3,4,6,7,8-HXCDF 0.0637 JB MDL 5.21 PQL ng/Kg В 2,3,4,7,8-PECDF 0.0813 JB 0.0140 MDL 5.21 PQL ng/Kg υ в

Sample ID:SL-104-NBZ-SS-0.0-0.5 Collected: 3/21/2012 1:45:00 Analysis Type: RES Dilution: 1

JB

J

JB

JB

0.0218

0.0685

3.14

0.338

0.0170

0.0243

0.0124

0.0185

MDL

MDL

MDL

MDL

1.04

1.04

10.4

10.4

PQL

PQL

PQL

PQL

ng/Kg

ng/Kg

ng/Kg

ng/Kg

3ample ID: 3L-104-NBZ-33-0.0-0.3	Conec	tea: 3/21/2	'	Dilution: 1					
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	1.87	JB	0.0230	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.591	JB	0.0122	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0980	JBQ	0.0196	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0682	JBQ	0.0191	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.247	JB	0.0165	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDD	0.126	JB	0.0211	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDF	0.156	JB	0.0156	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	0.127	JBQ	0.0197	MDL	5.43	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDF	0.0500	JQ	0.0203	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.0686	JQ	0.0227	MDL	5.43	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.361	J	0.0247	MDL	5.43	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.149	JB	0.0158	MDL	5.43	PQL	ng/Kg	υ	В

^{*} denotes a non-reportable result

2,3,7,8-TCDD

2,3,7,8-TCDF

OCDD

OCDF

Project Name and Number: 1203-004-009-AL - SSFL Area IV Collocated Soil Sampling 9/5/2012 2:11:02 PM ADR version 1.6.0.188

U

J

J

В

z z

В

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA Method: 1613B Matrix: SO

Sample ID: SL-104-NBZ-SS-0.0-0.5 Collected: 3/21/2012 1:45:00 Analysis Type: RES Dilution: 1 Data DLLab Lab RLReview Reason Analyte Result Qual DL RLUnits Type Type Qual Code 2,3,4,7,8-PECDF 0.517 JΒ 0.0258 MDL 5.43 **PQL** ng/Kg Z 2,3,7,8-TCDF 0.239 0.0475 MDL 1.09 Z J **PQL** ng/Kg J OCDF 1.08 0.0179 z JB MDL 10.9 **PQL** ng/Kg

Sample ID:SL-116-NBZ-SS-0.0-0.5 Collected: 3/22/2012 3:00:00 Analysis Type: RES Dilution: 1

	Lab	Lab		DL		RL		Data Review	Reason
Analyte	Result	Qual	DL	Туре	RL	Туре	Units	Qual	Code
1,2,3,4,6,7,8-HPCDD	2.01	JB	0.0302	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,4,6,7,8-HPCDF	0.579	JB	0.0155	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,4,7,8,9-HPCDF	0.0551	JBQ	0.0222	MDL	5.56	PQL	ng/Kg	U	В
1,2,3,4,7,8-HxCDD	0.0867	JB	0.0300	MDL	5.56	PQL	ng/Kg	U	В
1,2,3,4,7,8-HXCDF	0.117	JB	0.0219	MDL	5.56	PQL	ng/Kg	U	В
1,2,3,6,7,8-HXCDD	0.932	JB	0.0305	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,6,7,8-HXCDF	0.128	JBQ	0.0207	MDL	5.56	PQL	ng/Kg	U	В
1,2,3,7,8,9-HXCDD	1.45	JB	0.0314	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,7,8,9-HXCDF	0.294	JQ	0.0239	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDD	0.207	J	0.0370	MDL	5.56	PQL	ng/Kg	J	Z
1,2,3,7,8-PECDF	0.251	JQ	0.0284	MDL	5.56	PQL	ng/Kg	J	Z
2,3,4,6,7,8-HXCDF	0.100	JB	0.0215	MDL	5.56	PQL	ng/Kg	U	В
2,3,4,7,8-PECDF	0.0966	JB	0.0272	MDL	5.56	PQL	ng/Kg	U	В
2,3,7,8-TCDF	0.137	J	0.0475	MDL	1.11	PQL	ng/Kg	J	Z
OCDF	1.18	JB	0.0299	MDL	11.1	PQL	ng/Kg	J	Z

^{*} denotes a non-reportable result

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Reason Code Legend

Reason Code	Description
В	Method Blank Contamination
FD	Field Duplicate Precision
Q	Matrix Spike Lower Estimation
z	Reporting Limit Trace Value

Enclosure I

Level III ADR Outliers (including Manual Review Outliers)

Quality Control Outlier Reports

DX162

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: AQ	The same			
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0940B371712	4/4/2012 5:12:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8-HCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD OCDD OCDD	4.80 pg/L 1.46 pg/L 0.326 pg/L 0.221 pg/L 0.403 pg/L 0.438 pg/L 0.161 pg/L 0.508 pg/L 0.364 pg/L 0.176 pg/L 0.356 pg/L 0.605 pg/L 0.269 pg/L 14.6 pg/L	EB-NBZ-SB-032212

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-NBZ-SB-032212(RES)	1,2,3,4,6,7,8-HPCDD	3.75 pg/L	3.75U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,4,6,7,8-HPCDF	1.24 pg/L	1.24U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,4,7,8,9-HPCDF	0.361 pg/L	0.361U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,4,7,8-HXCDF	0.316 pg/L	0.316U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,6,7,8-HXCDD	0.467 pg/L	0.467U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,6,7,8-HXCDF	0.233 pg/L	0.233U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,7,8,9-HXCDD	0.507 pg/L	0.507U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,7,8,9-HXCDF	0.144 pg/L	0.144U pg/L
EB-NBZ-SB-032212(RES)	1,2,3,7,8-PECDF	0.321 pg/L	0.321U pg/L
EB-NBZ-SB-032212(RES)	2,3,4,6,7,8-HXCDF	0.425 pg/L	0.425U pg/L
EB-NBZ-SB-032212(RES)	2,3,4,7,8-PECDF	0.385 pg/L	0.385U pg/L
EB-NBZ-SB-032212(RES)	OCDD	8.78 pg/L	8.78U pg/L
EB-NBZ-SB-032212(RES)	OCDF	1.46 pg/L	1.46U pg/L

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0890B371818	3/30/2012 6:18:00 PM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,7,8-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDF 1,2,3,6,7,8-HXCDF 2,3,4,6,7,8-HXCDD 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF CODD CODD	0.266 ng/Kg 0.0992 ng/Kg 0.0489 ng/Kg 0.0430 ng/Kg 0.0430 ng/Kg 0.0499 ng/Kg 0.0457 ng/Kg 0.0288 ng/Kg 0.0515 ng/Kg 0.0673 ng/Kg 0.0304 ng/Kg 0.447 ng/Kg 0.184 ng/Kg	DUP-02-NBZ-QC-032312 SL-047-NBZ-SB-4.0-5.0 SL-048-NBZ-SB-4.0-5.0 SL-048-NBZ-SS-0.0-0.5 SL-049-NBZ-SB-2.0-3.0 SL-051-NBZ-SB-1.5-2.5 SL-055-NBZ-SS-0.0-0.5 SL-055-NBZ-SS-0.0-0.5 SL-059-NBZ-SS-0.0-0.5 SL-063-NBZ-SB-1.0-2.0 SL-062-NBZ-SB-2.5-3.5 SL-063-NBZ-SB-0.5-1.5 SL-064-NBZ-SB-0.5-1.5 SL-1164-NBZ-SS-0.0-0.5

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Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples
BLK0960B370337	4/7/2012 3:37:00 AM	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 0,0,0,0	0.397 ng/Kg 0.105 ng/Kg 0.0395 ng/Kg 0.0698 ng/Kg 0.0770 ng/Kg 0.0628 ng/Kg 0.0905 ng/Kg 0.212 ng/Kg 0.0466 ng/Kg 0.132 ng/Kg 0.0784 ng/Kg 0.0586 ng/Kg 0.624 ng/Kg 0.624 ng/Kg 0.195 ng/Kg	SL-060-NBZ-SS-0.0-0.5

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

Sample ID	Analyte	Reported Result	Modified Final Result	
DUP-02-NBZ-QC-032312(RES)	1,2,3,4,6,7,8-HPCDD	1.11 ng/Kg	1.11U ng/Kg	
DUP-02-NBZ-QC-032312(RES)	1,2,3,4,7,8-HxCDD	0.0763 ng/Kg	0.0763U ng/Kg	
DUP-02-NBZ-QC-032312(RES)	1,2,3,6,7,8-HXCDD	0.125 ng/Kg	0.125U ng/Kg	
DUP-02-NBZ-QC-032312(RES)	1,2,3,7,8,9-HXCDD	0.120 ng/Kg	0.120U ng/Kg	
DUP-02-NBZ-QC-032312(RES)	2,3,7,8-TCDD	0.0454 ng/Kg	0.0454U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.320 ng/Kg	0.320U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0644 ng/Kg	0.0644U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0270 ng/Kg	0.0270U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HxCDD	0.0292 ng/Kg	0.0292U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0450 ng/Kg	0.0450U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0578 ng/Kg	0.0578U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0329 ng/Kg	0.0329U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.0562 ng/Kg	0.0562U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0305 ng/Kg	0.0305U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0794 ng/Kg	0.0794U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0238 ng/Kg	0.0238U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	OCDD	0.781 ng/Kg	0.781U ng/Kg	
SL-047-NBZ-SB-4.0-5.0(RES)	OCDF	0.119 ng/Kg	0.119U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDD	0.383 ng/Kg	0.383U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0748 ng/Kg	0.0748U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0244 ng/Kg	0.0244U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,4,7,8-HXCDF	0.0455 ng/Kg	0.0455U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDD	0.0451 ng/Kg	0.0451U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,6,7,8-HXCDF	0.0621 ng/Kg	0.0621U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	1,2,3,7,8,9-HXCDD	0.109 ng/Kg	0.109U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	2,3,4,6,7,8-HXCDF	0.0489 ng/Kg	0.0489U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	2,3,4,7,8-PECDF	0.0872 ng/Kg	0.0872U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	2,3,7,8-TCDD	0.0218 ng/Kg	0.0218U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	OCDD	1.40 ng/Kg	1.40U ng/Kg	
SL-048-NBZ-SB-4.0-5.0(RES)	OCDF	0.157 ng/Kg	0.157U ng/Kg	
SL-048-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.182 ng/Kg	0.182U ng/Kg	

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Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result	
SL-048-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0466 ng/Kg	0.0466U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDD	0.293 ng/Kg	0.293U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,4,6,7,8-HPCDF	0.0897 ng/Kg	0.0897U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0461 ng/Kg	0.0461U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8-HxCDD	0.0265 ng/Kg	0.0265U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,4,7,8-HXCDF	0.0993 ng/Kg	0.0993U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDD	0.141 ng/Kg	0.141U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	1,2,3,6,7,8-HXCDF	0.0783 ng/Kg	0.0783U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	2,3,4,6,7,8-HXCDF	0.0569 ng/Kg	0.0569U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	2,3,4,7,8-PECDF	0.127 ng/Kg	0.127U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	2,3,7,8-TCDD	0.0200 ng/Kg	0.0200U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	OCDD	0.804 ng/Kg	0.804U ng/Kg	
SL-049-NBZ-SB-2.0-3.0(RES)	OCDF	0.150 ng/Kg	0.150U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDD	0.701 ng/Kg	0.701U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,4,6,7,8-HPCDF	0.157 ng/Kg	0.157U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0357 ng/Kg	0.0357U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8-HxCDD	0.0683 ng/Kg	0.0683U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,4,7,8-HXCDF	0.114 ng/Kg	0.114U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDD	0.147 ng/Kg	0.147U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,6,7,8-HXCDF	0.0979 ng/Kg	0.0979U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	1,2,3,7,8,9-HXCDD	0.120 ng/Kg	0.120U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	2,3,4,6,7,8-HXCDF	0.0729 ng/Kg	0.0729U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	2,3,4,7,8-PECDF	0.181 ng/Kg	0.181U ng/Kg	
SL-051-NBZ-SB-1.5-2.5(RES)	OCDF	0.402 ng/Kg	0.402U ng/Kg	
SL-054-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.151 ng/Kg	0.151U ng/Kg	
SL-055-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.164 ng/Kg	0.164U ng/Kg	
SL-055-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.235 ng/Kg	0.235U ng/Kg	
SL-055-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0738 ng/Kg	0.0738U ng/Kg	
SL-057-NBZ-SS-0.0-0.5(RES)	2,3,7,8-TCDD	0.0762 ng/Kg	0.0762U ng/Kg	
SL-059-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.132 ng/Kg	0.132U ng/Kg	
SL-059-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0506 ng/Kg	0.0506U ng/Kg	
SL-059-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.145 ng/Kg	0.145U ng/Kg	
SL-059-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg	
SL-060-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8-PECDD	0.522 ng/Kg	0.522U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDD	1.11 ng/Kg	1.11U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,4,6,7,8-HPCDF	0.459 ng/Kg	0.459U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,4,7,8,9-HPCDF	0.0491 ng/Kg	0.0491U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,4,7,8-HxCDD	0.0424 ng/Kg	0.0424U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,6,7,8-HXCDD	0.108 ng/Kg	0.108U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,6,7,8-HXCDF	0.165 ng/Kg	0.165U ng/Kg	

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Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO				
Method Blank Sample ID	Analysis Date	Analyte	Result	Associated Samples

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

Sample ID	Analyte	Reported Result	Modified Final Result	
SL-061-NBZ-SB-1.0-2.0(RES)	1,2,3,7,8,9-HXCDD	0.0870 ng/Kg	0.0870U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	2,3,4,6,7,8-HXCDF	0.210 ng/Kg	0.210U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	2,3,7,8-TCDD	0.0437 ng/Kg	0.0437U ng/Kg	
SL-061-NBZ-SB-1.0-2.0(RES)	OCDF	0.808 ng/Kg	0.808U ng/Kg	
SL-062-NBZ-SB-2.5-3.5(RES)	1,2,3,4,7,8-HxCDD	0.0911 ng/Kg	0.0911U ng/Kg	
SL-062-NBZ-SB-2.5-3.5(RES)	1,2,3,6,7,8-HXCDD	0.167 ng/Kg	0.167U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8,9-HPCDF	0.125 ng/Kg	0.125U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8-HxCDD	0.0544 ng/Kg	0.0544U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDD	0.169 ng/Kg	0.169U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDF	0.193 ng/Kg	0.193U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	2,3,4,6,7,8-HXCDF	0.198 ng/Kg	0.198U ng/Kg	
SL-063-NBZ-SB-0.5-1.5(RES)	2,3,4,7,8-PECDF	0.313 ng/Kg	0.313U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDD	0.629 ng/Kg	0.629U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,4,6,7,8-HPCDF	0.203 ng/Kg	0.203U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0510 ng/Kg	0.0510U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8-HxCDD	0.0236 ng/Kg	0.0236U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,4,7,8-HXCDF	0.0763 ng/Kg	0.0763U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDD	0.0702 ng/Kg	0.0702U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,6,7,8-HXCDF	0.0556 ng/Kg	0.0556U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	1,2,3,7,8,9-HXCDD	0.0741 ng/Kg	0.0741U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	2,3,4,6,7,8-HXCDF	0.0637 ng/Kg	0.0637U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	2,3,4,7,8-PECDF	0.0813 ng/Kg	0.0813U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	2,3,7,8-TCDD	0.0218 ng/Kg	0.0218U ng/Kg	
SL-064-NBZ-SB-0.5-1.5(RES)	OCDF	0.338 ng/Kg	0.338U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0980 ng/Kg	0.0980U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0682 ng/Kg	0.0682U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDD	0.126 ng/Kg	0.126U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.156 ng/Kg	0.156U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	1,2,3,7,8,9-HXCDD	0.127 ng/Kg	0.127U ng/Kg	
SL-104-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.149 ng/Kg	0.149U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8,9-HPCDF	0.0551 ng/Kg	0.0551U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HxCDD	0.0867 ng/Kg	0.0867U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	1,2,3,4,7,8-HXCDF	0.117 ng/Kg	0.117U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	1,2,3,6,7,8-HXCDF	0.128 ng/Kg	0.128U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	2,3,4,6,7,8-HXCDF	0.100 ng/Kg	0.100U ng/Kg	
SL-116-NBZ-SS-0.0-0.5(RES)	2,3,4,7,8-PECDF	0.0966 ng/Kg	0.0966U ng/Kg	

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Matrix Spike/Matrix Spike Duplicate Outlier Report

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO							
QC Sample ID (Associated Samples)	Compound	MS %R	MSD %R	%R Limits	RPD (Limits)	Affected Compounds	Flag
SL-057-NBZ-SS-0.0-0.5 MSD SL-057-NBZ-SS-0.0-0.5MSD (SL-057-NBZ-SS-0.0-0.5)	2,3,7,8-TCDF	-	35	40.00-135.00	-	2,3,7,8-TCDF	J (all detects) UJ (all non-detects)

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Field Duplicate RPD Report

Lab Reporting Batch ID: DX162

Laboratory: LL

eQAPP Name: CDM_SSFL_120718_Lan

EDD Filename: DX162_v1

Method: 160.3M Matrix: SO

	Concentr	ation (%)			
Analyte	SL-057-NBZ-SS-0.0-0.5	DUP-02-NBZ-QC- 032312	Sample RPD	eQAPP RPD	Flag
MOISTURE	9.1	7.2	23		No Qualifiers Applied

Method: 1613B

Matrix: SO

	Concentration	Concentration (ng/Kg)			
Analyte	SL-057-NBZ-SS-0.0-0.5	DUP-02-NBZ-QC- 032312	Sample RPD	eQAPP RPD	Flag
,2,3,4,6,7,8-HPCDD	8.71	1.11	155	50.00	
,2,3,4,6,7,8-HPCDF	8.06	0.836	162	50.00	
,2,3,4,7,8,9-HPCDF	4.26	0.492	159	50.00	
,2,3,4,7,8-HxCDD	0.216	0.0763	96	50.00	
,2,3,4,7,8-HXCDF	15.9	1.99	156	50.00	
2,3,6,7,8-HXCDD	0.531	0.125	124	50.00	
,2,3,6,7,8-HXCDF	7.24	0.882	157	50.00	
2,3,7,8,9-HXCDD	0.465	0.120	118	50.00	I/all datasta)
2,3,7,8,9-HXCDF	5.48 U	0.361	200	50.00	J(all detects)
,2,3,7,8-PECDD	0.260	0.0948	93	50.00	UJ(all non-detect
2,3,7,8-PECDF	17.8	2.10	158	50.00	
3,4,6,7,8-HXCDF	2.99	0.412	152	50.00	
3,4,7,8-PECDF	23.2	2.70	158	50.00	
3,7,8-TCDD	0.0762	0.0454	51	50.00	
3,7,8-TCDF	10.3	1.78	141	50.00	
CDD	57.2	7.02	156	50.00	
CDF	12.0	1.27	162	50.00	

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Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B	
Matrix: AO	

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
EB-NBZ-SB-032212	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF OCDD OCDF	######################################	3.75 1.24 0.361 0.316 0.467 0.233 0.507 0.144 0.423 0.321 0.425 0.385 0.209 8.78 1.46	9.44 9.44 9.44 9.44 9.44 9.44 9.44 9.44	PQL	pg/L pg/L pg/L pg/L pg/L pg/L pg/L pg/L	J (all detects)

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
DUP-02-NBZ-QC-032312	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-PECDF 2,3,7,8-TCDD OCDD OCDD		1.11 0.836 0.492 0.0763 1.99 0.125 0.882 0.120 0.361 0.0948 2.10 0.412 2.70 0.0454 7.02	5.31 5.31 5.31 5.31 5.31 5.31 5.31 5.31	PQL PQL PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg	J (all detects)
SL-047-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,7,8-PECDF 2,3,7,8-PECDF 2,3,7,8-TCDD OCDD	報告であるないないのである。	0.320 0.0644 0.0270 0.0292 0.0450 0.0578 0.0329 0.0562 0.0310 0.0473 0.0305 0.0794 0.0238 0.781 0.119	5.10 5.10 5.10 5.10 5.10 5.10 5.10 5.10	PQL	ng/Kg	J (all detects)

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B

Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-048-NBZ-SB-4.0-5.0	1,2,3,4,6,7,8-HPCDD	JB	0.383	5.22	PQL	ng/Kg	- 1.ug
01 0 10 NDL 0D 1.0 0.0	1,2,3,4,6,7,8-HPCDF	JBQ	0.0748	5.22	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0244	5.22	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0455	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.0451	5.22	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.0621	5.22	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.109	5.22	PQL	ng/Kg	
	1,2,3,7,8-PECDD	JQ	0.0449	5.22	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JQ	0.0536	5.22	PQL	ng/Kg	5 (all detects)
	2,3,4,6,7,8-HXCDF	JBQ	0.0330	5.22	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JBQ	0.0403	5.22	PQL	ng/Kg	
	2,3,7,8-TCDD	JB	0.0072	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0210	1.04	PQL	ng/Kg	
	OCDD	JB	1.40	10.4	PQL	ng/Kg	
	OCDF	JBQ	0.157	10.4	PQL		
						ng/Kg	
SL-048-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF	JB	2.28	5.40	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.182	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JB	0.424	5.40	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.484	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	1.29	5.40	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.350	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.01	5.40	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDF	J	0.0955	5.40	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	J	0.301	5.40	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	0.753	5.40	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.299	5.40	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.715	5.40	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0466	1.08	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.906	1.08	PQL	ng/Kg	
	OCDF	JB	4.78	10.8	PQL	ng/Kg	
SL-049-NBZ-SB-2.0-3.0	1,2,3,4,6,7,8-HPCDD	JB	0.293	5.15	PQL	ng/Kg	
32 040 ND2 0D 2.0 0.0	1,2,3,4,6,7,8-HPCDF	JB	0.233	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JBQ	0.0057	5.15	PQL	ng/Kg	
	1,2,3,4,7,8,9-11-CDF 1,2,3,4,7,8-HxCDD	JBQ	0.0461	5.15	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JBQ	0.0203	5.15	PQL	ng/Kg	
	1 ' ' ' '		0.0993				
	1,2,3,6,7,8-HXCDD	JB JB	0.141	5.15	PQL PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF			5.15		ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.225	5.15	PQL	ng/Kg	1 (-11 -1 -44 -)
	1,2,3,7,8,9-HXCDF	JQ	0.0681	5.15	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JQ	0.0840	5.15	PQL	ng/Kg	
	1,2,3,7,8-PECDF	JQ	0.102	5.15	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.0569	5.15	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.127	5.15	PQL	ng/Kg	
	2,3,7,8-TCDD	JBQ	0.0200	1.03	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.0445	1.03	PQL	ng/Kg	
	OCDD	JB	0.804	10.3	PQL	ng/Kg	
	OCDF	JB	0.150	10.3	PQL	ng/Kg	

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

		Lab		Reporting	RL		
SampleID	Analyte	Qual	Result	Limit	Type	Units	Flag
SL-051-NBZ-SB-1.5-2.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-TCDF CODD OCDF	田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田田	0.701 0.157 0.0357 0.0683 0.114 0.147 0.0979 0.120 0.0746 0.120 0.162 0.0729 0.181 0.0807 2.96 0.402	5.12 5.12 5.12 5.12 5.12 5.12 5.12 5.12	PQL	ng/Kg	J (all detects)
SL-054-NBZ-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HxCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD		0.818 0.553 2.06 1.89 1.12 1.72 0.705 2.20 0.743 2.34 0.151 0.796	5.37 5.37 5.37 5.37 5.37 5.37 5.37 5.37	PQL	ng/Kg	J (all detects)
SL-055-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDF 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD 2,3,7,8-TCDD	第一部の部の部の部の部の部の部の	1.67 0.164 0.201 0.381 0.447 0.274 0.498 0.103 0.297 0.355 0.235 0.549 0.0738 0.386 3.14	5.53 5.53 5.53 5.53 5.53 5.53 5.53 5.53	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/K/g	J (all detects)
SL-057-NBZ-SS-0.0-0.5	1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,7,8-TCDD	38 38 38 38 38 38 38 38	4.26 0.216 0.531 0.465 0.260 2.99 0.0762	5.48 5.48 5.48 5.48 5.48 5.48 1.10	PQL PQL PQL PQL PQL PQL PQL PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)

Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

SampleID	Analysia	Lab	Dooult	Reporting	RL Tours	11	~!
SampleID	Analyte	Qual	Result	Limit	Туре	Units	Flag
SL-059-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD	JB	1.45	5.36	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	0.751	5.36	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.132	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0506	5.36	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.521	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.145	5.36	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.308	5.36	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	0.148	5.36	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDF	J	0.0721	5.36	PQL	ng/Kg	J (all delects)
	1,2,3,7,8-PECDD	J	0.109	5.36	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	1.12	5.36	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.149	5.36	PQL	ng/Kg	•
1	2,3,4,7,8-PECDF	JB	1.01	5.36	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.844	1.07	PQL	ng/Kg	
	OCDD	JB	9.74	10.7	PQL	ng/Kg	
	OCDF	JB	1.08	10.7	PQL	ng/Kg	
SL-060-NBZ-SS-0.0-0.5	1,2,3,4,7,8-HxCDD	JB	0.717	5.25	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	2.29	5.25	PQL	ng/Kg	
	1,2,3,7,8,9-HXCDD	JB	1.54	5.25	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDD	JBQ	0.522	5.25	PQL	ng/Kg	o (an aotobio)
	2,3,7,8-TCDD	J	0.171	1.05	PQL	ng/Kg	
SL-061-NBZ-SB-1.0-2.0		JB	1.11	5.19	PQL		
SL-001-NDZ-SB-1.0-2.0	1,2,3,4,6,7,8-HPCDD			I I	PQL PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB JBQ	0.459	5.19		ng/Kg	
	1,2,3,4,7,8,9-HPCDF		0.0491	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0424	5.19	PQL	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	0.301	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JBQ	0.108	5.19	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JBQ	0.165	5.19	PQL	ng/Kg	17-11-1-1-1-1-1
	1,2,3,7,8,9-HXCDD	JBQ	0.0870	5.19	PQL	ng/Kg	J (all detects)
	1,2,3,7,8-PECDF	JQ	0.338	5.19	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JBQ	0.210	5.19	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	0.697	5.19	PQL	ng/Kg	,
	2,3,7,8-TCDD	JBQ	0.0437	1.04	PQL	ng/Kg	
	2,3,7,8-TCDF	J	0.278	1.04	PQL	ng/Kg	
	OCDD	JB	6.77	10.4	PQL	ng/Kg	
	OCDF	JB	0.808	10.4	PQL	ng/Kg	
SL-062-NBZ-SB-2.5-3.5	1,2,3,4,6,7,8-HPCDD	JB	3.28	5.16	PQL	ng/Kg	
	1,2,3,4,6,7,8-HPCDF	JB	1.05	5.16	PQL	ng/Kg	
	1,2,3,4,7,8,9-HPCDF	JB	0.451	5.16	PQL	ng/Kg	
	1,2,3,4,7,8-HxCDD	JBQ	0.0911	5.16	PQL.	ng/Kg	
	1,2,3,4,7,8-HXCDF	JB	1.49	5.16	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDD	JB	0.167	5.16	PQL	ng/Kg	
	1,2,3,6,7,8-HXCDF	JB	0.591	5.16	PQL	ng/Kg	J (all detects)
	1,2,3,7,8,9-HXCDD	JB	0.158	5.16	PQL	ng/Kg	J (an detects)
	1,2,3,7,8-PECDD	J	0.0722	5.16	PQL	ng/Kg	
	1,2,3,7,8-PECDF	J	2.49	5.16	PQL	ng/Kg	
	2,3,4,6,7,8-HXCDF	JB	0.299	5.16	PQL	ng/Kg	
	2,3,4,7,8-PECDF	JB	1.87	5.16	PQL	ng/Kg	
	2,3,7,8-TCDF	JC	0.363	1.03	PQL	ng/Kg	
	OCDF	JB	2.10	10.3	PQL	ng/Kg	

Lab Reporting Batch ID: DX162 Laboratory: LL

EDD Filename: DX162_v1 eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

Matrix: SO							
SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-063-NBZ-SB-0.5-1.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF OCDF	第1番番(一番)のおおおおおおお	2.84 0.940 0.125 0.0544 0.226 0.169 0.193 0.155 0.0319 0.295 0.198 0.313 0.277 1.70	5.58 5.58 5.58 5.58 5.58 5.58 5.58 5.58	PQL	ng/Kg	J (all detects)
SL-064-NBZ-SB-0.5-1.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,7,8-TCDD 2,3,7,8-TCDD OCDF	まましているなどのものののは、	0.629 0.203 0.0510 0.0236 0.0763 0.0702 0.0556 0.0741 0.0393 0.0812 0.0637 0.0813 0.0218 0.0685 3.14 0.338	5.21 5.21 5.21 5.21 5.21 5.21 5.21 5.21	PQL	ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg ng/Kg	J (all detects)
SL-104-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 1,2,3,7,8-PECDF 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-PECDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF OCDF	第1番番んどの数据報報報報報	1.87 0.591 0.0980 0.0682 0.247 0.126 0.156 0.127 0.0500 0.0686 0.361 0.149 0.517 0.239 1.08	5.43 5.43 5.43 5.43 5.43 5.43 5.43 5.43	PQL	ng/Kg	J (all detects)

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Lab Reporting Batch ID: DX162

Laboratory: LL

EDD Filename: DX162_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method: 1613B Matrix: SO

SampleID	Analyte	Lab Qual	Result	Reporting Limit	RL Type	Units	Flag
SL-116-NBZ-SS-0.0-0.5	1,2,3,4,6,7,8-HPCDD 1,2,3,4,6,7,8-HPCDF 1,2,3,4,7,8,9-HPCDF 1,2,3,4,7,8-HXCDD 1,2,3,4,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,6,7,8-HXCDD 1,2,3,7,8,9-HXCDD 1,2,3,7,8,9-HXCDF 1,2,3,7,8-PECDD 1,2,3,7,8-PECDD 2,3,4,6,7,8-HXCDF 2,3,4,6,7,8-HXCDF 2,3,4,7,8-PECDF 2,3,4,7,8-PECDF 2,3,7,8-TCDF 0CDF	B B B B B B B B B B B B B B B B B B B	2.01 0.579 0.0551 0.0867 0.117 0.932 0.128 1.45 0.294 0.207 0.251 0.100 0.0966 0.137 1.18	5.56 5.56 5.56 5.56 5.56 5.56 5.56 5.56	PQL	ng/Kg	J (all detects)

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SAMPLE DELIVERY GROUP

DX163

Attachment I

Sample ID Cross Reference and Data Review Level

Sample Cross Reference

Field Sample ID	Lab Sample ID	Sample Type	Prep Method	Analytical Method	Review Level
SL-046-NBZ-SS-0.0-0.5	6595142	N	METHOD	1613B	III
SL-046-NBZ-SB-4.0-5.0	6595143	N	METHOD	1613B	III
SL-124-NBZ-SS-0.0-0.5	6595147	N	METHOD	1613B	III
SL-126-NBZ-SS-0.0-0.5	6595148	N	METHOD	1613B	111
SL-045-NBZ-SS-0.0-0.5	6595140	N	METHOD	1613B	111
SL-196-NBZ-SS-0.0-0.5	6595150	N	METHOD	1613B	Ш
SL-045-NBZ-SB-4.0-5.0	6595141	N	METHOD	1613B	Ш
SL-042-NBZ-SS-0.0-0.5	6595138	N	METHOD	1613B	Ш
SL-050-NBZ-SS-0.0-0.5	6595144	N	METHOD	1613B	III
SL-123-NBZ-SS-0.0-0.5	6595145	N	METHOD	1613B	111
SL-133-NBZ-SS-0.0-0.5	6595146	N	METHOD	1613B	111
SL-043-NBZ-SS-0.0-0.5	6595139	N	METHOD	1613B	Ш
SL-195-NBZ-SS-0.0-0.5	6595149	N	METHOD	1613B	Ш
SL-078-NBZ-SS-0.0-0.5	6595152	N	METHOD	1613B	Ш
SL-095-NBZ-SS-0.0-0.5	6595153	N	METHOD	1613B	III
SL-130-NBZ-SS-0.0-0.5	6595155	N	METHOD	1613B	111
SL-119-NBZ-SS-0.0-0.5	6595154	N	METHOD	1613B	111
SL-038-NBZ-SS-0.0-0.5	6595151	N	METHOD	1613B	Ш
EB-NBZ-SB-032712	6595156	ЕВ	METHOD	1613B	Ш
EB-NBZ-SS-032712	6595157	ЕВ	METHOD	1613B	111
	SL-046-NBZ-SS-0.0-0.5 SL-046-NBZ-SB-4.0-5.0 SL-124-NBZ-SS-0.0-0.5 SL-126-NBZ-SS-0.0-0.5 SL-045-NBZ-SS-0.0-0.5 SL-045-NBZ-SS-0.0-0.5 SL-045-NBZ-SS-0.0-0.5 SL-042-NBZ-SS-0.0-0.5 SL-050-NBZ-SS-0.0-0.5 SL-123-NBZ-SS-0.0-0.5 SL-133-NBZ-SS-0.0-0.5 SL-195-NBZ-SS-0.0-0.5 SL-195-NBZ-SS-0.0-0.5 SL-078-NBZ-SS-0.0-0.5 SL-095-NBZ-SS-0.0-0.5 SL-130-NBZ-SS-0.0-0.5 SL-130-NBZ-SS-0.0-0.5 SL-130-NBZ-SS-0.0-0.5 SL-130-NBZ-SS-0.0-0.5 SL-130-NBZ-SS-0.0-0.5	SL-046-NBZ-SS-0.0-0.5 6595142 SL-046-NBZ-SB-4.0-5.0 6595143 SL-124-NBZ-SS-0.0-0.5 6595147 SL-126-NBZ-SS-0.0-0.5 6595148 SL-045-NBZ-SS-0.0-0.5 6595140 SL-196-NBZ-SS-0.0-0.5 6595150 SL-045-NBZ-SB-4.0-5.0 6595141 SL-042-NBZ-SS-0.0-0.5 6595138 SL-050-NBZ-SS-0.0-0.5 6595144 SL-123-NBZ-SS-0.0-0.5 6595145 SL-133-NBZ-SS-0.0-0.5 6595146 SL-043-NBZ-SS-0.0-0.5 6595149 SL-078-NBZ-SS-0.0-0.5 6595152 SL-095-NBZ-SS-0.0-0.5 6595153 SL-130-NBZ-SS-0.0-0.5 6595155 SL-119-NBZ-SS-0.0-0.5 6595154 SL-038-NBZ-SS-0.0-0.5 6595151 EB-NBZ-SB-032712 6595156	Field Sample ID Lab Sample ID Type SL-046-NBZ-SS-0.0-0.5 6595142 N SL-046-NBZ-SB-4.0-5.0 6595143 N SL-124-NBZ-SS-0.0-0.5 6595147 N SL-126-NBZ-SS-0.0-0.5 6595148 N SL-045-NBZ-SS-0.0-0.5 6595140 N SL-196-NBZ-SS-0.0-0.5 6595150 N SL-045-NBZ-SB-4.0-5.0 6595141 N SL-042-NBZ-SS-0.0-0.5 6595138 N SL-050-NBZ-SS-0.0-0.5 6595144 N SL-123-NBZ-SS-0.0-0.5 6595144 N SL-133-NBZ-SS-0.0-0.5 6595145 N SL-043-NBZ-SS-0.0-0.5 6595139 N SL-195-NBZ-SS-0.0-0.5 6595149 N SL-078-NBZ-SS-0.0-0.5 6595152 N SL-095-NBZ-SS-0.0-0.5 6595153 N SL-119-NBZ-SS-0.0-0.5 6595155 N SL-119-NBZ-SS-0.0-0.5 6595154 N SL-038-NBZ-SS-0.0-0.5 6595151 N SL-038-NBZ-SS-0.0-0.5 6595156 EB	Field Sample ID Lab Sample ID Type Method SL-046-NBZ-SS-0.0-0.5 6595142 N METHOD SL-046-NBZ-SB-4.0-5.0 6595143 N METHOD SL-124-NBZ-SS-0.0-0.5 6595147 N METHOD SL-126-NBZ-SS-0.0-0.5 6595148 N METHOD SL-045-NBZ-SS-0.0-0.5 6595140 N METHOD SL-196-NBZ-SS-0.0-0.5 6595150 N METHOD SL-045-NBZ-SS-0.0-0.5 6595141 N METHOD SL-042-NBZ-SS-0.0-0.5 6595138 N METHOD SL-050-NBZ-SS-0.0-0.5 6595144 N METHOD SL-123-NBZ-SS-0.0-0.5 6595145 N METHOD SL-043-NBZ-SS-0.0-0.5 6595146 N METHOD SL-095-NBZ-SS-0.0-0.5 6595149 N METHOD SL-095-NBZ-SS-0.0-0.5 6595152 N METHOD SL-130-NBZ-SS-0.0-0.5 6595153 N METHOD SL-119-NBZ-SS-0.0-0.5 6595155 N METHOD SL-1	Field Sample ID Lab Sample ID Type Method Method SL-046-NBZ-SS-0.0-0.5 6595142 N METHOD 1613B SL-046-NBZ-SB-4.0-5.0 6595143 N METHOD 1613B SL-124-NBZ-SS-0.0-0.5 6595147 N METHOD 1613B SL-126-NBZ-SS-0.0-0.5 6595148 N METHOD 1613B SL-045-NBZ-SS-0.0-0.5 6595140 N METHOD 1613B SL-196-NBZ-SS-0.0-0.5 6595140 N METHOD 1613B SL-045-NBZ-SS-0.0-0.5 6595141 N METHOD 1613B SL-042-NBZ-SS-0.0-0.5 6595144 N METHOD 1613B SL-050-NBZ-SS-0.0-0.5 6595144 N METHOD 1613B SL-123-NBZ-SS-0.0-0.5 6595146 N METHOD 1613B SL-043-NBZ-SS-0.0-0.5 6595139 N METHOD 1613B SL-078-NBZ-SS-0.0-0.5 6595152 N METHOD 1613B SL-078-NBZ-SS-0.0-0.5 6595155 N <td< td=""></td<>

Attachment II

Overall Data Qualification Summary

Data Qualifier Summary

Lab Reporting Batch ID: DX163

Laboratory: LL

EDD Filename: DX163_v1

eQAPP Name: CDM_SSFL_120718_Lan

Method Category: SVOA 1613B Method:

Matrix: AQ

Sample II	D:EB-NBZ-S	SB-032712
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Sample ID:EB-NBZ-SB-032712	Collec	ted: 3/27/2	012 3:00:	00 A	nalysis T	ype: RES	;	Dilution: 1		
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	4.39	JBQ	0.237	MDL	10.5	PQL	pg/L	U	В	
1,2,3,4,6,7,8-HPCDF	1.49	JB	0.114	MDL	10.5	PQL	pg/L	U	В	
1,2,3,4,7,8-HXCDF	0.354	JBQ	0.114	MDL	10.5	PQL	pg/L	U	В	
1,2,3,6,7,8-HXCDD	0.518	JBQ	0.201	MDL	10.5	PQL	pg/L	U	В	
1,2,3,6,7,8-HXCDF	0.371	JBQ	0.125	MDL	10.5	PQL	pg/L	U	В	
1,2,3,7,8,9-HXCDD	0.570	JBQ	0.205	MDL	10.5	PQL	pg/L	U	В	
1,2,3,7,8,9-HXCDF	0.569	JBQ	0.120	MDL	10.5	PQL	pg/L	U	В	
1,2,3,7,8-PECDD	0.302	JQ	0.233	MDL	10.5	PQL	pg/L	J	Z	
1,2,3,7,8-PECDF	0.365	JBQ	0.152	MDL	10.5	PQL	pg/L	U	В	
2,3,4,6,7,8-HXCDF	0.497	JBQ	0.110	MDL	10.5	PQL	pg/L	U	В	
2,3,4,7,8-PECDF	0.466	JB	0.135	MDL	10.5	PQL	pg/L	U	В	
2,3,7,8-TCDD	0.218	JBQ	0.210	MDL	2.11	PQL	pg/L	U	В	
OCDD	10.4	JB	0.246	MDL	21.1	PQL	pg/L	U	В	
OCDF	1.61	JB	0.276	MDL	21.1	PQL	pg/L	U	В	

Sample ID: EB-NBZ-SS-032712

Collected: 3/27/2012 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	3.61	JB	0.196	MDL	9.94	PQL	pg/L	υ	В
1,2,3,4,6,7,8-HPCDF	1.26	JB	0.108	MDL	9.94	PQL	pg/L	υ	В
1,2,3,4,7,8,9-HPCDF	0.199	JBQ	0.131	MDL	9.94	PQL	pg/L	υ	В
1,2,3,4,7,8-HxCDD	0.373	JBQ	0.163	MDL	9.94	PQL	pg/L	U	В
1,2,3,4,7,8-HXCDF	0.373	JB	0.0899	MDL	9.94	PQL	pg/L	υ	В
1,2,3,6,7,8-HXCDD	0.276	JB	0.178	MDL	9.94	PQL	pg/L	U	В
1,2,3,6,7,8-HXCDF	0.338	JBQ	0.0940	MDL.	9.94	PQL	pg/L	υ	В
1,2,3,7,8,9-HXCDD	0.299	JBQ	0.167	MDL	9.94	PQL	pg/L	U	В
1,2,3,7,8,9-HXCDF	0.227	JBQ	0.0936	MDL	9.94	PQL	pg/L	υ	В
1,2,3,7,8-PECDD	0.224	JQ	0.190	MDL	9.94	PQL	pg/L	J	Z
1,2,3,7,8-PECDF	0.170	JBQ	0.136	MDL	9.94	PQL	pg/L	U	В
2,3,4,6,7,8-HXCDF	0.395	JBQ	0.0810	MDL	9.94	PQL	pg/L	U	В
2,3,4,7,8-PECDF	0.494	JBQ	0.126	MDL	9.94	PQL	pg/L	U	В
2,3,7,8-TCDF	0.210	JQ	0.164	MDL	1.99	PQL	pg/L	J	Z

^{*} denotes a non-reportable result

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

9/5/2012 2:34:40 PM

ADR version 1.6.0.188