Attachment B2
Investigation-derived Waste Analytical Results and Manifest

January 15, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N002424

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on December 12, 2008 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

The attached report is the final hard copy pertaining to the subcontracted tests for the above project.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Jose Tenorio Jr.
Laboratory Director

This cover letter is an integral part of this analytical report.

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N002424

CASE NARRATIVE

Subcontracted Analysis:

STLC-Chromium was subcontracted to Advanced Technology Laboratories-Signal Hill, CA.

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

January 14, 2009

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118
TEL: (702) 307-2659
FAX: (702) 307-2691

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
Arizona: AZ0689
CSDLAC No.: 10196
Workorder No.: 103157

RE:

Attention: Marlon Cartin

Enclosed are the results for sample(s) received on January 08, 2009 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 103157

CASE NARRATIVE

Sample Receiving/General Comments

1. All sample containers were received intact with proper chain of custody documentation.
2. Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.
3. Sample preservation were verified upon receipt of samples, if applicable.
4. All samples were analyzed within method holding times.

Analytical Comments for Method 6010B

1. For sample 103157-001A, dilution was necessary due to sample matrix.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: *14-Jan-09*

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 103157
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
103157-001A	N002424-001B / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	1/8/2009	1/14/2009

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N002424-001B / IDW-SOIL-12001
Lab Order:	103157	**Collection Date:**	12/11/2008 3:10:00 PM
Project:		**Matrix:**	SOIL
Lab ID:	103157-001A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC							
			WET/ EPA 6010B				
RunID: **ICP8_090114A**	QC Batch: **R104382**				PrepDate:		Analyst: **CL**
Chromium	1.6	0.018	1.0		mg/L	20	1/14/2009 12:07 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 103157
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R104382

Sample ID: MB-52049	SampType: MBLK	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104382
Client ID: PBS	Batch ID: R104382	TestNo: WET/ EPA 60		Analysis Date: 1/14/2009	SeqNo: 1631852

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.050									

Sample ID: LCS-52049	SampType: LCS	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104382
Client ID: LCSS	Batch ID: R104382	TestNo: WET/ EPA 60		Analysis Date: 1/14/2009	SeqNo: 1631853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.921	0.050	1.000	0	92.1	85	115				

Sample ID: 103157-001AMS	SampType: MS	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104382
Client ID: N002424-001B / IDW	Batch ID: R104382	TestNo: WET/ EPA 60		Analysis Date: 1/14/2009	SeqNo: 1631858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	3.843	1.0	2.500	1.649	87.8	77	116				

Sample ID: 103157-001AMSD	SampType: MSD	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104382
Client ID: N002424-001B / IDW	Batch ID: R104382	TestNo: WET/ EPA 60		Analysis Date: 1/14/2009	SeqNo: 1631861

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	3.846	1.0	2.500	1.649	87.9	77	116	3.843	0.0844	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories - Las V
3151-3153 W Post Rd.
Las Vegas, NV 89118
TEL: *7023072659* FAX: *7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: ~~Level IV~~ LEVEL II

Subcontractor:
Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California
TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: BARRY COLLOM

08-Jan-09

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: WET/ EPA 6010B		
N002424-001B / IDW-SOIL-12001 10315T-201	Soil	12/11/2008 3:10:00 PM	8OZG	1		

General Comments: Please use PO#: LV00718 Please fax results by: ~~5 Day TAT~~ 4 DAY TAT

Please analyze for Cr only by 6010 STLC. 1/9/09

	Date/Time		Date/Time
Relinquished by:	1/8/09	Received by:	1/9/09
Relinquished by:		Received by:	

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME

DATE 12-12-08 PAGE 1 OF 1

COMPANY	E2 / CH2M Hill
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000, Oakland, CA 94612
P.O. NUMBER	354948.FP.08.FW.SC TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	8081 A	8082	6010B/7471 Title 22	8270 C	7199	NUMBER OF CONTAINERS	COMMENTS
IDW-soil-12001	12-11-08	1510	soil	X	X	X	X	X	6	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	12-12-08 1030
Signature (Received)	ALLEGAERT	ATL	12-12-08 1030
Signature (Relinquished)	ALLEGAERT	ATL	12-12-08
Signature (Received)	MBCARTHW	ATL	12/12/8
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (562) 989-4045.

Change Order Checklist

Client Name: ATL-LV

Date / Time Created: 1/8/2009 5:06:38 PM

Work Order Number: 103157

Created by: **MP**

Checklist completed by: _____ 1/8/09
Signature Date

Reviewed by: _____ _____
Initials Date

1. All samples within holding time?	Yes ☑	No ☐
2. Refrigerator temperature in compliance?	Yes ☑	No ☐
3. Change Order documents present?	Yes ☑	No ☐

Comments:

December 29, 2008

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N002424

RE: PG&E Topock

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on December 12, 2008 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Jose Tenorio Jr.
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N002424

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analysis:

Mercury (EPA 7471A), SVOC (EPA 8270C), Pesticides (EPA 8081A) and PCBs (EPA 8082) were subcontracted to Advanced Technology Laboratories-Signal Hill, CA.

Analytical Comments for EPA 6010B:

Matrix Spike Duplicate (MSD) recovery for Chromium was out of recovery criteria for sample N002424-001AMSD possibly due to matrix interference. A post digestion spike was performed on the sample and demonstrated recoveries within acceptance limits. Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were within acceptance crtieria.

Advanced Technology Laboratories *3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691*

Advanced Technology Laboratories - Las Vegas

Date: *29-Dec-08*

CLIENT: CH2M HILL
Project: PG&E Topock
Lab Order: N002424
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N002424-001A	IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/12/2008	12/29/2008
N002424-001B	IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/12/2008	12/29/2008
N002424-001C	IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/12/2008	12/29/2008
N002424-001D	IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/12/2008	12/29/2008

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME

DATE 12-12-08 PAGE 1 OF 1

COMPANY	E2 / CH2M Hill
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000, Oakland, CA 94612
P.O. NUMBER	354948.FP.08.FW.SC TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	8091 A	8082	6010B/7471 Title 22	9210 C	7199	NUMBER OF CONTAINERS	COMMENTS
IDW-Soil-12001	12-11-08	1510	Soil	X	X	X	X	X	6	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	12-12-08 1030
Signature (Received)	ALLEGAERT	ATL	12-12-08 1030
Signature (Relinquished)	ALLEGAERT	ATL	12-12-08
Signature (Received)	MBCARTHY	ATL	12/12/8
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 1.7 °C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories - Las V
3151-3153 W Post Rd.
Las Vegas, NV 89118
TEL: *7023072659* FAX: *7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California
TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

12-Dec-08

				Requested Tests		
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	**EPA 7471A**	**EPA 8081A**	**EPA 8082**
N002424-001B / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG	1		
N002424-001C / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG		1	1
N002424-001D / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG			

General Comments: Please use PO#: LV00698 Please fax results by: Normal TAT

Please see attached copy of COC from client.

		Date/Time			Date/Time
Relinquished by:		12/12/8	**Received by:**		
Relinquished by:			**Received by:**		

Advanced Technology Laboratories - Las V
3151-3153 W Post Rd.
Las Vegas, NV 89118
TEL: *7023072659* FAX: *7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California

TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

12-Dec-08

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 8270C		
N002424-001B / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG			
N002424-001C / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG			
N002424-001D / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG	1		

General Comments: Please use PO#: LV00698 Please fax results by: Normal TAT

Please see attached copy of COC from client.

	Date/Time		Date/Time
Relinquished by:	12/12/8	**Received by:**	
Relinquished by:		**Received by:**	

Advanced Technology Laboratories - Las Vegas

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (562) 989-4045.

Sample Receipt Checklist

Client Name: **CH2M HILL-OAKLAND** Date Time Received: **12/12/2008 2:28:04 PM**

Work Order Number: **N002424** Received by: **MBC**

Cooler Temp (Deg C): 1.7

Checklist completed by: _____ 12/12/8 Reviewed by: M 12/15/8
Signature Date Initials Date

Carrier name: ATL

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑

Comments:

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vegas

WORK ORDER Summary

12-Dec-08

Work Order N002424

Client ID: CH2M HILL-OAKLAND

Project: PG&E Topock

QC Level: Level IV

Date Received: 12/12/2008 2:28:04 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	SEL	Sub	Storage
N002424-001A	IDW-SOIL-12001	12/11/2008 3:10:00 PM	12/18/2008	Soil	EPA 3050B	SOPREP TOTAL METALS	☐	☐	☐	☐	WS
			12/18/2008		EPA 3060A	Prep for Hexavalend Chromium	☐	☐	☐	☐	WS
			12/18/2008		EPA 6010B	ICP METALS	☐	☐	☑	☐	WS
			12/18/2008		EPA 7199	Hexavalent Chromium by IC	☐	☐	☐	☐	WS
			12/18/2008		D2216	PERCENT MOISTURE	☐	☐	☐	☐	WS
N002424-001B			12/18/2008		EPA 7471	MERCURY PREP	☐	☐	☐	☐	WS
			12/18/2008		EPA 7471A	MERCURY BY COLD VAPOR TECHNIQUE	☐	☐	☐	☑	WS
N002424-001C			12/18/2008		EPA 3550B	ULTRASONIC EXTRACTION: PESTICIDES/PCB	☐	☐	☐	☐	SUB
			12/18/2008		EPA 8081A	ORGANOCHLORINE PESTICIDES BY GC/ECD	☐	☐	☑	☑	SUB
			12/18/2008		EPA 8082	PCBs BY GC/ECD	☐	☐	☐	☑	SUB
N002424-001D			12/18/2008		EPA 3550B	ULTRASONIC EXTRACTION: 8270C	☐	☐	☐	☐	SUB
			12/18/2008		EPA 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS	☐	☐	☑	☑	SUB
N002424-002A	Folder		12/18/2008		Folder	Folder	☐	☐	☐	☐	LAB

Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *29-Dec-08*

CLIENT: CH2M HILL
Lab Order: N002424
Project: PG&E Topock
Lab ID: N002424-001

Client Sample ID: IDW-SOIL-12001
Collection Date: 12/11/2008 3:10:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP1_081222A**	QC Batch: **32927**				PrepDate:	**12/16/2008**	Analyst: **JPA**
Antimony	ND	0.14	2.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Arsenic	3.0	0.29	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Barium	150	0.018	2.0		mg/Kg-dry	2	12/22/2008 11:34 AM
Beryllium	ND	0.010	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Cadmium	ND	0.010	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Chromium	210	0.15	2.0		mg/Kg-dry	2	12/22/2008 11:34 AM
Cobalt	7.4	0.060	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Copper	11	0.025	2.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Lead	4.3	0.084	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Molybdenum	1.8	0.060	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Nickel	13	0.039	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Selenium	ND	0.39	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Silver	ND	0.026	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Thallium	ND	0.25	2.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Vanadium	30	0.044	1.0		mg/Kg-dry	1	12/22/2008 11:43 AM
Zinc	52	0.21	2.0		mg/Kg-dry	2	12/22/2008 11:34 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories - Las Vegas

Date: *29-Dec-08*

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPGE

Sample ID: **MB-32927**	SampType: **MBLK**	TestCode: **6010_SPGE**	Units: **mg/Kg**	Prep Date: **12/16/2008**	RunNo: **73520**
Client ID: **PBS**	Batch ID: **32927**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **12/22/2008**	SeqNo: **1105679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	0.040	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	2.0									
Vanadium	ND	1.0									
Zinc	0.126	1.0									

Sample ID: **LCS-32927**	SampType: **LCS**	TestCode: **6010_SPGE**	Units: **mg/Kg**	Prep Date: **12/16/2008**	RunNo: **73520**
Client ID: **LCSS**	Batch ID: **32927**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **12/22/2008**	SeqNo: **1105680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.291	2.0	50.00	0	94.6	85	115				
Arsenic	47.931	1.0	50.00	0	95.9	85	115				
Barium	49.503	1.0	50.00	0	99.0	85	115				
Beryllium	47.922	1.0	50.00	0	95.8	85	115				
Cadmium	47.323	1.0	50.00	0	94.6	85	115				
Chromium	50.384	1.0	50.00	0	101	85	115				
Cobalt	49.092	1.0	50.00	0	98.2	85	115				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPGE

Sample ID: **LCS-32927** SampType: **LCS** TestCode: **6010_SPGE** Units: **mg/Kg** Prep Date: **12/16/2008** RunNo: **73520**
Client ID: **LCSS** Batch ID: **32927** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/22/2008** SeqNo: **1105680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	50.734	2.0	50.00	0	101	85	115				
Lead	49.202	1.0	50.00	0	98.4	85	115				
Molybdenum	50.186	1.0	50.00	0	100	85	115				
Nickel	48.053	1.0	50.00	0	96.1	85	115				
Selenium	45.036	1.0	50.00	0	90.1	85	115				
Silver	48.055	1.0	50.00	0	96.1	85	115				
Thallium	49.046	2.0	50.00	0	98.1	85	115				
Vanadium	50.672	1.0	50.00	0	101	85	115				
Zinc	47.144	1.0	50.00	0	94.3	85	115				

Sample ID: **LCSD-32927** SampType: **LCSD** TestCode: **6010_SPGE** Units: **mg/Kg** Prep Date: **12/16/2008** RunNo: **73520**
Client ID: **LCSS02** Batch ID: **32927** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/22/2008** SeqNo: **1105681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.145	2.0	50.00	0	94.3	85	115	47.29	0.310	20	
Arsenic	47.644	1.0	50.00	0	95.3	85	115	47.93	0.601	20	
Barium	49.101	1.0	50.00	0	98.2	85	115	49.50	0.817	20	
Beryllium	47.487	1.0	50.00	0	95.0	85	115	47.92	0.914	20	
Cadmium	46.584	1.0	50.00	0	93.2	85	115	47.32	1.57	20	
Chromium	50.040	1.0	50.00	0	100	85	115	50.38	0.685	20	
Cobalt	48.388	1.0	50.00	0	96.8	85	115	49.09	1.44	20	
Copper	50.412	2.0	50.00	0	101	85	115	50.73	0.637	20	
Lead	48.791	1.0	50.00	0	97.6	85	115	49.20	0.839	20	
Molybdenum	49.874	1.0	50.00	0	99.7	85	115	50.19	0.624	20	
Nickel	47.610	1.0	50.00	0	95.2	85	115	48.05	0.926	20	
Selenium	44.347	1.0	50.00	0	88.7	85	115	45.04	1.54	20	
Silver	47.748	1.0	50.00	0	95.5	85	115	48.05	0.639	20	
Thallium	48.279	2.0	50.00	0	96.6	85	115	49.05	1.58	20	
Vanadium	50.437	1.0	50.00	0	101	85	115	50.67	0.464	20	
Zinc	46.463	1.0	50.00	0	92.9	85	115	47.14	1.45	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPGE

Sample ID: N002424-001AMS	SampType: MS	TestCode: 6010_SPGE	Units: mg/Kg-dry	Prep Date: 12/16/2008	RunNo: 73520
Client ID: ZZZZZZ	Batch ID: 32927	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 12/22/2008	SeqNo: 1105684

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.804	10	125.5	0	76.3	75	125				
Arsenic	122.574	5.0	125.5	2.985	95.3	75	125				
Beryllium	117.235	5.0	125.5	0	93.4	75	125				
Cadmium	112.777	5.0	125.5	0	89.8	75	125				
Cobalt	126.355	5.0	125.5	7.389	94.8	75	125				
Copper	134.119	10	125.5	10.57	98.4	75	125				
Lead	122.651	5.0	125.5	4.252	94.3	75	125				
Molybdenum	120.846	5.0	125.5	1.766	94.9	75	125				
Nickel	132.886	5.0	125.5	13.25	95.3	75	125				
Selenium	108.781	5.0	125.5	0	86.6	75	125				
Silver	112.583	5.0	125.5	0	89.7	75	125				
Thallium	118.554	10	125.5	0	94.4	75	125				
Vanadium	159.491	5.0	125.5	29.91	103	75	125				

Sample ID: N002424-001AMSD	SampType: MSD	TestCode: 6010_SPGE	Units: mg/Kg-dry	Prep Date: 12/16/2008	RunNo: 73520
Client ID: ZZZZZZ	Batch ID: 32927	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 12/22/2008	SeqNo: 1105685

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.533	10	125.7	0	76.0	75	125	95.80	0.284	20	
Arsenic	121.977	5.0	125.7	2.985	94.7	75	125	122.6	0.489	20	
Beryllium	116.732	5.0	125.7	0	92.9	75	125	117.2	0.429	20	
Cadmium	110.874	5.0	125.7	0	88.2	75	125	112.8	1.70	20	
Cobalt	125.325	5.0	125.7	7.389	93.8	75	125	126.4	0.818	20	
Copper	141.339	10	125.7	10.57	104	75	125	134.1	5.24	20	
Lead	121.370	5.0	125.7	4.252	93.2	75	125	122.7	1.05	20	
Molybdenum	120.665	5.0	125.7	1.766	94.6	75	125	120.8	0.151	20	
Nickel	133.635	5.0	125.7	13.25	95.8	75	125	132.9	0.562	20	
Selenium	107.480	5.0	125.7	0	85.5	75	125	108.8	1.20	20	
Silver	111.605	5.0	125.7	0	88.8	75	125	112.6	0.872	20	
Thallium	118.742	10	125.7	0	94.5	75	125	118.6	0.158	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories
3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPGE

Sample ID: N002424-001AMSD	SampType: MSD	TestCode: 6010_SPGE	Units: mg/Kg-dry	Prep Date: 12/16/2008	RunNo: 73520
Client ID: ZZZZZZ	Batch ID: 32927	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 12/22/2008	SeqNo: 1105685

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vanadium	159.576	5.0	125.7	29.91	103	75	125	159.5	0.0537	20	

Sample ID: N002424-001AMS	SampType: MS	TestCode: 6010_SPGE	Units: mg/Kg-dry	Prep Date: 12/16/2008	RunNo: 73520
Client ID: ZZZZZZ	Batch ID: 32927	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 12/22/2008	SeqNo: 1105692

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	278.764	5.0	125.5	150.5	102	75	125				
Chromium	356.328	5.0	125.5	214.0	113	75	125				
Zinc	167.544	5.0	125.5	52.26	91.8	75	125				

Sample ID: N002424-001AMSD	SampType: MSD	TestCode: 6010_SPGE	Units: mg/Kg-dry	Prep Date: 12/16/2008	RunNo: 73520
Client ID: ZZZZZZ	Batch ID: 32927	TestNo: EPA 6010B	EPA 3050B	Analysis Date: 12/22/2008	SeqNo: 1105717

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	279.756	5.0	125.7	150.5	103	75	125	278.8	0.355	20	
Chromium	373.692	5.0	125.7	214.0	127	75	125	356.3	4.76	20	S
Zinc	166.645	5.0	125.7	52.26	91.0	75	125	167.5	0.538	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *29-Dec-08*

CLIENT: CH2M HILL
Lab Order: N002424
Project: PG&E Topock
Lab ID: N002424-001

Client Sample ID: IDW-SOIL-12001
Collection Date: 12/11/2008 3:10:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
	EPA 3060A				**EPA 7199**		
RunID: **IC1_081223A**	QC Batch: **32957**				PrepDate:	**12/20/2008**	Analyst: **QBM**
Hexavalent Chromium	3.4	0.056	0.32		mg/Kg-dry	2	12/23/2008 01:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

Advanced Technology Laboratories - Las Vegas

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Date: *29-Dec-08*

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_S_PGE

Sample ID: **MB-32957**	SampType: **MBLK**	TestCode: **7199_S_PGE**	Units: **mg/Kg**	Prep Date: **12/20/2008**	RunNo: **73530**
Client ID: **PBS**	Batch ID: **32957**	TestNo: **EPA 7199**	**EPA 3060A**	Analysis Date: **12/23/2008**	SeqNo: **1106221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.16									

Sample ID: **LCS-32957**	SampType: **LCS**	TestCode: **7199_S_PGE**	Units: **mg/Kg**	Prep Date: **12/20/2008**	RunNo: **73530**
Client ID: **LCSS**	Batch ID: **32957**	TestNo: **EPA 7199**	**EPA 3060A**	Analysis Date: **12/23/2008**	SeqNo: **1106222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.860	0.32	4.000	0	96.5	80	120				

Sample ID: **N002424-001AMS**	SampType: **MS**	TestCode: **7199_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/20/2008**	RunNo: **73530**
Client ID: **ZZZZZZ**	Batch ID: **32957**	TestNo: **EPA 7199**	**EPA 3060A**	Analysis Date: **12/23/2008**	SeqNo: **1106225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.874	0.32	4.027	3.439	85.3	85	115				

Sample ID: **N002424-001AMSD**	SampType: **MSD**	TestCode: **7199_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/20/2008**	RunNo: **73530**
Client ID: **ZZZZZZ**	Batch ID: **32957**	TestNo: **EPA 7199**	**EPA 3060A**	Analysis Date: **12/23/2008**	SeqNo: **1106226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.381	0.32	4.027	3.439	97.9	85	115	6.874	7.12	20	

Sample ID: **N002424-001AMSB**	SampType: **MS**	TestCode: **7199_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/20/2008**	RunNo: **73530**
Client ID: **ZZZZZZ**	Batch ID: **32957**	TestNo: **EPA 7199**	**EPA 3060A**	Analysis Date: **12/23/2008**	SeqNo: **1106227**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10389.448	160	10070	3.439	103	85	115				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories - Las Vegas

ANALYTICAL RESULTS

Print Date: *29-Dec-08*

CLIENT:	CH2M HILL	**Client Sample ID:**	IDW-SOIL-12001
Lab Order:	N002424	**Collection Date:**	12/11/2008 3:10:00 PM
Project:	PG&E Topock	**Matrix:**	SOIL
Lab ID:	N002424-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE							
			D2216				
RunID: **WETCHEM_081219A**	QC Batch: **R73513**				PrepDate:		Analyst: **SWT**
Percent Moisture	0.6800	0.1000	0.1000		wt%	1	12/18/2008

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

Advanced Technology Laboratories - Las Vegas

Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Date: *29-Dec-08*

CLIENT: CH2M HILL
Work Order: N002424
Project: PG&E Topock

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID: **MB-R73513**	SampType: **MBLK**	TestCode: **PMOIST**	Units: **wt%**	Prep Date:	RunNo: **73513**
Client ID: **PBS**	Batch ID: **R73513**	TestNo: **D2216**		Analysis Date: **12/18/2008**	SeqNo: **1105589**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	ND	0.1000									

Sample ID: **N002424-001ADUP**	SampType: **DUP**	TestCode: **PMOIST**	Units: **wt%**	Prep Date:	RunNo: **73513**
Client ID: **ZZZZZZ**	Batch ID: **R73513**	TestNo: **D2216**		Analysis Date: **12/18/2008**	SeqNo: **1105591**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	0.660	0.1000						0.6800	2.99	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

December 23, 2008

Marlon Cartin
Advanced Technology Laboratory-Las Vegas
3151 W Post Rd.
Las Vegas, NV 89118
TEL: (702) 307-2659
FAX: (702) 307-2691

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
Arizona: AZ0689
CSDLAC No.: 10196
Workorder No.: 102700

RE:

Attention: Marlon Cartin

Enclosed are the results for sample(s) received on December 13, 2008 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 102700

CASE NARRATIVE

Sample Receiving/General Comments

1. All sample containers were received intact with proper chain of custody documentation.
2. Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.
3. Sample preservation were verified upon receipt of samples, if applicable.
4. All samples were analyzed within method holding times.

Analytical Comments for EPA 8270C

1. For samples 102700-003AMS and 102700-003AMSD, LCS-51263 and LCSD-51263, 4-Bromophenyl-phenylether recovery was biased high. Sample results were non-detects (ND) for these analytes therefore reanalysis of the sample was not necessary.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: *23-Dec-08*

CLIENT: Advanced Technology Laboratory-Las Vega
Project:
Lab Order: 102700
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
102700-001A	N002424-001B / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/13/2008	12/23/2008
102700-002A	N002424-001C / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/13/2008	12/23/2008
102700-003A	N002424-001D / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	12/13/2008	12/23/2008

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N002424-001C / IDW-SOIL-12001
Lab Order:	102700	**Collection Date:**	12/11/2008 3:10:00 PM
Project:		**Matrix:**	SOIL
Lab ID:	102700-002A		

ORGANOCHLORINE PESTICIDES BY GC/ECD

EPA 3550B **EPA 8081A**

RunID: **GC9_081218A** QC Batch: **51229** PrepDate: **12/17/2008** Analyst: **VLT**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
4,4´-DDD	ND	0.060	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
4,4´-DDE	ND	0.061	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
4,4´-DDT	ND	0.070	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Aldrin	ND	0.064	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
alpha-BHC	ND	0.064	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
alpha-Chlordane	ND	0.060	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
beta-BHC	ND	0.14	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
delta-BHC	ND	0.092	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Dieldrin	ND	0.058	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Endosulfan I	ND	0.055	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Endosulfan II	ND	0.061	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Endosulfan sulfate	ND	0.079	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Endrin	ND	0.065	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Endrin aldehyde	ND	0.11	2.0		µg/Kg-dry	1	12/18/2008 03:33 PM
gamma-BHC	ND	0.095	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
gamma-Chlordane	ND	0.079	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Heptachlor	ND	0.072	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Heptachlor epoxide	ND	0.062	1.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Methoxychlor	ND	0.21	5.0		µg/Kg-dry	1	12/18/2008 03:33 PM
Toxaphene	ND	11	50		µg/Kg-dry	1	12/18/2008 03:33 PM
Surr: Tetrachloro-m-xylene	70.6	0	36-124		%REC	1	12/18/2008 03:33 PM
Surr: Decachlorobiphenyl	115	0	26-125		%REC	1	12/18/2008 03:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **MB-51229**	SampType: **MBLK**	TestCode: **8081_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103240**
Client ID: **PBS**	Batch ID: **51229**	TestNo: **EPA 8081A**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1610718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	ND	2.0									
4,4´-DDE	ND	2.0									
4,4´-DDT	ND	2.0									
Aldrin	ND	1.0									
alpha-BHC	ND	1.0									
alpha-Chlordane	ND	1.0									
beta-BHC	ND	1.0									
delta-BHC	ND	1.0									
Dieldrin	ND	2.0									
Endosulfan I	ND	1.0									
Endosulfan II	ND	2.0									
Endosulfan sulfate	ND	2.0									
Endrin	ND	2.0									
Endrin aldehyde	ND	2.0									
gamma-BHC	ND	1.0									
gamma-Chlordane	ND	1.0									
Heptachlor	ND	1.0									
Heptachlor epoxide	ND	1.0									
Methoxychlor	ND	5.0									
Toxaphene	ND	50									
Surr: Tetrachloro-m-xylene	13.390		16.67		80.3	36	124				
Surr: Decachlorobiphenyl	15.933		16.67		95.6	26	125				

Sample ID: **LCS-51229**	SampType: **LCS**	TestCode: **8081_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103240**
Client ID: **LCSS**	Batch ID: **51229**	TestNo: **EPA 8081A**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1610719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.699	2.0	16.67	0	88.2	50	139				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **LCS-51229** SampType: **LCS** TestCode: **8081_S_PGE** Units: **µg/Kg** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **LCSS** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDE	14.568	2.0	16.67	0	87.4	68	126				
4,4´-DDT	13.351	2.0	16.67	0	80.1	46	135				
Aldrin	13.760	1.0	16.67	0	82.5	47	120				
alpha-BHC	14.098	1.0	16.67	0	84.6	62	125				
alpha-Chlordane	13.295	1.0	16.67	0	79.8	63	121				
beta-BHC	12.639	1.0	16.67	0	75.8	62	127				
delta-BHC	15.088	1.0	16.67	0	90.5	57	130				
Dieldrin	14.106	2.0	16.67	0	84.6	67	125				
Endosulfan I	14.463	1.0	16.67	0	86.8	41	147				
Endosulfan II	14.971	2.0	16.67	0	89.8	37	141				
Endosulfan sulfate	14.863	2.0	16.67	0	89.2	62	135				
Endrin	14.768	2.0	16.67	0	88.6	61	133				
Endrin aldehyde	15.311	2.0	16.67	0	91.8	37	147				
gamma-BHC	13.646	1.0	16.67	0	81.9	59	123				
gamma-Chlordane	13.508	1.0	16.67	0	81.0	48	124				
Heptachlor	14.056	1.0	16.67	0	84.3	51	140				
Heptachlor epoxide	13.385	1.0	16.67	0	80.3	66	130				
Methoxychlor	16.409	5.0	16.67	0	98.4	57	143				
Surr: Tetrachloro-m-xylene	12.582		16.67		75.5	36	124				
Surr: Decachlorobiphenyl	15.230		16.67		91.4	26	125				

Sample ID: **LCSD-51229** SampType: **LCSD** TestCode: **8081_S_PGE** Units: **µg/Kg** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **LCSS02** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610720**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	14.477	2.0	16.67	0	86.8	50	139	14.70	1.52	50	
4,4´-DDE	14.242	2.0	16.67	0	85.4	68	126	14.57	2.26	50	
4,4´-DDT	13.487	2.0	16.67	0	80.9	46	135	13.35	1.01	50	
Aldrin	13.660	1.0	16.67	0	81.9	47	120	13.76	0.727	50	
alpha-BHC	14.052	1.0	16.67	0	84.3	62	125	14.10	0.323	50	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **LCSD-51229** SampType: **LCSD** TestCode: **8081_S_PGE** Units: **µg/Kg** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **LCSS02** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610720**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
alpha-Chlordane	13.199	1.0	16.67	0	79.2	63	121	13.30	0.730	50	
beta-BHC	12.550	1.0	16.67	0	75.3	62	127	12.64	0.707	50	
delta-BHC	14.973	1.0	16.67	0	89.8	57	130	15.09	0.765	50	
Dieldrin	13.900	2.0	16.67	0	83.4	67	125	14.11	1.47	50	
Endosulfan I	13.907	1.0	16.67	0	83.4	41	147	14.46	3.92	50	
Endosulfan II	14.772	2.0	16.67	0	88.6	37	141	14.97	1.34	50	
Endosulfan sulfate	14.637	2.0	16.67	0	87.8	62	135	14.86	1.53	50	
Endrin	14.659	2.0	16.67	0	87.9	61	133	14.77	0.742	50	
Endrin aldehyde	14.805	2.0	16.67	0	88.8	37	147	15.31	3.36	50	
gamma-BHC	13.584	1.0	16.67	0	81.5	59	123	13.65	0.449	50	
gamma-Chlordane	13.414	1.0	16.67	0	80.5	48	124	13.51	0.700	50	
Heptachlor	13.883	1.0	16.67	0	83.3	51	140	14.06	1.24	50	
Heptachlor epoxide	13.286	1.0	16.67	0	79.7	66	130	13.39	0.749	50	
Methoxychlor	15.754	5.0	16.67	0	94.5	57	143	16.41	4.07	50	
Surr: Tetrachloro-m-xylene	12.533		16.67		75.2	36	124		0	0	
Surr: Decachlorobiphenyl	14.865		16.67		89.2	26	125		0	0	

Sample ID: **LCS-51229TOX** SampType: **LCS** TestCode: **8081_S_PGE** Units: **µg/Kg** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **LCSS** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	159.999	50	166.7	0	96.0	31	136				
Surr: Tetrachloro-m-xylene	15.030		16.67		90.2	36	124				
Surr: Decachlorobiphenyl	18.529		16.67		111	26	125				

Sample ID: **LCSD-51229TOX** SampType: **LCSD** TestCode: **8081_S_PGE** Units: **µg/Kg** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **LCSS02** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **LCSD-51229TOX**	SampType: **LCSD**	TestCode: **8081_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103240**
Client ID: **LCSS02**	Batch ID: **51229**	TestNo: **EPA 8081A**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1610722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	160.124	50	166.7	0	96.1	31	136	160.0	0.0778	50	
Surr: Tetrachloro-m-xylene	14.906		16.67		89.4	36	124		0	0	
Surr: Decachlorobiphenyl	18.444		16.67		111	26	125		0	0	

Sample ID: **102700-002AMS**	SampType: **MS**	TestCode: **8081_S_PGE**	Units: **µg/Kg-dry**	Prep Date: **12/17/2008**	RunNo: **103240**
Client ID: **N002424-001C / IDW**	Batch ID: **51229**	TestNo: **EPA 8081A**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1610723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	11.156	2.0	16.78	0	66.5	50	139				
4,4´-DDE	12.490	2.0	16.78	0	74.4	68	126				
4,4´-DDT	13.677	2.0	16.78	0	81.5	46	135				
Aldrin	12.518	1.0	16.78	0	74.6	47	120				
alpha-BHC	13.948	1.0	16.78	0	83.1	62	125				
alpha-Chlordane	10.603	1.0	16.78	0	63.2	63	121				
beta-BHC	11.425	1.0	16.78	0	68.1	62	127				
delta-BHC	12.420	1.0	16.78	0	74.0	57	130				
Dieldrin	11.971	2.0	16.78	0	71.3	67	125				
Endosulfan I	12.219	1.0	16.78	0	72.8	41	147				
Endosulfan II	13.232	2.0	16.78	0	78.8	37	141				
Endosulfan sulfate	12.339	2.0	16.78	0	73.5	62	135				
Endrin	13.557	2.0	16.78	0	80.8	61	133				
Endrin aldehyde	12.828	2.0	16.78	0	76.4	37	147				
Endrin ketone	12.833	2.0	16.78	0	76.5	73	140				
gamma-BHC	13.245	1.0	16.78	0	78.9	59	123				
gamma-Chlordane	11.975	1.0	16.78	0	71.3	48	124				
Heptachlor	13.866	1.0	16.78	0	82.6	51	140				
Heptachlor epoxide	12.330	1.0	16.78	0	73.5	66	130				
Methoxychlor	14.800	5.0	16.78	0	88.2	57	143				
Surr: Tetrachloro-m-xylene	12.922		16.78		77.0	36	124				
Surr: Decachlorobiphenyl	20.507		16.78		122	26	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **102700-002AMSD** SampType: **MSD** TestCode: **8081_S_PGE** Units: **µg/Kg-dry** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **N002424-001C / IDW** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4´-DDD	10.787	2.0	16.78	0	64.3	50	139	11.16	3.36	50	
4,4´-DDE	12.506	2.0	16.78	0	74.5	68	126	12.49	0.124	50	
4,4´-DDT	13.249	2.0	16.78	0	78.9	46	135	13.68	3.18	50	
Aldrin	12.595	1.0	16.78	0	75.0	47	120	12.52	0.609	50	
alpha-BHC	13.960	1.0	16.78	0	83.2	62	125	13.95	0.0902	50	
alpha-Chlordane	10.591	1.0	16.78	0	63.1	63	121	10.60	0.114	50	
beta-BHC	11.504	1.0	16.78	0	68.5	62	127	11.43	0.686	50	
delta-BHC	12.629	1.0	16.78	0	75.2	57	130	12.42	1.66	50	
Dieldrin	11.478	2.0	16.78	0	68.4	67	125	11.97	4.20	50	
Endosulfan I	11.741	1.0	16.78	0	70.0	41	147	12.22	3.99	50	
Endosulfan II	12.799	2.0	16.78	0	76.3	37	141	13.23	3.33	50	
Endosulfan sulfate	12.038	2.0	16.78	0	71.7	62	135	12.34	2.47	50	
Endrin	13.062	2.0	16.78	0	77.8	61	133	13.56	3.71	50	
Endrin aldehyde	12.630	2.0	16.78	0	75.3	37	147	12.83	1.55	50	
Endrin ketone	12.615	2.0	16.78	0	75.2	73	140	12.83	1.71	50	
gamma-BHC	13.285	1.0	16.78	0	79.1	59	123	13.24	0.301	50	
gamma-Chlordane	11.786	1.0	16.78	0	70.2	48	124	11.98	1.59	50	
Heptachlor	13.621	1.0	16.78	0	81.2	51	140	13.87	1.78	50	
Heptachlor epoxide	12.390	1.0	16.78	0	73.8	66	130	12.33	0.486	50	
Methoxychlor	14.266	5.0	16.78	0	85.0	57	143	14.80	3.67	50	
Surr: Tetrachloro-m-xylene	12.921		16.78		77.0	36	124		0	0	
Surr: Decachlorobiphenyl	20.567		16.78		123	26	125		0	0	

Sample ID: **102700-002AMSTOX** SampType: **MS** TestCode: **8081_S_PGE** Units: **µg/Kg-dry** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **N002424-001C / IDW** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	116.977	50	167.8	0	69.7	31	136				
Surr: Tetrachloro-m-xylene	12.724		16.78		75.8	36	124				
Surr: Decachlorobiphenyl	20.382		16.78		121	26	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **102700-002AMSDTO** SampType: **MSD** TestCode: **8081_S_PGE** Units: **µg/Kg-dry** Prep Date: **12/17/2008** RunNo: **103240**
Client ID: **N002424-001C / IDW** Batch ID: **51229** TestNo: **EPA 8081A** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1610726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	121.983	50	167.8	0	72.7	31	136	117.0	4.19	50	
Surr: Tetrachloro-m-xylene	12.836		16.78		76.5	36	124		0	0	
Surr: Decachlorobiphenyl	20.957		16.78		125	26	125		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N002424-001C / IDW-SOIL-12001
Lab Order:	102700	**Collection Date:**	12/11/2008 3:10:00 PM
Project:		**Matrix:**	SOIL
Lab ID:	102700-002A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
PCBS BY GC/ECD							
	EPA 3550B				**EPA 8082**		
RunID: **GC4_081218A**	QC Batch: **51229**				PrepDate: **12/17/2008**		Analyst: **HL**
Aroclor 1016	ND	8.6	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1221	ND	2.5	33		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1232	ND	4.0	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1242	ND	3.5	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1248	ND	2.5	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1254	ND	1.8	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Aroclor 1260	ND	4.2	17		µg/Kg-dry	1	12/18/2008 02:39 PM
Surr: Decachlorobiphenyl	123	0	26-125		%REC	1	12/18/2008 02:39 PM
Surr: Tetrachloro-m-xylene	88.2	0	48-121		%REC	1	12/18/2008 02:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **MB-51229**	SampType: **MBLK**	TestCode: **8082_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103192**
Client ID: **PBS**	Batch ID: **51229**	TestNo: **EPA 8082**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1609927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	16									
Aroclor 1221	ND	33									
Aroclor 1232	ND	16									
Aroclor 1242	ND	16									
Aroclor 1248	ND	16									
Aroclor 1254	ND	16									
Aroclor 1260	ND	16									
Surr: Decachlorobiphenyl	11.512		16.67		69.1	26	125				
Surr: Tetrachloro-m-xylene	12.503		16.67		75.0	48	121				

Sample ID: **LCSA-51229**	SampType: **LCS**	TestCode: **8082_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103192**
Client ID: **LCSS**	Batch ID: **51229**	TestNo: **EPA 8082**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1609928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	139.577	16	166.7	0	83.7	41	138				
Aroclor 1260	152.893	16	166.7	0	91.7	61	131				
Surr: Decachlorobiphenyl	13.395		16.67		80.4	26	125				
Surr: Tetrachloro-m-xylene	14.912		16.67		89.5	48	121				

Sample ID: **LCSDA-51229**	SampType: **LCSD**	TestCode: **8082_S_PGE**	Units: **µg/Kg**	Prep Date: **12/17/2008**	RunNo: **103192**
Client ID: **LCSS02**	Batch ID: **51229**	TestNo: **EPA 8082**	**EPA 3550B**	Analysis Date: **12/18/2008**	SeqNo: **1609929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	145.972	16	166.7	0	87.6	41	138	139.6	4.48	50	
Aroclor 1260	160.420	16	166.7	0	96.3	61	131	152.9	4.80	50	
Surr: Decachlorobiphenyl	13.995		16.67		84.0	26	125		0	0	
Surr: Tetrachloro-m-xylene	15.765		16.67		94.6	48	121		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51229

Sample ID: **102700-002AMSA** SampType: **MS** TestCode: **8082_S_PGE** Units: **µg/Kg-dry** Prep Date: **12/17/2008** RunNo: **103192**
Client ID: **N002424-001C / IDW** Batch ID: **51229** TestNo: **EPA 8082** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1609930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	135.265	17	167.8	0	80.6	41	138				
Aroclor 1260	152.700	17	167.8	11.71	84.0	61	131				
Surr: Decachlorobiphenyl	19.519		16.78		116	26	125				
Surr: Tetrachloro-m-xylene	13.926		16.78		83.0	48	121				

Sample ID: **102700-002AMSDA** SampType: **MSD** TestCode: **8082_S_PGE** Units: **µg/Kg-dry** Prep Date: **12/17/2008** RunNo: **103192**
Client ID: **N002424-001C / IDW** Batch ID: **51229** TestNo: **EPA 8082** **EPA 3550B** Analysis Date: **12/18/2008** SeqNo: **1609931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	143.405	17	167.8	0	85.5	41	138	135.3	5.84	50	
Aroclor 1260	155.237	17	167.8	11.71	85.5	61	131	152.7	1.65	50	
Surr: Decachlorobiphenyl	19.583		16.78		117	26	125		0	0	
Surr: Tetrachloro-m-xylene	14.059		16.78		83.8	48	121		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT: Advanced Technology Laboratory-Las Vega
Client Sample ID: N002424-001D / IDW-SOIL-12001
Lab Order: 102700
Collection Date: 12/11/2008 3:10:00 PM
Project:
Matrix: SOIL
Lab ID: 102700-003A

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: **MS6_081219A** QC Batch: **51263** PrepDate: **12/18/2008** Analyst: **DMP**

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	68	330		µg/Kg-dry	1	12/19/2008 12:09 PM
1,2-Dichlorobenzene	ND	43	330		µg/Kg-dry	1	12/19/2008 12:09 PM
1,3-Dichlorobenzene	ND	55	330		µg/Kg-dry	1	12/19/2008 12:09 PM
1,4-Dichlorobenzene	ND	46	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4,5-Trichlorophenol	ND	78	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4,6-Trichlorophenol	ND	71	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4-Dichlorophenol	ND	76	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4-Dimethylphenol	ND	52	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4-Dinitrophenol	ND	190	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
2,4-Dinitrotoluene	ND	76	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2,6-Dinitrotoluene	ND	100	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Chloronaphthalene	ND	59	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Chlorophenol	ND	48	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Methylnaphthalene	ND	63	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Methylphenol	ND	61	330		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Nitroaniline	ND	90	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
2-Nitrophenol	ND	88	330		µg/Kg-dry	1	12/19/2008 12:09 PM
3,3´-Dichlorobenzidine	ND	260	330		µg/Kg-dry	1	12/19/2008 12:09 PM
3-Nitroaniline	ND	68	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
4,6-Dinitro-2-methylphenol	ND	200	1700		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Bromophenyl-phenylether	ND	90	330		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Chloro-3-methylphenol	ND	60	660		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Chloroaniline	ND	170	330		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Chlorophenyl-phenylether	ND	64	330		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Methylphenol	ND	61	330		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Nitroaniline	ND	120	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
4-Nitrophenol	ND	160	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
Acenaphthene	ND	70	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Acenaphthylene	ND	73	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Anthracene	ND	55	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzo(a)anthracene	ND	87	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzo(a)pyrene	ND	88	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzo(b)fluoranthene	ND	97	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzo(g,h,i)perylene	ND	76	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzo(k)fluoranthene	ND	110	330		µg/Kg-dry	1	12/19/2008 12:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT: Advanced Technology Laboratory-Las Vega
Client Sample ID: N002424-001D / IDW-SOIL-12001
Lab Order: 102700
Collection Date: 12/11/2008 3:10:00 PM
Project:
Matrix: SOIL
Lab ID: 102700-003A

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS6_081219A**	QC Batch: **51263**				PrepDate: **12/18/2008**		Analyst: **DMP**
Benzoic acid	ND	160	1700		µg/Kg-dry	1	12/19/2008 12:09 PM
Benzyl alcohol	ND	58	660		µg/Kg-dry	1	12/19/2008 12:09 PM
Bis(2-chloroethoxy)methane	ND	72	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Bis(2-chloroethyl)ether	ND	47	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Bis(2-chloroisopropyl)ether	ND	64	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Bis(2-ethylhexyl)phthalate	ND	250	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Butylbenzylphthalate	ND	320	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Chrysene	ND	78	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Di-n-butylphthalate	ND	63	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Di-n-octylphthalate	ND	320	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Dibenz(a,h)anthracene	ND	77	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Dibenzofuran	ND	60	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Diethylphthalate	ND	100	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Dimethylphthalate	ND	75	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Fluoranthene	ND	83	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Fluorene	ND	57	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Hexachlorobenzene	ND	76	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Hexachlorobutadiene	ND	54	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Hexachloroethane	ND	62	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Indeno(1,2,3-cd)pyrene	ND	74	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Isophorone	ND	62	330		µg/Kg-dry	1	12/19/2008 12:09 PM
N-Nitrosodi-n-propylamine	ND	86	330		µg/Kg-dry	1	12/19/2008 12:09 PM
N-Nitrosodiphenylamine	ND	76	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Naphthalene	ND	54	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Nitrobenzene	ND	70	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Pentachlorophenol	ND	130	1600		µg/Kg-dry	1	12/19/2008 12:09 PM
Phenanthrene	ND	66	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Phenol	ND	59	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Pyrene	ND	83	330		µg/Kg-dry	1	12/19/2008 12:09 PM
Surr: 1,2-Dichlorobenzene-d4	80.2	0	25-110		%REC	1	12/19/2008 12:09 PM
Surr: 2,4,6-Tribromophenol	111	0	36-126		%REC	1	12/19/2008 12:09 PM
Surr: 2-Chlorophenol-d4	90.7	0	30-100		%REC	1	12/19/2008 12:09 PM
Surr: 2-Fluorobiphenyl	91.8	0	43-125		%REC	1	12/19/2008 12:09 PM
Surr: 2-Fluorophenol	89.8	0	37-125		%REC	1	12/19/2008 12:09 PM
Surr: 4-Terphenyl-d14	110	0	32-125		%REC	1	12/19/2008 12:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N002424-001D / IDW-SOIL-12001
Lab Order:	102700	**Collection Date:**	12/11/2008 3:10:00 PM
Project:		**Matrix:**	SOIL
Lab ID:	102700-003A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS							
EPA 3550B			**EPA 8270C**				
RunID: **MS6_081219A**	QC Batch: **51263**				PrepDate: **12/18/2008**		Analyst: **DMP**
Surr: Nitrobenzene-d5	85.1	0	37-125		%REC	1	12/19/2008 12:09 PM
Surr: Phenol-d5	93.0	0	40-125		%REC	1	12/19/2008 12:09 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **MB-51263** SampType: **MBLK** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **PBS** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330									
1,2-Dichlorobenzene	ND	330									
1,3-Dichlorobenzene	ND	330									
1,4-Dichlorobenzene	ND	330									
2,4,5-Trichlorophenol	ND	1600									
2,4,6-Trichlorophenol	ND	330									
2,4-Dichlorophenol	ND	330									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3´-Dichlorobenzidine	ND	330									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	330									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **MB-51263**	SampType: **MBLK**	TestCode: **8270_S_FUL**	Units: **µg/Kg**		Prep Date: **12/18/2008**			RunNo: **103233**			
Client ID: **PBS**	Batch ID: **51263**	TestNo: **EPA 8270C**	**EPA 3550B**		Analysis Date: **12/19/2008**			SeqNo: **1610649**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthylene	ND	330									
Anthracene	ND	330									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	330									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	330									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	330									
Hexachloroethane	ND	330									
Indeno(1,2,3-cd)pyrene	ND	330									
Isophorone	ND	330									
N-Nitrosodi-n-propylamine	ND	330									
N-Nitrosodiphenylamine	ND	330									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **MB-51263**	SampType: **MBLK**	TestCode: **8270_S_FUL**	Units: **µg/Kg**	Prep Date: **12/18/2008**	RunNo: **103233**
Client ID: **PBS**	Batch ID: **51263**	TestNo: **EPA 8270C**	**EPA 3550B**	Analysis Date: **12/19/2008**	SeqNo: **1610649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	330									
Nitrobenzene	ND	330									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2829.000		3330		85.0	25	110				
Surr: 2,4,6-Tribromophenol	3386.000		3330		102	36	126				
Surr: 2-Chlorophenol-d4	2979.667		3330		89.5	30	100				
Surr: 2-Fluorobiphenyl	2934.333		3330		88.1	43	125				
Surr: 2-Fluorophenol	2943.667		3330		88.4	37	125				
Surr: 4-Terphenyl-d14	3748.000		3330		113	32	125				
Surr: Nitrobenzene-d5	2897.333		3330		87.0	37	125				
Surr: Phenol-d5	3017.333		3330		90.6	40	125				

Sample ID: **LCS-51263**	SampType: **LCS**	TestCode: **8270_S_FUL**	Units: **µg/Kg**	Prep Date: **12/18/2008**	RunNo: **103233**
Client ID: **LCSS**	Batch ID: **51263**	TestNo: **EPA 8270C**	**EPA 3550B**	Analysis Date: **12/19/2008**	SeqNo: **1610650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2998.333	330	3330	0	90.0	44	125				
1,2-Dichlorobenzene	2833.333	330	3330	0	85.1	45	125				
1,3-Dichlorobenzene	2954.333	330	3330	0	88.7	39	125				
1,4-Dichlorobenzene	2893.667	330	3330	0	86.9	35	125				
2,4,5-Trichlorophenol	3720.333	1600	3330	0	112	49	125				
2,4,6-Trichlorophenol	3600.333	330	3330	0	108	43	125				
2,4-Dichlorophenol	3478.333	330	3330	0	104	45	125				
2,4-Dimethylphenol	3157.667	330	3330	0	94.8	32	125				
2,4-Dinitrophenol	3389.667	1600	3330	0	102	25	132				
2,4-Dinitrotoluene	3720.333	330	3330	0	112	48	125				
2,6-Dinitrotoluene	3680.667	330	3330	0	111	48	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCS-51263** SampType: **LCS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chloronaphthalene	3219.000	330	3330	0	96.7	45	125				
2-Chlorophenol	3143.667	330	3330	0	94.4	44	125				
2-Methylnaphthalene	3317.000	330	3330	0	99.6	47	125				
2-Methylphenol	3273.667	330	3330	0	98.3	40	125				
2-Nitroaniline	3819.333	1600	3330	0	115	44	125				
2-Nitrophenol	3400.000	330	3330	0	102	42	125				
3,3´-Dichlorobenzidine	3107.333	330	3330	0	93.3	25	128				
3-Nitroaniline	3360.667	1600	3330	0	101	27	125				
4,6-Dinitro-2-methylphenol	4090.000	1600	3330	0	123	29	137				
4-Bromophenyl-phenylether	4373.000	330	3330	0	131	46	125				S
4-Chloro-3-methylphenol	3781.333	660	3330	0	114	46	125				
4-Chloroaniline	3212.000	330	3330	0	96.5	10	125				
4-Chlorophenyl-phenylether	3777.667	330	3330	0	113	47	125				
4-Methylphenol	3421.667	330	3330	0	103	41	125				
4-Nitroaniline	3916.000	1600	3330	0	118	34	125				
4-Nitrophenol	4031.333	1600	3330	0	121	25	138				
Acenaphthene	3517.000	330	3330	0	106	46	125				
Acenaphthylene	3410.667	330	3330	0	102	44	125				
Anthracene	3784.667	330	3330	0	114	53	125				
Benzo(a)anthracene	3528.667	330	3330	0	106	52	125				
Benzo(a)pyrene	3999.667	330	3330	0	120	50	125				
Benzo(b)fluoranthene	3848.667	330	3330	0	116	45	125				
Benzo(g,h,i)perylene	3701.667	330	3330	0	111	38	126				
Benzo(k)fluoranthene	3904.667	330	3330	0	117	45	125				
Benzoic acid	3476.333	1600	3330	0	104	25	125				
Benzyl alcohol	3431.667	660	3330	0	103	25	125				
Bis(2-chloroethoxy)methane	3191.333	330	3330	0	95.8	43	125				
Bis(2-chloroethyl)ether	2978.000	330	3330	0	89.4	38	125				
Bis(2-chloroisopropyl)ether	2870.333	330	3330	0	86.2	25	125				
Bis(2-ethylhexyl)phthalate	3542.333	330	3330	0	106	47	127				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCS-51263** SampType: **LCS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Butylbenzylphthalate	3693.000	330	3330	0	111	49	125				
Chrysene	3542.667	330	3330	0	106	53	125				
Di-n-butylphthalate	4061.667	330	3330	0	122	56	125				
Di-n-octylphthalate	4193.333	330	3330	0	126	41	132				
Dibenz(a,h)anthracene	3849.333	330	3330	0	116	41	215				
Dibenzofuran	3525.000	330	3330	0	106	51	125				
Diethylphthalate	3367.667	330	3330	0	101	50	125				
Dimethylphthalate	3636.333	330	3330	0	109	49	125				
Fluoranthene	3725.333	330	3330	0	112	54	125				
Fluorene	3618.333	330	3330	0	109	49	125				
Hexachlorobenzene	3929.667	330	3330	0	118	47	125				
Hexachlorobutadiene	2866.333	330	3330	0	86.1	40	125				
Hexachloroethane	2897.000	330	3330	0	87.0	34	125				
Indeno(1,2,3-cd)pyrene	3815.000	330	3330	0	115	38	125				
Isophorone	3010.000	330	3330	0	90.4	43	125				
N-Nitrosodi-n-propylamine	3416.333	330	3330	0	103	40	125				
N-Nitrosodiphenylamine	3913.000	330	3330	0	118	49	125				
Naphthalene	3066.333	330	3330	0	92.1	40	125				
Nitrobenzene	2970.667	330	3330	0	89.2	41	125				
Pentachlorophenol	3977.000	1600	3330	0	119	25	125				
Phenanthrene	3690.333	330	3330	0	111	50	125				
Phenol	3237.667	330	3330	0	97.2	39	125				
Pyrene	3700.667	330	3330	0	111	46	125				
Surr: 1,2-Dichlorobenzene-d4	2826.667		3330		84.9	25	110				
Surr: 2,4,6-Tribromophenol	3999.667		3330		120	36	126				
Surr: 2-Chlorophenol-d4	2949.333		3330		88.6	30	100				
Surr: 2-Fluorobiphenyl	3091.333		3330		92.8	43	125				
Surr: 2-Fluorophenol	2891.000		3330		86.8	37	125				
Surr: 4-Terphenyl-d14	3484.333		3330		105	32	125				
Surr: Nitrobenzene-d5	2888.000		3330		86.7	37	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCS-51263**	SampType: **LCS**	TestCode: **8270_S_FUL**	Units: **µg/Kg**	Prep Date: **12/18/2008**	RunNo: **103233**
Client ID: **LCSS**	Batch ID: **51263**	TestNo: **EPA 8270C**	**EPA 3550B**	Analysis Date: **12/19/2008**	SeqNo: **1610650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Phenol-d5	3006.667		3330		90.3	40	125				

Sample ID: **102700-003AMS**	SampType: **MS**	TestCode: **8270_S_FUL**	Units: **µg/Kg-dry**	Prep Date: **12/18/2008**	RunNo: **103233**
Client ID: **N002424-001D / IDW**	Batch ID: **51263**	TestNo: **EPA 8270C**	**EPA 3550B**	Analysis Date: **12/19/2008**	SeqNo: **1610651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	3034.636	330	3353	0	90.5	44	125				
1,2-Dichlorobenzene	2760.102	330	3353	0	82.3	45	125				
1,2-Diphenylhydrazine	3614.244	330	3353	0	108	62	122				
1,3-Dichlorobenzene	2843.335	330	3353	0	84.8	39	125				
1,4-Dichlorobenzene	2851.725	330	3353	0	85.1	35	125				
2,4,5-Trichlorophenol	3845.483	1600	3353	0	115	49	125				
2,4,6-Trichlorophenol	3734.394	330	3353	0	111	43	125				
2,4-Dichlorophenol	3581.018	330	3353	0	107	45	125				
2,4-Dimethylphenol	3192.039	330	3353	0	95.2	32	125				
2,4-Dinitrophenol	2733.588	1600	3353	0	81.5	25	132				
2,4-Dinitrotoluene	3865.955	330	3353	0	115	48	125				
2,6-Dinitrotoluene	3804.538	330	3353	0	113	48	125				
2-Chloronaphthalene	3370.922	330	3353	0	101	45	125				
2-Chlorophenol	3176.265	330	3353	0	94.7	44	125				
2-Methylnaphthalene	3368.573	330	3353	0	100	47	125				
2-Methylphenol	3273.594	330	3353	0	97.6	40	125				
2-Nitroaniline	3968.318	1600	3353	0	118	44	125				
2-Nitrophenol	3425.963	330	3353	0	102	42	125				
3,3´-Dichlorobenzidine	2971.540	330	3353	0	88.6	25	128				
3-Nitroaniline	3564.572	1600	3353	0	106	27	125				
4,6-Dinitro-2-methylphenol	3936.434	1700	3353	0	117	29	137				
4-Bromophenyl-phenylether	4445.899	330	3353	0	133	46	125				S
4-Chloro-3-methylphenol	3822.325	660	3353	0	114	46	125				
4-Chloroaniline	2812.794	330	3353	0	83.9	10	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **102700-003AMS** SampType: **MS** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorophenyl-phenylether	3867.969	330	3353	0	115	47	125				
3/4-Methylphenol	3419.587	330	3353	0	102	62	114				
4-Methylphenol	3419.587	330	3353	0	102	41	125				
4-Nitroaniline	3981.071	1600	3353	0	119	34	125				
4-Nitrophenol	4042.153	1600	3353	0	121	25	138				
Acenaphthene	3503.155	330	3353	0	104	46	125				
Acenaphthylene	3498.121	330	3353	0	104	44	125				
Aniline	2955.766	330	3353	0	88.2	56	106				
Anthracene	3752.853	330	3353	0	112	53	125				
Benzidine (M)	1285.072	1700	3353	0	38.3	0	108				
Benzo(a)anthracene	3597.798	330	3353	0	107	52	125				
Benzo(a)pyrene	3999.530	330	3353	0	119	50	125				
Benzo(b)fluoranthene	3919.318	330	3353	0	117	45	125				
Benzo(g,h,i)perylene	3838.770	330	3353	0	114	38	126				
Benzo(k)fluoranthene	3794.469	330	3353	0	113	45	125				
Benzoic acid	999.463	1700	3353	0	29.8	25	125				
Benzyl alcohol	3427.641	660	3353	0	102	25	125				
Bis(2-chloroethoxy)methane	3207.478	330	3353	0	95.7	43	125				
Bis(2-chloroethyl)ether	3021.211	330	3353	0	90.1	38	125				
Bis(2-chloroisopropyl)ether	2828.903	330	3353	0	84.4	25	125				
Bis(2-ethylhexyl)phthalate	3613.237	330	3353	0	108	47	127				
Butylbenzylphthalate	3813.264	330	3353	0	114	49	125				
Carbazole	3814.942	330	3353	0	114	70	130				
Chrysene	3608.202	330	3353	0	108	53	125				
Di-n-butylphthalate	4226.406	330	3353	84.91	124	56	125				
Di-n-octylphthalate	4082.763	330	3353	0	122	41	132				
Dibenz(a,h)anthracene	3965.633	330	3353	0	118	41	215				
Dibenzofuran	3616.257	330	3353	0	108	51	125				
Diethylphthalate	3492.079	330	3353	0	104	50	125				
Dimethylphthalate	3769.969	330	3353	0	112	49	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **102700-003AMS** SampType: **MS** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoranthene	3814.942	330	3353	0	114	54	125				
Fluorene	3708.887	330	3353	0	111	49	125				
Hexachlorobenzene	3966.975	330	3353	0	118	47	125				
Hexachlorobutadiene	2885.622	330	3353	0	86.1	40	125				
Hexachlorocyclopentadiene	3285.005	660	3353	0	98.0	57	108				
Hexachloroethane	2841.992	330	3353	0	84.8	34	125				
Indeno(1,2,3-cd)pyrene	3940.126	330	3353	0	118	38	125				
Isophorone	2999.396	330	3353	0	89.5	43	125				
N-Nitrosodi-n-propylamine	3325.950	330	3353	0	99.2	40	125				
N-Nitrosodimethylamine	2643.979	330	3353	0	78.9	49	120				
N-Nitrosodiphenylamine	3996.845	330	3353	0	119	49	125				
Naphthalene	3078.601	330	3353	0	91.8	40	125				
Nitrobenzene	2964.156	330	3353	0	88.4	41	125				
Pentachlorophenol	3817.962	1600	3353	0	114	25	125				
Phenanthrene	3683.045	330	3353	0	110	50	125				
Phenol	3245.066	330	3353	0	96.8	39	125				
Pyrene	3796.147	330	3353	0	113	46	125				
Surr: 1,2-Dichlorobenzene-d4	2793.328		3353		83.3	25	110				
Surr: 2,4,6-Tribromophenol	4114.646		3353		123	36	126				
Surr: 2-Chlorophenol-d4	3026.916		3353		90.3	30	100				
Surr: 2-Fluorobiphenyl	3265.875		3353		97.4	43	125				
Surr: 2-Fluorophenol	2952.745		3353		88.1	37	125				
Surr: 4-Terphenyl-d14	3502.484		3353		104	32	125				
Surr: Nitrobenzene-d5	2899.718		3353		86.5	37	125				
Surr: Phenol-d5	3084.978		3353		92.0	40	125				

Sample ID: **102700-003AMSD** SampType: **MSD** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **102700-003AMSD** SampType: **MSD** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	3001.745	330	3353	0	89.5	44	125	3035	1.09	30	
1,2-Dichlorobenzene	2740.301	330	3353	0	81.7	45	125	2760	0.720	30	
1,2-Diphenylhydrazine	3395.422	330	3353	0	101	62	122	3614	6.24	30	
1,3-Dichlorobenzene	2813.129	330	3353	0	83.9	39	125	2843	1.07	30	
1,4-Dichlorobenzene	2822.191	330	3353	0	84.2	35	125	2852	1.04	30	
2,4,5-Trichlorophenol	3772.318	1600	3353	0	113	49	125	3845	1.92	30	
2,4,6-Trichlorophenol	3666.600	330	3353	0	109	43	125	3734	1.83	30	
2,4-Dichlorophenol	3507.853	330	3353	0	105	45	125	3581	2.06	30	
2,4-Dimethylphenol	3196.067	330	3353	0	95.3	32	125	3192	0.126	30	
2,4-Dinitrophenol	2372.130	1600	3353	0	70.8	25	132	2734	14.2	30	
2,4-Dinitrotoluene	3619.613	330	3353	0	108	48	125	3866	6.58	30	
2,6-Dinitrotoluene	3689.757	330	3353	0	110	48	125	3805	3.06	30	
2-Chloronaphthalene	3281.313	330	3353	0	97.9	45	125	3371	2.69	30	
2-Chlorophenol	3135.991	330	3353	0	93.5	44	125	3176	1.28	30	
2-Methylnaphthalene	3258.155	330	3353	0	97.2	47	125	3369	3.33	30	
2-Methylphenol	3263.525	330	3353	0	97.3	40	125	3274	0.308	30	
2-Nitroaniline	3798.496	1600	3353	0	113	44	125	3968	4.37	30	
2-Nitrophenol	3430.326	330	3353	0	102	42	125	3426	0.127	30	
3,3´-Dichlorobenzidine	2914.150	330	3353	0	86.9	25	128	2972	1.95	30	
3-Nitroaniline	3411.532	1600	3353	0	102	27	125	3565	4.39	30	
4,6-Dinitro-2-methylphenol	3721.305	1700	3353	0	111	29	137	3936	5.62	30	
4-Bromophenyl-phenylether	4372.063	330	3353	0	130	46	125	4446	1.67	30	S
4-Chloro-3-methylphenol	3665.593	660	3353	0	109	46	125	3822	4.19	30	
4-Chloroaniline	2774.869	330	3353	0	82.8	10	125	2813	1.36	30	
4-Chlorophenyl-phenylether	3719.291	330	3353	0	111	47	125	3868	3.92	30	
3/4-Methylphenol	3347.765	330	3353	0	99.8	62	114	3420	2.12	30	
4-Methylphenol	3347.765	330	3353	0	99.8	41	125	3420	2.12	30	
4-Nitroaniline	3732.716	1600	3353	0	111	34	125	3981	6.44	30	
4-Nitrophenol	3677.675	1600	3353	0	110	25	138	4042	9.44	30	
Acenaphthene	3364.881	330	3353	0	100	46	125	3503	4.03	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **102700-003AMSD** SampType: **MSD** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthylene	3376.628	330	3353	0	101	44	125	3498	3.53	30	
Aniline	2928.917	330	3353	0	87.4	56	106	2956	0.913	30	
Anthracene	3677.339	330	3353	0	110	53	125	3753	2.03	30	
Benzidine (M)	1314.606	1700	3353	0	39.2	0	108	1285	0	30	
Benzo(a)anthracene	3479.997	330	3353	0	104	52	125	3598	3.33	30	
Benzo(a)pyrene	3877.366	330	3353	0	116	50	125	4000	3.10	30	
Benzo(b)fluoranthene	3834.407	330	3353	0	114	45	125	3919	2.19	30	
Benzo(g,h,i)perylene	3674.654	330	3353	0	110	38	126	3839	4.37	30	
Benzo(k)fluoranthene	3705.531	330	3353	0	111	45	125	3794	2.37	30	
Benzoic acid	1021.949	1700	3353	0	30.5	25	125	999.5	0	30	
Benzyl alcohol	3396.093	660	3353	0	101	25	125	3428	0.925	30	
Bis(2-chloroethoxy)methane	3138.005	330	3353	0	93.6	43	125	3207	2.19	30	
Bis(2-chloroethyl)ether	2913.143	330	3353	0	86.9	38	125	3021	3.64	30	
Bis(2-chloroisopropyl)ether	2753.054	330	3353	0	82.1	25	125	2829	2.72	30	
Bis(2-ethylhexyl)phthalate	3518.929	330	3353	0	105	47	127	3613	2.64	30	
Butylbenzylphthalate	3721.640	330	3353	0	111	49	125	3813	2.43	30	
Carbazole	3654.853	330	3353	0	109	70	130	3815	4.29	30	
Chrysene	3487.045	330	3353	0	104	53	125	3608	3.42	30	
Di-n-butylphthalate	4059.941	330	3353	84.91	119	56	125	4226	4.02	30	
Di-n-octylphthalate	3961.270	330	3353	0	118	41	132	4083	3.02	30	
Dibenz(a,h)anthracene	3845.818	330	3353	0	115	41	215	3966	3.07	30	
Dibenzofuran	3493.086	330	3353	0	104	51	125	3616	3.47	30	
Diethylphthalate	3300.443	330	3353	0	98.4	50	125	3492	5.64	30	
Dimethylphthalate	3625.654	330	3353	0	108	49	125	3770	3.90	30	
Fluoranthene	3602.833	330	3353	0	107	54	125	3815	5.72	30	
Fluorene	3520.942	330	3353	0	105	49	125	3709	5.20	30	
Hexachlorobenzene	3899.181	330	3353	0	116	47	125	3967	1.72	30	
Hexachlorobutadiene	2876.225	330	3353	0	85.8	40	125	2886	0.326	30	
Hexachlorocyclopentadiene	3216.539	660	3353	0	95.9	57	108	3285	2.11	30	
Hexachloroethane	2756.075	330	3353	0	82.2	34	125	2842	3.07	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **102700-003AMSD** SampType: **MSD** TestCode: **8270_S_FUL** Units: **µg/Kg-dry** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **N002424-001D / IDW** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	3809.907	330	3353	0	114	38	125	3940	3.36	30	
Isophorone	2935.629	330	3353	0	87.6	43	125	2999	2.15	30	
N-Nitrosodi-n-propylamine	3258.827	330	3353	0	97.2	40	125	3326	2.04	30	
N-Nitrosodimethylamine	2539.267	330	3353	0	75.7	49	120	2644	4.04	30	
N-Nitrosodiphenylamine	3920.325	330	3353	0	117	49	125	3997	1.93	30	
Naphthalene	3044.033	330	3353	0	90.8	40	125	3079	1.13	30	
Nitrobenzene	2947.711	330	3353	0	87.9	41	125	2964	0.556	30	
Pentachlorophenol	3737.750	1600	3353	0	111	25	125	3818	2.12	30	
Phenanthrene	3588.401	330	3353	0	107	50	125	3683	2.60	30	
Phenol	3199.423	330	3353	0	95.4	39	125	3245	1.42	30	
Pyrene	3565.915	330	3353	0	106	46	125	3796	6.25	30	
Surr: 1,2-Dichlorobenzene-d4	2786.616		3353		83.1	25	110		0	0	
Surr: 2,4,6-Tribromophenol	3931.736		3353		117	36	126		0	0	
Surr: 2-Chlorophenol-d4	3021.211		3353		90.1	30	100		0	0	
Surr: 2-Fluorobiphenyl	3208.149		3353		95.7	43	125		0	0	
Surr: 2-Fluorophenol	2946.033		3353		87.9	37	125		0	0	
Surr: 4-Terphenyl-d14	3396.765		3353		101	32	125		0	0	
Surr: Nitrobenzene-d5	2915.828		3353		87.0	37	125		0	0	
Surr: Phenol-d5	3050.074		3353		91.0	40	125		0	0	

Sample ID: **LCSD-51263** SampType: **LCSD** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS02** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	3203.333	330	3330	0	96.2	44	125	2998	6.61	20	
1,2-Dichlorobenzene	2982.667	330	3330	0	89.6	45	125	2833	5.14	20	
1,3-Dichlorobenzene	3084.000	330	3330	0	92.6	39	125	2954	4.29	20	
1,4-Dichlorobenzene	3027.000	330	3330	0	90.9	35	125	2894	4.50	20	
2,4,5-Trichlorophenol	3769.333	1600	3330	0	113	49	125	3720	1.31	20	
2,4,6-Trichlorophenol	3684.000	330	3330	0	111	43	125	3600	2.30	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCSD-51263** SampType: **LCSD** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS02** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dichlorophenol	3677.667	330	3330	0	110	45	125	3478	5.57	20	
2,4-Dimethylphenol	3368.000	330	3330	0	101	32	125	3158	6.45	20	
2,4-Dinitrophenol	3212.000	1600	3330	0	96.5	25	132	3390	5.38	20	
2,4-Dinitrotoluene	3655.667	330	3330	0	110	48	125	3720	1.75	20	
2,6-Dinitrotoluene	3650.667	330	3330	0	110	48	125	3681	0.818	20	
2-Chloronaphthalene	3348.000	330	3330	0	101	45	125	3219	3.93	20	
2-Chlorophenol	3331.667	330	3330	0	100	44	125	3144	5.81	20	
2-Methylnaphthalene	3437.000	330	3330	0	103	47	125	3317	3.55	20	
2-Methylphenol	3442.333	330	3330	0	103	40	125	3274	5.02	20	
2-Nitroaniline	3791.000	1600	3330	0	114	44	125	3819	0.745	20	
2-Nitrophenol	3614.667	330	3330	0	109	42	125	3400	6.12	20	
3,3´-Dichlorobenzidine	3050.333	330	3330	0	91.6	25	128	3107	1.85	20	
3-Nitroaniline	3216.667	1600	3330	0	96.6	27	125	3361	4.38	20	
4,6-Dinitro-2-methylphenol	3973.667	1600	3330	0	119	29	137	4090	2.89	20	
4-Bromophenyl-phenylether	4371.667	330	3330	0	131	46	125	4373	0.0305	20	S
4-Chloro-3-methylphenol	3743.667	660	3330	0	112	46	125	3781	1.00	20	
4-Chloroaniline	3284.333	330	3330	0	98.6	10	125	3212	2.23	20	
4-Chlorophenyl-phenylether	3704.667	330	3330	0	111	47	125	3778	1.95	20	
4-Methylphenol	3568.333	330	3330	0	107	41	125	3422	4.20	20	
4-Nitroaniline	3777.667	1600	3330	0	113	34	125	3916	3.60	20	
4-Nitrophenol	3792.667	1600	3330	0	114	25	138	4031	6.10	20	
Acenaphthene	3556.333	330	3330	0	107	46	125	3517	1.11	20	
Acenaphthylene	3451.667	330	3330	0	104	44	125	3411	1.19	20	
Anthracene	3695.000	330	3330	0	111	53	125	3785	2.40	20	
Benzo(a)anthracene	3457.333	330	3330	0	104	52	125	3529	2.04	20	
Benzo(a)pyrene	3885.667	330	3330	0	117	50	125	4000	2.89	20	
Benzo(b)fluoranthene	3566.000	330	3330	0	107	45	125	3849	7.62	20	
Benzo(g,h,i)perylene	3752.667	330	3330	0	113	38	126	3702	1.37	20	
Benzo(k)fluoranthene	3840.667	330	3330	0	115	45	125	3905	1.65	20	
Benzoic acid	3603.000	1600	3330	0	108	25	125	3476	3.58	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCSD-51263** SampType: **LCSD** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS02** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzyl alcohol	3610.333	660	3330	0	108	25	125	3432	5.07	20	
Bis(2-chloroethoxy)methane	3335.000	330	3330	0	100	43	125	3191	4.40	20	
Bis(2-chloroethyl)ether	3122.000	330	3330	0	93.8	38	125	2978	4.72	20	
Bis(2-chloroisopropyl)ether	2980.000	330	3330	0	89.5	25	125	2870	3.75	20	
Bis(2-ethylhexyl)phthalate	3539.333	330	3330	0	106	47	127	3542	0.0847	20	
Butylbenzylphthalate	3754.667	330	3330	0	113	49	125	3693	1.66	20	
Chrysene	3479.000	330	3330	0	104	53	125	3543	1.81	20	
Di-n-butylphthalate	4011.333	330	3330	0	120	56	125	4062	1.25	20	
Di-n-octylphthalate	4047.333	330	3330	0	122	41	132	4193	3.54	20	
Dibenz(a,h)anthracene	3895.000	330	3330	0	117	41	215	3849	1.18	20	
Dibenzofuran	3521.333	330	3330	0	106	51	125	3525	0.104	20	
Diethylphthalate	3288.333	330	3330	0	98.7	50	125	3368	2.38	20	
Dimethylphthalate	3614.667	330	3330	0	109	49	125	3636	0.598	20	
Fluoranthene	3568.333	330	3330	0	107	54	125	3725	4.31	20	
Fluorene	3531.333	330	3330	0	106	49	125	3618	2.43	20	
Hexachlorobenzene	3883.333	330	3330	0	117	47	125	3930	1.19	20	
Hexachlorobutadiene	3072.000	330	3330	0	92.3	40	125	2866	6.93	20	
Hexachloroethane	3046.000	330	3330	0	91.5	34	125	2897	5.01	20	
Indeno(1,2,3-cd)pyrene	3868.667	330	3330	0	116	38	125	3815	1.40	20	
Isophorone	3090.667	330	3330	0	92.8	43	125	3010	2.64	20	
N-Nitrosodi-n-propylamine	3510.667	330	3330	0	105	40	125	3416	2.72	20	
N-Nitrosodiphenylamine	3875.667	330	3330	0	116	49	125	3913	0.959	20	
Naphthalene	3253.000	330	3330	0	97.7	40	125	3066	5.91	20	
Nitrobenzene	3136.667	330	3330	0	94.2	41	125	2971	5.44	20	
Pentachlorophenol	3878.667	1600	3330	0	116	25	125	3977	2.50	20	
Phenanthrene	3577.667	330	3330	0	107	50	125	3690	3.10	20	
Phenol	3382.333	330	3330	0	102	39	125	3238	4.37	20	
Pyrene	3535.333	330	3330	0	106	46	125	3701	4.57	20	
Surr: 1,2-Dichlorobenzene-d4	2950.333		3330		88.6	25	110		0	0	
Surr: 2,4,6-Tribromophenol	3906.667		3330		117	36	126		0	0	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51263

Sample ID: **LCSD-51263** SampType: **LCSD** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **12/18/2008** RunNo: **103233**
Client ID: **LCSS02** Batch ID: **51263** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **12/19/2008** SeqNo: **1610728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2-Chlorophenol-d4	3142.667		3330		94.4	30	100		0	0	
Surr: 2-Fluorobiphenyl	3224.333		3330		96.8	43	125		0	0	
Surr: 2-Fluorophenol	3048.333		3330		91.5	37	125		0	0	
Surr: 4-Terphenyl-d14	3441.000		3330		103	32	125		0	0	
Surr: Nitrobenzene-d5	3028.333		3330		90.9	37	125		0	0	
Surr: Phenol-d5	3128.667		3330		94.0	40	125		0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *23-Dec-08*

CLIENT:	Advanced Technology Laboratory-Las Vega	**Client Sample ID:**	N002424-001B / IDW-SOIL-12001
Lab Order:	102700	**Collection Date:**	12/11/2008 3:10:00 PM
Project:		**Matrix:**	SOIL
Lab ID:	102700-001A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_081221A**	QC Batch: **51259**				PrepDate: **12/18/2008**		Analyst: **AMT**
Mercury	ND	0.038	0.10		mg/Kg-dry	1	12/21/2008 05:15 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: Advanced Technology Laboratory-Las Vegas
Work Order: 102700
Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 51259

Sample ID: **MB-51259**	SampType: **MBLK**	TestCode: **7471_S_PGE**	Units: **mg/Kg**	Prep Date: **12/18/2008**	RunNo: **103322**
Client ID: **PBS**	Batch ID: **51259**	TestNo: **EPA 7471A**		Analysis Date: **12/21/2008**	SeqNo: **1612276**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-51259**	SampType: **LCS**	TestCode: **7471_S_PGE**	Units: **mg/Kg**	Prep Date: **12/18/2008**	RunNo: **103322**
Client ID: **LCSS**	Batch ID: **51259**	TestNo: **EPA 7471A**		Analysis Date: **12/21/2008**	SeqNo: **1612277**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.846	0.10	0.8300	0	102	75	125				

Sample ID: **102700-001A-MS**	SampType: **MS**	TestCode: **7471_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/18/2008**	RunNo: **103322**
Client ID: **N002424-001B / IDW**	Batch ID: **51259**	TestNo: **EPA 7471A**		Analysis Date: **12/21/2008**	SeqNo: **1612278**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.867	0.10	0.8357	0	104	75	125				

Sample ID: **102700-001A-MSD**	SampType: **MSD**	TestCode: **7471_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/18/2008**	RunNo: **103322**
Client ID: **N002424-001B / IDW**	Batch ID: **51259**	TestNo: **EPA 7471A**		Analysis Date: **12/21/2008**	SeqNo: **1612279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.864	0.10	0.8357	0	103	75	125	0.8668	0.320	20	

Sample ID: **102700-001A-DUP**	SampType: **DUP**	TestCode: **7471_S_PGE**	Units: **mg/Kg-dry**	Prep Date: **12/18/2008**	RunNo: **103322**
Client ID: **N002424-001B / IDW**	Batch ID: **51259**	TestNo: **EPA 7471A**		Analysis Date: **12/21/2008**	SeqNo: **1612281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories - Las V
3151-3153 W Post Rd.
Las Vegas, NV 89118
TEL: *7023072659* FAX: *7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California
TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

12-Dec-08

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 7471A	EPA 8081A	EPA 8082
N002424-001B / IDW-SOIL-12001 102700-001	Soil	12/11/2008 3:10:00 PM	8OZG	1		
N002424-001C / IDW-SOIL-12001 2	Soil	12/11/2008 3:10:00 PM	8OZG		1	1
N002424-001D / IDW-SOIL-12001 3	Soil	12/11/2008 3:10:00 PM	8OZG			

General Comments: Please use PO#: LV00698 Please fax results by: Normal TAT

Please see attached copy of COC from client.

		Date/Time			Date/Time
Relinquished by:		12/12/8	**Received by:**	Margo	12/13/08 11:00
Relinquished by:			**Received by:**		

3.9 Ontrac

Advanced Technology Laboratories - Las V
3151-3153 W Post Rd.
Las Vegas, NV 89118
TEL: *7023072659* FAX: *7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Advanced Technology Laboratories - Signal Hill
3283 Walnut Ave.
Signal Hill, California
TEL: (562) 989-4045
FAX: (562) 989-4045
Acct #:

Field Sampler: Barry Collom

12-Dec-08

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 8270C		
N002424-001B / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG			
N002424-001C / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG			
N002424-001D / IDW-SOIL-12001	Soil	12/11/2008 3:10:00 PM	8OZG	1		

General Comments: Please use PO#: LV00698 Please fax results by: Normal TAT

Please see attached copy of COC from client.

		Date/Time			Date/Time
Relinquished by:		12/12/8	**Received by:**		12/13/08 11.00
Relinquished by:			**Received by:**		

CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME

DATE 12-12-08 PAGE 1 OF 1

COMPANY E2/CH2M Hill

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 354948.FP.08.FW.SC TEAM 1

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	8081 A	8082	6010B/7471 Title 22	8270 C	7199	NUMBER OF CONTAINERS	COMMENTS
IDW-Soil-12001	12-11-08	1510	Soil	X	X	X	X	X	6	

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Barry Collom	CH2M Hill	12-12-08 1030
Signature (Received)	ALLEGAERT	ATL	12-12-08 1030
Signature (Relinquished)	ALLEGAERT	ATL	12-12-08
Signature (Received)	MBCARTHW	ATL	12/12/8
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

Advanced Technology Laboratories

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (562) 989-4045.

Sample Receipt Checklist

Client Name: ATL-LV

Date Time Received: 12/13/2008 11:00:00 AM

Work Order Number: 102700

Received by: **MP**

Cooler Temp (Deg C): 3.8

Checklist completed by: Signature 12/15/08 Date

Reviewed by: Initials 12/16/08 Date

Carrier name: CA Overnight

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Container/Temp Blank temperature within acceptance limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑

Comments:

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAR000015118 | Manifest Document No. 008118 | 2. Page 1 of 1

3. Generator's Name and Mailing Address
GHE
PO BOX 337 CA. 92363
VIDEO'S, CA. 92363
TORCH GROUNDWATER EXTRACTION SITE

4. Generator's Phone (760) 258-7899

5. Transporter 1 Company Name: MT ENVIRONMENTAL | 6. US EPA ID Number: CAT000627247 | A. Transporter's Phone: 602-278-6233

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT
35251 OLD SKYLINE RD.
KETTLEMAN CITY, CA. 93239
10. US EPA ID Number: CAT080646117 | C. Facility's Phone: 800-222-2964

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS, IDW DRILLING WASTE WITH TRACE METALS	001	CM	15	Y
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
PROFILE #: 101585 CA

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
WEAR PROPER PPE + EYEWEAR AS NEEDED
PO#: 2500121155 (DISPOSAL)
(SOIL STUDY - PART A)

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: CHRIS SMITH | Signature | Month 02 | Day 07 | Year 17

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19
Printed/Typed Name | Signature | Month | Day | Year

GENERATOR | TRANSPORTER | FACILITY

GENERATOR'S COPY

12-SLC-M5

Attachment B3
AOC 4 Surface Debris Mapping Photograph Log



Photograph 1: View from East to West in the bottom of the ravine. Note pile of wooden slats and large slabs of concrete near the top of the slope.



Photograph 2: View from West to East in the bottom of the ravine. Note wooden slat pile in the ravine bottom and two large slabs of concrete on the slope.



Photograph 3: Close up debris in bottom of ravine.



Photograph 4: View from West to East at top of the ravine.



Photograph 5: Grid sections A, B, and C. Note the three large pieces of concrete, rusted drum lids, metal scraps, and wooden slats in section A. Also, note the large slab of debris in section B



Photograph 6: Close up of grid section A



Photograph 7: Extent of debris in grid section A



Photograph 7: Extent of debris in grid section A



Photograph 8: Close up of grid section B



Photograph 9: B30 White soil close up



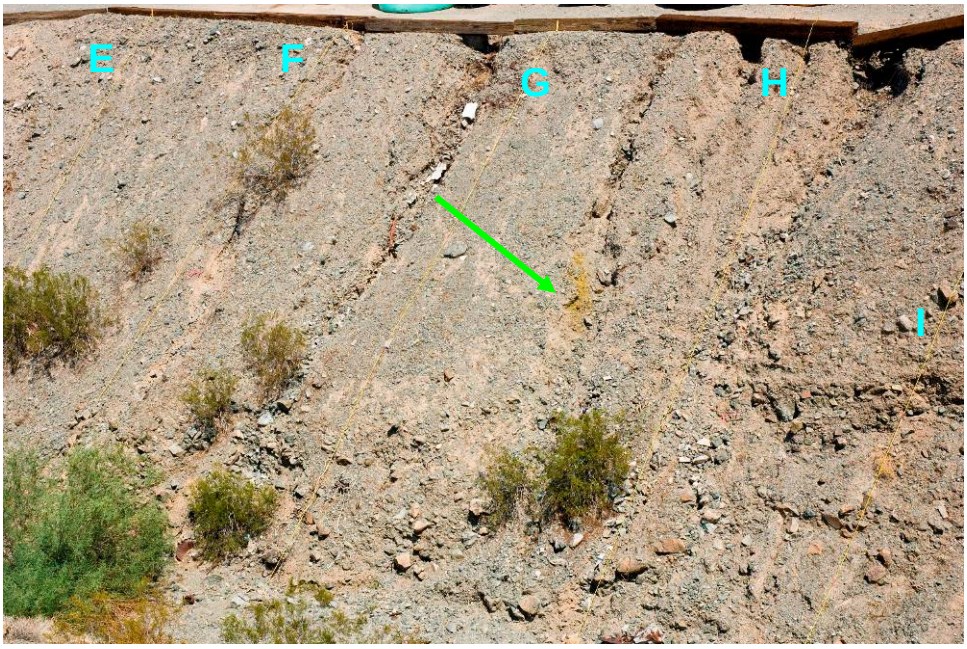
Photograph 10: Close up of grid section C



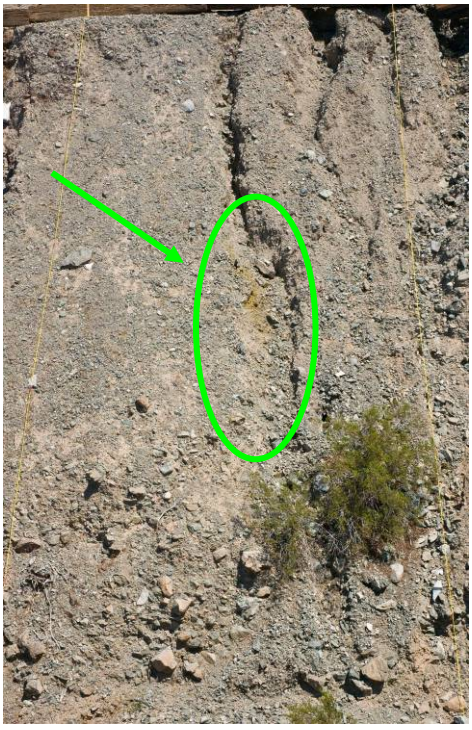
Photograph 11: Close up of grid section D



Photograph 12: Close up wooden slats at the bottom of grid sections C and D

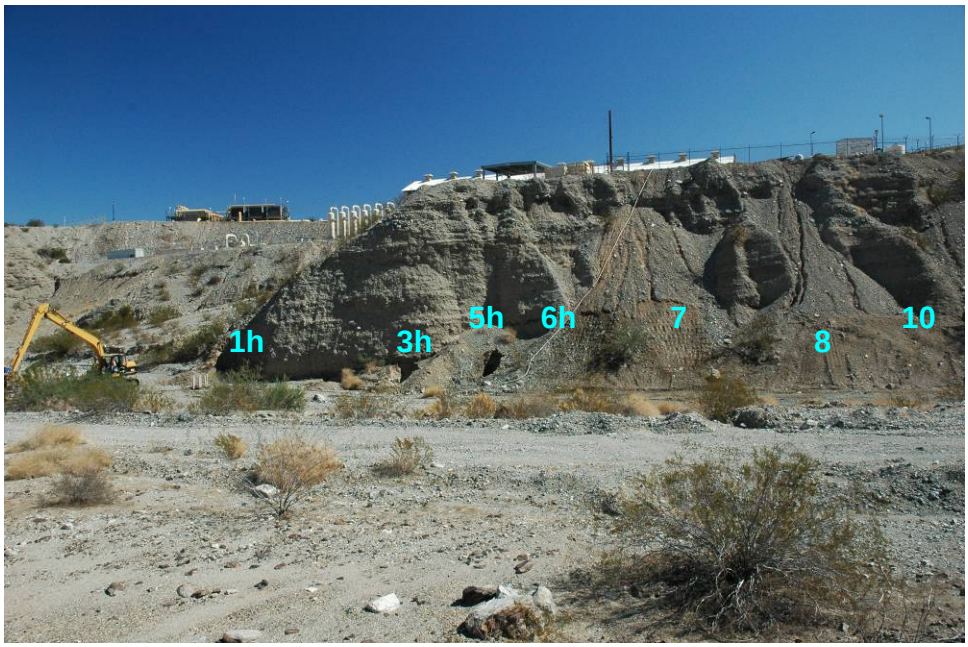


Photograph 13: Grid sections E through I. Note the stained soil in grid section G.



Photograph 14: Close up grid section G. Note stained soil.

Attachment B4
SWMU 1 Surface Debris Mapping and Trenching Photograph Log



Photograph 1: Approximate areas of the seven trench locations.



Photograph 2: Trench SWMU-WP-1h. Note that there is no white powder visible in this trench.



Photograph 3: Trench SWMU1-WP-1h south side wall at bottom



Photograph 4: SWMU1-WP-1h trench bottom



Photograph 5: SWMU1-WP-1h trench middle



Photograph 6: SWMU1-WP-1h trench top



Photograph 7: SWMU1-WP-1h green soil



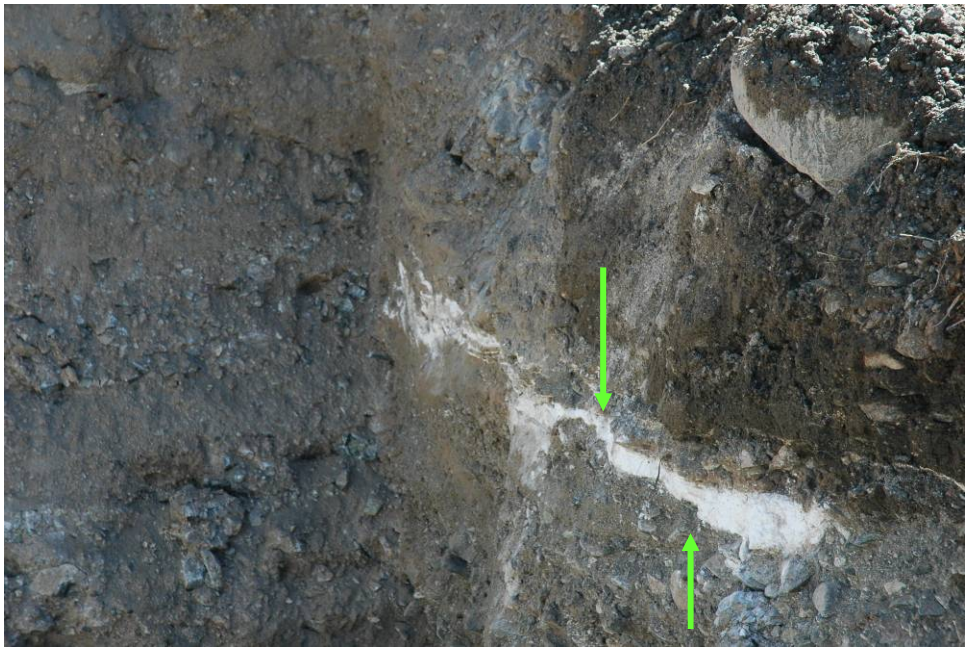
Photograph 8: SWMU1-WP-1h green soil close



Photograph 9: Trench *SWMU1*-WP-3h open. Note layer of white powdery material.



Photograph 10: Trench SWMU1-WP-3h North sidewall. Note white powdery material.



Photograph 11: Trench SWMU1-WP-3h south sidewall. Note white layer.



Photograph 12: Observation trench SWMU1-WP-2h to investigate extent of white layer found in Trench SWMU1-WP-3h.



Photograph 13: WP-5h open. Note white powdery material.



Photograph 14: Trench SWMU1-WP-5h trench bottom



Photograph 15: Trench SWMU1-WP-5h trench middle



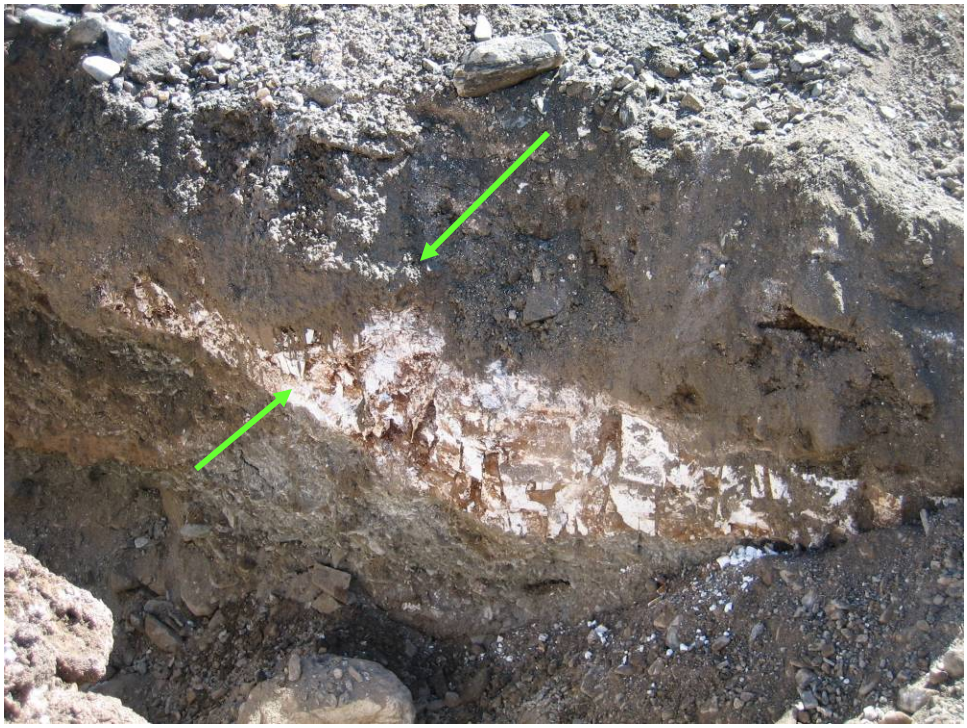
Photograph 16: Trench SWMU1-WP-5h trench top



Photograph 17: Trench SWMU1-WP-6h open. Note small outcrops of white material.



Photograph 18: Trench SWMU1-WP7 center. Note consolidated layer of white chalky material.



Photograph 19: Trench SWMU1-WP-7 north sidewall. Note close up of white chalky material.



Photograph 20: Trench SWMU1-WP-7 south sidewall. Note white chalky material.



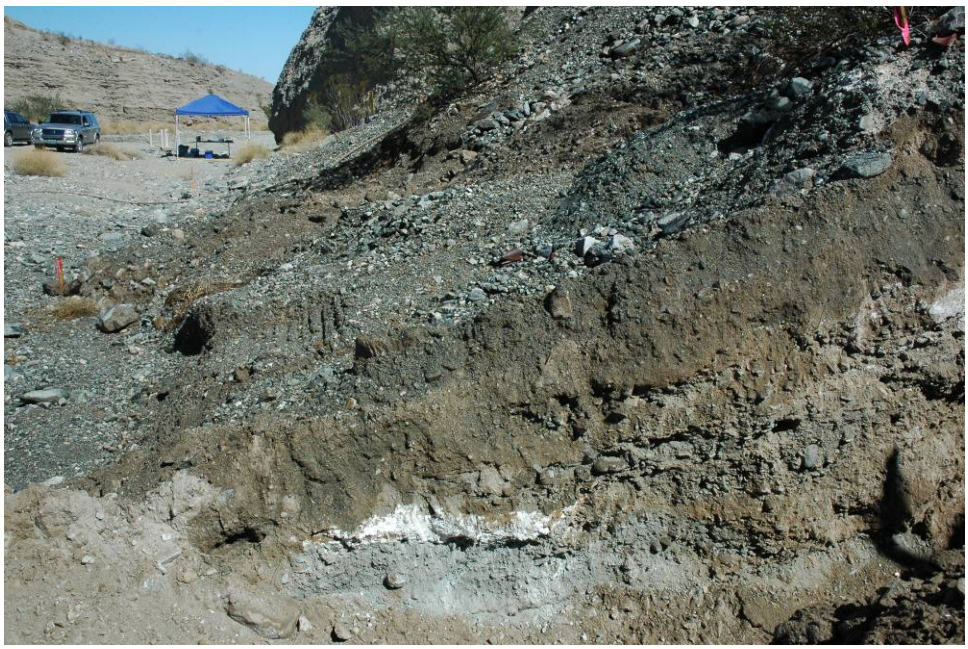
Photograph 21: Trench SWMU1-WP-7h red soil



Photograph 22: Horizontal lens of white powder in small observation trench located between trenching locations SWMU1-WP-6a and SWMU1-WP-7



Photograph 23: Trench SWMU1-WP-8



Photograph 24: Trench SWMU1-WP-8 Trench view north



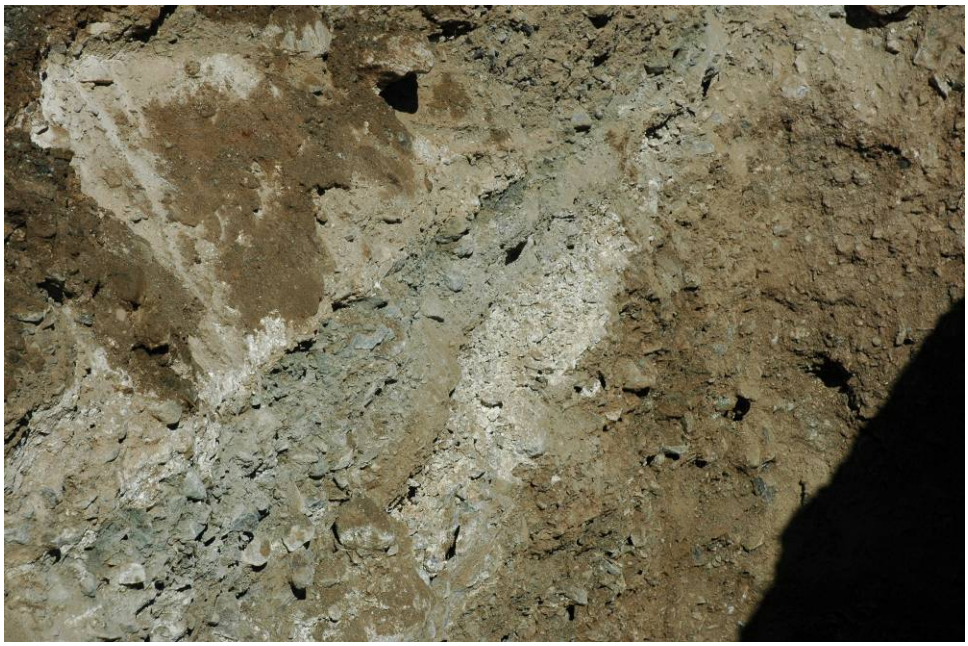
Photograph 25: SWMU1-WP-8 Trench view south



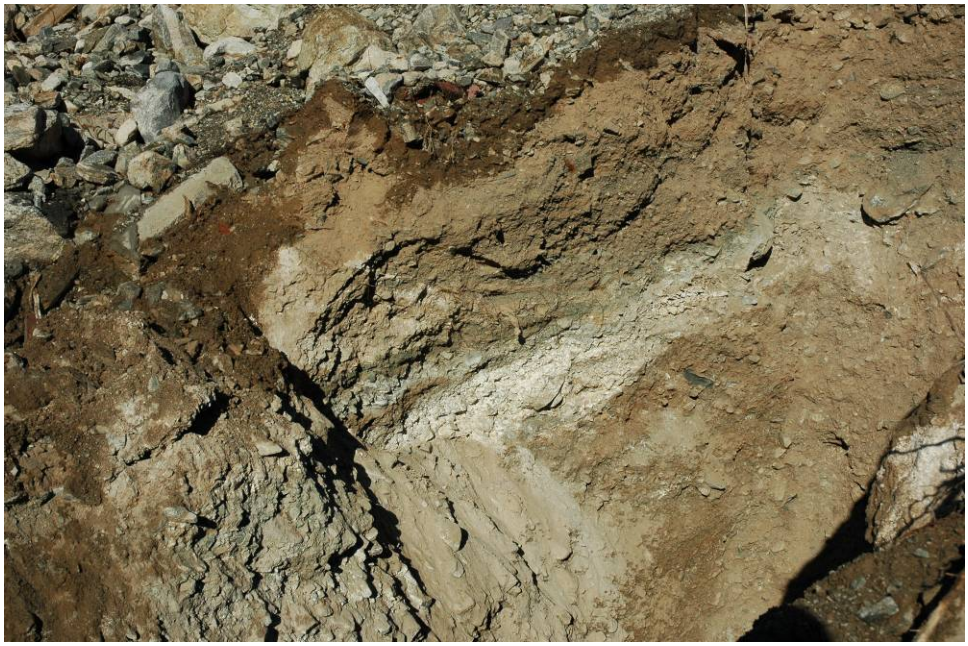
Photograph 26: SWMU1-WP-8 white with red soil south sidewall



Photograph 27: Trench SWMU1-WP-10 Trench



Photograph 28: Trench SWMU1-WP-10 North sidewall close



Photograph 29: Trench SWMU1-WP-10 Trench north sidewall



Photograph 30: Trench SWMU1-WP-10 south sidewall

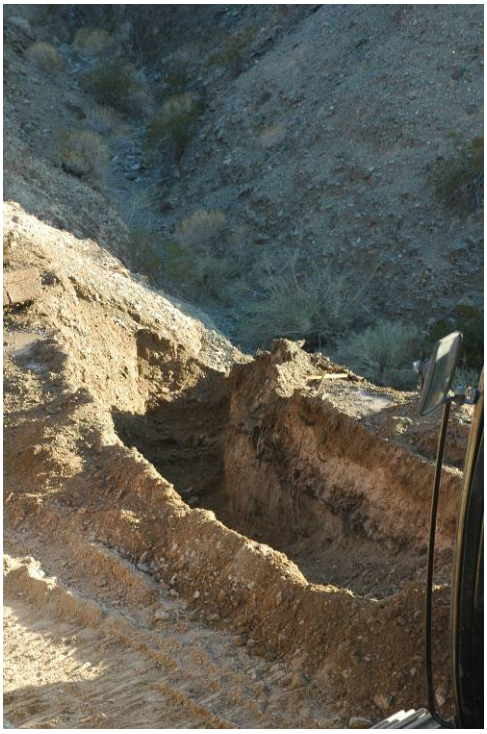
Attachment B5
AOC 4 Trenching Photograph Log



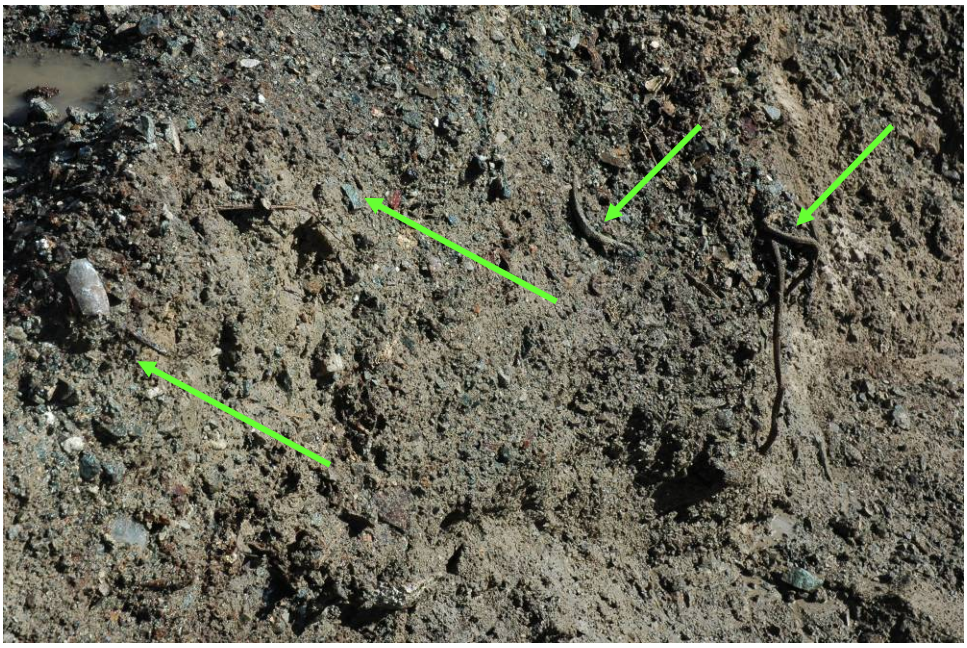
Photograph 1: View of trench AOC4-T1



Photograph 2: Trench AOC4-T1 East sidewall. Note piece of wire debris.



Photograph 3: Trench AOC4-T2 south view



Photograph 4: Trench AOC4-T2 debris up close



Photograph 5: Trench AOC4-T2 west sidewall upper portion



Photograph 6: Trench AOC4-T3 west view



Photograph 7: Trench AOC4-T3 south view



Photograph 8: Note pipe in west sidewall of Trench AOC4-T3.



Photograph 9: Trench AOC4-T4 view south

Attachment B6
Geophysical Results

NORCAL GEOPHYSICAL CONSULTANTS, INC.

October 1, 2008

Mr. Mike Cavaliere
CH2M Hill Inc.
155 Grand Avenue, Suite 1000
Oakland, CA 94612

Subject: Geophysical Survey
PG&E Topock Compressor Station, Needles, CA
NORCAL Job Number 08-106.47

Dear Mr. Cavaliere:

This letter presents the findings of a geophysical investigation performed by NORCAL Geophysical Consultants, Inc. on the property located at the PG&E Topock Compressor Station, Needles, CA. The field survey was conducted on September 4 - 5, 2008 by NORCAL Professional Geophysicist Sierra Boyd and Geophysical Technician Travis Black. Logistical support and background information were provided by Mike Cavaliere, CH2M Hill Inc., and Barry Collum, Site Coordinator/On-Site Safety Officer, Topock Compressor Station.

SITE DESCRIPTION

The PG&E Topock Compressor Station is located off of Highway 40, west of the Colorado River, California/Arizona border, approximately 14 miles southeast of Needles, CA. The facility provides pressure to natural gas which is piped from Texas to central and northern California. The Compressor Station is located in dry rocky terrain with sparse desert vegetation.

The geophysical survey was conducted in several regions known as Areas of Concern (AOC), as shown on Plates 1 and 2. The regions include AOC–12A, AOC-12B and AOC-12C in the vicinity of the Transwestern Gas Pipeline Intertie. An additional survey area, called AOC UA-1 Potential Pipe Disposal Area, is located approximately 2600 feet to the southwest from the Transwestern Gas Pipeline Intertie. Details of each survey area are described below.

AOC-12A

The area of concern is located in a small ravine northeast of the Transwestern Gas Pipeline Intertie, as shown on Plate 1. The terrain is rocky and uneven with a steep slope in the southern portion of the survey area. Site features include several bushes and pin flags delineating two suspected pipelines crossing the region.

AOC-12B&C

These two small areas are located along the western perimeter of the Transwestern Gas Pipeline Intertie, as shown on Plate 1. To simplify data acquisition, these two areas were combined into AOC-12B & C. There is a steep drop-off to the west and an earthen mound to the

north which create an irregularly shaped survey area. The facility is surrounded by chain link fencing which was removed in the vicinity of the survey area. The metal fence posts surrounding the former Above-ground Storage Tank (AST) pad and AST bunker were left in place, as shown on Plate 1.The AST pad and bunker are enclosed by cement retaining walls. In the south there is a large metal container with miscellaneous pipes and rolls of chain link fencing stored nearby.

AOC UA-1 Potential Pipe Disposal Area

This area is located approximately 2600 feet to the southwest of the Transwestern Gas Pipeline Intertie. The region is flat and bordered by a dirt road to the south, a steep drop-off to the west and a steep slope to the east, as shown on Plate 2. There are two monitoring wells surrounded by metal bollards located in the southeast and southwest as well as several large bushes. The surface appears uneven, perhaps due to differences in fill materials.

PURPOSE

Future plans for AOC-12A, AOC-12B and AOC-12C include trenching. The purpose of the geophysical surveys is to locate detectable utilities and buried metallic debris in the vicinity of the proposed trenching sites. The purpose of the survey in AOC UA-1 is to locate possible buried pipes, utilities and buried metallic debris.

FIELD INVESTIGATIONS

Methodology

We used vertical magnetic gradient (VMG), electromagnetic (EM), metal detection-electromagnetic line locating (MD-EMLL) and ground penetrating radar (GPR) methods to investigate for detectable subsurface features and debris.

The VMG method is used to determine the presence of buried ferrous metal objects. These objects could include various metallic debris and utilities. We used a Geometrics G-858 cesium vapor magnetometer to obtain the vertical magnetic gradient data, since it provides high sensitivity and rapid data acquisition.

The EM instrument records terrain conductivity (TC). TC values represent the electrical conductivity of the subsurface to a depth of approximately 12 to 15 feet. These values can be affected by both metallic and nonmetallic debris. The effect that ferrous or nonferrous metal will have on the TC readings is dependent upon the depth and size of the metal object. In addition, subsurface properties such as differences in soil compaction, composition and water content of fill materials can also affect TC values. We performed the TC survey using a Geonics EM31-DL ground conductivity meter connected to an Omnidata recorder.

The MD-EMLL methods are used to scan for near surface metal objects and the presence of metallic utilities. We used the Fischer TW-6 M-Scope to perform the MD survey and the Radio Detection 4000 for the EMLL portion of the survey.

The GPR method is used to aid in further characterizing the source of detected VMG, TC and MD-EMLL anomalies or for additional information where these methods experienced interference from above ground sources. We used a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar System equipped with a 400 megaHertz (MHz) transducer. This transducer is near the center of the available frequency range and is used to provide high resolution at shallow depths. Descriptions of the VMG, TC, MD-EMLL, and GPR methods are provided in Appendix A.

Geophysical Surveys

Prior to proceeding with the geophysical work, we established a survey grid to provide horizontal control for each of the areas. The grids are based on a rectangular coordinate system with the origin (0E, 0N) located in the southwest corner of the survey areas. We established the grid in the field using a fiberglass measuring tape and wooden survey lath. The lath was used in lieu of spray paint at the request of CH2M Hill. The grids were then used to guide the VMG, TC, MD-EMLL and GPR surveys.

VMG and TC data were obtained at 5-ft. intervals along south-north trending traverses spaced 5 feet apart. Following data acquisition, we transferred the VMG and TC data to a personal computer and contoured the respective data sets to produce VMG and TC contour maps. Each contour map was analyzed to determine potential locations of buried metallic debris, utilities and other subsurface features. Further processing was completed at our Cotati office.

We also scanned each of the survey areas with the MD-EMLL equipment to further characterize detectable subsurface features. Further investigations over suspect VMG, TC and MD-EMLL anomalies were conducted using GPR along south-north and/or west-east trending traverses. The GPR records were examined for reflection patterns characteristic of buried pipes and other subsurface features.

Following the geophysical data acquisition, we used a Trimble GeoExplorer 2005 Series global positioning system (GPS) to survey selected grid nodes and site features. The limits of the survey areas are shown on Plates 1 and 2.

RESULTS and INTERPRETATION

The results of the geophysical investigation of the respective survey areas are presented on Plates 3, 4 and 5. These plates show pertinent site features, limits of the VMG-TC survey areas, and the respective VMG Contour and TC Color Image Maps. The VMG Contour Map shows variations of the VMG values. Typically, closely spaced contours or contours forming localized contour closures are normally caused by specific metallic sources. Variations that can not be associated with known above or below ground features are considered anomalous. The TC

Color Image Map shows variations in terrain conductivity ranging from low values (blue shades) to high values (red shades), as indicated by the color scale shown with the map. Also shown are the lateral extents of suspected MD-EMLL anomalies that are typically caused by near surface metallic sources.

AOC–12A Geophysical Results, Plate 3

Magnetic Survey

The VMG results show numerous closely spaced contour closures extending across the central portion of the survey area, as shown on Plate 3. This anomalous zone is approximately 30 feet wide and consists of an alignment of densely spaced contour closures with both positive and negative peaks. The areal extent of the contour closures is large, and the peaks have extreme high and low values, suggesting a large source buried near the surface. There is an alignment of less intense, loosely spaced contour closures to the north, suggestive of a possible additional metallic source. Due to the linearity, these anomalies may represent pipelines.

Terrain Conductivity Survey

The TC Color Image Map shows two linear features, extending across the central portion of the survey area, which correlates with the VMG results. One linear feature is shaded yellow and is located between 15 and 25 feet north of another linear feature shaded blue. The difference in color corresponds to a difference in conductivity values. Blue shades correspond to extreme negative conductivity values and yellows correspond to mid-range conductivity values. The southern linear anomaly is larger and has more extreme conductivity values, suggestive of a larger source buried closer to the surface in relation to the northern anomaly.

Metal Detector – Electromagnetic Line Locating Survey

The MD emitted a strong continuous tone in the vicinity of the southern linear anomaly, suggestive of a metallic pipeline. There was no audible signal in the vicinity of the suspected anomaly to the north. The EMLL equipment detected both linear anomalies that appear to be due to pipelines or tracer lines associated with possible pipelines.

Ground Penetrating Radar Survey

Four GPR profiles were collected across the suspected pipelines, as shown on Plate 1. The profiles over the southern pipeline display characteristics typical of a large buried pipe with an approximate diameter of 3.0 to 4.0 ft., buried less than one foot below the surface. There were no indications of a buried pipeline to the north.

AOC–12B & C Geophysical Results, Plate 4

Magnetic Survey

The VMG contour map shows numerous closely spaced contour closures throughout the area. They correlate with above ground surface features as shown on Plate 4. There is a north-south trending linear alignment of closely spaced circular contour closures that correlates with the north-south equally-spaced fence posts. Additional fence posts extending to the east and remnants of the chain link fence stored nearby also contribute to the numerous contour closures in the north and south.

Terrain Conductivity Survey

The TC Color Image Map shows very uniform conductivity variations over the site. The only color variations are caused by the former AST pad and the AST bunker. There appears to be no evidence of UST's or buried debris.

Metal Detector-Electromagnetic Line Locating Survey

Two suspected undifferentiated utilities (UU's) extending east from two AST pipe stub-outs were detected.

AOC UA-1 Potential Pipe Disposal Area Geophysical Results, Plate 5

Magnetic Survey

The VMG Contour Map shows numerous closely spaced contour closures throughout the site. The strongest variations are associated with the two monitoring wells, and along the southern boundary. Additional scattered anomalies appear to be related to small scattered debris observed on the ground surface.

Terrain Conductivity Survey

The TC Color Image Map shows subtle TC variations throughout the site. Lower conductivity values are shown along the eastern and western boundaries where there are steep elevation changes. High conductivities are shown along the southern boundary bordering the dirt road.

Metal Detector – Electromagnetic Line Locating Survey

The MD-EMLL survey delineated two linear anomalies suspected to be pipelines, as shown on Plate 5. The north trending pipeline bends to the east where it appears to be truncated, and extends out of the survey area in the south. The EMLL depth estimate for the north-south trending portion is shallow, ranging from 11 to 16 inches below the surface. The east-west trending pipeline along the southern boundary of the site may truncate to the east and west as shown. There is no evidence for additional pipelines within the survey area.

SUMMARY

Several geophysical methods including vertical magnetic gradient, terrain conductivity, metal detection, electromagnetic line locating and ground penetrating radar were used to investigate portions of the PG&E Topock Compressor Station (Plates 1 and 2) for buried debris, undifferentiated utilities (UU's) and buried pipes.

- The results of the geophysical surveys found two alignments crossing AOC-12A, as shown on Plate 3. The southern alignment is an interpreted large pipeline, approximately 3 to 4 feet in diameter, buried within the upper 1 foot of the surface. The northern alignment is a suspected pipeline or UU, buried deeper, within 3 to 4 feet below the surface.
- In AOC-12B&C, the geophysical results indicate two suspected UU's extending east from two AST Bunker pipe stub outs, as shown on Plate 4. There is no evidence for additional buried debris within this survey area.
- In AOC UA-1 two suspected UU's were detected, as shown on Plate 5. The north to south trending UU appears to be buried within 1.5 ft. below the surface. The suspected UU appears to be truncated in the north and extends out of the survey area in the south. Another suspected UU is located in the southern portion of the survey area and trends east-west. The ends appear to be truncated. There were no indications of buried debris or pipes other than those mentioned above.

STANDARD CARE AND WARRANTY

Please note that all geophysical methods have limitations that may not allow for the detection of certain subsurface features or targets. These limitations may be related to the target being deeper than instrument detection capabilities; target not providing sufficient contrast with the surrounding materials; or other features or structures causing instrumental interference that masks the detection of a target of interest. Therefore it is possible that not all subsurface features/targets may be located or characterized.

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. We performed our services in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the performance of services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate having the opportunity to provide our services to CH2M Hill Inc. for this investigation.

Respectfully,

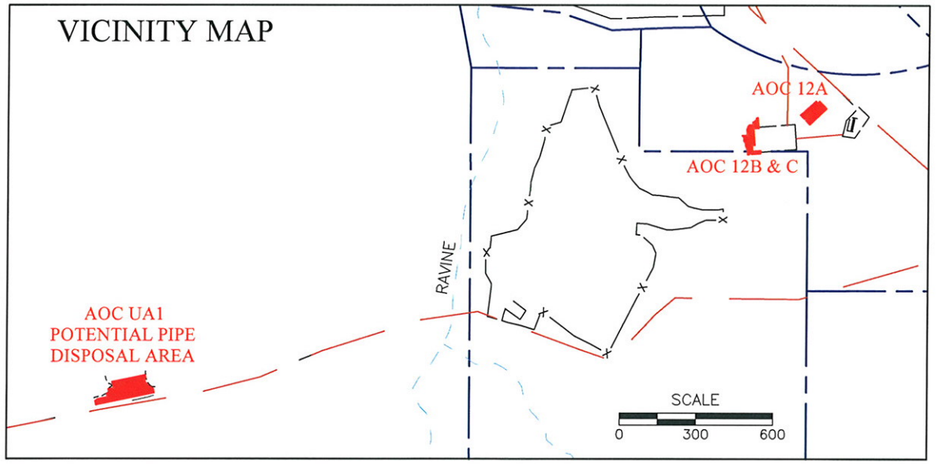
NORCAL Geophysical Consultants, Inc.

O. Sierra Boyd
Professional Geophysicist, PGp: 1060

OSB/KGB/tt

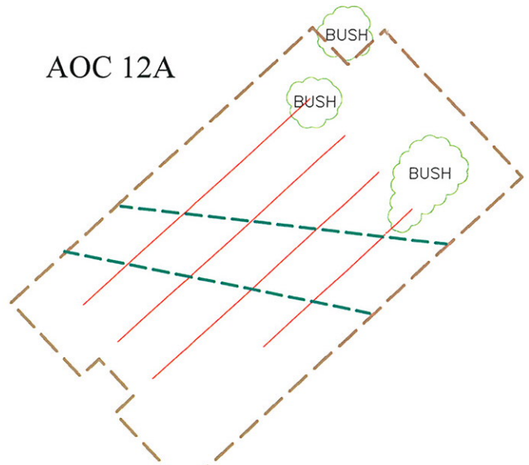
Enclosure:
Plate 1 Site Map AOC-12A, AOC-12B & C
Plate 2 Site Map AOC UA-1 Potential Pipe Disposal Area
Plate 3 AOC–12A Geophysical Survey Results
Plate 4 AOC–12B & C Geophysical Survey Results
Plate 5 AOC UA-1 Potential Pipe Disposal Area Geophysical Survey Results
Appendix A Geophysical Methodology, Instrumentation, Data Analysis, and Limitations

VICINITY MAP



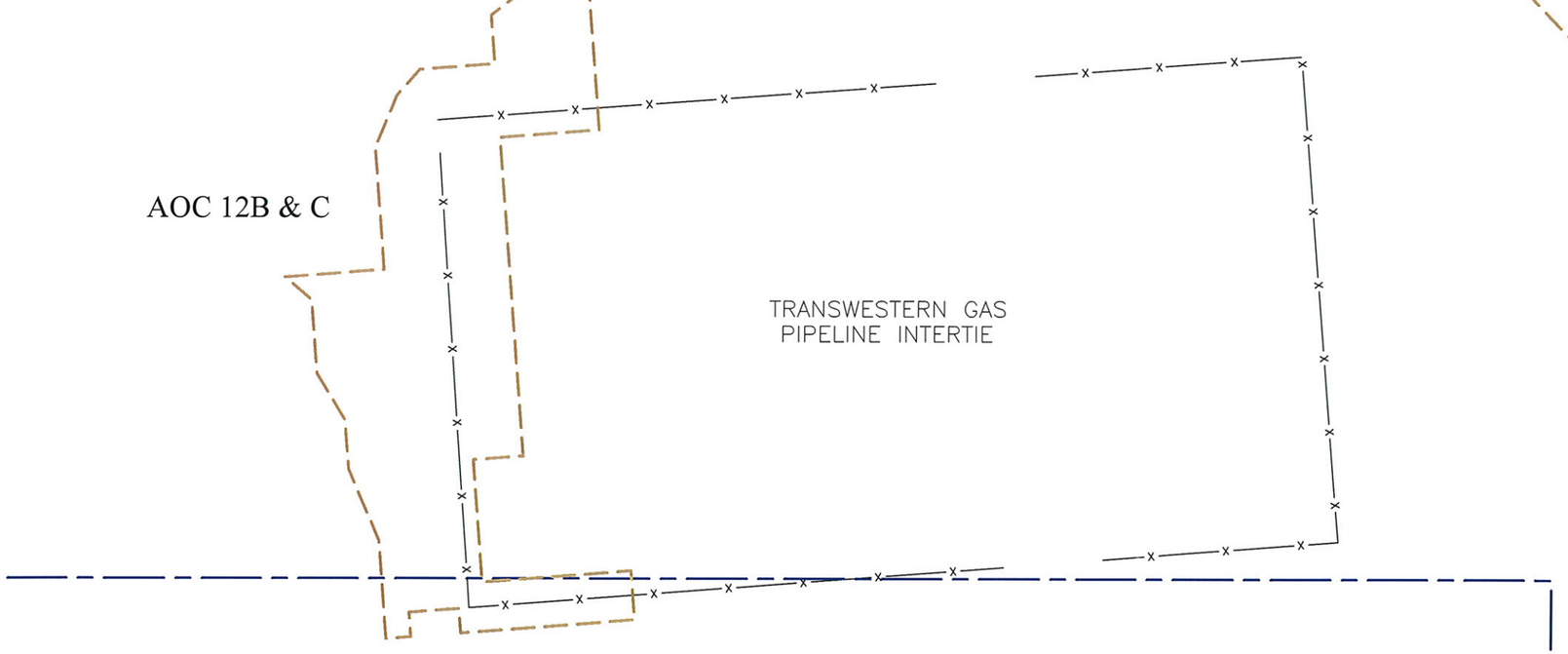


AOC 12A



AOC 12B & C

TRANSWESTERN GAS
PIPELINE INTERTIE



LEGEND

— — —	LIMITS OF GEOPHYSICAL SURVEY
———	GPR TRAVERSE
— — —	SUSPECTED PIPELINE
—x—	FENCE LINE (PER CH2MHILL)
— -- —	PROPERTY LINE (PER CH2MHILL)

NORCAL

SITE MAP
AOC 12A & AOC 12B & C
PG&E TOPOCK COMPRESSOR STATION

LOCATION: NEEDLES, CALIFORNIA

CLIENT: CH2MHILL

JOB #: 08-106.47

NORCAL GEOPHYSICAL CONSULTANTS INC.

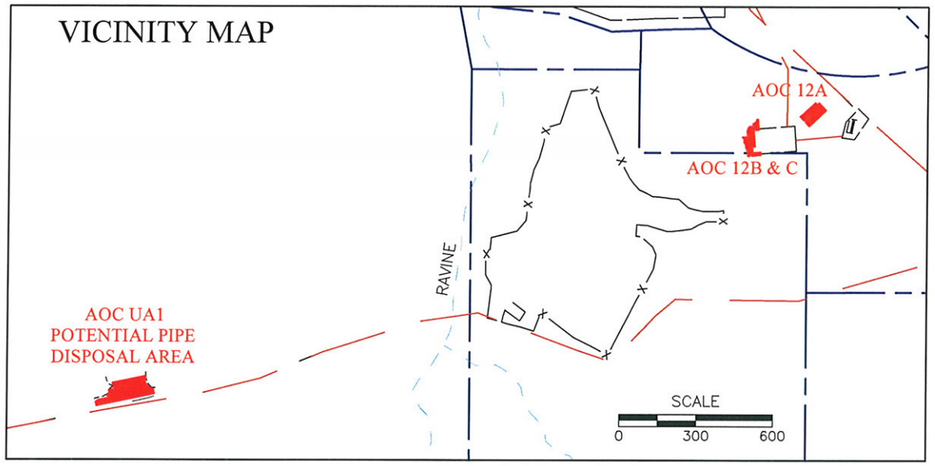
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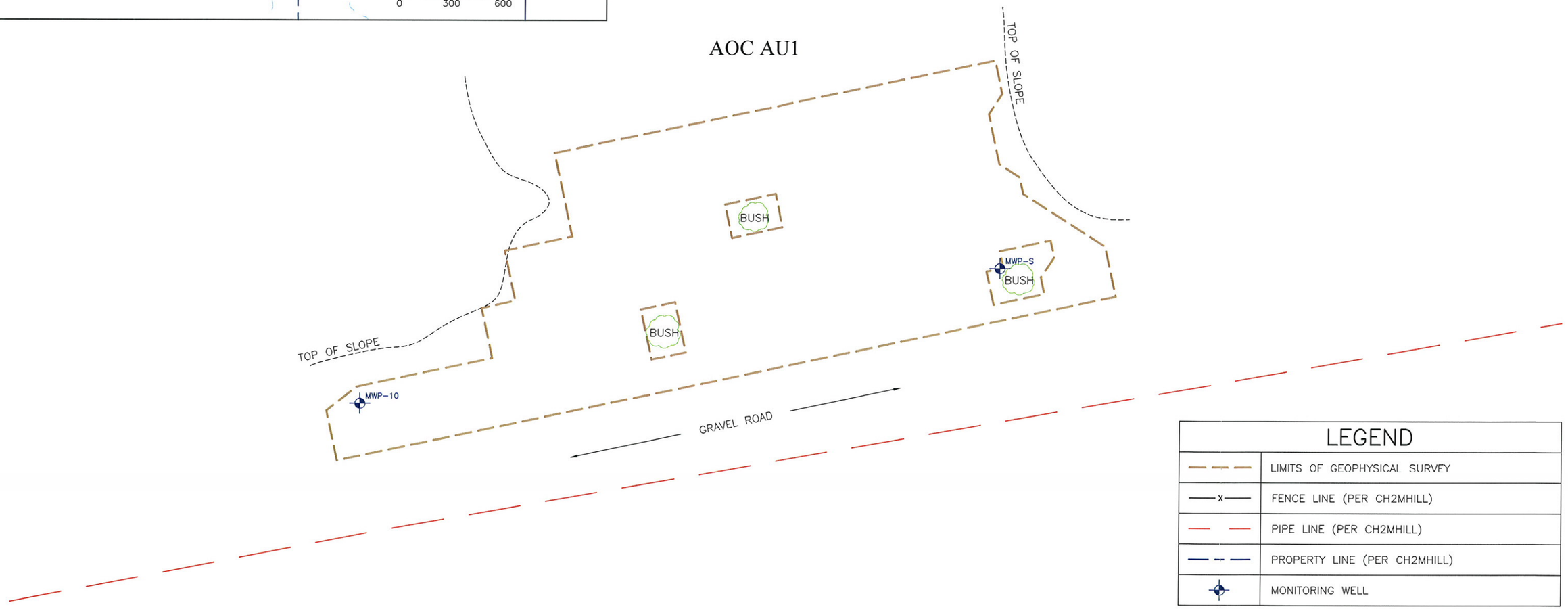
APPROVED BY: OSB

PLATE 1

VICINITY MAP



AOC AU1



LEGEND	
	LIMITS OF GEOPHYSICAL SURVEY
x	FENCE LINE (PER CH2MHILL)
	PIPE LINE (PER CH2MHILL)
	PROPERTY LINE (PER CH2MHILL)
	MONITORING WELL

SCALE
0 15 30 60
(1 inch = 30 feet)

NORCAL

SITE MAP
AOC AU1 – POTENTIAL PIPE DISPOSAL AREA
PG&E TOPOCK COMPRESSOR STATION

LOCATION: NEEDLES, CALIFORNIA

CLIENT: CH2MHILL

JOB #: 08-106.47

NORCAL GEOPHYSICAL CONSULTANTS INC.

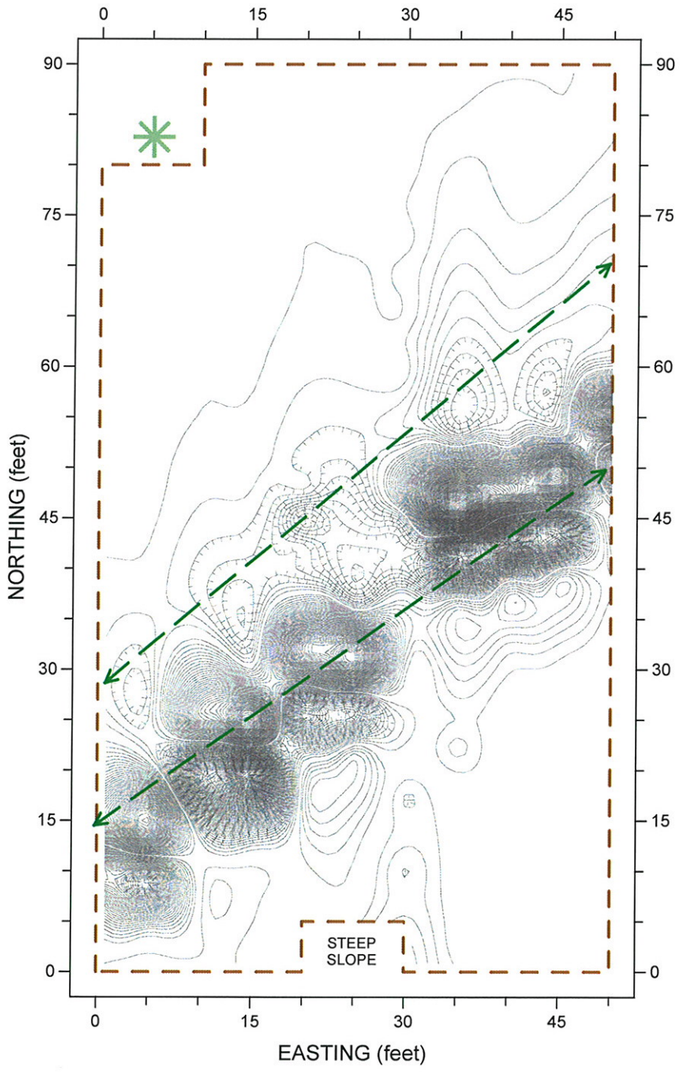
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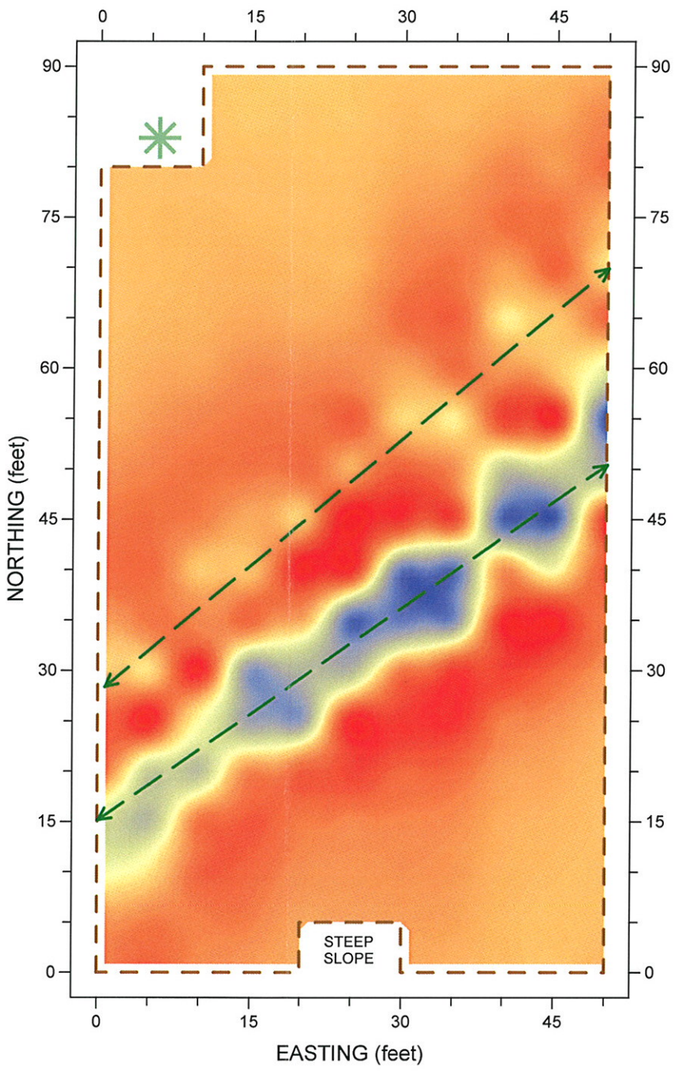
APPROVED BY: OSB

PLATE 2

VERTICAL MAGNETIC GRADIENT CONTOUR MAP



TERRAIN CONDUCTIVITY COLOR IMAGE MAP



TERRAIN CONDUCTIVITY

-55 -45 -35 -25 -15 -5 5 15 25 35 45 55

(milliSiemens/meter)



SCALE

0 15 30

(1 inch = 15 feet)

LEGEND

- - -	LIMITS OF GEOPHYSICAL SURVEY
~	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 50 nT/m)
← →	SUSPECTED PIPELINE
✳	BUSH

NORCAL

GEOPHYSICAL SURVEY RESULTS AOC 12A PG&E TOPOCK COMPRESSOR STATION

LOCATION: NEEDLES, CALIFORNIA

CLIENT: CH2MHILL

JOB #: 08-106.47

NORCAL GEOPHYSICAL CONSULTANTS INC.

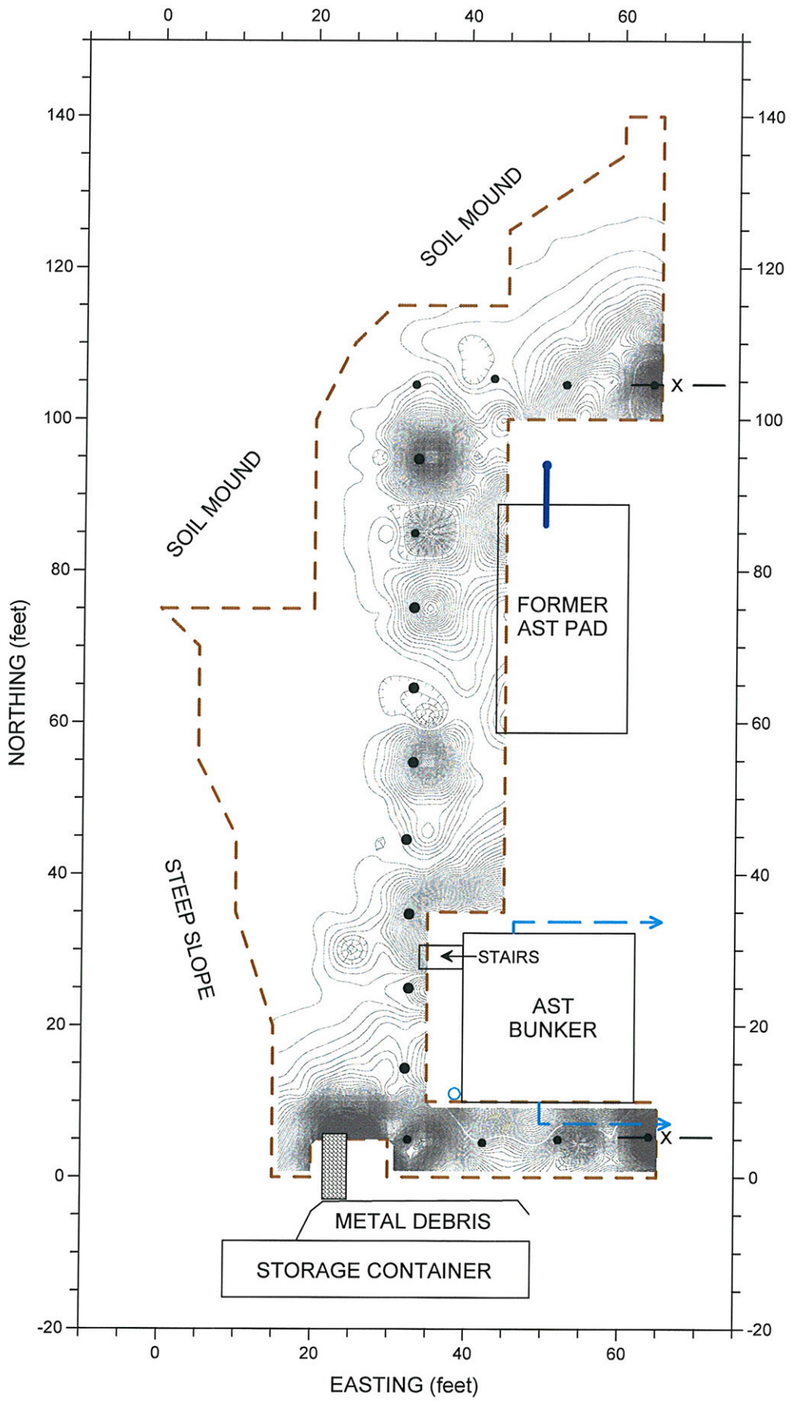
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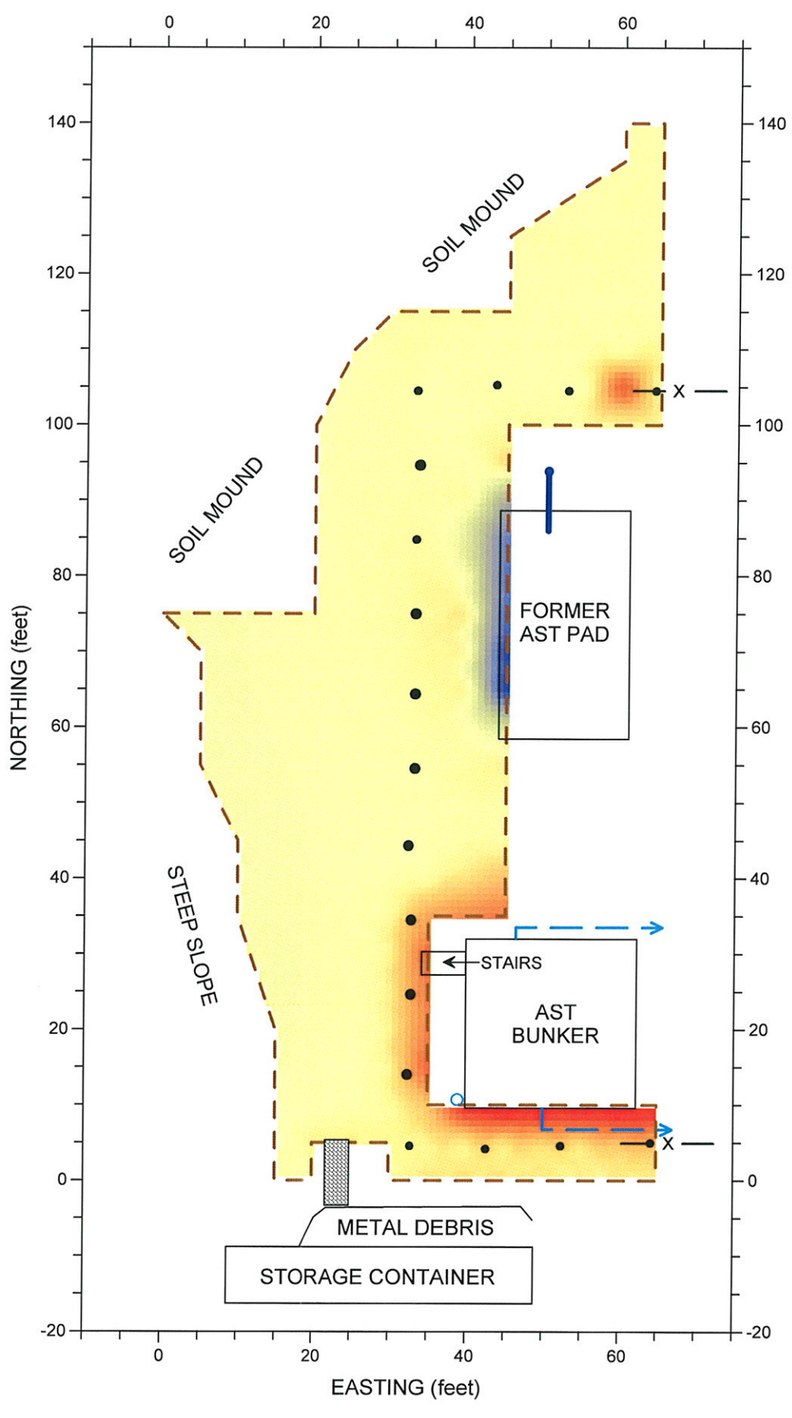
APPROVED BY: OSB

PLATE 3

VERTICAL MAGNETIC GRADIENT CONTOUR MAP



TERRAIN CONDUCTIVITY COLOR IMAGE MAP





LEGEND

	LIMITS OF GEOPHYSICAL SURVEY
	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 50 nT/m)
	SUSPECTED UTILITY LINE
	PIPE STUB OUT
	LARGE PIPE
X	CHAIN-LINK FENCE
	FENCE POST
	BUNDLED FENCING

TERRAIN CONDUCTIVITY

-300 -250 -200 -150 -100 -50 0 50 100 150 200 250 300 350

(milliSiemens/meter)

NORCAL

GEOPHYSICAL SURVEY RESULTS
AOC 12B & C
PG&E TOPOCK COMPRESSOR STATION

LOCATION: NEEDLES, CALIFORNIA

CLIENT: CH2MHILL

JOB #: 08-106.47

NORCAL GEOPHYSICAL CONSULTANTS INC.

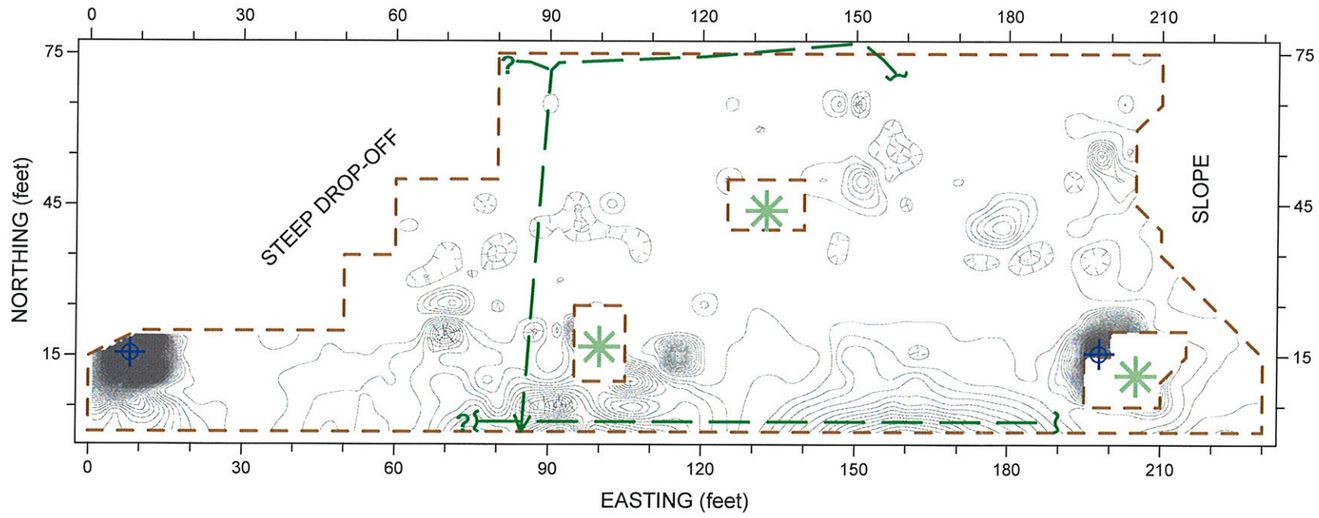
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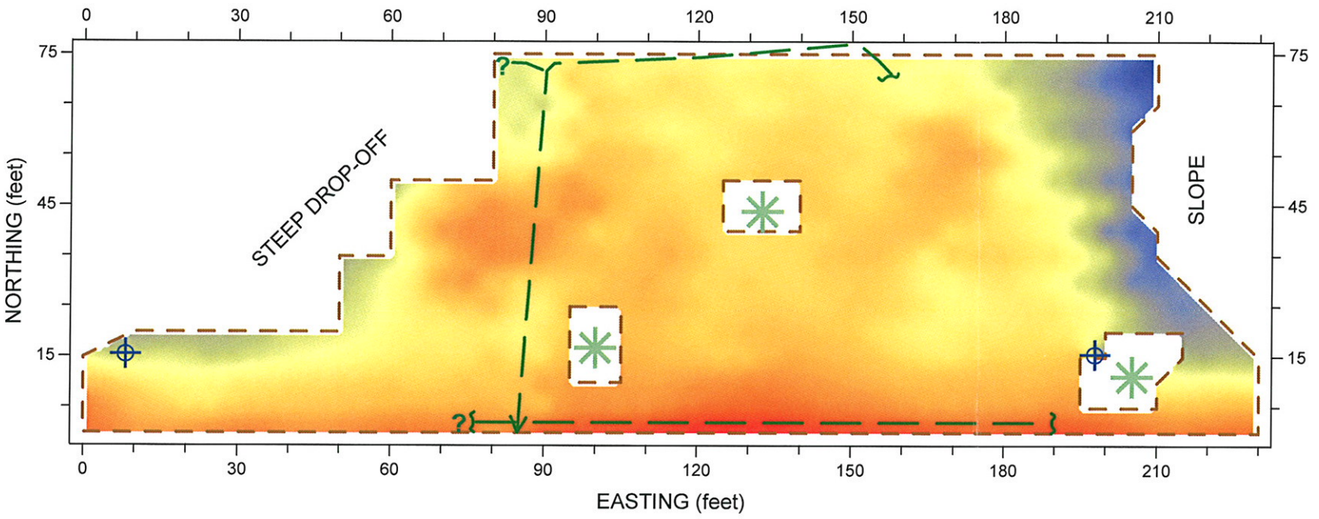
APPROVED BY: OSB

PLATE 4

VERTICAL MAGNETIC GRADIENT CONTOUR MAP



TERRAIN CONDUCTIVITY COLOR IMAGE MAP



TERRAIN CONDUCTIVITY

10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

(milliSiemens/meter)

SCALE

0 30 60

(1 inch = 30 feet)

LEGEND

	LIMITS OF GEOPHYSICAL SURVEY
	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 10 nT/m)
	SUSPECTED PIPELINE
	MONITORING WELL
	BUSH

NORCAL

GEOPHYSICAL SURVEY RESULTS
AOC UA1 - POTENTIAL PIPE DISPOSAL AREA
PG&E TOPOCK COMPRESSOR STATION

LOCATION: NEEDLES, CALIFORNIA

CLIENT: CH2MHILL

JOB #: 08-106.47

NORCAL GEOPHYSICAL CONSULTANTS INC.

DATE: SEP. 2008

DRAWN BY: G.RANDALL

APPROVED BY: OSB

PLATE 5

Appendix A

GEOPHYSICAL METHODOLOGY, INSTRUMENTATION, DATA ANALYSIS and LIMITATIONS

VERTICAL MAGNETIC GRADIENT (VMG)

VMG Methodology

Vertical magnetic gradient surveys are used to determine the presence of buried ferrous objects. A magnetic gradiometer measures the vertical gradient of the earth's magnetic field. It consists of two total field magnetic sensors separated vertically by one-half meter. The magnetic field strength is measured simultaneously at both of these sensors. The difference in magnetic intensity between these measurements is proportional to the vertical gradient of the earth's magnetic field. Because the vertical gradient is constant with respect to time, the effect of diurnal variations is eliminated. Therefore, a gradiometer provides higher sensitivity and better resolution of near surface sources than total field magnetometers. Areas with significant amounts of buried metal typically produce anomalously steep magnetic gradients. Since it is sensitive to ferrous metal sources both above and below ground, site and vicinity surface conditions can affect survey results.

We typically use a Geometrics G-858 cesium vapor magnetometer to obtain vertical magnetic gradient data. This instrument features a built-in memory that stores the vertical magnetic gradient and survey grid information. The information can be down loaded to a computer for further processing.

Data Analysis

Computer Processing

The VMG data are down loaded to a lap-top computer and converted it into a format for contouring. The contouring program (SURFER Version 8.0 by Golden Software) calculates an evenly spaced array of values (grid) based on the observed field data. Finally, these gridded values are contoured to produce a VMG contour map.

Contour Map Interpretation

The VMG contour map illustrates the variations in the vertical magnetic gradient across the site. Areas without below or above ground ferrous metal are characterized by very low magnetic gradients. In these areas, there are very few contours. In areas with above or below ground ferrous metal, the magnetic gradient is relatively steep. These areas are characterized by numerous closely spaced contours and are considered anomalous. If the source of the anomaly is linear (e.g. underground utilities or fence lines), then the contours tend to be parallel and evenly distributed. If the source of the anomaly is localized (e.g. sign post, buried drum, etc.), then the contours tend to form circular or elliptical closures proportional to the size of the object. The larger the object and the closer it is to the magnetometer, the denser the concentrations of contours. Magnetic anomalies that cannot be attributed to above ground objects (fences, vehicles, buildings, etc.) are probably caused by buried objects.

USTs are often characterized by circular to elliptical contour closures. These closures have magnitudes ranging from several hundred to several thousand nano-Tesla per meter (nT/m) depending on the size and depth of the tank. If the UST is cylindrical and lying horizontally, it will often produce a bi-polar VMG anomaly. This consists of two adjacent contour closures. One has VMG values that increase towards the center of the closure and is referred to as a positive lobe. The second has VMG values that decrease towards the center of the closure and is referred to as a negative lobe. Typically, the positive lobe is situated directly above the UST and the negative lobe is to the north of the UST. Utilities and scattered metal debris, on the other hand, are generally characterized by single circular or irregular shaped negative lobes, or a group of alternating positive and negative lobes (closures). These closures typically have magnitudes ranging from less than fifty to several hundred nano-Tesla per meter (nT/m) depending on the size, depth, and amount of utilities and debris in a given area.

Limitations

Below ground metal ferrous objects produce localized variations in the earth's magnetic field. The magnetic intensity associated with buried metal depends on the mass of the metal and the distance the metal object is from the magnetometer sensor. As the distance between the object and the magnetometer sensor increases, the intensity of the associated field decreases, thereby making detection more difficult. In addition, the ability to detect a buried metal object is based on the intensity of these variations versus the intensity of the background variations. Background variations can be caused by other nearby above or below ground metallic sources. Cultural features such as chain link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce numerous magnetic variations with high intensities. These variations may mask effects from buried metal objects, or make it very difficult to determine whether the magnetic variations are associated with below ground metal or above/below ground cultural features.

ELECTROMAGNETIC (EM)

EM Methodology

The electromagnetic method is used to measure variations in subsurface electrical conductivity that may be due to buried foreign objects or changes in subsurface materials. The electromagnetic system utilizes two coils separated by a specified distance. One of these coils transmits a time-varying electromagnetic signal (primary magnetic field) which induces current flow in the earth. This in turn creates a secondary magnetic field which is detected by the receiver coil. The secondary signal is complex and has both quadrature and in-phase components. The amplitude of the quadrature component is proportional to the electrical conductivity of the subsurface materials. The in-phase component is proportional to conductivity, but is also affected by electrical properties associated with metal objects. The instrument displays the quadrature component in

units of milliSiemens/meter (mS/m). Since this measurement represents the conductivity of the volume of material sampled, rather than individual layers, it is an apparent value and is referred to as terrain conductivity (TC). The instrument displays the in-phase component (IPC) value in units of parts per thousand (ppt).

Electromagnetic surveys are typically conducted using a Geonics EM31-DL ground conductivity meter connected to an Omnidata data recorder. The EM31 has a fixed coil separation of 12 feet, which results in a total depth of investigation of approximately 10 to 15 feet depending upon local site conditions. The data recorder automatically stores the EM values as well as station locations and annotations regarding cultural features.

Data Analysis:

Computer Processing

The EM data are downloaded to a lap-top computer and converted into a format for contouring. The contouring program (SURFER Version 8.0 by Golden Software) calculates an evenly spaced array of values (grid) based on the observed field data. Finally, these gridded values are contoured to produce TC and IPC contour maps.

Contour Map Interpretation

The TC and IPC contour maps show the variations in the electromagnetic terrain conductivity and in-phase component values within the survey area. The contour map is characterized by a series of contour lines that represent specific values. Areas that lack contour lines, or where the contours are spaced far apart, indicate a minimal change or variation in the respective values. This is indicative of relatively uniform conditions. Areas where contours are closely spaced indicate variations that are not uniform and probably caused by local sources.

In areas where there are significant quantities of above or below ground metal objects, the measured values are relatively large. These areas are characterized by numerous closely spaced contours. If the source of the anomaly is linear (e.g. underground utilities, railroad spurs, culvert, etc.), then the contours tend to parallel the object, and are closely spaced in close proximity to the object. If the below ground source is localized (e.g. UST, buried drum, isolated metal debris, etc.), then the contours tend to form circular or elliptical closures that enclose the object. The larger the object and the closer it is to the geophysical instrument, the more contours there are in a given area.

Buried landfill material is often characterized by circular to elliptical contour closures. These closures can vary from large circular closures that cover broad areas, to clusters of small closures that occur in zones. If the composition of the landfill is generally homogenous and nonmetallic, the contours tend to form large closures representing a decrease in value. If the fill material consists of both nonmetallic and metallic debris that varies significantly throughout the landfill, the contours tend to occur as numerous small closures representing both high and low values.

Limitations

There are inherent limitations associated with EM techniques that may not allow for the detection of all subsurface features of interest. These limitations are related to the composition of the subsurface feature, its size and depth of burial, and its proximity to other above or below ground features. In general, as the distance between a subsurface object and the respective geophysical instrument increases, the intensity of the associated field decreases, thereby making detection more difficult. In addition, above and below ground objects, such as buildings, debris, utilities, above ground electric lines, etc., typically produce interference that may mask effects from nearby buried features (targets).

Apart from the physical limitations of the instrument and the unwanted effects from secondary objects, the ability to detect subsurface features is also dependent upon the density of data acquisition points. If the distance between data acquisition points is significantly larger than the size of the subsurface feature, then this object may not be detectable.

METAL DETECTION (MD)

MD Methodology

This method uses the principle of electromagnetic induction to detect shallowly buried metal objects such as USTs, metal utility conduits, rebar in concrete, manhole covers, and various metallic debris. This is done by carrying a hand-held radio transmitter-receiver unit above the ground and continuously scanning the surface. A primary coil broadcasts a radio signal from a transmitter which induces secondary electrical currents in metal objects. These secondary currents in turn produce a magnetic field which is detected by the receiver.

Instrumentation

The MD instrument that we typically use for shallow subsurface investigations is a Fisher TW-6 pipe and cable locator. This instrument is expressly designed to detect metallic pipes, cables, USTs, manhole covers, and other large, shallowly buried metallic objects. The instrument operates by generating both a meter reading (unitless) and an audible response when near a metal object. The peak instrument response usually occurs when the unit is directly over the object. The TW-6 does not provide a recordable data output that can be used for later computer processing. Results are generally limited to marking the interpreted outlines of detected objects in the field and mapping their locations.

Limitations

In general, the response of the MD instrument is roughly proportional to the horizontal surface area of near surface buried objects (typically in the upper three or four feet). This relationship can be used to advantage in discriminating between metal debris, reinforced concrete pads, and pipelines. However, in the presence of above ground metal objects such as fences, walls, parked cars, and

metal debris, this is no longer valid. In some instances, the presence of such objects can make it very difficult to determine whether the instrument responses are associated with below ground targets or above ground cultural features. When multiple sources are present it may not be possible to identify individual targets. Also, relatively large objects that have a limited horizontal cross-section such as well casing and fence posts are sometimes difficult to detect.

GROUND PENETRATING RADAR (GPR)

GPR Methodology

Ground penetrating radar is a method that provides a continuous, high resolution graphical cross-section of the shallow subsurface. The method entails repeatedly radiating an electromagnetic pulse into the ground from an antenna as it is moved along a traverse. Reflected signals are received by an antenna (often the same one used to generate the signal) and sent to a control unit for processing. The control unit then converts the varying amplitude of reflected radar signals as a function of time into a cross-sectional image showing signal amplitude as a function of depth.

GPR is particularly sensitive to variations of two electrical properties. One property is conductivity (the ability of a material to conduct a charge when a field is applied) and the other is permittivity (the ability of a material to hold a charge when a field is applied). These two properties determine how far a signal can propagate. They also determine the strength of reflected signals that can be generated at material boundaries. Most soil and earthen-like materials such as concrete are electrically resistive and have a relatively low permittivity. As a result, they are relatively transparent to electromagnetic energy. This means that only a portion of the radar signal incident upon them is reflected back to the surface. On the other hand, when the signal encounters an object composed of a material that has the opposite electrical properties, especially one with a high permittivity (such as metal) much of the incident energy is reflected.

Instrumentation

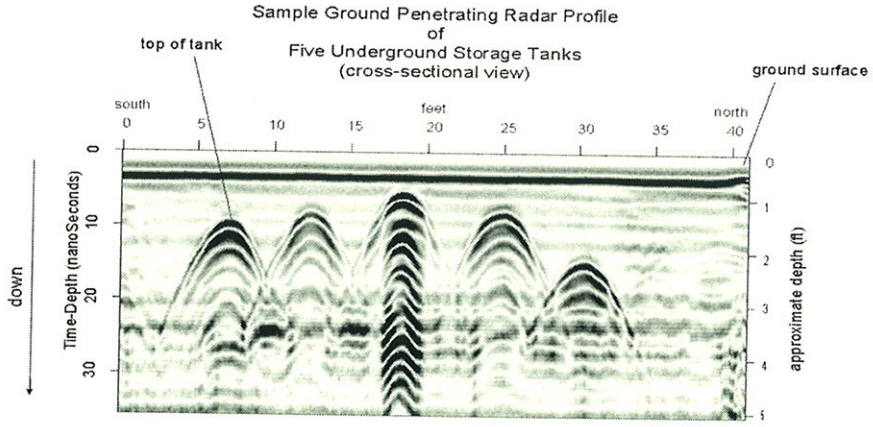
We typically perform GPR surveys using a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar System equipped with a 500 megahertz (MHz) transducer. This unit is comprised of a combined control/data recording console that is connected by a telemetry cable to the antenna. This system is often chosen for investigating environmental sites since it usually provides both the resolution and depth penetration needed for characterizing the upper three to four feet of the subsurface.

Data Interpretation

The interpretation of GPR data involves examining the graphical records for reflections from buried objects. GPR records display changes in reflected signal strength and arrival time with changes in horizontal position. Strong signals appear dark and weak reflections appear light. Reflections that arrive earlier in time are placed in the upper portions of the record and reflections that arrive later are placed lower, towards the bottom of the records. Horizontal position is across the top of the record.

In areas with relatively uniform conditions, with no buried objects producing reflections, the records typically appear as a series of alternating dark and light horizontal bands. In areas where there are subsurface objects producing reflections, the horizontal banding is disrupted. Discrete objects typically produce reflections having the appearance of inverted "U"s, forming what are known as "hyperbolic reflections". Metallic objects often produce markedly strong reflections, in many cases forming multiple reflections appearing as a series of inverted U's cascading down the record. Non-metallic objects can produce similar reflections, but the multiples are typically much weaker.

A sample profile from a different site with five adjacent steel USTs is presented below:



Note: the "Time Depth" of 35 nanoSeconds at the bottom of this profile corresponds to a true depth of approximately 5 feet for this example only. Actual depth to bottom of other profiles may be different.

An object's burial depth may also be estimated from GPR profiles. As mentioned above, GPR measures signal amplitude as a function of time. However, the translation of the radar signal's travel time (technically known as time-depth) to an actual distance (true depth) is not always a simple one. Strictly speaking, in order to translate from time-depth to true depth the signal velocity within each time interval must be known. Since this is not routinely determined in the field, estimated velocities are often used for determining the approximate depth to a reflector. The empirical values for GPR signal propagation velocities within commonly encountered soils are obtained from published tables.

Limitations

The ability to detect subsurface targets is dependent on specific site conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the depth of detection will be reduced as the clay and/or moisture content in the subsurface increases. As a result, depths of detection (using a 500 Mhz antenna) typically range from as deep as six feet to as little as a few inches.

Attachment B7
AOC 12 Trenching Photograph Log



Photo 1: Digging central region of AOC12a-T1 with AOC12a-T2 in foreground



Photo 2 AOC12b-T1



Photo 3: AOC12B-T1 central view west



Photo 4: AOC12c-T1 west; east view



Photo 5: AOC12c-T2 south; south view



Photo 6: AOC12c-T2 north



Photo 7: AOC12c-T1 east part of trench concrete chunk



Photo 8: AOC12c-T1 east; wooden slat recovered from trench

Appendix D
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station

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Acronyms and Abbreviations

AOC	Area of Concern
APPL	Agriculture and Priority Pollutants Laboratories, Inc.
ATL	Advanced Technology Laboratories
BHC	benzene hexachloride
BKG	background
CCV	continuing calibration verification
Cr(VI)	hexavalent chromium
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DQE	data quality evaluation
DRO	diesel-range organic
GRO	gasoline-range organic
LCL	lower control limit
LCS	laboratory control sample
MO	motor-oil-range organic
MS/MSD	matrix spike/matrix spike duplicate
PAH	polynuclear aromatic hydrocarbon
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
PDS	post-digestion spike
PG&E	Pacific Gas and Electric Company
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RFI/RI	RCRA facility investigation/remedial investigation
RPD	relative percent difference
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit

TLI	Truesdail Laboratories, Inc.
TPH	total petroleum hydrocarbons
UCL	upper control limit
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

APPENDIX D

Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station

D.1 Introduction

This data quality evaluation (DQE) assesses the data quality of analytical results for the Part A, Phase 1 Resource Conservation and Recovery Act (RCRA) facility investigation/ remedial soil investigation (RFI/RI) at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station near Needles, California, between August 22, 2008 and December 16, 2008. Samples were collected and analyzed as specified in the *RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A* (CH2M HILL, 2006). The *PG&E Program Quality Assurance Project Plan* (QAPP) (CH2M HILL, 2008a), *Addendum to the PG&E Program Quality Assurance Project Plan for the RCRA Facility Investigation/Remedial Investigation for Soil* (CH2M HILL, 2008b), individual method requirements, internal laboratory quality control criteria, guidelines from the United States Environmental Protection Agency (USEPA) *Contract Laboratory National Functional Guidelines for Inorganic Data Review* (USEPA, 2002), and U*SEPA National Functional Guidelines for Organic Data Review* (USEPA, 1999) were used in this assessment. Soil collected between 1988 and 2003 were evaluated in the *Final Soil and Sediment Data Usability Technical Memorandum, PG&E Topock Compressor Station* (CH2M HILL, 2008c).

The goal of this review is to evaluate whether a sufficient number of representative samples were collected and whether the resulting analytical data can be used to support the decision-making process. The procedures for assessing the precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters are addressed in the QAPP (CH2M HILL, 2008a). The following summary highlights the PARCC findings for the Part A, Phase 1 RFI/RI at the Topock Compressor Station.

The overall data quality met the data quality objectives and the project-specific objectives despite some issues with the analysis of a difficult soil matrix, which are summarized in the following statements:

- The completeness objective for the PG&E program is 90 percent for soil samples. The completeness objectives were met for all method/analyte combinations collected except acetone. See Attachment 11.
- Samples were collected and analyzed based on approved methods/procedures, and the results are reported using industry-standard units.
- No data were qualified due to method blank contamination, and a minimum number of samples were qualified due to equipment blank contamination.

- With the exceptions discussed above, the routinely acceptable performance of field and laboratory quality control indicators (field duplicates, field blanks, laboratory blanks, laboratory control sample [LCS], matrix spike/matrix spike duplicate [MS/MSD], and calibrations) show the accuracy and precision of the data meet the project objectives.
- Matrix effects were encountered, resulting in elevated reporting limits.
- Analytical data as qualified meet the data quality objectives (except acetone) and can be used in project decision-making.

D.2 Analytical Data

This DQE report covers 672 soil (and other solid) samples, 63 soil field duplicate samples, and the associated quality control samples (e.g., trip blanks and equipment blanks). These samples were reported by the laboratories in 159 sample delivery groups.

Truesdail Laboratories, Inc. (TLI) of Tustin, California; Advanced Technology Laboratories (ATL) of Signal Hill, California; the ATL satellite laboratory of Las Vegas, Nevada; and Agriculture and Priority Pollutants Laboratories, Inc. (APPL) of Fresno, California performed the required analyses. All laboratories are certified by the California Department of Health Service's Environmental Laboratory Accreditation Program for the analyses included in Table D-1, where appropriate. Samples were analyzed for one or more of the analytes/methods provided in Table D-1.

TABLE D-1
Analytical Parameters
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Parameter	Method	Laboratory
Percent moisture	D2216 [a]	ATL/TLI
Metals	SW6010B [b]	ATL-NV
Synthetic precipitation leaching procedure chromium	SW6020A [b]	TLI
Hexavalent chromium	SW7199 [b]	TLI
Mercury	SW7471A [b]	ATL-CA
Total petroleum hydrocarbon diesel-range organics/motor oil-range organics	SW8015B-E [b]	TLI
TPH gasoline-range organics	SW8015B-P [b]	ATL-NV
Organochlorine pesticides	SW8081A [b]	ATL-CA
Polychlorinated biphenyls	SW8082 [b]	ATL-CA
Volatile organic compounds	SW8260B [b]	ATL-NV
Semivolatile organic compounds	SW8270C [b]	ATL-CA
Polynuclear aromatic hydrocarbons	SW8270 Selected Ion Monitoring (SIM) [b]	ATL-CA
Dioxins and furans	SW8290 [b]	APPL
Cyanide	SW9012A [b]	TLI
pH	SW9045 [b]	TLI

TABLE D-1
Analytical Parameters
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Parameter	Method	Laboratory

[a] American Society for Testing and Materials – ASTM – 2005.

[b] SW-846 Test Methods for Evaluating Solid Waste, 3rd Edition, revision 4, 1996.

The assessment of data includes a review of:

- Chain of custody documentation.
- Holding time compliance.
- Required quality control samples at the specified frequencies.
- Method blanks.
- LCS.
- Surrogate spike recoveries.
- MS/MSD samples.
- Field duplicate precision.
- Initial and continuing calibration criteria.

Field samples were also reviewed to ascertain field compliance and data quality issues. This review includes evaluation of field duplicates, as well as equipment blank and trip blank data.

Data flags were assigned according to the QAPP (CH2M HILL, 2008a). These flags, as well as the reason for each flag, are entered into the electronic database and can be found in Attachments 1 through 10 to this DQE report. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes matrix and blank sample effects.

The data flags are listed and defined below:

- J = Analyte was present but the reported value might not be accurate or precise (estimated).
- R = Data were unusable due to deficiencies in the ability to analyze the sample and meet quality control criteria.
- U = Analyte was not detected at the specified reporting limit.
- UJ = Analyte was not detected and the specified reporting limit might not be accurate or precise (estimated).

D.3 Data Assessment

Data assessment includes a review of the activities described in the following sections.

D.3.1 Holding Times

Holding time exceedances result in the possible loss of target analytes due to degradation or chemical reactions that usually cause a negative bias to sample results. Detected and non-detected sample results exceeding the method recommended holding time were qualified as estimated and flagged "J" and "UJ." Refer to the site-specific tables in Attachments D1 through D10 for the data discussed below.

- **Background (BKG).** All holding time acceptance criteria were met for the background samples.
- **Solid Waste Management Unit (SWMU) 1 (Former Percolation Bed).** Seven samples for polychlorinated biphenyls (PCBs) (SW8082) were analyzed outside the recommended holding time. The seven samples were not scheduled for PCB analysis in the original sampling plan, and the PCB analysis was requested after the holding time had been exceeded. See Attachment D2, Table D2-1.
- **Area of Concern (AOC) 1 (Area around Former Percolation Bed).** One sample for PCB (SW8082) was analyzed outside the recommended holding time. This sample was not scheduled for PCB analysis in the original sampling plan, and the PCB analysis was requested after the holding time had been exceeded. See Attachment D3, Table D3-1.
- **AOC 4 (Debris Ravine).** Two samples for hexavalent chromium [Cr(VI)] (SW7199), 14 samples for total petroleum hydrocarbon diesel-range organics (TPH-DRO) (SW8015B-E), one sample for pesticides (SW8081A), one sample for PCBs (SW8082), 14 samples for semivolatile organic compounds (SVOCs) (SW8270C), 17 samples for polynuclear aromatic hydrocarbons (PAHs) (SW8270sim), one sample for cyanide (SW9012), and two samples for pH (SW9045) were analyzed outside the recommended holding time. With the exception of the two samples for Cr(VI), the remaining samples were mistakenly held in the field (stored at 4º Celsius) past the recommended holding time.
- Due to the complex nature of the "wood" samples for Cr(VI) the laboratory made several attempts to extract the Cr(VI) using the standard soil extraction method (SW3060A) prior to a successful extraction that allowed analysis to proceed. The final analysis was delayed past the recommended holding time due to the difficulty of the matrix. See Attachment D4, Table D4-1.
- **AOC 9 (Southeast Fence Line -Outside Visitor Parking Area).** One sample for total petroleum hydrocarbons motor-oil-range organics (TPH-MO) (SW8015B-E) and two samples for PCBs (SW8082) were analyzed outside the recommended holding time. The original motor-oil fraction result was greater than the calibration range, and the analyst overlooked the need for reanalysis until after the sample was outside the holding time. The samples for PCBs were not scheduled for PCB analysis in the original sampling plan, and the analysis was requested after the holding time had been exceeded. See Attachment D5, Table D5-1.
- **AOC 10 (East Ravine).** Six samples for mercury (SW7471A), five samples for TPH-DRO (SW8015B-E), and five samples for PCBs (SW8082) were analyzed outside the recommended holding time. In the original sampling plan, the six samples for mercury analysis were designated as supplemental samples, with the analysis to be determined

after results from contiguous samples could be evaluated. The mercury analysis was requested after the holding time had been exceeded. The five samples for TPH-DRO were analyzed a few days outside the recommended holding time due to lab capacity issues. The samples for PCBs were not scheduled for PCB analysis in the original sampling plan, and the analysis was requested after the holding time had been exceeded. See Attachment D6, Table D6-1.

- **AOC 11 (Topographic Low Area).** Thirty-nine samples for mercury (SW7471A), 12 samples for TPH-DRO (SW8015B-E), six samples for total petroleum hydrocarbons gasoline-range organics (TPH-GRO) (SW8015B-P), two samples for PCBs (SW8082), and five samples for volatile organic compounds (VOCs) (SW8020B) were analyzed outside the recommended holding time. In the original sampling plan, the 39 samples for mercury analysis were designate as supplemental samples, with the analysis to be determined after results from contiguous samples could be evaluated. The mercury analysis was requested after the holding time had been exceeded. The five samples for TPH-DRO were analyzed a few days outside the recommended holding time due to lab capacity issues. The six samples for TPH-GRO were received in the lab just outside the 48-hour preservation requirement for frozen samples. The samples for PCBs were not scheduled for PCB analysis in the original sampling plan, and the analysis was requested after the holding time had been exceeded. See Attachment D7, Table D7-1.
- **AOC 12 (Fill Area).** One sample for PCB (SW8082) was analyzed outside the recommended holding time. This sample was not scheduled for PCB analysis in the original sampling plan, and the PCB analysis was requested after the holding time had been exceeded. See Attachment D8, Table D8-1.
- **AOC 14 (Railroad Debris Site).** Eighteen samples for TPH-DRO (SW0815B-E), two samples for SVOCs (SW8270C), two samples for PAHs (SW8270SIM), and two samples for pH (SW9045) were analyzed outside the recommended holding time. Fifteen of the TPH-DRO samples were analyzed a few days outside the recommended holding time due to lab capacity issues. The remaining three TPH-DRO, two SVOC, two PAH, and two pH samples were mistakenly held in the field (stored at 4° Celsius) past the recommended holding time. See Attachment D9, Table D9-1.
- **300B (Former 300B Pipeline Liquids Tank).** All holding time acceptance criteria were met in this area of concern.

D.3.2 Method Blanks

Method blanks are used to monitor and evaluate each preparation or analytical batch for potential contamination throughout the analytical process from sources such as glassware, reagents, instrumentation, and other potential contaminant sources within the laboratory. If a target analyte is detected in the method blank, similar detections in the samples are possibly artifacts of laboratory contamination.

Method blanks were analyzed at the required frequency. No target analytes were detected in the method blanks that affected the reporting limit for the associated samples.

D.3.3 Equipment Blanks

Equipment blanks are used to assess the effectiveness of sampling equipment decontamination procedures. Target analytes detected in equipment blanks may indicate that field equipment was not thoroughly decontaminated and/or samples could have been cross contaminated. Equipment blanks are collected at a frequency of one per sampling crew per day where non-dedicated equipment is used. Where equipment blank detections occur, reporting levels are adjusted up to reflect the possibility the results detected in a sample are actually a manifestation of contamination. Detected sample results greater than five times the equipment blank result and non-detected sample results are considered to be unaffected. Refer to the site-specific tables in Attachments 1 through 10.

- **BKG.** Sodium (SW6010B), a target analyte, was detected at or above the reporting limit for an equipment blank. Four associated samples with detected sodium results that were less than five times the equipment blank result were qualified as not detected and were flagged as "U."
- **SWMU 1.** Sodium (SW6010B), a target analyte, was detected at or above the reporting limit for two equipment blanks. Seven associated samples with detected sodium results that were less than five times the equipment blank results were qualified as not detected and were flagged as "U."
- **AOC 1.** Copper (SW6010B), a target analyte, was detected at or above the reporting limit for an equipment blank. Two associated samples with detected copper results that were less than five times the equipment blank result were qualified as not detected and were flagged "U." Sodium (SW6010B), a target analyte, was detected at or above the reporting limit for three equipment blanks. Four associated samples with detected results that were less than five times the equipment blank result were qualified as not detected and were as flagged "U."
- **AOC 4.** Sodium (SW6010B), a target analyte, was detected at or above the reporting limit for an equipment blank. One associated sample's detected sodium result that was less than five times the equipment blank result was qualified as not detected and flagged "U."
- **AOC 9.** All equipment blank acceptance criteria were met in this area of concern.
- **AOC 10.** All equipment blank acceptance criteria were met in this area of concern.
- **AOC 11.** Sodium (SW6010B), a target analyte, was detected at or above the reporting limit for an equipment blank. One associated sample's detected sodium result that was less than five times the equipment blank result was qualified as not detected and was flagged as "U."
- **AOC 12.** All equipment blank acceptance criteria were met in this area of concern.
- **AOC 14.** All equipment blank acceptance criteria were met in this area of concern.
- **300B.** All equipment blank acceptance criteria were met in this area of concern.

D.3.4 Calibration

Initial calibration and periodic verification are essential to generating defensible analytical data. Initial calibrations that do not meet method requirements result in data that may be either positively or negatively biased. Periodic calibration verification ensures that the instrument has not been adversely affected by the sample matrix or other instrument failures that would increase or decrease the sensitivity or accuracy of the method. The inability to meet initial or continuing calibration analyses may result in qualifying the data as estimated or rejecting the data for project decision-making purposes. Refer to the site-specific tables in Attachments D1 through D10.

All initial calibrations were performed as required by the methods and met the method criteria.

- **BKG.** All continuing calibration verification (CCV) standard acceptance criteria were met for the background samples.
- **SWMU 1.** One CCV for bromoform (SW8060B) had a recovery that was less than the lower control limit (LCL). Two associated non-detect results were qualified as estimated and were flagged as "UJ." See Attachment D2, Table D2-1.
- **AOC 1.** One CCV for bromoform (SW8060B) had a recovery that was less than the LCL. Seven associated non-detected results were qualified as estimated and were flagged as "UJ." See Attachment D3, Table D3-1.
- **AOC 4.** One CCV for gasoline (SW8015B-P) had a recovery that was less than the LCL. Five associated non-detect results were qualified as estimated and were flagged as "UJ." One CCV for endrin aldehyde (SW8081A) had a low-bias recovery. One associated non-detected result was qualified as estimated and was flagged as "UJ." See Attachment D4, Table D4-1.
- **AOC 9.** One CCV for bromoform (SW8060B) had a recovery that was less than the LCL. Five associated non-detected results were qualified as estimated and were flagged as "UJ." One Cr(VI) sample result was greater than the linear range of the initial calibration range. The sample was qualified as estimated and was flagged as "J." See Attachment D5, Table D5-1.
- **AOC 10.** One CCV for 4,4´-DDT (dichlorodiphenyltrichloroethane), endosulfan I, endrin aldehyde, methoxychlor, and toxaphene (SW8081A) had recoveries that were less than the LCL. The associated non-detected results from one sample were qualified as estimated and were flagged as "UJ." One CCV for bromoform (SW8060B) had a recovery that was less than the LCL. Seven associated non-detected results were qualified as estimated and were flagged as "UJ." See Attachment D6, Table D6-1.
- **AOC 11.** One CCV for bromoform (SW8060B) had a low-bias recovery. Fourteen associated non-detected results were qualified as estimated and were flagged as "UJ." See Attachment D7, Table D7-1.
- **AOC 12.** One CCV for acrolein (SW8060B) had a recovery that was less than the LCL. Seven associated non-detected results were qualified as estimated and were flagged as "UJ." See Attachment D8, Table D8-1.

- **AOC 14.** One CCV for bromoform (SW8060B) had a recovery that was less than the LCL. Two associated non-detected results were qualified as estimated and were flagged as "UJ." See Attachment D9, Table D9-1.
- **300B.** All CCV acceptance criteria were met in this area of concern.

D.3.5 Field Duplicates

Field duplicates are collected and analyzed to determine if field collection activities or the sample matrix influence the precision of the analytical measurements obtained at the sample site. Soils samples are inherently more variable than water samples, despite homogenizing and lead to larger relative percent differences (RPD). Large RPDs do not necessarily indicate lack of precision when associated with soil samples. Detected and non-detected results were qualified as estimated and were flagged as "J" and "UJ." Refer to a list of field duplicate pairs and reference the site-specific tables in Attachments D1 through D10.

- **BKG.** All field duplicate acceptance criteria were met for the background samples.
- **SWMU 1.** One field duplicate pair had an RPD greater than the upper control limit (UCL) for chromium (SW6010B, 20 percent). One field duplicate pair had an RPD greater than the UCL for nickel (SW6010B, 20 percent). One field duplicate pair had an RPD greater than UCL for cobalt (SW6010B, 20 percent). One field duplicate pair had RPDs greater than the UCL for barium, cobalt, chromium, and nickel (SW6010B, 20 percent). Two field duplicate pairs had RPDs greater than the UCL for acetone (SW8260B, 30 percent). See Attachment D2, Table D2-1.
- **AOC 1.** One field duplicate pair had a RPD greater than the UCL for chromium (SW6010B, 20 percent). One field duplicate pair had an RPD greater than the UCL for lead (SW6010B, 20 percent). One field duplicate pair had RPDs greater than the UCL for lead (SW6010B, 20 percent) and acetone (SW8260B, 30 percent). One field duplicate pair had an RPD greater than the UCL for lead, nickel, zinc (SW6010B, 20 percent), and Cr(VI) (SW7199, 20 percent). See Attachment D3, Table D3-1.
- **AOC 4.** One field duplicate pair had an RPD greater than the UCL for Cr(VI) (SW7199, 20 percent). One field duplicate pair had RPDs greater than the UCL for anthracene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and fluoranthene (SW8270SIM, 30 percent). One field duplicate pair had RPDs greater than the UCL for benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, and pyrene (SW8270SIM, 30 percent). See Attachment D4, Table D4-1.
- **AOC 9.** One field duplicate pair had an RPD greater than the UCL for acetone (SW8260B, 30 percent). One field duplicate pair had RPDs greater than the UCL for chrysene, phenanthrene, (SW8270SIM, 30 percent), and chromium (SW6010B, 20 percent). One field duplicate pair had RPDs greater than the UCL for 1-methylnaphthalene and 2-methylnaphthalene (SW8270SIM, 30 percent). See Attachment D5, Table D5-1.
- **AOC 10.** One field duplicate pair had an RPD greater than the UCL for lead (SW6010B, 20 percent). One field duplicate pair had an RPD greater than the UCL for acetone (SW8260B, 30 percent). One field duplicate pair had RPDs greater than the UCL for lead, zinc (SW6010B, 20 percent) and acetone (SW8260B, 30 percent). One field duplicate pair

had RPDs greater than the UCL for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(k)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene (SW8270SIM, 30 percent), and acetone (SW8260B, 30 percent). See Attachment D6, Table D6-1.

- **AOC 11.** One field duplicate pair had RPDs greater than the UCL for barium, calcium (SW6010B, 20 percent), alpha chlordane, and gamma chlordane (SW8081A, 50 percent). One field duplicate pair had RPDs greater than the UCL for TPH-DRO (SW8015B-E, 50 percent) and acetone (SW8260B, 30 percent). One field duplicate pair had RPDs greater than the UCL for fluoranthene, phenanthrene, and pyrene (SW8270SIM, 30 percent). See Attachment D7, Table D7-1.
- **AOC 12.** All field duplicate acceptance criteria were met in this area of concern.
- **AOC 14.** One field duplicate pair had an RPD greater than the UCL for acetone (SW8260B, 30 percent). One field duplicate pair had an RPD greater than the UCL for copper (SW6010B, 20 percent). See Attachment D9, Table D9-1.
- **300B.** All field duplicate acceptance criteria were met in this area of concern.

D.3.6 Laboratory Control Samples

A LCS measures laboratory accuracy. Accuracy is the degree of agreement between a measured value and the expected value. The LCS is prepared from laboratory deionized or reagent-grade water and spiked with known amounts of the target analytes of interest. Recovery of analytes outside of quality control limits generally indicates a problem with the analytical procedure. A low LCS recovery indicates that the target analyte in associated samples is likely biased low. Associated detected and non-detected sample results were qualified as estimated and were flagged as "J" and "UJ." Likewise, a high LCS recovery indicates that the target analyte in associated samples is likely biased high. All of the LCS recoveries recovered outside the quality control limits were biased high for the Part A, Phase 1 samples. Associated detected results were qualified as estimated and were flagged as "J." Non-detected results associated with a high-bias recovery were not qualified. Refer to the site-specific tables in Attachments D1 through D10.

- **BKG.** LCSs were analyzed at the required frequency and were recovered within quality control limits.
- **SWMU 1.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Five associated detected sample results were qualified as estimated and were flagged as "J." One LCS for TPH-MO (SW8015-E) had a recovery that was greater than the UCL (120 percent). Ten associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D2, Table D2-1.
- **AOC 1.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). One associated detected sample result was qualified as estimated and was flagged as "J." Another LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Ten associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D3, Table D3-1.

- **AOC 4.** LCSs were analyzed at the required frequency and were recovered within quality control limits.
- **AOC 9.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Three associated detected sample results were qualified as estimated and were flagged as "J." The RPD of acenaphthylene (SW8270SIM) between the results for two LCSs was greater than the UCL (126 percent). Sixteen associated non-detected sample results were qualified as estimated and were flagged as "UJ." See Attachment D5, Table D5-1.
- **AOC 10.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Three associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D6, Table D6-1.
- **AOC 11.** One LCS for TPH-MO (SW8015-E) had a recovery that was greater than the UCL (120 percent). Nine associated detected sample results were qualified as estimated and were flagged as "J." One LCS for benzo(k)fluoranthene (SW8270SIM) had a recovery that was greater than the UCL (129 percent). Seven associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D7, Table D7-1.
- **AOC 12.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Two associated detected sample results were qualified as estimated and were flagged as "J." One LCS for benzo(k)fluoranthene (SW8270SIM) had a recovery that was greater than the UCL (129 percent). One associated detected sample result was qualified as estimated and was flagged as "J." See Attachment D8, Table D8-1.
- **AOC 14.** One LCS for TPH-MO (SW8015B-E) had a recovery that was greater than the UCL (120 percent). Two associated detected sample results were qualified as estimated and were flagged as "J." One LCS and LCS duplicate for TPH-MO (SW8015B-E) had recoveries that were greater than the UCL (120 percent). Four associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D9, Table D9-1.
- **300B.** One LCS and LCS duplicate for TPH-MO (SW8015-E) had recoveries that were greater than the UCL (120 percent). Six associated detected sample results were qualified as estimated and were flagged as "J." See Attachment D10, Table D10-1.

D.3.7 Matrix Spike Samples

Matrix spike recoveries are used to evaluate the effect of the sample matrix on the recovery of target analytes. A sample is fortified with a known quantity of a target analyte and is carried through the same preparation and analytical procedures as the non-spiked sample. Matrix spike recoveries outside the quality control limits may indicate that the sample's matrix is affecting the method's ability to accurately quantify the target analyte in the associated sample or samples from similar locations. A low matrix spike recovery generally indicates a negative bias in the sample data. Associated parent detected and non-detected sample results are qualified as estimated and are flagged as "J" or "UJ." When the matrix spike, MSD, or both have recoveries that are below 10 percent and the associated parent

sample has a detected result, the result is qualified as estimated and is flagged as "J" (low bias). However, an associated non-detected parent sample result is considered unusable and is flagged as "R." A high matrix spike recovery indicates a potential positive bias to the associated sample data. The associated parent detected results are qualified as estimated and are flagged as "J." Non-detected parent results associated with a high-bias recovery are not qualified. If a matrix spike and an MSD are analyzed, an RPD greater than the quality control criteria may further indicate that the sample matrix is affecting the precision of the method for the target analyte that did not meet criteria. Refer to the site-specific tables in Attachments D1 through D10.

- **BKG.** The MS/MSD samples for the background data set had recovery of antimony and barium (SW6010B), target analytes, outside the control limits established in the QAPP (75 to 125 percent). The associated parent analytes were qualified as estimated and were flagged as "J." See Attachment D1, Table D1-1.

- **SWMU 1.** The MS/MSD samples for SWMU 1 had recovery of target analytes outside the control limits established in the QAPP. Nine target analytes were qualified as estimated: antimony (SW6010B), Cr(VI) (SW7199), 4,4-DDE (dichlorodiphenyldichloroethylene), dieldrin, endrin ketone (SW8081A), 2,4-dinitrophenol, acetophenone, benzaldehyde, and caprolactam (SW8270C). Four benzoic acid (SW8270C) results were unusable (flagged as "R") due to MS/MSD recoveries less than 10 percent. Three serial dilution sample results had RPDs greater than the UCL. Three target analytes were qualified as estimated: iron, magnesium, and potassium (SW6010B); the associated sample results were qualified as estimated. See Attachment D2, Table D2-1.

- **AOC 1.** The MS/MSD samples for AOC1 had recovery of target analytes outside the control limits established in the QAPP. Three target analytes were qualified as estimated: caprolactam, hexachlorocyclopentadine (SW8270C), and antimony (SW6010B). Two benzoic acid (SW8270C) results were unusable due to MS/MSD recoveries of less than 10 percent and were flagged as "R." The serial dilution for a potassium sample result had an RPD greater than the UCL, and the associated sample was qualified as estimated. See Attachment D3, Table D3-1.

- **AOC 4.** The MS/MSD samples for AOC 4 had recovery of target analytes outside the control limits established in the QAPP. Twenty-six target analytes were qualified as estimated: antimony, barium, chromium, copper, lead, potassium, sodium, zinc (SW6010B), 4,4-DDE, alpha-BHC (benzene hexachloride), alpha chlordane, beta-BHC, delta-BHC, dieldrin, endosulfan sulfide, endrin ketone, gamma-BHC, heptachlor, heptachlor epoxide (SW8081A), Aroclor-1260 (SW8082) benzaldehyde (SW8270C), benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and pyrene (SW8270SIM). Two MS/MSD samples for benzoic acid and caprolactam (SW8270C) had recoveries less than 10 percent, and the sample non-detected results were rejected (flagged as "R"). One copper and lead (SW6010B) MS/MSD pair had RPDs greater than the UCL, and the associated sample results were qualified as estimated. One Cr(VI) (SW7199) sample had a high bias post-digestion spike (PDS) and was qualified as estimated. See Attachment D4, Table D4-1.

- **AOC 9.** The MS/MSD samples for AOC 9 had recovery of target analytes outside the control limits established in the QAPP. Seven target analytes were qualified as estimated: antimony (SW6010B), 1,1-biphenyl, 1,2,4,5-tetrachlorobenzene, acetophenone, benzaldehyde, benzoic acid, and caprolactam (SW8270C). The serial dilution for one sample had an RPD greater than the UCL for barium, iron, magnesium, and manganese (SW6010B), and the sample was qualified as estimated. See Attachment D5, Table D5-1.

- **AOC 10.** The MS/MSD samples for AOC 10 had recovery of target analytes outside the control limits established in the QAPP. Twenty-one target analytes were qualified as estimated: aluminum, antimony, barium, copper, iron, lead, zinc (SW6010B), 4,4-DDE, alpha-BHC, alpha chlordane, beta-BHC, delta-BHC, dieldrin, endosulfan sulfide, endrin ketone, gamma-BHC, heptachlor, heptachlor epoxide (SW8081A), Aroclor-1260 (SW8082) benzoic acid, and caprolactan (SW8270C). One lead (SW6010B) MS/MSD pair had an RPD greater than the UCL, and the associated sample was qualified as estimated. The serial dilution for one sample had an RPD greater than the UCL for barium, iron, and magnesium (SW6010B), and the sample was qualified as estimated. See Attachment D6, Table D6-1.

- **AOC 11.** The MS/MSD samples for AOC 11 had recovery of target analytes outside the control limits established in the QAPP. Four target analytes were qualified as estimated: antimony, barium (SW6010B), Cr(VI) (SW7199), and caprolactam (SW8270C). The serial dilution for one sample had an RPD greater than the UCL for aluminum, barium, calcium, iron, magnesium, manganese, and zinc (SW6010B), and the sample was qualified as estimated. A PDS was also outside the control limits for calcium (SW6010B), and the sample was qualified as estimated. See Attachment D7, Table D7-1.

- **AOC 12.** The MS/MSD samples for AOC 12 had recovery of target analytes outside the control limits established in the QAPP. Eight target analytes were qualified as estimated: antimony, barium, magnesium (SW6010B), 1,2,4,5-tetrachlorobenzene, 2,3,4,6-tetrachlorophenol, acetophenone, benzaldehyde, and caprolactam (SW8270C). A PDS was also out of the control range for calcium and iron (SW6010B), and the associated sample was qualified as estimated. See Attachment D8, Table D8-1.

- **AOC 14.** The MS/MSD samples for AOC 14 had recoveries of target analytes outside the control limits established in the QAPP. Seven target analytes were qualified as estimated: antimony, barium (SW6010B), 1,2,4,5-tetrachlorobenzene, acetophenone, benzaldehyde, benzoic acid, and caprolactam (SW8270C). One benzoic acid (SW8270C) result was unusable due to a matrix spike recovery less than 10 percent and was flagged as "R." A PDS was also out of the control range for barium, chromium, potassium, vanadium, and zinc (SW6010B), and the associated sample was qualified as estimated. See Attachment D9, Table D9-1.

- **300B.** The MS/MSD samples for area 300B had recovery of target analytes outside the control limits established in the QAPP. Two target analytes were qualified as estimated: antimony and barium (SW6010B). Two MS/MSD samples for benzoic acid and caprolactam (SW8270C) had recovery of less than 10 percent, and the sample results for benzoic acid and caprolactan (SW8270C) were rejected and were flagged as "R." See Attachment D10, Table D10-1.

D.3.8 Surrogates

Surrogates are primarily used in organic chromatography methods and are added prior to sample preparation. The surrogates are added to all samples, standards, and blanks in an analytical run and provide a measurement to determine recovery for every sample matrix. Surrogate compounds are chosen to represent the various chemistries of the target analytes in a specific method. They are often specified by the method and are deliberately selected for their improbability of occurring as environmental contaminants. The results are compared to the acceptance criteria as established by the method or the QAPP.

Sample results with surrogate recoveries outside the acceptance criteria were qualified as estimated and were flagged as "J" for all detected results, qualified as estimated and flagged as "UJ" for all non-detect results where the surrogate recovery is equal to or greater than 10 percent, and rejected and flagged as "R" if the surrogate recovery is less than 10 percent. Refer to the site-specific tables in Attachments D1 through D10.

- **BKG.** All surrogate acceptance criteria were met for the background sample set.
- **SWMU 1.** One non-detect sample had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E), four non-detect TPH-GRO (SW8015B-P) samples had a surrogate recovery less than the LCL, and one sample with detected TPH-DRO (SW8015B-E) had a surrogate recovery greater than the UCL. The samples results were qualified as described above. See Attachment D2, Table D2-1.
- **AOC 1.** Seven non-detect TPH-DRO/TPH-MO (SW8015B-E) samples had surrogate recoveries less than the LCL; two of the seven samples had less than 10 percent surrogate recovery. One detected TPH-MO (SW8015-E) sample had a surrogate recovery greater than the UCL. One detected PAH (SW8270SIM) sample had a surrogate recovery greater than the UCL; the samples results were qualified as described above. See Attachment D3, Table D3-1.
- **AOC 4.** One non-detect TPH-GRO (SW8015B-P) sample had a surrogate recovery less than the LCL. One sample had surrogate recovery less than the LCL for pesticides (SW8081A) and PCB (SW8082). The detect sample results were qualified as estimated and were flagged as "J"; the non-detect sample results were qualified as estimated and were flagged as "UJ." See Attachment D4, Table D4-1.
- **AOC 9.** One sample had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E). Three non-detect TPH-GRO (SW8015B-P) samples had a surrogate recovery less than the LCL. One PAH (SW8270SIM) sample had a surrogate recovery greater than the UCL, and the samples results were qualified as described above. See Attachment D5, Table D5-1.
- **AOC 10.** Four samples had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E). Six non-detect TPH-GRO (SW8015B-P) samples had a surrogate recovery less than the LCL; one of the six samples had less than 10 percent surrogate recovery. One sample had surrogate recovery less than the LCL for pesticides (SW8081A). One PAH (SW8270SIM) sample had a surrogate recovery greater than the UCL. The samples results were qualified as described above. See Attachment D6, Table D6-1.

- **AOC 11.** Two samples had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E). Three non-detect TPH-GRO (SW8015B-P) samples had a surrogate recovery less than the LCL. One TPH-MO (SW8015B-E) sample had a surrogate recovery greater than the UCL. See Attachment D7, Table D7-1.
- **AOC 12.** One non-detect TPH-GRO (SW8015B-P) sample had a surrogate recovery less than the LCL. See Attachment D8, Table D8-1.
- **AOC 14.** Four samples had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E), and seven non-detect TPH-GRO (SW8015B-P) samples had a surrogate recovery less than the LCL. One TPH-MO (SW8015B-E) sample had a surrogate recovery greater than the UCL. One PAH (SW8270SIM) sample had a surrogate recovery greater than the UCL. One VOC (SW8260B) sample had a surrogate recovery greater than the UCL. The samples results were qualified as described above. See Attachment D9, Table D9-1.
- **300B.** One sample had surrogate recovery less than the LCL for TPH-DRO (SW8015B-E). See Attachment D10, Table D10-1. The samples results were qualified as described above.

D.3.9 Other

D.3.9.1 Internal Standards

Internal standards have similar chemical characteristics to those of the analytes and provide an analytical response that is distinct from the analyte and not normally subject to interference. The internal standards are added prior to analysis for the purpose of determining analyte concentrations. The internal standard's response is referenced against a relative response factor, and the sample's analyte concentration can be corrected for matrix effects. Sample results with internal standard relative response factors outside the acceptance criteria are qualified and flagged as "J" for all detected results, qualified and flagged as "UJ" for all non-detect results where the internal standard recovery is equal to or greater than 10 percent, and rejected and flagged as "R" if the surrogate recovery is less than 10 percent. See the site-specific table in Attachments 1 through 10 for the data discussed below. Three investigation areas had samples results that were flagged due to internal standards results.

- **AOC 4.** One VOC (SW8260B) sample had an internal standard recovery less than the LCL; the associated analytes were qualified as described above. One PAH (SW8270SIM) sample had an internal standard recovery greater than the UCL; the associated detected analytes were qualified as described above. See Attachment D4, Table D4-1.
- **AOC 14.** One VOC (SW8260B) sample had four internal standards recovered at less than the LCL; the associated analytes were qualified as described above. See Attachment D9, Table D9-1.
- **300B.** One VOC (SW8260B) sample had an internal standard recovery less than the LCL; the associated analytes were qualified as described above. See Attachment D10, Table D10-1.

D.3.9.2 Contamination

VOC soil samples were collected following the Method SW5035A protocols. Based on Method SW5035A there are multiple methods of preservation. Because soil samples that contain carbonate minerals may effervesce upon contact with sodium bisulfate preservative (the "normal" preservative), to reduce the possibility of gas forming in the samples vials, the VOC samples were collected using a minimum of three pre-weighed vials—two containing reagent water and one preserved with methanol.

During the process of VOC analysis, ATL determined that the reagent water certified pre-weighed vials it received from its supplier were contaminated with acetone. After analyzing approximately a dozen vials from new cases within the lot purchased, the laboratory determined the concentration of acetone varied from non-detect to over 2,000 micrograms per kilogram. Because of the highly variable concentration, it was decided to reject all detected acetone results. Acetone data from seven of the investigation areas were rejected. See the site-specific table in Appendix H of the Data Gaps Report for the data discussed below.

- **SWMU 1.** Twenty-two of 132 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D2, Table D2-1.
- **AOC 1.** Twelve of 90 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D3, Table D3-1.
- **AOC 9.** Nine of 19 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D5, Table D5-1.
- **AOC 10.** Thirty-one of 57 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D6, Table D6-1.
- **AOC 11.** Twenty-four of 38 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D7, Table D7-1.
- **AOC 12.** Six of 16 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D8, Table D8-1.
- **AOC 14.** Twenty-six of 75 samples had acetone detects; acetone detects were rejected and flagged as "R." See Attachment D9, Table D9-1.

D.3.9.3 Retention Time Window

Retention time is one form of measurement associated with liquid and gas chromatography. Ion chromatography introduces a sample, either manually or with an auto sampler, into a sample loop of known volume. A buffered aqueous solution known as the mobile phase carries the sample from the loop onto a column that contains some form of stationary phase material. The time it takes for an analyte to move from the injection loop, through the column, to the detector is referred to as the retention time. Because retention times vary with the identity of the component, they are used for qualitative analysis. Once the laboratory has established a retention time window (the laboratory averages the retention time of multiple standards and calculates a retention time window by using ± 3 times the standard deviation from the average), the retention time is used to positively identify the analyte in subsequent samples.

When a sample's chromatogram has a "suspect peak" (that is believed to be the analyte in question, but is not within the retention time window), the analyst should dilute and re-analyze the sample with the suspect peak to positively identify the analyte. If the sample is not re-analyzed, a detect sample result is qualified and flagged as "J"; a non-detect result is qualified and flagged as "UJ."

Two Cr(VI) samples from SWMU 1 had a chromatogram peak that was not within the retention time window. The detected results were qualified and flagged as "J." See Attachment D2, Table D2-1.

D.3.9.4 Matrix Interference

Matrix interference was encountered in many of the soil samples. Some interferences are listed in the method for metals (SW6010B), and others can be inferred from poor MS/MSD (all methods), surrogate (organic methods), or internal standard (mass spectrometer methods) recovery. Matrix interference may require a dilution, resulting in the sample being reported at an elevated reporting level. Alternatively, matrix interference may require the sample result be qualified due to poor MS/MSD, surrogate, or internal standard recovery.

D.3.10 Laboratory Duplicates

Laboratory duplicates measure laboratory precision. RPDs that exceed method criteria indicate imprecision in some aspect of the analytical procedure.

The laboratory analyzed duplicate aliquots of field samples at the required frequency. The quality control acceptance criteria for laboratory duplicates were met for all methods.

D.3.11 Chain of Custody/Sample Receipt

Samples are collected under chain of custody to ensure that sample integrity is documented and known from the time of collection through receipt at the laboratory, where custody is relinquished to the laboratory.

Each sample was documented in a completed chain of custody and was received by the laboratory courier in good condition. All discrepancies identified by the laboratory were promptly resolved.

All samples were transported to the laboratories by couriers provided by the laboratories.

D.4 References

CH2M HILL. 2006. *RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A*.

_____. 2008a. *PG&E Program Quality Assurance Project Plan*.

_____. 2008b. *Addendum to the PG&E Program Quality Assurance Project Plan for the RCRA Facility Investigation/Remedial Investigation for Soil*.

_____. 2008c. *Final Soil and Sediment Data Usability Technical Memorandum, PG&E Topock Compressor Station*. August 29.

United States Environmental Protection Agency (USEPA). 1999. *USEPA National Functional Guidelines for Organic Data Review.*

_____. 2002. *Contract Laboratory National Functional Guidelines for Inorganic Data Review*. July.

Attachment D1
Summary of Samples Qualified in Background (BKG)

TABLE D1-1
Topock Soil RFI/RI Part A – BKG
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
NA	NA	NA	NA	NA	NA	NA	HT>UCL
Continuing Calibration Summary							
NA	NA	NA	NA	NA	NA	NA	CCV<LCL
Field Duplicate Summary							
NA	NA	NA	NA	NA	NA	NA	FD>RPD
Laboratory Control Sample Summary							
NA	NA	NA	NA	NA	NA	NA	LCS>UCL
Matrix Spike Summary							
N002154	BKG-07-11024	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002058	BKG-08-11029	SW6010B	Antimony	mg/Kg	10	UJ	MS<LCL
N002186	BKG-17-11061	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
Matrix Spike Duplicate Summary							
N002154	BKG-07-11024	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002154	BKG-07-11024	SW6010B	Barium	mg/Kg	190	J	SD<LCL
N002058	BKG-08-11029	SW6010B	Antimony	mg/Kg	10	UJ	SD<LCL
N002186	BKG-17-11061	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
Serial Dilution Summary							
NA	NA	NA	NA	NA	NA	NA	SerDil
Surrogate Summary							
NA	NA	NA	NA	NA	NA	NA	Sur<LCL
NA	NA	NA	NA	NA	NA	NA	Sur>UCL
Contamination Summary							
NA	NA	NA	NA	NA	NA	NA	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

RejectContamination = Result was rejected due to possible contamination.

TABLE D1-1
Topock Soil RFI/RI Part A – BKG
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason

SD<LCL = Matrix spike duplicate recovery less than lower control limit.
SerDil = Serial Dilution is greater than 10% RPD.
Sur<LCL = Surrogate recovery less than lower control limit.
Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D1-2
Topock Soil RFI/RI Part A Field Duplicate Pairs - BKG
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
BKG-04-11011	BKG-04-11012	BKG-11-11034	BKG-11-11035
BKG-07-11023	BKG-07-11024	BKG-14-11045	BKG-14-11046

TABLE D1-3
Topock Soil RFI/RI Part A - BKG - Equipment Blank Summary Table
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
N002184	BKG-16-11054	SW6010B	Sodium	mg/Kg	240	U	EB>RL	1200
N002184	BKG-16-11055	SW6010B	Sodium	mg/Kg	700	U	EB>RL	1200
N002184	BKG-16-11056	SW6010B	Sodium	mg/Kg	1100	U	EB>RL	1200
N002184	BKG-16-11057	SW6010B	Sodium	mg/Kg	850	U	EB>RL	1200

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

U = the analyte is qualified as “not detected” due to blank contamination.

Validation Reasons:

EB>RL = Equipment blank contamination greater than the reporting limit

Attachment D2
Summary of Samples Qualified in SWMU 1

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
N002326	SWMU1-15-1076	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1221	µg/Kg	35	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-15-1076	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-3-1010	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1016	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1221	µg/Kg	35	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1232	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1242	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1248	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1254	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1260	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1262	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-5h-2028	SW8082	Aroclor 1268	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6a-2033	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP-6h-2041	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1016	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1221	µg/Kg	37	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1232	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1242	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1248	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1254	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1260	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1262	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP7-2047	SW8082	Aroclor 1268	µg/Kg	18	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	SWMU1-WP8-2054	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
Continuing Calibration Summary							
N002182	SWMU1-15-1087	SW8260B	Bromoform	µg/Kg	5.2	UJ	CCV<LCL
N002182	SWMU1-15-1089	SW8260B	Bromoform	µg/Kg	6	UJ	CCV<LCL
Field Duplicate Summary							
N002170	SWMU1-17-1097	SW6010B	Chromium	mg/Kg	43	J	FD>RPD
N002170	SWMU1-17-1098	SW6010B	Chromium	mg/Kg	53	J	FD>RPD
N002274	SWMU1-7-1043	SW6010B	Nickel	mg/Kg	14	J	FD>RPD
N002274	SWMU1-7-1044	SW6010B	Nickel	mg/Kg	11	J	FD>RPD
N002236	SWMU1-WP-6a-2033	SW6010B	Cobalt	mg/Kg	8.8	J	FD>RPD
N002236	SWMU1-WP-6a-2034	SW6010B	Cobalt	mg/Kg	11	J	FD>RPD
N002170	SWMU1-WP9-2061	SW6010B	Barium	mg/Kg	150	J	FD>RPD
N002170	SWMU1-WP9-2061	SW6010B	Chromium	mg/Kg	34	J	FD>RPD
N002170	SWMU1-WP9-2061	SW6010B	Cobalt	mg/Kg	9.5	J	FD>RPD
N002170	SWMU1-WP9-2061	SW6010B	Nickel	mg/Kg	20	J	FD>RPD
N002170	SWMU1-WP9-2062	SW6010B	Barium	mg/Kg	1900	J	FD>RPD
N002170	SWMU1-WP9-2062	SW6010B	Chromium	mg/Kg	20	J	FD>RPD
N002170	SWMU1-WP9-2062	SW6010B	Cobalt	mg/Kg	5.9	J	FD>RPD
N002170	SWMU1-WP9-2062	SW6010B	Nickel	mg/Kg	12	J	FD>RPD
N002173	SWMU1-15-1078	SW8260B	Acetone	µg/Kg	1400	J	FD>RPD
N002173	SWMU1-15-1079	SW8260B	Acetone	µg/Kg	830	J	FD>RPD
N002170	SWMU1-WP9-2061	SW8260B	Acetone	µg/Kg	52	UJ	FD>RPD
N002170	SWMU1-WP9-2062	SW8260B	Acetone	µg/Kg	960	J	FD>RPD

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Laboratory Control Sample Summary							
978650	SWMU1-16-1090	SW8015-E	TPH-Motor Oil	mg/kg	19.2	J	LCS>UCL
978650	SWMU1-16-1092	SW8015-E	TPH-Motor Oil	mg/kg	33.8	J	LCS>UCL
978650	SWMU1-17-1094	SW8015-E	TPH-Motor Oil	mg/kg	150	J	LCS>UCL
978650	SWMU1-17-1096	SW8015-E	TPH-Motor Oil	mg/kg	27.2	J	LCS>UCL
979189	SWMU1-9-1049	SW8015-E	TPH-Motor Oil	mg/kg	41.2	J	LCS>UCL
979189	SWMU1-9-1050	SW8015-E	TPH-Motor Oil	mg/kg	41.9	J	LCS>UCL
979189	SWMU1-9-1051	SW8015-E	TPH-Motor Oil	mg/kg	20.4	J	LCS>UCL
979189	SWMU1-9-1052	SW8015-E	TPH-Motor Oil	mg/kg	11.8	J	LCS>UCL
979189	SWMU1-WP-3a-2006	SW8015-E	TPH-Motor Oil	mg/kg	86	J	LCS>UCL
979189	SWMU1-WP-3a-2007	SW8015-E	TPH-Motor Oil	mg/kg	14.9	J	LCS>UCL
979189	SWMU1-WP-3a-2008	SW8015-E	TPH-Motor Oil	mg/kg	18.5	J	LCS>UCL
979189	SWMU1-WP-3a-2009	SW8015-E	TPH-Motor Oil	mg/kg	11.6	J	LCS>UCL
979189	SWMU1-WP-3a-2010	SW8015-E	TPH-Motor Oil	mg/kg	13.3	J	LCS>UCL
979189	SWMU1-WP-3a-2011	SW8015-E	TPH-Motor Oil	mg/kg	12.5	J	LCS>UCL
978650	SWMU1-WP9-2063	SW8015-E	TPH-Motor Oil	mg/kg	17.4	J	LCS>UCL
Matrix Spike Summary							
N002283	SWMU1-1-1001	SW6010B	Antimony	mg/Kg	2.4	UJ	MS<LCL
N002270	SWMU1-13-1066	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002173	SWMU1-15-1075	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002274	SWMU1-4-1025	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002236	SWMU1-WP-5a-2019	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002252	SWMU1-WP-5h-2027	SW6010B	Antimony	mg/Kg	2.2	UJ	MS<LCL
N002247	SWMU1-WP8-2057	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002236	SWMU1-WP-T3a-2076	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
978925	SWMU1-WP-5a-2022	SW7199	Chromium, hexavalent	mg/kg	0.42	UJ	MS<LCL
N002274	SWMU1-4-1025	SW8081A	Endrin ketone	µg/Kg	2	UJ	MS<LCL
N002236	SWMU1-WP-6a-2038	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	MS<LCL
N002283	SWMU1-1-1001	SW8270C	Acetophenone	µg/Kg	840	UJ	MS<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Acetophenone	µg/Kg	730	UJ	MS<LCL
N002283	SWMU1-1-1001	SW8270C	Benzaldehyde	µg/Kg	840	UJ	MS<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Benzaldehyde	µg/Kg	730	UJ	MS<LCL
N002236	SWMU1-WP-5a-2019	SW8270C	Benzaldehyde	µg/Kg	710	UJ	MS<LCL
N002283	SWMU1-1-1004	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002170	SWMU1-17-1098	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002274	SWMU1-6-1038	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002236	SWMU1-WP-6a-2038	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002283	SWMU1-1-1001	SW8270C	Caprolactam	µg/Kg	400	UJ	MS<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Caprolactam	µg/Kg	340	UJ	MS<LCL
N002236	SWMU1-WP-5a-2019	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
Matrix Spike Duplicate Summary							
N002283	SWMU1-1-1001	SW6010B	Antimony	mg/Kg	2.4	UJ	SD<LCL

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002270	SWMU1-13-1066	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002173	SWMU1-15-1075	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002274	SWMU1-4-1025	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002236	SWMU1-WP-5a-2019	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002252	SWMU1-WP-5h-2027	SW6010B	Antimony	mg/Kg	2.2	UJ	SD<LCL
N002247	SWMU1-WP8-2057	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002236	SWMU1-WP-T3a-2076	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002274	SWMU1-4-1025	SW8081A	4,4´-DDE	µg/Kg	2	UJ	SD<LCL
N002274	SWMU1-4-1025	SW8081A	Dieldrin	µg/Kg	2	UJ	SD<LCL
N002274	SWMU1-4-1025	SW8081A	Endrin ketone	µg/Kg	2	UJ	SD<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Acetophenone	µg/Kg	730	UJ	SD<LCL
N002283	SWMU1-1-1001	SW8270C	Benzaldehyde	µg/Kg	840	UJ	SD<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Benzaldehyde	µg/Kg	730	UJ	SD<LCL
N002236	SWMU1-WP-5a-2019	SW8270C	Benzaldehyde	µg/Kg	710	UJ	SD<LCL
N002283	SWMU1-1-1004	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002170	SWMU1-17-1098	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002274	SWMU1-6-1038	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002236	SWMU1-WP-6a-2038	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002283	SWMU1-1-1001	SW8270C	Caprolactam	µg/Kg	400	UJ	SD<LCL
N002252	SWMU1-WP-1h-2001	SW8270C	Caprolactam	µg/Kg	340	UJ	SD<LCL
N002236	SWMU1-WP-5a-2019	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
Serial Dilution Summary							
N002173	SWMU1-15-1075	SW6010B	Iron	mg/Kg	20000	J	SerDil
N002236	SWMU1-WP-5a-2019	SW6010B	Iron	mg/Kg	23000	J	SerDil
N002236	SWMU1-WP-T3a-2076	SW6010B	Iron	mg/Kg	24000	J	SerDil
N002173	SWMU1-15-1075	SW6010B	Magnesium	mg/Kg	6900	J	SerDil
N002236	SWMU1-WP-T3a-2076	SW6010B	Magnesium	mg/Kg	8000	J	SerDil
N002173	SWMU1-15-1075	SW6010B	Manganese	mg/Kg	280	J	SerDil
N002173	SWMU1-15-1075	SW6010B	Potassium	mg/Kg	2800	J	SerDil
N002236	SWMU1-WP-5a-2019	SW6010B	Potassium	mg/Kg	2800	J	SerDil
N002252	SWMU1-WP-5h-2027	SW6010B	Potassium	mg/Kg	2300	J	SerDil
N002236	SWMU1-WP-T3a-2076	SW6010B	Potassium	mg/Kg	2900	J	SerDil
Surrogate Summary							
979189	SWMU1-WP-3a-2008	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
979189	SWMU1-WP-3a-2008	SW8015-E	TPH-Motor Oil	mg/kg	18.5	J	Sur<LCL
N002270	SWMU1-10-1054	SW8015-P	TPH-Gasoline	µg/Kg	910	UJ	Sur<LCL
N002173	SWMU1-15-1078	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
N002170	SWMU1-17-1095	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
N002236	SWMU1-WP10-2070	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
978650	SWMU1-16-1092	SW8015-E	TPH-Diesel	mg/kg	14.5	J	Sur>UCL
978650	SWMU1-16-1092	SW8015-E	TPH-Motor Oil	mg/kg	33.8	J	Sur>UCL
979189	SWMU1-WP-3a-2008	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
979189	SWMU1-WP-3a-2008	SW8015-E	TPH-Motor Oil	mg/kg	18.5	J	Sur<LCL

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002270	SWMU1-10-1054	SW8015-P	TPH-Gasoline	µg/Kg	910	UJ	Sur<LCL
N002173	SWMU1-15-1078	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
N002170	SWMU1-17-1095	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
N002236	SWMU1-WP10-2070	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
Contamination Summary							
N002173	SWMU1-15-1077	SW8260B	Acetone	µg/Kg	870	R	Reject Contamination
N002173	SWMU1-15-1078	SW8260B	Acetone	µg/Kg	1400	R	Reject Contamination
N002173	SWMU1-15-1079	SW8260B	Acetone	µg/Kg	830	R	Reject Contamination
N002173	SWMU1-15-1080	SW8260B	Acetone	µg/Kg	850	R	Reject Contamination
N002173	SWMU1-15-1081	SW8260B	Acetone	µg/Kg	350	R	Reject Contamination
N002173	SWMU1-15-1082	SW8260B	Acetone	µg/Kg	560	R	Reject Contamination
N002173	SWMU1-15-1083	SW8260B	Acetone	µg/Kg	870	R	Reject Contamination
N002173	SWMU1-15-1084	SW8260B	Acetone	µg/Kg	1200	R	Reject Contamination
N002173	SWMU1-15-1085	SW8260B	Acetone	µg/Kg	6100	R	Reject Contamination
N002173	SWMU1-15-1086	SW8260B	Acetone	µg/Kg	1300	R	Reject Contamination
N002182	SWMU1-15-1087	SW8260B	Acetone	µg/Kg	1900	R	Reject Contamination
N002182	SWMU1-15-1089	SW8260B	Acetone	µg/Kg	1600	R	Reject Contamination
N002170	SWMU1-16-1091	SW8260B	Acetone	µg/Kg	1500	R	Reject Contamination
N002170	SWMU1-16-1092	SW8260B	Acetone	µg/Kg	440	R	Reject Contamination
N002170	SWMU1-17-1095	SW8260B	Acetone	µg/Kg	970	R	Reject Contamination
N002170	SWMU1-17-1096	SW8260B	Acetone	µg/Kg	590	R	Reject Contamination
N002170	SWMU1-17-1098	SW8260B	Acetone	µg/Kg	630	R	Reject Contamination
N002170	SWMU1-WP9-2062	SW8260B	Acetone	µg/Kg	960	R	Reject Contamination
N002170	SWMU1-WP9-2063	SW8260B	Acetone	µg/Kg	510	R	Reject Contamination
N002170	SWMU1-WP9-2064	SW8260B	Acetone	µg/Kg	450	R	Reject Contamination
N002170	SWMU1-WP9-2065	SW8260B	Acetone	µg/Kg	1000	R	Reject Contamination

TABLE D2-1
Topock Soil RFI/RI Part A – SWMU 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002236	SWMU1-WP-T3a-2084	SW8260B	Acetone	µg/Kg	57	R	Reject Contamination
Laboratory Accuracy and Precision Summary							
979047	SWMU1-3-1013	SW7199	Chromium, hexavalent	mg/kg	1.55	J	LabA&P
978925	SWMU1-WP10-2070	SW7199	Chromium, hexavalent	mg/kg	0.494	J	LabA&P

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LabA&P = Laboratory Accuracy and Precision

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

Reject Contamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D2-2
Topock Soil RFI/RI Part A – SWMU 1 Field Duplicate Pairs
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
SWMU1-10-1055	SWMU1-10-1056	SWMU1-7-1043	SWMU1-7-1044
SWMU1-13-1067	SWMU1-13-1068	SWMU1-WP-3a-2010	SWMU1-WP-3a-2011
SWMU1-15-1078	SWMU1-15-1079	SWMU1-WP-5a-2021	SWMU1-WP-5a-2022
SWMU1-15-1084	SWMU1-15-1089	SWMU1-WP-6a-2033	SWMU1-WP-6a-2034
SWMU1-17-1097	SWMU1-17-1098	SWMU1-WP-6h-2042	SWMU1-WP-6h-2043
SWMU1-3-1010	SWMU1-3-1011	SWMU1-WP9-2061	SWMU1-WP9-2062
SWMU1-3-1020	SWMU1-3-1022	SWMU1-WP-T3a-2078	SWMU1-WP-T3a-2079
SWMU1-5-1032	SWMU1-5-1033		

TABLE D2-3
Topock Soil RFI/RI Part A – SWMU 1 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
N002247	SWMU1-3-1009	SW6010B	Sodium	mg/Kg	260	U	EB>RL	8000
N002236	SWMU1-WP-5a-2019	SW6010B	Sodium	mg/Kg	280	U	EB>RL	8200
N002236	SWMU1-WP-6a-2032	SW6010B	Sodium	mg/Kg	370	U	EB>RL	8200
N002247	SWMU1-WP-6h-2040	SW6010B	Sodium	mg/Kg	690	U	EB>RL	8200
N002247	SWMU1-WP7-2046	SW6010B	Sodium	mg/Kg	1000	U	EB>RL	8200
N002247	SWMU1-WP8-2053	SW6010B	Sodium	mg/Kg	320	U	EB>RL	8200
N002236	SWMU1-WP-T3a-2076	SW6010B	Sodium	mg/Kg	330	U	EB>RL	8200

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as “not detected” due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D3
Summary of Samples Qualified in AOC 1

TABLE D3-1
Topock Soil RFI/RI Part A – AOC 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
N002326	AOC1-BCW1-101	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC1-BCW1-101	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
Continuing Calibration Summary							
N002204	AOC1-T6a-087	SW8260B	Bromoform	µg/Kg	4.2	UJ	CCV<LCL
N002204	AOC1-T6a-088	SW8260B	Bromoform	µg/Kg	3.8	UJ	CCV<LCL
N002204	AOC1-T6b-092	SW8260B	Bromoform	µg/Kg	4	UJ	CCV<LCL
N002204	AOC1-T6b-093	SW8260B	Bromoform	µg/Kg	3.7	UJ	CCV<LCL
N002204	AOC1-T6b-099	SW8260B	Bromoform	µg/Kg	4	UJ	CCV<LCL
N002204	AOC1-T6c-096	SW8260B	Bromoform	µg/Kg	5	UJ	CCV<LCL
N002204	AOC1-T6c-097	SW8260B	Bromoform	µg/Kg	4.1	UJ	CCV<LCL
Field Duplicate Summary							
N002284	AOC1-T1b-005	SW6010B	Chromium	mg/Kg	43	J	FD>RPD
N002284	AOC1-T1b-006	SW6010B	Chromium	mg/Kg	33	J	FD>RPD
N002284	AOC1-T1c-011	SW6010B	Lead	mg/Kg	20	J	FD>RPD
N002284	AOC1-T1c-012	SW6010B	Lead	mg/Kg	32	J	FD>RPD
N002218	AOC1-T4b-065	SW6010B	Lead	mg/Kg	8.8	J	FD>RPD
N002218	AOC1-T4b-066	SW6010B	Lead	mg/Kg	7	J	FD>RPD
N002204	AOC1-T6b-094	SW6010B	Lead	mg/Kg	3.1	J	FD>RPD
N002204	AOC1-T6b-099	SW6010B	Lead	mg/Kg	8.5	J	FD>RPD
N002284	AOC1-T1c-011	SW6010B	Nickel	mg/Kg	11	J	FD>RPD
N002284	AOC1-T1c-012	SW6010B	Nickel	mg/Kg	14	J	FD>RPD
N002284	AOC1-T1c-011	SW6010B	Zinc	mg/Kg	82	J	FD>RPD
N002284	AOC1-T1c-012	SW6010B	Zinc	mg/Kg	110	J	FD>RPD
979247	AOC1-T1c-011	SW7199	Chromium, hexavalent	mg/kg	4.77	J	FD>RPD
979247	AOC1-T1c-012	SW7199	Chromium, hexavalent	mg/kg	3.58	J	FD>RPD
N002204	AOC1-T6b-094	SW8260B	Acetone	µg/Kg	470	J	FD>RPD
N002204	AOC1-T6b-099	SW8260B	Acetone	µg/Kg	170	J	FD>RPD
Laboratory Control Sample Summary							
978927	AOC1-BCW2-104	SW8015-E	TPH-Motor Oil	mg/kg	31	J	LCS>UCL
978927	AOC1-BCW2-105	SW8015-E	TPH-Motor Oil	mg/kg	11.1	J	LCS>UCL
978927	AOC1-BCW2-106	SW8015-E	TPH-Motor Oil	mg/kg	17.6	J	LCS>UCL
978927	AOC1-BCW3-108	SW8015-E	TPH-Motor Oil	mg/kg	21.6	J	LCS>UCL
978927	AOC1-BCW3-109	SW8015-E	TPH-Motor Oil	mg/kg	10.7	J	LCS>UCL
978927	AOC1-BCW4-113	SW8015-E	TPH-Motor Oil	mg/kg	17.8	J	LCS>UCL

TABLE D3-1
Topock Soil RFI/RI Part A – AOC 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
978927	AOC1-BCW5-117	SW8015-E	TPH-Motor Oil	mg/kg	30.1	J	LCS>UCL
978927	AOC1-BCW5-118	SW8015-E	TPH-Motor Oil	mg/kg	22.6	J	LCS>UCL
978927	AOC1-T4a-060	SW8015-E	TPH-Motor Oil	mg/kg	25	J	LCS>UCL
978927	AOC1-T4a-061	SW8015-E	TPH-Motor Oil	mg/kg	15.6	J	LCS>UCL
978927	AOC1-T5a-077	SW8015-E	TPH-Motor Oil	mg/kg	16.5	J	LCS>UCL
Matrix Spike Summary							
N002284	AOC1-T2b-019	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002261	AOC1-T2c-024	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002230	AOC1-T4c-069	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002230	AOC1-T5b-078	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002230	AOC1-BCW2-107	SW8270C	Benzoic acid	µg/Kg	1800	UJ	MS<LCL
N002058	AOC1-BCW6-122	SW8270C	Benzoic acid	µg/Kg	2300	UJ	MS<LCL
N002058	AOC1-BCW6-122	SW8270C	Hexachlorocyclopentadiene	µg/Kg	940	UJ	MS<LCL
N002284	AOC1-T1a-001	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002284	AOC1-T1a-004	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002284	AOC1-T2b-022	SW8270C	Benzoic acid	µg/Kg	1700	UJ	MS<LCL
N002204	AOC1-T6c-095	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002204	AOC1-T6c-097	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
Matrix Spike Duplicate Summary							
N002284	AOC1-T2b-019	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002261	AOC1-T2c-024	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002230	AOC1-T4c-069	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002230	AOC1-T5b-078	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002058	AOC1-BCW6-122	SW8270C	Hexachlorocyclopentadiene	µg/Kg	940	UJ	SD<LCL
N002284	AOC1-T1a-001	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002284	AOC1-T1a-004	SW8270C	Benzoic acid	µg/Kg	1700	UJ	SD<LCL
N002284	AOC1-T2b-022	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002204	AOC1-T6c-095	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002204	AOC1-T6c-097	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
Serial Dilution Summary							
N002284	AOC1-T2b-019	SW6010B	Potassium	mg/Kg	3000	J	SerDil
Surrogate Summary							
978927	AOC1-T4c-069	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-070	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-071	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-072	SW8015-E	TPH-Diesel	mg/kg	10	R	Sur<LCL
978927	AOC1-T5a-073	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T5a-074	SW8015-E	TPH-Diesel	mg/kg	10	R	Sur<LCL
978927	AOC1-T5b-081	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-069	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-070	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T4c-071	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL

TABLE D3-1
Topock Soil RFI/RI Part A – AOC 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
978927	AOC1-T4c-072	SW8015-E	TPH-Motor Oil	mg/kg	10	R	Sur<LCL
978927	AOC1-T5a-073	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T5a-074	SW8015-E	TPH-Motor Oil	mg/kg	10	R	Sur<LCL
978927	AOC1-T5b-081	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978927	AOC1-T5a-077	SW8015-E	TPH-Motor Oil	mg/kg	16.5	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Benzo(a)anthracene	µg/Kg	7.9	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Benzo(a)pyrene	µg/Kg	10	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	9.7	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	7.7	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	11	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Chrysene	µg/Kg	10	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Fluoranthene	µg/Kg	19	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	7.3	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Phenanthrene	µg/Kg	6.2	J	Sur>UCL
N002230	AOC1-BCW2-105	SW8270SIM	Pyrene	µg/Kg	16	J	Sur>UCL
Contamination Summary							
N002284	AOC1-T1a-003	SW8260B	Acetone	µg/Kg	51	R	Reject Contamination
N002284	AOC1-T1b-009	SW8260B	Acetone	µg/Kg	65	R	Reject Contamination
N002284	AOC1-T3b-053	SW8260B	Acetone	µg/Kg	69	R	Reject Contamination
N002204	AOC1-T6a-087	SW8260B	Acetone	µg/Kg	230	R	Reject Contamination
N002204	AOC1-T6a-088	SW8260B	Acetone	µg/Kg	100	R	Reject Contamination
N002204	AOC1-T6a-090	SW8260B	Acetone	µg/Kg	86	R	Reject Contamination
N002204	AOC1-T6b-092	SW8260B	Acetone	µg/Kg	210	R	Reject Contamination
N002204	AOC1-T6b-093	SW8260B	Acetone	µg/Kg	150	R	Reject Contamination
N002204	AOC1-T6b-094	SW8260B	Acetone	µg/Kg	470	R	Reject Contamination
N002204	AOC1-T6b-099	SW8260B	Acetone	µg/Kg	170	R	Reject Contamination
N002204	AOC1-T6c-096	SW8260B	Acetone	µg/Kg	180	R	Reject Contamination
N002204	AOC1-T6c-097	SW8260B	Acetone	µg/Kg	300	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

TABLE D3-1
Topock Soil RFI/RI Part A – AOC 1
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason

Validation Reasons:
CCV<LCL = Continuing calibration recovery less than the lower control limit.
FD>RPD = Field duplicate's relative percent difference is greater than the control limit.
HT>UCL = Holding time exceeded the upper control limit.
LCS>UCL = Laboratory Control Sample greater than upper control limit.
MS<LCL = Matrix spike recovery less than lower control limit.
RejectContamination = Result was rejected due to possible contamination.
SD<LCL = Matrix spike duplicate recovery less than lower control limit.
SerDil = Serial Dilution is greater than 10% RPD.
Sur<LCL = Surrogate recovery less than lower control limit.
Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D3-2
Topock Soil RFI/RI Part A - AOC1-*Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC1-BCW3-111	AOC1-BCW3-112	AOC1-T2e-043	AOC1-T2e-044
AOC1-BCW5-120	AOC1-BCW5-121	AOC1-T3b-054	AOC1-T3b-055
AOC1-T1b-005	AOC1-T1b-006	AOC1-T4b-065	AOC1-T4b-066
AOC1-T1c-011	AOC1-T1c-012	AOC1-T5a-076	AOC1-T5a-077
AOC1-T2b-022	AOC1-T2b-023	AOC1-T6a-087	AOC1-T6a-088
AOC1-T2d-033	AOC1-T2d-034	AOC1-T6b-094	AOC1-T6b-099

TABLE D3-3
Topock Soil RFI/RI Part A - AOC1 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
N002230	AOC1-BCW5-120	SW6010B	Copper	mg/Kg	7.4	U	EB>RL	15
N002230	AOC1-BCW5-121	SW6010B	Copper	mg/Kg	7.3	U	EB>RL	15
N002230	AOC1-BCW5-117	SW6010B	Sodium	mg/Kg	360	U	EB>RL	7800
N002235	AOC1-T3a-047	SW6010B	Sodium	mg/Kg	250	U	EB>RL	7900
N002230	AOC1-T4c-069	SW6010B	Sodium	mg/Kg	240	U	EB>RL	8000
N002230	AOC1-T5b-078	SW6010B	Sodium	mg/Kg	210	U	EB>RL	8000

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as "not detected" due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D4
Summary of Samples Qualified in AOC 4

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
978924	AOC4-Wood1-3070R	SW7199	Chromium, hexavalent	mg/kg	47.7	J	HT>UCL
978924	AOC4-Wood2-3071R	SW7199	Chromium, hexavalent	mg/kg	89.2	J	HT>UCL
979250	AOC4-12-3037R	SW8015-E	TPH-Diesel	mg/kg	67.7	J	HT>UCL
979250	AOC4-12-3037R	SW8015-E	TPH-Motor Oil	mg/kg	54.4	J	HT>UCL
979250	AOC4-12-3038R	SW8015-E	TPH-Diesel	mg/kg	48.4	J	HT>UCL
979250	AOC4-12-3038R	SW8015-E	TPH-Motor Oil	mg/kg	43.1	J	HT>UCL
979387	AOC4-B10-11005	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979387	AOC4-B10-11005	SW8015-E	TPH-Motor Oil	mg/kg	51.4	J	HT>UCL
979387	AOC4-B20-11006	SW8015-E	TPH-Diesel	mg/kg	10.2	J	HT>UCL
979387	AOC4-B20-11006	SW8015-E	TPH-Motor Oil	mg/kg	67.6	J	HT>UCL
979387	AOC4-B30-11007	SW8015-E	TPH-Diesel	mg/kg	57.9	J	HT>UCL
979387	AOC4-B30-11007	SW8015-E	TPH-Motor Oil	mg/kg	541	J	HT>UCL
979387	AOC4-D10-11013	SW8015-E	TPH-Diesel	mg/kg	95.4	J	HT>UCL
979387	AOC4-D10-11013	SW8015-E	TPH-Motor Oil	mg/kg	219	J	HT>UCL
979387	AOC4-D20-11014	SW8015-E	TPH-Diesel	mg/kg	10	J	HT>UCL
979387	AOC4-D20-11014	SW8015-E	TPH-Motor Oil	mg/kg	59.7	J	HT>UCL
979387	AOC4-D30-11015	SW8015-E	TPH-Diesel	mg/kg	12.2	J	HT>UCL
979387	AOC4-D30-11015	SW8015-E	TPH-Motor Oil	mg/kg	83.5	J	HT>UCL
979387	AOC4-DE5-11002	SW8015-E	TPH-Diesel	mg/kg	73.8	J	HT>UCL
979387	AOC4-DE5-11002	SW8015-E	TPH-Motor Oil	mg/kg	186	J	HT>UCL
979387	AOC4-GH10-11029	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979387	AOC4-GH10-11029	SW8015-E	TPH-Motor Oil	mg/kg	20.6	J	HT>UCL
979387	AOC4-GH30-11031	SW8015-E	TPH-Diesel	mg/kg	72.9	J	HT>UCL
979387	AOC4-GH30-11031	SW8015-E	TPH-Motor Oil	mg/kg	334	J	HT>UCL
979387	AOC4-I20-11038	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979387	AOC4-I20-11038	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979387	AOC4-I30-11039	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979387	AOC4-I30-11039	SW8015-E	TPH-Motor Oil	mg/kg	10.3	J	HT>UCL
979387	AOC4-Z25-11001	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979387	AOC4-Z25-11001	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	4,4´-DDD	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	4,4´-DDE	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	4,4´-DDT	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Aldrin	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	alpha-BHC	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	alpha-Chlordane	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	beta-BHC	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	delta-BHC	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Dieldrin	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Endosulfan I	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Endosulfan II	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Endosulfan sulfate	µg/Kg	2.3	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-DE5-11002	SW8081A	Endrin	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Endrin aldehyde	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Endrin ketone	µg/Kg	2.3	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	gamma-BHC	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	gamma-Chlordane	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Heptachlor	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Heptachlor epoxide	µg/Kg	1.1	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Methoxychlor	µg/Kg	5.7	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8081A	Toxaphene	µg/Kg	57	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1016	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1221	µg/Kg	37	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1232	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1242	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1248	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1254	µg/Kg	780	J	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1260	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1262	µg/Kg	19	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8082	Aroclor 1268	µg/Kg	19	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	1,2-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	1,3-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	1,4-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4,6-Trichlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4-Dichlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4-Dimethylphenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,4-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2,6-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Chloronaphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Chlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Methylnaphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	2-Nitrophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	3-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Bromophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Chloro-3-methylphenol	µg/Kg	660	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Chloroaniline	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Methylphenol	µg/Kg	330	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002285	AOC4-12-3037R	SW8270C	4-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	4-Nitrophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Acenaphthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Acenaphthylene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzo(a)anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzo(a)pyrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzo(b)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzo(g,h,i)perylene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzo(k)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Benzyl alcohol	µg/Kg	660	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Butylbenzylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Chrysene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Dibenz(a,h)anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Dibenzofuran	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Diethylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Dimethylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Di-n-butylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Di-n-octylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Fluorene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Hexachlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Hexachlorobutadiene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Hexachloroethane	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Isophorone	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Naphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Nitrobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	N-Nitrosodiphenylamine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Pentachlorophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Phenanthrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Phenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270C	Pyrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	1,2-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	1,3-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	1,4-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002285	AOC4-12-3038R	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,4,6-Trichlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,4-Dichlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,4-Dimethylphenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,4-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2,6-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Chloronaphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Chlorophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Methylnaphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	2-Nitrophenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	3-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Bromophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Chloro-3-methylphenol	µg/Kg	660	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Chloroaniline	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	4-Nitrophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Acenaphthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Acenaphthylene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzo(a)anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzo(a)pyrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzo(b)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzo(g,h,i)perylene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzo(k)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Benzyl alcohol	µg/Kg	660	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Butylbenzylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Chrysene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Dibenz(a,h)anthracene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Dibenzofuran	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Diethylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Dimethylphthalate	µg/Kg	330	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002285	AOC4-12-3038R	SW8270C	Di-n-butylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Di-n-octylphthalate	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Fluoranthene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Fluorene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Hexachlorobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Hexachlorobutadiene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Hexachloroethane	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Isophorone	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Naphthalene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Nitrobenzene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	N-Nitrosodiphenylamine	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Pentachlorophenol	µg/Kg	1600	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Phenanthrene	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Phenol	µg/Kg	330	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270C	Pyrene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	1,2-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	1,3-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	1,4-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4,6-Trichlorophenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4-Dichlorophenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4-Dimethylphenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,4-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2,6-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Chloronaphthalene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Chlorophenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Methylnaphthalene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	2-Nitrophenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	3-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Bromophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Chloro-3-methylphenol	µg/Kg	670	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Chloroaniline	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	4-Nitroaniline	µg/Kg	1600	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-B10-11005	SW8270C	4-Nitrophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Acenaphthene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Acenaphthylene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Anthracene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzo(a)anthracene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzo(a)pyrene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzo(b)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzo(g,h,i)perylene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzo(k)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Benzyl alcohol	µg/Kg	670	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Butylbenzylphthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Chrysene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Dibenz(a,h)anthracene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Dibenzofuran	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Diethylphthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Dimethylphthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Di-n-butylphthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Di-n-octylphthalate	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Fluoranthene	µg/Kg	370	J	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Fluorene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Hexachlorobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Hexachlorobutadiene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Hexachloroethane	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Isophorone	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Naphthalene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Nitrobenzene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	N-Nitrosodiphenylamine	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Pentachlorophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Phenanthrene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Phenol	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270C	Pyrene	µg/Kg	330	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	1,2-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	1,3-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	1,4-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1700	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-B20-11006	SW8270C	2,4,6-Trichlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,4-Dichlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,4-Dimethylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,4-Dinitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,4-Dinitrotoluene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2,6-Dinitrotoluene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Chloronaphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Chlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Methylnaphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Methylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	2-Nitrophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	3-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Bromophenyl-phenylether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Chloro-3-methylphenol	µg/Kg	690	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Chloroaniline	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Methylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	4-Nitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Acenaphthene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Acenaphthylene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Anthracene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzo(a)anthracene	µg/Kg	600	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzo(a)pyrene	µg/Kg	600	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzo(b)fluoranthene	µg/Kg	1300	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzo(g,h,i)perylene	µg/Kg	430	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzo(k)fluoranthene	µg/Kg	410	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Benzyl alcohol	µg/Kg	690	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Butylbenzylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Chrysene	µg/Kg	730	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Dibenz(a,h)anthracene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Dibenzofuran	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Diethylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Dimethylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Di-n-butylphthalate	µg/Kg	340	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-B20-11006	SW8270C	Di-n-octylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Fluoranthene	µg/Kg	860	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Fluorene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Hexachlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Hexachlorobutadiene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Hexachloroethane	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	370	J	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Isophorone	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Naphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Nitrobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	N-Nitrosodiphenylamine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Pentachlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Phenanthrene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Phenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270C	Pyrene	µg/Kg	810	J	HT>UCL
N002309	AOC4-B30-11007	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	1,2-Dichlorobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	1,3-Dichlorobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	1,4-Dichlorobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4,5-Trichlorophenol	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4,6-Trichlorophenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4-Dichlorophenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4-Dimethylphenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4-Dinitrophenol	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,4-Dinitrotoluene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2,6-Dinitrotoluene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Chloronaphthalene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Chlorophenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Methylnaphthalene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Methylphenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Nitroaniline	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	2-Nitrophenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	3-Nitroaniline	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	2300	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Bromophenyl-phenylether	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Chloro-3-methylphenol	µg/Kg	900	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Chloroaniline	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Methylphenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Nitroaniline	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	4-Nitrophenol	µg/Kg	2200	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-B30-11007	SW8270C	Acenaphthene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Acenaphthylene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Anthracene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzo(a)anthracene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzo(a)pyrene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzo(b)fluoranthene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzo(g,h,i)perylene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzo(k)fluoranthene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzoic acid	µg/Kg	2300	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Benzyl alcohol	µg/Kg	900	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Butylbenzylphthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Chrysene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Dibenz(a,h)anthracene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Dibenzofuran	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Diethylphthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Dimethylphthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Di-n-butylphthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Di-n-octylphthalate	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Fluoranthene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Fluorene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Hexachlorobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Hexachlorobutadiene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Hexachloroethane	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Isophorone	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Naphthalene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Nitrobenzene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	N-Nitrosodiphenylamine	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Pentachlorophenol	µg/Kg	2200	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Phenanthrene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Phenol	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270C	Pyrene	µg/Kg	450	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	1,2-Dichlorobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	1,3-Dichlorobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	1,4-Dichlorobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,4,5-Trichlorophenol	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,4,6-Trichlorophenol	µg/Kg	1800	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D10-11013	SW8270C	2,4-Dichlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,4-Dimethylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,4-Dinitrophenol	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,4-Dinitrotoluene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2,6-Dinitrotoluene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Chloronaphthalene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Chlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Methylnaphthalene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Nitroaniline	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	2-Nitrophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	3-Nitroaniline	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	9100	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Bromophenyl-phenylether	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Chloro-3-methylphenol	µg/Kg	3600	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Chloroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Nitroaniline	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	4-Nitrophenol	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Acenaphthene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Acenaphthylene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Anthracene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzo(a)anthracene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzo(a)pyrene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzo(b)fluoranthene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzo(g,h,i)perylene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzo(k)fluoranthene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzoic acid	µg/Kg	9100	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Benzyl alcohol	µg/Kg	3600	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Butylbenzylphthalate	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Chrysene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Dibenz(a,h)anthracene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Dibenzofuran	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Diethylphthalate	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Dimethylphthalate	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Di-n-butylphthalate	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Di-n-octylphthalate	µg/Kg	1800	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D10-11013	SW8270C	Fluoranthene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Fluorene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Hexachlorobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Hexachlorobutadiene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Hexachloroethane	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Isophorone	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Naphthalene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Nitrobenzene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	N-Nitrosodiphenylamine	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Pentachlorophenol	µg/Kg	8800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Phenanthrene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Phenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270C	Pyrene	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	1,2-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	1,3-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	1,4-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4,6-Trichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4-Dichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4-Dimethylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4-Dinitrophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,4-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2,6-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Chloronaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Chlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Methylnaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	2-Nitrophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	3-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Bromophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Chloro-3-methylphenol	µg/Kg	730	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Chloroaniline	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	4-Nitrophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Acenaphthene	µg/Kg	360	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D20-11014	SW8270C	Acenaphthylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzo(a)anthracene	µg/Kg	1700	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzo(a)pyrene	µg/Kg	1100	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzo(b)fluoranthene	µg/Kg	2000	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzo(g,h,i)perylene	µg/Kg	900	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzo(k)fluoranthene	µg/Kg	670	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzoic acid	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Benzyl alcohol	µg/Kg	730	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Butylbenzylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Chrysene	µg/Kg	1700	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Dibenz(a,h)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Dibenzofuran	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Diethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Dimethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Di-n-butylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Di-n-octylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Fluoranthene	µg/Kg	3700	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Fluorene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Hexachlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Hexachlorobutadiene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Hexachloroethane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	800	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Isophorone	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Naphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Nitrobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	N-Nitrosodiphenylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Pentachlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Phenanthrene	µg/Kg	2100	J	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Phenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270C	Pyrene	µg/Kg	3300	J	HT>UCL
N002309	AOC4-D30-11015	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	1,2-Dichlorobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	1,3-Dichlorobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	1,4-Dichlorobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,4,5-Trichlorophenol	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,4,6-Trichlorophenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,4-Dichlorophenol	µg/Kg	850	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D30-11015	SW8270C	2,4-Dimethylphenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,4-Dinitrophenol	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,4-Dinitrotoluene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2,6-Dinitrotoluene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Chloronaphthalene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Chlorophenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Methylnaphthalene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Methylphenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Nitroaniline	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	2-Nitrophenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	3-Nitroaniline	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	4300	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Bromophenyl-phenylether	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Chloro-3-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Chloroaniline	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Methylphenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Nitroaniline	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	4-Nitrophenol	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Acenaphthene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Acenaphthylene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Anthracene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzo(a)anthracene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzo(a)pyrene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzo(b)fluoranthene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzo(g,h,i)perylene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzo(k)fluoranthene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzoic acid	µg/Kg	4300	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Benzyl alcohol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Butylbenzylphthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Chrysene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Dibenz(a,h)anthracene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Dibenzofuran	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Diethylphthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Dimethylphthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Di-n-butylphthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Di-n-octylphthalate	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Fluoranthene	µg/Kg	850	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D30-11015	SW8270C	Fluorene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Hexachlorobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Hexachlorobutadiene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Hexachloroethane	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Isophorone	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Naphthalene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Nitrobenzene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	N-Nitrosodiphenylamine	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Pentachlorophenol	µg/Kg	4100	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Phenanthrene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Phenol	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270C	Pyrene	µg/Kg	850	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,1´-Biphenyl	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,2-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,3-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,4-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	1,4-Dioxane	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,3,4,6-Tetrachlorophenol	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4,6-Trichlorophenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4-Dichlorophenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4-Dimethylphenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4-Dinitrophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,4-Dinitrotoluene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2,6-Dinitrotoluene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Chloronaphthalene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Chlorophenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Methylnaphthalene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Methylphenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	2-Nitrophenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	3-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1900	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Bromophenyl-phenylether	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Chloro-3-methylphenol	µg/Kg	750	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Chloroaniline	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Methylphenol	µg/Kg	370	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-DE5-11002	SW8270C	4-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	4-Nitrophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Acenaphthene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Acenaphthylene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Acetophenone	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Anthracene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Atrazine	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzaldehyde	µg/Kg	790	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzo(a)anthracene	µg/Kg	470	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzo(a)pyrene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzo(b)fluoranthene	µg/Kg	1200	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzo(g,h,i)perylene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzo(k)fluoranthene	µg/Kg	380	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzoic acid	µg/Kg	1900	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Benzyl alcohol	µg/Kg	750	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Butylbenzylphthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Caprolactam	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Carbazole	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Chrysene	µg/Kg	940	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Dibenz(a,h)anthracene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Dibenzofuran	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Diethylphthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Dimethylphthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Di-n-butylphthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Di-n-octylphthalate	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Fluoranthene	µg/Kg	2200	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Fluorene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Hexachlorobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Hexachlorobutadiene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Hexachlorocyclopentadiene	µg/Kg	750	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Hexachloroethane	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Isophorone	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Naphthalene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Nitrobenzene	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	N-Nitrosodiphenylamine	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Pentachlorophenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Phenanthrene	µg/Kg	1200	J	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-DE5-11002	SW8270C	Phenol	µg/Kg	370	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270C	Pyrene	µg/Kg	1500	J	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	1,2-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	1,3-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	1,4-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4,6-Trichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4-Dichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4-Dimethylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4-Dinitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,4-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2,6-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Chloronaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Chlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Methylnaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	2-Nitrophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	3-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Bromophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Chloro-3-methylphenol	µg/Kg	720	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Chloroaniline	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	4-Nitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Acenaphthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Acenaphthylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzo(a)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzo(a)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzo(b)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzo(g,h,i)perylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzo(k)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzoic acid	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Benzyl alcohol	µg/Kg	720	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	360	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-GH10-11029	SW8270C	Butylbenzylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Chrysene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Dibenz(a,h)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Dibenzofuran	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Diethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Dimethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Di-n-butylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Di-n-octylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Fluorene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Hexachlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Hexachlorobutadiene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Hexachloroethane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Isophorone	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Naphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Nitrobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	N-Nitrosodiphenylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Pentachlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Phenanthrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Phenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270C	Pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	1,2-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	1,3-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	1,4-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4,6-Trichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4-Dichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4-Dimethylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4-Dinitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,4-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2,6-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Chloronaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Chlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Methylnaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	2-Nitrophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	3-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1800	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-GH30-11031	SW8270C	4-Bromophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Chloro-3-methylphenol	µg/Kg	720	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Chloroaniline	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	4-Nitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Acenaphthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Acenaphthylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzo(a)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzo(a)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzo(b)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzo(g,h,i)perylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzo(k)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzoic acid	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Benzyl alcohol	µg/Kg	720	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Butylbenzylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Chrysene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Dibenz(a,h)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Dibenzofuran	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Diethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Dimethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Di-n-butylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Di-n-octylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Fluorene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Hexachlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Hexachlorobutadiene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Hexachloroethane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Isophorone	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Naphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Nitrobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	N-Nitrosodiphenylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Pentachlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Phenanthrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270C	Phenol	µg/Kg	360	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-GH30-11031	SW8270C	Pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	1,2-Dichlorobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	1,3-Dichlorobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	1,4-Dichlorobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4,6-Trichlorophenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4-Dichlorophenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4-Dimethylphenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4-Dinitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,4-Dinitrotoluene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2,6-Dinitrotoluene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Chloronaphthalene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Chlorophenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Methylnaphthalene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Methylphenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	2-Nitrophenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	3-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Bromophenyl-phenylether	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Chloro-3-methylphenol	µg/Kg	710	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Chloroaniline	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Methylphenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	4-Nitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Acenaphthene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Acenaphthylene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Anthracene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzo(a)anthracene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzo(a)pyrene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzo(b)fluoranthene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzo(g,h,i)perylene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzo(k)fluoranthene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzoic acid	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Benzyl alcohol	µg/Kg	710	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Butylbenzylphthalate	µg/Kg	350	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-I20-11038	SW8270C	Chrysene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Dibenz(a,h)anthracene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Dibenzofuran	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Diethylphthalate	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Dimethylphthalate	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Di-n-butylphthalate	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Di-n-octylphthalate	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Fluoranthene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Fluorene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Hexachlorobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Hexachlorobutadiene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Hexachloroethane	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Isophorone	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Naphthalene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Nitrobenzene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	N-Nitrosodiphenylamine	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Pentachlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Phenanthrene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Phenol	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270C	Pyrene	µg/Kg	350	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	1,2-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	1,3-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	1,4-Dichlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4,6-Trichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4-Dichlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4-Dimethylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4-Dinitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,4-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2,6-Dinitrotoluene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Chloronaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Chlorophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Methylnaphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	2-Nitrophenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	3-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Bromophenyl-phenylether	µg/Kg	360	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-I30-11039	SW8270C	4-Chloro-3-methylphenol	µg/Kg	710	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Chloroaniline	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Methylphenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Nitroaniline	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	4-Nitrophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Acenaphthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Acenaphthylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzo(a)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzo(a)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzo(b)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzo(g,h,i)perylene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzo(k)fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzoic acid	µg/Kg	1800	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Benzyl alcohol	µg/Kg	710	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Butylbenzylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Chrysene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Dibenz(a,h)anthracene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Dibenzofuran	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Diethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Dimethylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Di-n-butylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Di-n-octylphthalate	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Fluoranthene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Fluorene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Hexachlorobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Hexachlorobutadiene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Hexachloroethane	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Isophorone	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Naphthalene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Nitrobenzene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	N-Nitrosodiphenylamine	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Pentachlorophenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Phenanthrene	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Phenol	µg/Kg	360	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270C	Pyrene	µg/Kg	360	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-Z25-11001	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	1,2-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	1,3-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	1,4-Dichlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4,6-Trichlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4-Dichlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4-Dimethylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,4-Dinitrotoluene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2,6-Dinitrotoluene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Chloronaphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Chlorophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Methylnaphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Methylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	2-Nitrophenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	3-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Bromophenyl-phenylether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Chloro-3-methylphenol	µg/Kg	680	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Chloroaniline	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Methylphenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	4-Nitrophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Acenaphthene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Acenaphthylene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Anthracene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzo(a)anthracene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzo(a)pyrene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzo(b)fluoranthene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzo(g,h,i)perylene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzo(k)fluoranthene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Benzyl alcohol	µg/Kg	680	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Butylbenzylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Chrysene	µg/Kg	340	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-Z25-11001	SW8270C	Dibenz(a,h)anthracene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Dibenzofuran	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Diethylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Dimethylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Di-n-butylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Di-n-octylphthalate	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Fluoranthene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Fluorene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Hexachlorobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Hexachlorobutadiene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Hexachloroethane	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Isophorone	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Naphthalene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Nitrobenzene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	N-Nitrosodiphenylamine	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Pentachlorophenol	µg/Kg	1600	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Phenanthrene	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Phenol	µg/Kg	340	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270C	Pyrene	µg/Kg	340	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Acenaphthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Benzo(a)anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Benzo(a)pyrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Chrysene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Fluorene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Phenanthrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3037R	SW8270SIM	Pyrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Acenaphthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002285	AOC4-12-3038R	SW8270SIM	Anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Benzo(a)anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Benzo(a)pyrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Chrysene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Fluoranthene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Fluorene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Phenanthrene	µg/Kg	5	UJ	HT>UCL
N002285	AOC4-12-3038R	SW8270SIM	Pyrene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Acenaphthene	µg/Kg	9.9	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Acenaphthylene	µg/Kg	7.3	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Anthracene	µg/Kg	500	UJ	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Benzo(a)anthracene	µg/Kg	10000	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Benzo(a)pyrene	µg/Kg	6600	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	11000	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	4000	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	4300	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Chrysene	µg/Kg	9300	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	1100	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Fluoranthene	µg/Kg	24000	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Fluorene	µg/Kg	6.7	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	4100	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Phenanthrene	µg/Kg	2200	J	HT>UCL
N002062	AOC4-13-3040	SW8270SIM	Pyrene	µg/Kg	23000	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Acenaphthene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Anthracene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Benzo(a)anthracene	µg/Kg	70	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Benzo(a)pyrene	µg/Kg	54	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	83	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	38	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	21	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Chrysene	µg/Kg	80	J	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002062	AOC4-4-3010	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	11	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Fluoranthene	µg/Kg	140	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Fluorene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	38	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Phenanthrene	µg/Kg	23	J	HT>UCL
N002062	AOC4-4-3010	SW8270SIM	Pyrene	µg/Kg	120	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Acenaphthene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Anthracene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)anthracene	µg/Kg	29	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)pyrene	µg/Kg	27	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	51	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	25	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	21	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Chrysene	µg/Kg	43	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	6.9	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Fluoranthene	µg/Kg	75	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Fluorene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	24	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Phenanthrene	µg/Kg	16	J	HT>UCL
N002062	AOC4-4-3011	SW8270SIM	Pyrene	µg/Kg	63	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Acenaphthene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Anthracene	µg/Kg	12	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Benzo(a)anthracene	µg/Kg	76	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Benzo(a)pyrene	µg/Kg	57	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	140	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	44	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	33	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Chrysene	µg/Kg	100	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	13	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Fluoranthene	µg/Kg	290	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Fluorene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	38	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Naphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Phenanthrene	µg/Kg	45	J	HT>UCL
N002309	AOC4-B10-11005	SW8270SIM	Pyrene	µg/Kg	190	J	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-B20-11006	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Acenaphthene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Acenaphthylene	µg/Kg	17	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Anthracene	µg/Kg	76	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Benzo(a)anthracene	µg/Kg	270	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Benzo(a)pyrene	µg/Kg	310	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	600	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	320	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	180	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Chrysene	µg/Kg	390	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	56	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Fluoranthene	µg/Kg	400	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Fluorene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	200	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Naphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Phenanthrene	µg/Kg	99	J	HT>UCL
N002309	AOC4-B20-11006	SW8270SIM	Pyrene	µg/Kg	360	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	1-Methylnaphthalene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	2-Methylnaphthalene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Acenaphthene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Acenaphthylene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Anthracene	µg/Kg	9.8	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Benzo(a)anthracene	µg/Kg	63	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Benzo(a)pyrene	µg/Kg	52	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	97	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	40	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	35	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Chrysene	µg/Kg	89	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	11	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Fluoranthene	µg/Kg	180	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Fluorene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	38	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Naphthalene	µg/Kg	6.9	UJ	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Phenanthrene	µg/Kg	99	J	HT>UCL
N002309	AOC4-B30-11007	SW8270SIM	Pyrene	µg/Kg	130	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Acenaphthene	µg/Kg	25	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Acenaphthylene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Anthracene	µg/Kg	32	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Benzo(a)anthracene	µg/Kg	140	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Benzo(a)pyrene	µg/Kg	260	J	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D10-11013	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	410	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	190	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	150	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Chrysene	µg/Kg	170	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	48	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Fluoranthene	µg/Kg	590	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Fluorene	µg/Kg	17	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	170	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Naphthalene	µg/Kg	33	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Phenanthrene	µg/Kg	220	J	HT>UCL
N002309	AOC4-D10-11013	SW8270SIM	Pyrene	µg/Kg	570	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Acenaphthene	µg/Kg	18	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Acenaphthylene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Anthracene	µg/Kg	64	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Benzo(a)anthracene	µg/Kg	670	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Benzo(a)pyrene	µg/Kg	510	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	750	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	350	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	290	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Chrysene	µg/Kg	660	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	89	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Fluoranthene	µg/Kg	1100	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Fluorene	µg/Kg	11	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	340	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Naphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Phenanthrene	µg/Kg	390	J	HT>UCL
N002309	AOC4-D20-11014	SW8270SIM	Pyrene	µg/Kg	960	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Acenaphthene	µg/Kg	11	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Acenaphthylene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Anthracene	µg/Kg	40	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Benzo(a)anthracene	µg/Kg	120	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Benzo(a)pyrene	µg/Kg	130	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	210	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	99	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	70	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Chrysene	µg/Kg	140	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	25	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Fluoranthene	µg/Kg	380	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Fluorene	µg/Kg	7	J	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-D30-11015	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	88	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Naphthalene	µg/Kg	5.2	UJ	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Phenanthrene	µg/Kg	230	J	HT>UCL
N002309	AOC4-D30-11015	SW8270SIM	Pyrene	µg/Kg	290	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	1-Methylnaphthalene	µg/Kg	14	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	2-Methylnaphthalene	µg/Kg	17	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Acenaphthene	µg/Kg	7.4	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Acenaphthylene	µg/Kg	5.7	UJ	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Anthracene	µg/Kg	23	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Benzo(a)anthracene	µg/Kg	190	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Benzo(a)pyrene	µg/Kg	140	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	330	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	94	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	120	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Chrysene	µg/Kg	330	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	26	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Fluoranthene	µg/Kg	550	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Fluorene	µg/Kg	5.9	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	91	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Naphthalene	µg/Kg	22	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Phenanthrene	µg/Kg	350	J	HT>UCL
N002309	AOC4-DE5-11002	SW8270SIM	Pyrene	µg/Kg	410	J	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Acenaphthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Acenaphthylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Benzo(a)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Chrysene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Fluorene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Naphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Phenanthrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH10-11029	SW8270SIM	Pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Acenaphthene	µg/Kg	5.5	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-GH30-11031	SW8270SIM	Acenaphthylene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Anthracene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Benzo(a)anthracene	µg/Kg	15	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Benzo(a)pyrene	µg/Kg	15	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	31	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	16	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	11	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Chrysene	µg/Kg	24	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Fluoranthene	µg/Kg	31	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Fluorene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	12	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Naphthalene	µg/Kg	5.5	UJ	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Phenanthrene	µg/Kg	9.7	J	HT>UCL
N002309	AOC4-GH30-11031	SW8270SIM	Pyrene	µg/Kg	28	J	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Acenaphthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Acenaphthylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Benzo(a)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Chrysene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Fluorene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Naphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Phenanthrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I20-11038	SW8270SIM	Pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Acenaphthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Acenaphthylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Benzo(a)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.4	UJ	HT>UCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002309	AOC4-I30-11039	SW8270SIM	Chrysene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.4	UJ	HT>UCL
N0023 09	AOC4-I30-11039	SW8270SIM	Fluoranthene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Fluorene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Naphthalene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Phenanthrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-I30-11039	SW8270SIM	Pyrene	µg/Kg	5.4	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Acenaphthene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Anthracene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Benzo(a)pyrene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Chrysene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Fluoranthene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Fluorene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Naphthalene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Phenanthrene	µg/Kg	5.1	UJ	HT>UCL
N002309	AOC4-Z25-11001	SW8270SIM	Pyrene	µg/Kg	5.1	UJ	HT>UCL
979387	AOC4-DE5-11002	SW9012A	Cyanide	mg/kg	1.08	UJ	HT>UCL
979250	AOC4-12-3037R	SW9045	PH	pH	8.54	J	HT>UCL
979250	AOC4-12-3038R	SW9045	PH	pH	8.57	J	HT>UCL
Continuing Calibration Summary							
N002309	AOC4-T1-12001	SW8015-P	TPH-Gasoline	µg/Kg	800	UJ	CCV<LCL
N002309	AOC4-T2-12002	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	CCV<LCL
N002309	AOC4-T2-12003	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	CCV<LCL
N002309	AOC4-T2-12004	SW8015-P	TPH-Gasoline	µg/Kg	1400	UJ	CCV<LCL
N002309	AOC4-T2-12005	SW8015-P	TPH-Gasoline	µg/Kg	1000	UJ	CCV<LCL
N002271	AOC4-1-3001	SW8081A	Endrin aldehyde	µg/Kg	2	UJ	CCV<LCL
Field Duplicate Summary							
979422	AOC4-11041	SW7199	Chromium, hexavalent	mg/kg	10.7	J	FD>RPD
979422	AOC4-T3-12007	SW7199	Chromium, hexavalent	mg/kg	13.6	J	FD>RPD
N002062	AOC4-14-3043	SW8270SIM	Anthracene	µg/Kg	21	J	FD>RPD
N002062	AOC4-14-3043	SW8270SIM	Benzo(a)anthracene	µg/Kg	970	J	FD>RPD
N002062	AOC4-14-3043	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	530	J	FD>RPD
N002062	AOC4-14-3043	SW8270SIM	Chrysene	µg/Kg	1000	J	FD>RPD

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002062	AOC4-14-3043	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	110	J	FD>RPD
N002062	AOC4-14-3043	SW8270SIM	Fluoranthene	µg/Kg	2400	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Anthracene	µg/Kg	45	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Benzo(a)anthracene	µg/Kg	2100	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	1300	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Chrysene	µg/Kg	2000	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	310	J	FD>RPD
N002062	AOC4-14-3044	SW8270SIM	Fluoranthene	µg/Kg	4100	J	FD>RPD
N002062	AOC4-4-3010	SW8270SIM	Benzo(a)anthracene	µg/Kg	70	J	FD>RPD
N002062	AOC4-4-3010	SW8270SIM	Benzo(a)pyrene	µg/Kg	54	J	FD>RPD
N002062	AOC4-4-3010	SW8270SIM	Chrysene	µg/Kg	80	J	FD>RPD
N002062	AOC4-4-3010	SW8270SIM	Fluoranthene	µg/Kg	140	J	FD>RPD
N002062	AOC4-4-3010	SW8270SIM	Pyrene	µg/Kg	120	J	FD>RPD
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)anthracene	µg/Kg	29	J	FD>RPD
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)pyrene	µg/Kg	27	J	FD>RPD
N002062	AOC4-4-3011	SW8270SIM	Chrysene	µg/Kg	43	J	FD>RPD
N002062	AOC4-4-3011	SW8270SIM	Fluoranthene	µg/Kg	75	J	FD>RPD
N002062	AOC4-4-3011	SW8270SIM	Pyrene	µg/Kg	63	J	FD>RPD
Laboratory Control Sample Summary							
NA	NA	NA	NA	NA	NA	NA	LCS>UCL
Matrix Spike Summary							
N002226	AOC4-11-3034R	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002271	AOC4-1-3001	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002271	AOC4-1-3001	SW6010B	Barium	mg/Kg	440	J	MS<LCL
N002062	AOC4-3-3007	SW6010B	Antimony	mg/Kg	4	UJ	MS<LCL
N002309	AOC4-DE5-11002	SW6010B	Antimony	mg/Kg	2.3	UJ	MS<LCL
N002311	AOC4-T3-12007	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002311	AOC4-T3-12007	SW6010B	Zinc	mg/Kg	290	J	MS<LCL
N002062	AOC4-13-3040	SW8081A	alpha-BHC	µg/Kg	1	UJ	MS<LCL
N002062	AOC4-13-3040	SW8081A	beta-BHC	µg/Kg	1	UJ	MS<LCL
N002062	AOC4-13-3040	SW8081A	delta-BHC	µg/Kg	1	UJ	MS<LCL
N002062	AOC4-13-3040	SW8081A	Endrin ketone	µg/Kg	2	UJ	MS<LCL
N002062	AOC4-13-3040	SW8081A	gamma-BHC	µg/Kg	1	UJ	MS<LCL
N002062	AOC4-13-3040	SW8081A	Heptachlor	µg/Kg	1	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	4,4´-DDE	µg/Kg	2	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	alpha-BHC	µg/Kg	1	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	beta-BHC	µg/Kg	1	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	Dieldrin	µg/Kg	2	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	Endosulfan sulfate	µg/Kg	2	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	Endrin ketone	µg/Kg	2	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8081A	Heptachlor epoxide	µg/Kg	1	UJ	MS<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1260	µg/Kg	290	J	MS<LCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002062	AOC4-13-3040	SW8270C	Benzaldehyde	µg/Kg	3500	UJ	MS<LCL
N002062	AOC4-13-3040	SW8270C	Caprolactam	µg/Kg	1700	R	MS<LCL
N002062	AOC4-3-3007	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002226	AOC4-7-3020	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002309	AOC4-T1-12000	SW8270C	Caprolactam	µg/Kg	340	UJ	MS<LCL
N002311	AOC4-T4-12010	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002224	AOC4-T5a-3068	SW8270C	Benzoic acid	µg/Kg	1700	UJ	MS<LCL
N002224	AOC4-T5a-3068	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002226	AOC4-11-3034R	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002226	AOC4-11-3034R	SW6010B	Barium	mg/Kg	200	J	MS>UCL
N002271	AOC4-1-3001	SW6010B	Potassium	mg/Kg	2500	J	MS>UCL
N002309	AOC4-DE5-11002	SW6010B	Barium	mg/Kg	140	J	MS>UCL
N002309	AOC4-DE5-11002	SW6010B	Sodium	mg/Kg	680	J	MS>UCL
N002311	AOC4-T3-12007	SW6010B	Copper	mg/Kg	63	J	MS>UCL
N002311	AOC4-T3-12007	SW6010B	Lead	mg/Kg	78	J	MS>UCL
N002311	AOC4-T3-12007	SW6010B	Copper	mg/Kg	63	J	MSRPD
N002311	AOC4-T3-12007	SW6010B	Lead	mg/Kg	78	J	MSRPD
Matrix Spike Duplicate Summary							
N002226	AOC4-11-3034R	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002271	AOC4-1-3001	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002271	AOC4-1-3001	SW6010B	Barium	mg/Kg	440	J	SD<LCL
N002062	AOC4-3-3007	SW6010B	Antimony	mg/Kg	4	UJ	SD<LCL
N002309	AOC4-DE5-11002	SW6010B	Antimony	mg/Kg	2.3	UJ	SD<LCL
N002311	AOC4-T3-12007	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002311	AOC4-T3-12007	SW6010B	Chromium	mg/Kg	280	J	SD<LCL
N002311	AOC4-T3-12007	SW6010B	Zinc	mg/Kg	290	J	SD<LCL
N002062	AOC4-13-3040	SW8081A	alpha-BHC	µg/Kg	1	UJ	SD<LCL
N002062	AOC4-13-3040	SW8081A	beta-BHC	µg/Kg	1	UJ	SD<LCL
N002062	AOC4-13-3040	SW8081A	delta-BHC	µg/Kg	1	UJ	SD<LCL
N002062	AOC4-13-3040	SW8081A	Endrin ketone	µg/Kg	2	UJ	SD<LCL
N002062	AOC4-13-3040	SW8081A	gamma-BHC	µg/Kg	1	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	4,4´-DDE	µg/Kg	2	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	alpha-BHC	µg/Kg	1	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	beta-BHC	µg/Kg	1	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	Dieldrin	µg/Kg	2	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	Endosulfan sulfate	µg/Kg	2	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8081A	Endrin ketone	µg/Kg	2	UJ	SD<LCL
N002062	AOC4-13-3040	SW8270C	Caprolactam	µg/Kg	1700	R	SD<LCL
N002062	AOC4-3-3007	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002226	AOC4-7-3020	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002311	AOC4-T4-12010	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002224	AOC4-T5a-3068	SW8270C	Benzoic acid	µg/Kg	1700	UJ	SD<LCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002224	AOC4-T5a-3068	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002226	AOC4-11-3034R	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002271	AOC4-1-3001	SW6010B	Potassium	mg/Kg	2500	J	SD>UCL
N002309	AOC4-DE5-11002	SW6010B	Barium	mg/Kg	140	J	SD>UCL
N002309	AOC4-DE5-11002	SW6010B	Sodium	mg/Kg	680	J	SD>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)anthracene	µg/Kg	29	J	SD>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(a)pyrene	µg/Kg	27	J	SD>UCL
N002062	AOC4-4-3011	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	51	J	SD>UCL
N002062	AOC4-4-3011	SW8270SIM	Chrysene	µg/Kg	43	J	SD>UCL
N002062	AOC4-4-3011	SW8270SIM	Pyrene	µg/Kg	63	J	SD>UCL
Post Digestion Spike							
978924	AOC4-6-3019	SW7199	Chromium, hexavalent	mg/kg	1.98	J	PDS>UCL
Serial Dilution Summary							
NA	NA	NA	NA	NA	NA	NA	SerDil
Surrogate Summary							
N002311	AOC4-T4-12012	SW8015-P	TPH-Gasoline	µg/Kg	960	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	4,4´-DDD	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	4,4´-DDE	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	4,4´-DDT	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Aldrin	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	alpha-BHC	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	beta-BHC	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	delta-BHC	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Dieldrin	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endosulfan I	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endosulfan II	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endosulfan sulfate	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endrin	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endrin aldehyde	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Endrin ketone	µg/Kg	2	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	gamma-BHC	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	gamma-Chlordane	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Heptachlor	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Heptachlor epoxide	µg/Kg	1	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Methoxychlor	µg/Kg	5	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8081A	Toxaphene	µg/Kg	50	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1016	µg/Kg	17	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1221	µg/Kg	33	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1232	µg/Kg	17	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1242	µg/Kg	17	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1248	µg/Kg	17	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1254	µg/Kg	790	J	Sur<LCL

TABLE D4-1
Topock Soil RFI/RI Part A – AOC 4
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002062	AOC4-13-3040	SW8082	Aroclor 1260	µg/Kg	290	J	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1262	µg/Kg	17	UJ	Sur<LCL
N002062	AOC4-13-3040	SW8082	Aroclor 1268	µg/Kg	17	UJ	Sur<LCL
Internal Standard Summary							
N002311	AOC4-11041	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,2,3-Trichloropropane	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,2-Dichlorobenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,3-Dichlorobenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	1,4-Dichlorobenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	2-Chlorotoluene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	Bromobenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	Isopropylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	n-Butylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	n-Propylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	sec-Butylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002311	AOC4-11041	SW8260B	tert-Butylbenzene	µg/Kg	5.6	UJ	IS<LCL
N002309	AOC4-D10-11013	SW8270SIM	Benzo(a)anthracene	µg/Kg	140	J	IS>UCL
N002309	AOC4-D10-11013	SW8270SIM	Chrysene	µg/Kg	170	J	IS>UCL

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

IS<LCL = Internal Standard recovery less than lower control limit.

IS>UCL = Internal Standard recovery greater than upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

MS>UCL = Matrix spike recovery greater than upper control limit.

MSRPD = Relative percent difference between matrix spike and matrix spike duplicate greater than control limit.

PDS>UCL = Post digestion spike recovery greater than upper control limit.

RejectContamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SD>UCL = Matrix spike duplicate recovery greater than upper control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D4-2
Topock Soil RFI/RI Part A - AOC4 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC4-T3-12007	AOC4-11041	AOC4-4-3010	AOC4-4-3011
AOC4-14-3043	AOC4-14-3044		

TABLE D4-3
Topock Soil RFI/RI Part A - AOC4 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
N002224	AOC4-T5a-3068	SW6010B	Sodium	mg/Kg	3400	U	EB>RL	2200

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as “not detected” due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D5
Summary of Samples Qualified in AOC 9

TABLE D5-1
Topock Soil RFI/RI Part A – AOC 9
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
978926	AOC9-14-4033	SW8015-E	TPH-Motor Oil	mg/kg	702	J	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-12-4028	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1254	µg/Kg	160	J	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC9-5-4010	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
Continuing Calibration Summary							
N002211	AOC9-10-4024	SW8260B	Bromoform	µg/Kg	5.1	UJ	CCV<LCL
N002211	AOC9-1-4002	SW8260B	Bromoform	µg/Kg	4	UJ	CCV<LCL
N002211	AOC9-5-4010	SW8260B	Bromoform	µg/Kg	5.3	UJ	CCV<LCL
N002211	AOC9-5-4011	SW8260B	Bromoform	µg/Kg	4.3	UJ	CCV<LCL
N002211	AOC9-9-4022	SW8260B	Bromoform	µg/Kg	4.1	UJ	CCV<LCL
978844	AOC9-8-4016	SW7199	Chromium, hexavalent	mg/kg	48.6	J	>ICLinear Range
Field Duplicate Summary							
N002156	AOC9-13-4030	SW6010B	Chromium	mg/Kg	23	J	FD>RPD
N002156	AOC9-13-4031	SW6010B	Chromium	mg/Kg	18	J	FD>RPD
N002211	AOC9-9-4021	SW8260B	Acetone	µg/Kg	46	UJ	FD>RPD
N002211	AOC9-9-4022	SW8260B	Acetone	µg/Kg	300	J	FD>RPD
N002156	AOC9-13-4030	SW8270SIM	Chrysene	µg/Kg	39	J	FD>RPD
N002156	AOC9-13-4030	SW8270SIM	Phenanthrene	µg/Kg	49	J	FD>RPD
N002156	AOC9-13-4031	SW8270SIM	Chrysene	µg/Kg	18	J	FD>RPD
N002156	AOC9-13-4031	SW8270SIM	Phenanthrene	µg/Kg	9	J	FD>RPD
N002211	AOC9-5-4010	SW8270SIM	1-Methylnaphthalene	µg/Kg	220	J	FD>RPD
N002211	AOC9-5-4010	SW8270SIM	2-Methylnaphthalene	µg/Kg	240	J	FD>RPD
N002211	AOC9-5-4011	SW8270SIM	1-Methylnaphthalene	µg/Kg	120	J	FD>RPD
N002211	AOC9-5-4011	SW8270SIM	2-Methylnaphthalene	µg/Kg	81	J	FD>RPD

TABLE D5-1
Topock Soil RFI/RI Part A – AOC 9
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Laboratory Control Sample Summary							
978647	AOC9-13-4029	SW8015-E	TPH-Motor Oil	mg/kg	19.2	J	LCS>UCL
978647	AOC9-13-4030	SW8015-E	TPH-Motor Oil	mg/kg	77.9	J	LCS>UCL
978647	AOC9-13-4031	SW8015-E	TPH-Motor Oil	mg/kg	62	J	LCS>UCL
N002211	AOC9-10-4023	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	LCSRPD
N002211	AOC9-10-4024	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-12-4027	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-12-4028	SW8270SIM	Acenaphthylene	µg/Kg	5.2	UJ	LCSRPD
N002211	AOC9-1-4001	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	LCSRPD
N002211	AOC9-1-4002	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-5-4009	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	LCSRPD
N002211	AOC9-5-4010	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-5-4011	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-8-4016	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-8-4017	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-8-4018	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-9-4019	SW8270SIM	Acenaphthylene	µg/Kg	5.1	UJ	LCSRPD
N002211	AOC9-9-4020	SW8270SIM	Acenaphthylene	µg/Kg	5.2	UJ	LCSRPD
N002211	AOC9-9-4021	SW8270SIM	Acenaphthylene	µg/Kg	5.2	UJ	LCSRPD
N002211	AOC9-9-4022	SW8270SIM	Acenaphthylene	µg/Kg	5.2	UJ	LCSRPD
Matrix Spike Summary							
N002211	AOC9-12-4027	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002156	AOC9-13-4029	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002150	AOC9-11-4025	SW8270C	1,1´-Biphenyl	µg/Kg	750	UJ	MS<LCL
N002211	AOC9-12-4027	SW8270C	1,1´-Biphenyl	µg/Kg	710	UJ	MS<LCL
N002150	AOC9-11-4025	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	750	UJ	MS<LCL
N002211	AOC9-12-4027	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	710	UJ	MS<LCL
N002150	AOC9-11-4025	SW8270C	Acetophenone	µg/Kg	750	UJ	MS<LCL
N002211	AOC9-12-4027	SW8270C	Acetophenone	µg/Kg	710	UJ	MS<LCL
N002150	AOC9-11-4025	SW8270C	Benzaldehyde	µg/Kg	750	UJ	MS<LCL
N002211	AOC9-12-4027	SW8270C	Benzaldehyde	µg/Kg	710	UJ	MS<LCL
N002211	AOC9-8-4018	SW8270C	Benzoic acid	µg/Kg	1700	UJ	MS<LCL
N002150	AOC9-11-4025	SW8270C	Caprolactam	µg/Kg	350	UJ	MS<LCL
N002211	AOC9-12-4027	SW8270C	Caprolactam	µg/Kg	340	UJ	MS<LCL
Matrix Spike Duplicate Summary							
N002211	AOC9-12-4027	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002156	AOC9-13-4029	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002150	AOC9-11-4025	SW8270C	1,1´-Biphenyl	µg/Kg	750	UJ	SD<LCL
N002150	AOC9-11-4025	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	750	UJ	SD<LCL
N002211	AOC9-8-4018	SW8270C	1,2-Dichlorobenzene	µg/Kg	340	UJ	SD<LCL
N002150	AOC9-11-4025	SW8270C	Acetophenone	µg/Kg	750	UJ	SD<LCL
N002211	AOC9-12-4027	SW8270C	Acetophenone	µg/Kg	710	UJ	SD<LCL

TABLE D5-1
Topock Soil RFI/RI Part A – AOC 9
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002150	AOC9-11-4025	SW8270C	Benzaldehyde	µg/Kg	750	UJ	SD<LCL
N002211	AOC9-12-4027	SW8270C	Benzaldehyde	µg/Kg	710	UJ	SD<LCL
N002211	AOC9-8-4018	SW8270C	Benzoic acid	µg/Kg	1700	UJ	SD<LCL
N002150	AOC9-11-4025	SW8270C	Caprolactam	µg/Kg	350	UJ	SD<LCL
N002211	AOC9-12-4027	SW8270C	Caprolactam	µg/Kg	340	UJ	SD<LCL
Serial Dilution Summary							
N002211	AOC9-12-4027	SW6010B	Barium	mg/Kg	190	J	SerDil
N002211	AOC9-12-4027	SW6010B	Iron	mg/Kg	22000	J	SerDil
N002211	AOC9-12-4027	SW6010B	Magnesium	mg/Kg	9600	J	SerDil
N002211	AOC9-12-4027	SW6010B	Manganese	mg/Kg	310	J	SerDil
Surrogate Summary							
978926	AOC9-14-4032	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978926	AOC9-14-4032	SW8015-E	TPH-Motor Oil	mg/kg	48.4	J	Sur<LCL
N002156	AOC9-13-4031	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	Sur<LCL
N002211	AOC9-1-4002	SW8015-P	TPH-Gasoline	µg/Kg	850	UJ	Sur<LCL
N002150	AOC9-3-4006	SW8015-P	TPH-Gasoline	µg/Kg	1200	UJ	Sur<LCL
N002227	AOC9-14-4033	SW8270SIM	Anthracene	µg/Kg	6.5	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Benzo(a)anthracene	µg/Kg	15	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Benzo(a)pyrene	µg/Kg	15	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	19	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	17	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	15	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Chrysene	µg/Kg	16	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	17	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Fluoranthene	µg/Kg	10	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	17	J	Sur>UCL
N002227	AOC9-14-4033	SW8270SIM	Pyrene	µg/Kg	11	J	Sur>UCL
Contamination Summary							
N002211	AOC9-10-4024	SW8260B	Acetone	µg/Kg	280	R	Reject Contamination
N002150	AOC9-11-4026	SW8260B	Acetone	µg/Kg	150	R	Reject Contamination
N002156	AOC9-13-4031	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002227	AOC9-14-4033	SW8260B	Acetone	µg/Kg	57	R	Reject Contamination
N002150	AOC9-2-4004	SW8260B	Acetone	µg/Kg	550	R	Reject Contamination
N002150	AOC9-3-4006	SW8260B	Acetone	µg/Kg	110	R	Reject Contamination
N002150	AOC9-6-4013	SW8260B	Acetone	µg/Kg	460	R	Reject Contamination
N002150	AOC9-7-4015	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination

TABLE D5-1
Topock Soil RFI/RI Part A – AOC 9
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002211	AOC9-9-4022	SW8260B	Acetone	µg/Kg	300	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

LCSRPD = Laboratory Control Sample's relative percent difference is greater than control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

RejectContamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

Sur>UCL = Surrogate recovery greater than upper control limit.

>ICLinearRange = The result reported exceeds the linear range of the calibration

TABLE D5-2
Topock Soil RFI/RI Part A - AOC9 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC9-13-4030	AOC9-13-4031	AOC9-9-4021	AOC9-9-4022
AOC9-5-4010	AOC9-5-4011		

TABLE D5-3
Topock Soil RFI/RI Part A - AOC9 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
NA	NA	NA	NA	NA	NA	NA	EB>RL	NA

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

U = the analyte is qualified as "not detected" due to blank contamination.

Validation Reasons:

TABLE D5-3
Topock Soil RFI/RI Part A - AOC9 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L

EB>RL = Equipment blank contamination greater than the RL.

Attachment D6
Summary of Samples Qualified in AOC 10

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
N002325	AOC10-3-5013	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC10-4-5017	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC10d-1-5084	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC10d-2-5088	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC10d-3-5093	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC10d-4-5097	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
978845	AOC10b-3-5053	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
978845	AOC10b-3-5053	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
978845	AOC10c-1-5061	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
978845	AOC10c-1-5061	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
978902	AOC10c-4-5075	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
978902	AOC10c-4-5075	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
978902	AOC10c-5-5079	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
978902	AOC10c-5-5079	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1254	µg/Kg	33	J	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC10-5-5019	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1254	µg/Kg	68	J	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5063	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1254	µg/Kg	46	J	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC10c-2-5064	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002326	AOC10d-2-5086	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-2-5086	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC10d-3-5090	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
Continuing Calibration Summary							
N002286	AOC10a-1-5036	SW8081A	4,4´-DDT	µg/Kg	2.1	UJ	CCV<LCL
N002286	AOC10a-1-5036	SW8081A	Endosulfan I	µg/Kg	1.1	UJ	CCV<LCL
N002286	AOC10a-1-5036	SW8081A	Endrin aldehyde	µg/Kg	2.1	UJ	CCV<LCL
N002286	AOC10a-1-5036	SW8081A	Methoxychlor	µg/Kg	5.3	UJ	CCV<LCL
N002286	AOC10a-1-5036	SW8081A	Toxaphene	µg/Kg	53	UJ	CCV<LCL
N002203	AOC10b-1-5041	SW8260B	Bromoform	µg/Kg	6.9	UJ	CCV<LCL
N002203	AOC10b-1-5042	SW8260B	Bromoform	µg/Kg	6.8	UJ	CCV<LCL
N002203	AOC10b-1-5043	SW8260B	Bromoform	µg/Kg	7.5	UJ	CCV<LCL
N002203	AOC10b-2-5046	SW8260B	Bromoform	µg/Kg	6.8	UJ	CCV<LCL
N002203	AOC10b-2-5047	SW8260B	Bromoform	µg/Kg	6.6	UJ	CCV<LCL
N002203	AOC10b-4-5055	SW8260B	Bromoform	µg/Kg	6.3	UJ	CCV<LCL
N002203	AOC10b-4-5056	SW8260B	Bromoform	µg/Kg	7	UJ	CCV<LCL
Field Duplicate Summary							
N002058	AOC10-8-5031	SW6010B	Lead	mg/Kg	15	J	FD>RPD
N002058	AOC10-8-5033	SW6010B	Lead	mg/Kg	12	J	FD>RPD
N002203	AOC10b-1-5041	SW6010B	Lead	mg/Kg	8.4	J	FD>RPD
N002203	AOC10b-1-5041	SW6010B	Zinc	mg/Kg	110	J	FD>RPD
N002203	AOC10b-1-5042	SW6010B	Lead	mg/Kg	12	J	FD>RPD
N002203	AOC10b-1-5042	SW6010B	Zinc	mg/Kg	160	J	FD>RPD
N002203	AOC10b-1-5041	SW8260B	Acetone	µg/Kg	69	UJ	FD>RPD
N002203	AOC10b-1-5042	SW8260B	Acetone	µg/Kg	400	J	FD>RPD
N002210	AOC10c-2-5063	SW8260B	Acetone	µg/Kg	58	UJ	FD>RPD
N002210	AOC10c-2-5064	SW8260B	Acetone	µg/Kg	570	J	FD>RPD
N002217	AOC10c-3-5068	SW8260B	Acetone	µg/Kg	320	J	FD>RPD

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002217	AOC10c-3-5069	SW8260B	Acetone	µg/Kg	1700	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Benzo(a)anthracene	µg/Kg	230	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Benzo(a)pyrene	µg/Kg	180	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	200	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	84	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	170	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Chrysene	µg/Kg	260	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	33	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Fluoranthene	µg/Kg	400	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	92	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Phenanthrene	µg/Kg	72	J	FD>RPD
N002217	AOC10c-3-5068	SW8270SIM	Pyrene	µg/Kg	350	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Benzo(a)anthracene	µg/Kg	14	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Benzo(a)pyrene	µg/Kg	24	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	36	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	22	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	25	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Chrysene	µg/Kg	30	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	6.2	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Fluoranthene	µg/Kg	39	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	20	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Phenanthrene	µg/Kg	11	J	FD>RPD
N002217	AOC10c-3-5069	SW8270SIM	Pyrene	µg/Kg	38	J	FD>RPD
Laboratory Control Sample Summary							
978602	AOC10d-2-5086	SW8015-E	TPH-Motor Oil	mg/kg	27.3	J	LCS>UCL
978602	AOC10d-2-5087	SW8015-E	TPH-Motor Oil	mg/kg	38.3	J	LCS>UCL
978602	AOC10d-3-5089	SW8015-E	TPH-Motor Oil	mg/kg	16.1	J	LCS>UCL
Matrix Spike Summary							
N002153	AOC10-3-5009	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002163	AOC10-6-5023	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002286	AOC10a-1-5036	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002286	AOC10a-1-5036	SW6010B	Iron	mg/Kg	32000	J	MS<LCL
N002286	AOC10a-1-5036	SW6010B	Lead	mg/Kg	200	J	MS<LCL
N002210	AOC10c-1-5058	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002149	AOC10d-1-5080	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	4,4´-DDE	µg/Kg	2	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	alpha-BHC	µg/Kg	1	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	delta-BHC	µg/Kg	1	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	Dieldrin	µg/Kg	2	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	Endrin ketone	µg/Kg	2	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	gamma-BHC	µg/Kg	1	UJ	MS<LCL

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002153	AOC10-3-5009	SW8081A	Heptachlor	µg/Kg	1	UJ	MS<LCL
N002153	AOC10-3-5009	SW8081A	Heptachlor epoxide	µg/Kg	1	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	alpha-BHC	µg/Kg	1	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	beta-BHC	µg/Kg	1	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	delta-BHC	µg/Kg	1	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	Dieldrin	µg/Kg	2	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	Endosulfan sulfate	µg/Kg	2	UJ	MS<LCL
N002139	AOC10d-2-5085	SW8081A	Endrin ketone	µg/Kg	2	UJ	MS<LCL
N002153	AOC10-3-5010	SW8082	Aroclor 1260	µg/Kg	17	UJ	MS<LCL
N002217	AOC10-2-5006	SW8270C	Benzoic acid	µg/Kg	1700	UJ	MS<LCL
N002153	AOC10-3-5009	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002210	AOC10c-1-5058	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002139	AOC10d-3-5089	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002163	AOC10-6-5023	SW6010B	Barium	mg/Kg	220	J	MS>UCL
N002286	AOC10a-1-5036	SW6010B	Aluminum	mg/Kg	4100	J	MS>UCL
N002286	AOC10a-1-5036	SW6010B	Copper	mg/Kg	270	J	MS>UCL
N002286	AOC10a-1-5036	SW6010B	Zinc	mg/Kg	1000	J	MS>UCL
N002286	AOC10a-1-5036	SW6010B	Lead	mg/Kg	200	J	MSRPD
Matrix Spike Duplicate Summary							
N002153	AOC10-3-5009	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002163	AOC10-6-5023	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002286	AOC10a-1-5036	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002286	AOC10a-1-5036	SW6010B	Lead	mg/Kg	200	J	SD<LCL
N002210	AOC10c-1-5058	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002149	AOC10d-1-5080	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	4,4´-DDE	µg/Kg	2	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	alpha-BHC	µg/Kg	1	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	delta-BHC	µg/Kg	1	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	Dieldrin	µg/Kg	2	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	Endrin ketone	µg/Kg	2	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	gamma-BHC	µg/Kg	1	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	Heptachlor	µg/Kg	1	UJ	SD<LCL
N002153	AOC10-3-5009	SW8081A	Heptachlor epoxide	µg/Kg	1	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	alpha-BHC	µg/Kg	1	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	beta-BHC	µg/Kg	1	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	delta-BHC	µg/Kg	1	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	Dieldrin	µg/Kg	2	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	Endosulfan sulfate	µg/Kg	2	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	Endrin ketone	µg/Kg	2	UJ	SD<LCL
N002139	AOC10d-2-5085	SW8081A	gamma-BHC	µg/Kg	1	UJ	SD<LCL
N002217	AOC10-2-5006	SW8270C	Benzoic acid	µg/Kg	1700	UJ	SD<LCL
N002153	AOC10-3-5009	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002210	AOC10c-1-5058	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002139	AOC10d-3-5089	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002163	AOC10-6-5023	SW6010B	Barium	mg/Kg	220	J	SD>UCL
N002286	AOC10a-1-5036	SW6010B	Aluminum	mg/Kg	4100	J	SD>UCL
N002286	AOC10a-1-5036	SW6010B	Iron	mg/Kg	32000	J	SD>UCL
N002286	AOC10a-1-5036	SW6010B	Zinc	mg/Kg	1000	J	SD>UCL
Serial Dilution Summary							
N002153	AOC10-3-5009	SW6010B	Iron	mg/Kg	13000	J	SerDil
N002153	AOC10-3-5009	SW6010B	Magnesium	mg/Kg	7700	J	SerDil
N002163	AOC10-6-5023	SW6010B	Barium	mg/Kg	220	J	SerDil
Surrogate Summary							
978902	AOC10-1-5001	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978902	AOC10-1-5001	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978902	AOC10-1-5003	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978902	AOC10-1-5003	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
978902	AOC10-2-5005	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978902	AOC10-2-5005	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
979251	AOC10a-1-5036	SW8015-E	TPH-Diesel	mg/kg	213	UJ	Sur<LCL
979251	AOC10a-1-5036	SW8015-E	TPH-Motor Oil	mg/kg	297	J	Sur<LCL
N002163	AOC10-6-5024	SW8015-P	TPH-Gasoline	µg/Kg	1500	UJ	Sur<LCL
N002163	AOC10-7-5028	SW8015-P	TPH-Gasoline	µg/Kg	1600	UJ	Sur<LCL
N002163	AOC10-7-5029	SW8015-P	TPH-Gasoline	µg/Kg	1200	R	Sur<LCL
N002203	AOC10b-1-5043	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	Sur<LCL
N002210	AOC10c-1-5059	SW8015-P	TPH-Gasoline	µg/Kg	1900	UJ	Sur<LCL
N002149	AOC10d-4-5096	SW8015-P	TPH-Gasoline	µg/Kg	1500	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	4,4´-DDD	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	4,4´-DDE	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	4,4´-DDT	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Aldrin	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	alpha-BHC	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	alpha-Chlordane	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	beta-BHC	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	delta-BHC	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Dieldrin	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endosulfan I	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endosulfan II	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endosulfan sulfate	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endrin	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endrin aldehyde	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Endrin ketone	µg/Kg	2.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	gamma-BHC	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	gamma-Chlordane	µg/Kg	1.1	UJ	Sur<LCL

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002286	AOC10a-1-5036	SW8081A	Heptachlor	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Heptachlor epoxide	µg/Kg	1.1	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Methoxychlor	µg/Kg	5.3	UJ	Sur<LCL
N002286	AOC10a-1-5036	SW8081A	Toxaphene	µg/Kg	53	UJ	Sur<LCL
N002163	AOC10-7-5027	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.4	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Benzo(a)pyrene	µg/Kg	10	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	9.7	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	8.6	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	11	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Chrysene	µg/Kg	13	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Fluoranthene	µg/Kg	18	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	7.9	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Phenanthrene	µg/Kg	5.7	J	Sur>UCL
N002163	AOC10-7-5027	SW8270SIM	Pyrene	µg/Kg	17	J	Sur>UCL
Internal Standard Summary							
N002153	AOC10-3-5012	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002153	AOC10-4-5015	SW8260B	Acetone	µg/Kg	83	R	Reject Contamination
N002153	AOC10-4-5016	SW8260B	Acetone	µg/Kg	170	R	Reject Contamination
N002163	AOC10-7-5028	SW8260B	Acetone	µg/Kg	340	R	Reject Contamination
N002163	AOC10-7-5029	SW8260B	Acetone	µg/Kg	98	R	Reject Contamination
N002203	AOC10b-1-5042	SW8260B	Acetone	µg/Kg	400	R	Reject Contamination
N002266	AOC10b-1-5044	SW8260B	Acetone	µg/Kg	170	R	Reject Contamination
N002203	AOC10b-2-5046	SW8260B	Acetone	µg/Kg	83	R	Reject Contamination
N002203	AOC10b-2-5047	SW8260B	Acetone	µg/Kg	320	R	Reject Contamination
N002266	AOC10b-2-5048	SW8260B	Acetone	µg/Kg	110	R	Reject Contamination
N002210	AOC10b-3-5050	SW8260B	Acetone	µg/Kg	550	R	Reject Contamination
N002210	AOC10b-3-5051	SW8260B	Acetone	µg/Kg	700	R	Reject Contamination
N002210	AOC10b-3-5052	SW8260B	Acetone	µg/Kg	570	R	Reject Contamination
N002210	AOC10b-3-5053	SW8260B	Acetone	µg/Kg	530	R	Reject Contamination
N002203	AOC10b-4-5055	SW8260B	Acetone	µg/Kg	87	R	Reject Contamination

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002203	AOC10b-4-5056	SW8260B	Acetone	µg/Kg	320	R	Reject Contamination
N002266	AOC10b-4-5057	SW8260B	Acetone	µg/Kg	700	R	Reject Contamination
N002210	AOC10c-1-5060	SW8260B	Acetone	µg/Kg	310	R	Reject Contamination
N002210	AOC10c-2-5064	SW8260B	Acetone	µg/Kg	570	R	Reject Contamination
N002217	AOC10c-3-5068	SW8260B	Acetone	µg/Kg	320	R	Reject Contamination
N002217	AOC10c-3-5069	SW8260B	Acetone	µg/Kg	1700	R	Reject Contamination
N002217	AOC10c-3-5070	SW8260B	Acetone	µg/Kg	600	R	Reject Contamination
N002149	AOC10d-1-5082	SW8260B	Acetone	µg/Kg	240	R	Reject Contamination
N002149	AOC10d-1-5083	SW8260B	Acetone	µg/Kg	210	R	Reject Contamination
N002139	AOC10d-2-5086	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002139	AOC10d-2-5087	SW8260B	Acetone	µg/Kg	74	R	Reject Contamination
N002149	AOC10d-3-5090	SW8260B	Acetone	µg/Kg	420	R	Reject Contamination
N002149	AOC10d-3-5091	SW8260B	Acetone	µg/Kg	350	R	Reject Contamination
N002149	AOC10d-3-5092	SW8260B	Acetone	µg/Kg	560	R	Reject Contamination
N002149	AOC10d-4-5095	SW8260B	Acetone	µg/Kg	340	R	Reject Contamination
N002149	AOC10d-4-5096	SW8260B	Acetone	µg/Kg	420	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

MS>UCL = Matrix spike recovery greater than upper control limit.

MSRPD = Relative percent difference between matrix spike and matrix spike duplicate greater than control limit.

RejectContamination = Result was rejected due to possible contamination.

TABLE D6-1
Topock Soil RFI/RI Part A – AOC 10
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason

SD<LCL = Matrix spike duplicate recovery less than lower control limit.
SD>UCL = Matrix spike duplicate recovery greater than upper control limit.
SerDil = Serial Dilution is greater than 10% RPD.
Sur<LCL = Surrogate recovery less than lower control limit.
Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D6-2
Topock Soil RFI/RI Part A - AOC10 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC10-3-5009	AOC10-3-5010	AOC10c-2-5063	AOC10c-2-5064
AOC10-5-5020	AOC10-5-5021	AOC10c-3-5068	AOC10c-3-5069
AOC10-8-5031	AOC10-8-5033	AOC10d-1-5082	AOC10d-1-5083
AOC10b-1-5041	AOC10b-1-5042	AOC10d-3-5091	AOC10d-3-5092
AOC10b-3-5051	AOC10b-3-5052		

TABLE D6-3
Topock Soil RFI/RI Part A - AOC10 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
NA	NA	NA	NA	NA	NA	NA	EB>RL	NA

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as "not detected" due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D7
Summary of Samples Qualified in AOC 11

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
N002325	AOC11a-1-6004	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-2-6008	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-3-6013	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-4-6017	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-5-6022	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-1-6055	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-1-6056	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-1-6057	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-1-6058	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-2-6059	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-2-6060	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-3-6063	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-3-6064	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-3-6065	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11a-SS-3-6066	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11b-1-6027	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11b-2-6031	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-1-6036	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-2-6040	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-1-6067	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-1-6068	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-1-6069	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-1-6070	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-2-6071	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-2-6072	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-2-6073	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11c-SS-2-6074	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11d-1-6045	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-1-6049	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-2-6054	SW7471A	Mercury	mg/Kg	0.11	UJ	HT>UCL
N002325	AOC11e-SS-1-6075	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-1-6076	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-1-6077	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-1-6078	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-2-6079	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-2-6080	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-2-6081	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-2-6082	SW7471A	Mercury	mg/Kg	0.1	UJ	HT>UCL
N002325	AOC11e-SS-2-6083	SW7471A	Mercury	mg/Kg	0.11	UJ	HT>UCL
980620	AOC11d-1-6045	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11d-1-6045	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-1-6049	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
980620	AOC11e-1-6049	SW8015-E	TPH-Motor Oil	mg/kg	17.7	J	HT>UCL
980620	AOC11e-2-6054	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-2-6054	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6075	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6075	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6076	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6076	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6077	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6077	SW8015-E	TPH-Motor Oil	mg/kg	10.5	J	HT>UCL
980620	AOC11e-SS-1-6078	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-1-6078	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6079	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6079	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6080	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6080	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6081	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6081	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6082	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6082	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
980620	AOC11e-SS-2-6083	SW8015-E	TPH-Diesel	mg/kg	10	J	HT>UCL
980620	AOC11e-SS-2-6083	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8015-P	TPH-Gasoline	µg/Kg	3800	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8015-P	TPH-Gasoline	µg/Kg	2400	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8015-P	TPH-Gasoline	µg/Kg	1500	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8015-P	TPH-Gasoline	µg/Kg	2300	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8015-P	TPH-Gasoline	µg/Kg	1500	UJ	HT>UCL
N002180	AOC11e-SS-2-6083	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1016	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1221	µg/Kg	35	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1232	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1242	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1248	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1254	µg/Kg	190	J	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1260	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1262	µg/Kg	18	UJ	HT>UCL
N002326	AOC11c-2-6038	SW8082	Aroclor 1268	µg/Kg	18	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1221	µg/Kg	34	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002326	AOC11d-1-6043	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC11d-1-6043	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1,1-Trichloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1,2-Trichloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1-Dichloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1-Dichloroethene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,1-Dichloropropene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2,3-Trichlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2,3-Trichloropropane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2-Dibromoethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2-Dichlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2-Dichloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,2-Dichloropropane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,3-Dichlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,3-Dichloropropane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	1,4-Dichlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	2,2-Dichloropropane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	2-Butanone	µg/Kg	150	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	2-Chlorotoluene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	4-Chlorotoluene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	4-Isopropyltoluene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	4-Methyl-2-pentanone	µg/Kg	150	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Acetone	µg/Kg	8100	J	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Acrolein	µg/Kg	300	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Acrylonitrile	µg/Kg	150	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Benzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Bromobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Bromochloromethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Bromodichloromethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Bromoform	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Bromomethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Carbon disulfide	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Carbon tetrachloride	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Chlorobenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Chloroethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Chloroform	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Chloromethane	µg/Kg	15	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-1-6033	SW8260B	cis-1,2-Dichloroethene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	cis-1,3-Dichloropropene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Dibromochloromethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Dibromomethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Dichlorodifluoromethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Ethylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Freon-113	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Hexachlorobutadiene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Isopropylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	m,p-Xylene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Methylene chloride	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	MTBE	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Naphthalene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	n-Butylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	n-Propylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	o-Xylene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	sec-Butylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Styrene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	tert-Butylbenzene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Tetrachloroethene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Toluene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	trans-1,2-Dichloroethene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	trans-1,3-Dichloropropene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Trichloroethene	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Trichlorofluoromethane	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Vinyl chloride	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6033	SW8260B	Xylenes, Total	µg/Kg	15	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1,1-Trichloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1,2-Trichloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1-Dichloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1-Dichloroethene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,1-Dichloropropene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2,3-Trichlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2,3-Trichloropropane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2-Dibromoethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2-Dichlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2-Dichloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,2-Dichloropropane	µg/Kg	12	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-1-6034	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,3-Dichlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,3-Dichloropropane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	1,4-Dichlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	2,2-Dichloropropane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	2-Butanone	µg/Kg	120	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	2-Chlorotoluene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	4-Chlorotoluene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	4-Isopropyltoluene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	4-Methyl-2-pentanone	µg/Kg	120	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Acetone	µg/Kg	520	J	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Acrolein	µg/Kg	230	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Acrylonitrile	µg/Kg	120	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Benzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Bromobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Bromochloromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Bromodichloromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Bromoform	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Bromomethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Carbon disulfide	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Carbon tetrachloride	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Chlorobenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Chloroethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Chloroform	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Chloromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	cis-1,2-Dichloroethene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	cis-1,3-Dichloropropene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Dibromochloromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Dibromomethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Dichlorodifluoromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Ethylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Freon-113	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Hexachlorobutadiene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Isopropylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	m,p-Xylene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Methylene chloride	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	MTBE	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Naphthalene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	n-Butylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	n-Propylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	o-Xylene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	sec-Butylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Styrene	µg/Kg	12	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-1-6034	SW8260B	tert-Butylbenzene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Tetrachloroethene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Toluene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	trans-1,2-Dichloroethene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	trans-1,3-Dichloropropene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Trichloroethene	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Trichlorofluoromethane	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Vinyl chloride	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6034	SW8260B	Xylenes, Total	µg/Kg	12	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1,1-Trichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1,2-Trichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1-Dichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,1-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2,3-Trichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2,3-Trichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2-Dibromoethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2-Dichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,2-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,3-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,3-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	1,4-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	2,2-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	2-Butanone	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	2-Chlorotoluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	4-Chlorotoluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	4-Isopropyltoluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	4-Methyl-2-pentanone	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Acetone	µg/Kg	190	J	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Acrolein	µg/Kg	140	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Acrylonitrile	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Benzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Bromobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Bromochloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Bromodichloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Bromoform	µg/Kg	6.9	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-1-6035	SW8260B	Bromomethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Carbon disulfide	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Carbon tetrachloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Chlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Chloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Chloroform	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Chloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	cis-1,2-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	cis-1,3-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Dibromochloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Dibromomethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Dichlorodifluoromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Ethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Freon-113	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Hexachlorobutadiene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Isopropylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	m,p-Xylene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Methylene chloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	MTBE	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Naphthalene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	n-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	n-Propylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	o-Xylene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	sec-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Styrene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	tert-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Tetrachloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Toluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	trans-1,2-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	trans-1,3-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Trichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Trichlorofluoromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Vinyl chloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-1-6035	SW8260B	Xylenes, Total	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1,1-Trichloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1,2-Trichloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1-Dichloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1-Dichloroethene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,1-Dichloropropene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2,3-Trichlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2,3-Trichloropropane	µg/Kg	16	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-2-6038	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2-Dibromoethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2-Dichlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2-Dichloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,2-Dichloropropane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,3-Dichlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,3-Dichloropropane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	1,4-Dichlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	2,2-Dichloropropane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	2-Butanone	µg/Kg	160	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	2-Chlorotoluene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	2-Hexanone	µg/Kg	160	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	4-Chlorotoluene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	4-Isopropyltoluene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	4-Methyl-2-pentanone	µg/Kg	160	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Acetone	µg/Kg	5600	J	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Acrolein	µg/Kg	320	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Acrylonitrile	µg/Kg	160	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Benzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Bromobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Bromochloromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Bromodichloromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Bromoform	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Bromomethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Carbon disulfide	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Carbon tetrachloride	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Chlorobenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Chloroethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Chloroform	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Chloromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	cis-1,2-Dichloroethene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	cis-1,3-Dichloropropene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Cyclohexane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Dibromochloromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Dibromomethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Dichlorodifluoromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Ethylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Freon-113	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Hexachlorobutadiene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Isopropylbenzene	µg/Kg	16	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-2-6038	SW8260B	m,p-Xylene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Methyl Acetate	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Methylcyclohexane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Methylene chloride	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	MTBE	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Naphthalene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	n-Butylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	n-Propylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	o-Xylene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	sec-Butylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Styrene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	tert-Butylbenzene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Tetrachloroethene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Toluene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	trans-1,2-Dichloroethene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	trans-1,3-Dichloropropene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Trichloroethene	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Trichlorofluoromethane	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Vinyl chloride	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6038	SW8260B	Xylenes, Total	µg/Kg	16	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1,1-Trichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1,2-Trichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1-Dichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,1-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2,3-Trichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2,3-Trichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2-Dibromoethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2-Dichloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,2-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,3-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,3-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	1,4-Dichlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	2,2-Dichloropropane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	2-Butanone	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	2-Chlorotoluene	µg/Kg	6.9	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-2-6039	SW8260B	4-Chlorotoluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	4-Isopropyltoluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	4-Methyl-2-pentanone	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Acetone	µg/Kg	760	J	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Acrolein	µg/Kg	140	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Acrylonitrile	µg/Kg	69	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Benzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Bromobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Bromochloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Bromodichloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Bromoform	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Bromomethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Carbon disulfide	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Carbon tetrachloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Chlorobenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Chloroethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Chloroform	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Chloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	cis-1,2-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	cis-1,3-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Dibromochloromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Dibromomethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Dichlorodifluoromethane	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Ethylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Freon-113	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Hexachlorobutadiene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Isopropylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	m,p-Xylene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Methylene chloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	MTBE	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Naphthalene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	n-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	n-Propylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	o-Xylene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	sec-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Styrene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	tert-Butylbenzene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Tetrachloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Toluene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	trans-1,2-Dichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	trans-1,3-Dichloropropene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Trichloroethene	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Trichlorofluoromethane	µg/Kg	6.9	UJ	HT>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11c-2-6039	SW8260B	Vinyl chloride	µg/Kg	6.9	UJ	HT>UCL
N002180	AOC11c-2-6039	SW8260B	Xylenes, Total	µg/Kg	6.9	UJ	HT>UCL
Continuing Calibration Summary							
N002180	AOC11c-1-6035	SW8260B	Bromoform	µg/Kg	6.9	UJ	CCV<LCL
N002180	AOC11c-2-6038	SW8260B	Bromoform	µg/Kg	16	UJ	CCV<LCL
N002180	AOC11c-2-6039	SW8260B	Bromoform	µg/Kg	6.9	UJ	CCV<LCL
N002180	AOC11d-1-6043	SW8260B	Bromoform	µg/Kg	4.4	UJ	CCV<LCL
N002180	AOC11d-1-6044	SW8260B	Bromoform	µg/Kg	3.5	UJ	CCV<LCL
N002180	AOC11d-1-6045	SW8260B	Bromoform	µg/Kg	5.1	UJ	CCV<LCL
N002180	AOC11e-1-6047	SW8260B	Bromoform	µg/Kg	5.4	UJ	CCV<LCL
N002180	AOC11e-1-6048	SW8260B	Bromoform	µg/Kg	4.6	UJ	CCV<LCL
N002180	AOC11e-1-6049	SW8260B	Bromoform	µg/Kg	5	UJ	CCV<LCL
N002180	AOC11e-2-6051	SW8260B	Bromoform	µg/Kg	5.1	UJ	CCV<LCL
N002180	AOC11e-2-6053	SW8260B	Bromoform	µg/Kg	4.5	UJ	CCV<LCL
N002180	AOC11e-2-6054	SW8260B	Bromoform	µg/Kg	4	UJ	CCV<LCL
N002180	AOC11e-SS-1-6076	SW8260B	Bromoform	µg/Kg	4.5	UJ	CCV<LCL
N002180	AOC11e-SS-1-6077	SW8260B	Bromoform	µg/Kg	3.9	UJ	CCV<LCL
N002180	AOC11e-SS-1-6078	SW8260B	Bromoform	µg/Kg	4.3	UJ	CCV<LCL
Field Duplicate Summary							
N002180	AOC11d-1-6041	SW6010B	Barium	mg/Kg	310	J	FD>RPD
N002180	AOC11d-1-6041	SW6010B	Calcium	mg/Kg	43000	J	FD>RPD
N002180	AOC11d-1-6042	SW6010B	Barium	mg/Kg	250	J	FD>RPD
N002180	AOC11d-1-6042	SW6010B	Calcium	mg/Kg	33000	J	FD>RPD
978698	AOC11c-1-6033	SW8015-E	TPH-Diesel	mg/kg	10	UJ	FD>RPD
978698	AOC11c-1-6034	SW8015-E	TPH-Diesel	mg/kg	78	J	FD>RPD
N002180	AOC11d-1-6041	SW8081A	alpha-Chlordane	µg/Kg	12	J	FD>RPD
N002180	AOC11d-1-6041	SW8081A	gamma-Chlordane	µg/Kg	13	J	FD>RPD
N002180	AOC11d-1-6042	SW8081A	alpha-Chlordane	µg/Kg	1	UJ	FD>RPD
N002180	AOC11d-1-6042	SW8081A	gamma-Chlordane	µg/Kg	1	UJ	FD>RPD
N002180	AOC11c-1-6033	SW8260B	Acetone	µg/Kg	8100	J	FD>RPD
N002180	AOC11c-1-6034	SW8260B	Acetone	µg/Kg	520	J	FD>RPD
N002180	AOC11e-SS-2-6081	SW8270SIM	Fluoranthene	µg/Kg	38	J	FD>RPD
N002180	AOC11e-SS-2-6081	SW8270SIM	Phenanthrene	µg/Kg	28	J	FD>RPD
N002180	AOC11e-SS-2-6081	SW8270SIM	Pyrene	µg/Kg	31	J	FD>RPD
N002180	AOC11e-SS-2-6082	SW8270SIM	Fluoranthene	µg/Kg	5.1	UJ	FD>RPD
N002180	AOC11e-SS-2-6082	SW8270SIM	Phenanthrene	µg/Kg	5.1	UJ	FD>RPD
N002180	AOC11e-SS-2-6082	SW8270SIM	Pyrene	µg/Kg	5.1	UJ	FD>RPD
Laboratory Control Sample Summary							
978645	AOC11a-1-6001	SW8015-E	TPH-Motor Oil	mg/kg	45.7	J	LCS>UCL
978645	AOC11a-1-6002	SW8015-E	TPH-Motor Oil	mg/kg	10.1	J	LCS>UCL
978645	AOC11a-3-6012	SW8015-E	TPH-Motor Oil	mg/kg	35.6	J	LCS>UCL
978645	AOC11a-4-6014	SW8015-E	TPH-Motor Oil	mg/kg	14	J	LCS>UCL
978645	AOC11a-4-6015	SW8015-E	TPH-Motor Oil	mg/kg	47.5	J	LCS>UCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
978645	AOC11a-4-6016	SW8015-E	TPH-Motor Oil	mg/kg	11.9	J	LCS>UCL
978645	AOC11a-5-6018	SW8015-E	TPH-Motor Oil	mg/kg	11.2	J	LCS>UCL
978645	AOC11a-5-6019	SW8015-E	TPH-Motor Oil	mg/kg	37.4	J	LCS>UCL
978645	AOC11a-5-6020	SW8015-E	TPH-Motor Oil	mg/kg	11.3	J	LCS>UCL
N002180	AOC11c-2-6039	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	120	J	LCS>UCL
N002180	AOC11d-1-6041	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	61	J	LCS>UCL
N002180	AOC11d-1-6042	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	55	J	LCS>UCL
N002180	AOC11e-1-6046	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	85	J	LCS>UCL
N002180	AOC11e-1-6047	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	22	J	LCS>UCL
N002180	AOC11e-1-6048	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	8.1	J	LCS>UCL
N002180	AOC11e-2-6050	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	39	J	LCS>UCL
Matrix Spike Summary							
N002169	AOC11a-1-6002	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002325	AOC11a-5-6022	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002138	AOC11b-1-6023	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002180	AOC11d-1-6041	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002325	AOC11e-SS-1-6075	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
978645	AOC11a-4-6016	SW7199	Chromium, hexavalent	mg/kg	0.407	UJ	MS<LCL
N002169	AOC11a-1-6001	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002138	AOC11b-1-6023	SW6010B	Barium	mg/Kg	200	J	MS>UCL
Matrix Spike Duplicate Summary							
N002169	AOC11a-1-6002	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002325	AOC11a-5-6022	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002138	AOC11b-1-6023	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002180	AOC11d-1-6041	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002325	AOC11e-SS-1-6075	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002169	AOC11a-1-6001	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
Post Digestion Spike							
N002180	AOC11d-1-6041	SW6010B	Calcium	mg/Kg	43000	J	PDS>UCL
Serial Dilution Summary							
N002180	AOC11d-1-6041	SW6010B	Aluminum	mg/Kg	19000	J	SerDil
N002325	AOC11e-SS-1-6075	SW6010B	Barium	mg/Kg	96	J	SerDil
N002180	AOC11d-1-6041	SW6010B	Calcium	mg/Kg	43000	J	SerDil
N002180	AOC11d-1-6041	SW6010B	Iron	mg/Kg	21000	J	SerDil
N002180	AOC11d-1-6041	SW6010B	Magnesium	mg/Kg	11000	J	SerDil
N002180	AOC11d-1-6041	SW6010B	Manganese	mg/Kg	390	J	SerDil
N002325	AOC11e-SS-1-6075	SW6010B	Zinc	mg/Kg	35	J	SerDil
Surrogate Summary							
978645	AOC11a-3-6012	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978645	AOC11a-3-6012	SW8015-E	TPH-Motor Oil	mg/kg	35.6	J	Sur<LCL
980620	AOC11e-SS-2-6080	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
980620	AOC11e-SS-2-6080	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
N002180	AOC11e-2-6051	SW8015-P	TPH-Gasoline	µg/Kg	900	UJ	Sur<LCL

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11e-2-6052	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	Sur<LCL
N002180	AOC11e-2-6053	SW8015-P	TPH-Gasoline	µg/Kg	1000	UJ	Sur<LCL
978698	AOC11e-1-6047	SW8015-E	TPH-Motor Oil	mg/kg	42.2	J	Sur>UCL
Contamination Summary							
N002169	AOC11a-1-6003	SW8260B	Acetone	µg/Kg	170	R	Reject Contamination
N002169	AOC11a-2-6006	SW8260B	Acetone	µg/Kg	650	R	Reject Contamination
N002169	AOC11a-2-6007	SW8260B	Acetone	µg/Kg	560	R	Reject Contamination
N002162	AOC11a-3-6010	SW8260B	Acetone	µg/Kg	400	R	Reject Contamination
N002162	AOC11a-3-6011	SW8260B	Acetone	µg/Kg	110	R	Reject Contamination
N002162	AOC11a-4-6015	SW8260B	Acetone	µg/Kg	760	R	Reject Contamination
N002162	AOC11a-4-6016	SW8260B	Acetone	µg/Kg	330	R	Reject Contamination
N002169	AOC11a-5-6019	SW8260B	Acetone	µg/Kg	420	R	Reject Contamination
N002169	AOC11a-5-6020	SW8260B	Acetone	µg/Kg	320	R	Reject Contamination
N002169	AOC11a-5-6021	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002138	AOC11b-2-6029	SW8260B	Acetone	µg/Kg	290	R	Reject Contamination
N002138	AOC11b-2-6030	SW8260B	Acetone	µg/Kg	140	R	Reject Contamination
N002180	AOC11c-1-6033	SW8260B	Acetone	µg/Kg	8100	R	Reject Contamination
N002180	AOC11c-1-6034	SW8260B	Acetone	µg/Kg	520	R	Reject Contamination
N002180	AOC11c-1-6035	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002180	AOC11c-2-6038	SW8260B	Acetone	µg/Kg	5600	R	Reject Contamination
N002180	AOC11c-2-6039	SW8260B	Acetone	µg/Kg	760	R	Reject Contamination
N002180	AOC11d-1-6044	SW8260B	Acetone	µg/Kg	48	R	Reject Contamination
N002180	AOC11d-1-6045	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002180	AOC11e-1-6047	SW8260B	Acetone	µg/Kg	330	R	Reject Contamination
N002180	AOC11e-1-6048	SW8260B	Acetone	µg/Kg	320	R	Reject Contamination
N002180	AOC11e-1-6049	SW8260B	Acetone	µg/Kg	420	R	Reject Contamination

TABLE D7-1
Topock Soil RFI/RI Part A – AOC 11
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002180	AOC11e-2-6052	SW8260B	Acetone	µg/Kg	100	R	Reject Contamination
N002180	AOC11e-SS-2-6083	SW8260B	Acetone	µg/Kg	99	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

MS>UCL = Matrix spike recovery greater than upper control limit.

PDS>UCL = Post digestion spike recovery greater than upper control limit.

RejectContamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D7-2
Topock Soil RFI/RI Part A - AOC11 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC11a-3-6010	AOC11a-3-6011	AOC11d-1-6041	AOC11d-1-6042
AOC11a-5-6020	AOC11a-5-6021	AOC11e-2-6051	AOC11e-2-6052
AOC11b-1-6023	AOC11b-1-6024	AOC11e-SS-2-6081	AOC11e-SS-2-6082
AOC11c-1-6033	AOC11c-1-6034		

TABLE D7-3
Topock Soil RFI/RI Part A - AOC11 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flaga	Validation Reason	Equipment Blank Result µg/L
N002180	AOC11e-2-6050	SW6010B	Sodium	mg/Kg	580	U	EB>RL	7200

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

U = the analyte is qualified as "not detected" due to blank contamination.

TABLE D7-3
Topock Soil RFI/RI Part A - AOC11 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flaga	Validation Reason	Equipment Blank Result µg/L

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D8
Summary of Samples Qualified in AOC 12

TABLE D8-1
Topock Soil RFI/RI Part A – AOC 12
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flaga	Validation Reason
Holding Time Summary							
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1016	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1221	µg/Kg	33	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1232	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1242	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1248	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1254	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1260	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1262	µg/Kg	17	UJ	HT>UCL
N002326	AOC12a-T1a-7002	SW8082	Aroclor 1268	µg/Kg	17	UJ	HT>UCL
Continuing Calibration Summary							
N002161	AOC12c-T1b-7016	SW8260B	Acrolein	µg/Kg	130	UJ	CCV<LCL
N002161	AOC12c-T1c-7017	SW8260B	Acrolein	µg/Kg	110	UJ	CCV<LCL
N002161	AOC12c-T2a-7018	SW8260B	Acrolein	µg/Kg	120	UJ	CCV<LCL
N002161	AOC12c-T2b-7019	SW8260B	Acrolein	µg/Kg	110	UJ	CCV<LCL
N002161	AOC12c-T2c-7020	SW8260B	Acrolein	µg/Kg	99	UJ	CCV<LCL
N002161	AOC12c-T2d-7021	SW8260B	Acrolein	µg/Kg	110	UJ	CCV<LCL
N002161	AOC12c-T2d-7022	SW8260B	Acrolein	µg/Kg	96	UJ	CCV<LCL
Field Duplicate Summary							
NA	NA	NA	NA	NA	NA	NA	FD>RPD
Laboratory Control Sample Summary							
978651	AOC12c-T2d-7021	SW8015-E	TPH-Motor Oil	mg/kg	97.5	J	LCS>UCL
978651	AOC12c-T2d-7022	SW8015-E	TPH-Motor Oil	mg/kg	120	J	LCS>UCL
N002181	AOC12a-T1a-7001	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	20	J	LCS>UCL
Matrix Spike Summary							
N002181	AOC12a-T1a-7001	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002161	AOC12c-T1b-7015	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002181	AOC12a-T1a-7001	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002181	AOC12a-T1a-7001	SW6010B	Magnesium	mg/Kg	3000	J	MS>UCL
Matrix Spike Duplicate Summary							
N002181	AOC12a-T1a-7001	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	710	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW8270C	2,3,4,6-Tetrachlorophenol	µg/Kg	710	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW8270C	Acetophenone	µg/Kg	710	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW8270C	Benzaldehyde	µg/Kg	710	UJ	SD<LCL
N002181	AOC12a-T1a-7001	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002161	AOC12c-T1b-7015	SW6010B	Barium	mg/Kg	110	J	SD>UCL
N002181	AOC12a-T1a-7001	SW6010B	Magnesium	mg/Kg	3000	J	SD>UCL

TABLE D8-1
Topock Soil RFI/RI Part A – AOC 12
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flaga	Validation Reason
Post Digestion Spike							
N002181	AOC12a-T1a-7001	SW6010B	Calcium	mg/Kg	10000	J	PDS>UCL
N002181	AOC12a-T1a-7001	SW6010B	Iron	mg/Kg	9900	J	PDS>UCL
Serial Dilution Summary							
NA	NA	NA	NA	NA	NA	NA	SerDil
Surrogate Summary							
N002181	AOC12a-T2a-7005	SW8015-P	TPH-Gasoline	µg/Kg	1000	UJ	Sur<LCL
Contamination Summary							
N002181	AOC12a-T1c-7004	SW8260B	Acetone	µg/Kg	84	R	Reject Contamination
N002181	AOC12a-T2b-7006	SW8260B	Acetone	µg/Kg	55	R	Reject Contamination
N002161	AOC12c-T1a-7014	SW8260B	Acetone	µg/Kg	180	R	Reject Contamination
N002161	AOC12c-T2a-7018	SW8260B	Acetone	µg/Kg	280	R	Reject Contamination
N002161	AOC12c-T2c-7020	SW8260B	Acetone	µg/Kg	240	R	Reject Contamination
N002161	AOC12c-T2d-7021	SW8260B	Acetone	µg/Kg	150	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

MS>UCL = Matrix spike recovery greater than upper control limit.

PDS>UCL = Post digestion spike recovery greater than upper control limit.

RejectContamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SD>UCL = Matrix spike duplicate recovery greater than upper control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D8-2
Topock Soil RFI/RI Part A - AOC12 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC12c-T2d-7021	AOC12c-T2d-7022		

TABLE D8-3
Topock Soil RFI/RI Part A - AOC12 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
NA	NA	NA	NA	NA	NA	NA	EB>RL	NA

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as “not detected” due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D9
Summary of Samples Qualified in AOC 14

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
979156	AOC14-10-8055	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-10-8055	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-11-8058	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-11-8058	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979252	AOC14-13-8089	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979252	AOC14-13-8089	SW8015-E	TPH-Motor Oil	mg/kg	89.1	J	HT>UCL
979252	AOC14-2-8088	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979252	AOC14-2-8088	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-3-8016	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-3-8016	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-4-8022	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-4-8022	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-9-8049	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-9-8049	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8066	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8066	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8067	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8067	SW8015-E	TPH-Motor Oil	mg/kg	56.7	J	HT>UCL
979156	AOC14-SS-1-8068	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8068	SW8015-E	TPH-Motor Oil	mg/kg	38.9	J	HT>UCL
979156	AOC14-SS-1-8069	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8069	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8070	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-1-8070	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8071	SW8015-E	TPH-Diesel	mg/kg	11	J	HT>UCL
979156	AOC14-SS-2-8071	SW8015-E	TPH-Motor Oil	mg/kg	134	J	HT>UCL
979156	AOC14-SS-2-8072	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8072	SW8015-E	TPH-Motor Oil	mg/kg	28.2	J	HT>UCL
979156	AOC14-SS-2-8073	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8073	SW8015-E	TPH-Motor Oil	mg/kg	10.9	J	HT>UCL
979156	AOC14-SS-2-8074	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8074	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8075	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8075	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8076	SW8015-E	TPH-Diesel	mg/kg	10	UJ	HT>UCL
979156	AOC14-SS-2-8076	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	1,2-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	1,3-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	1,4-Dichlorobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,4,6-Trichlorophenol	µg/Kg	330	UJ	HT>UCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002287	AOC14-13-8089	SW8270C	2,4-Dichlorophenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,4-Dimethylphenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,4-Dinitrophenol	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,4-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2,6-Dinitrotoluene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Chloronaphthalene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Chlorophenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Methylnaphthalene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	2-Nitrophenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	3-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1700	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Bromophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Chloro-3-methylphenol	µg/Kg	660	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Chloroaniline	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Methylphenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Nitroaniline	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	4-Nitrophenol	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Acenaphthene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Acenaphthylene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Anthracene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzo(a)anthracene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzo(a)pyrene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzo(b)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzo(g,h,i)perylene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzo(k)fluoranthene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzoic acid	µg/Kg	1700	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Benzyl alcohol	µg/Kg	660	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Butylbenzylphthalate	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Chrysene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Dibenz(a,h)anthracene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Dibenzofuran	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Diethylphthalate	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Dimethylphthalate	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Di-n-butylphthalate	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Di-n-octylphthalate	µg/Kg	330	UJ	HT>UCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002287	AOC14-13-8089	SW8270C	Fluoranthene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Fluorene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Hexachlorobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Hexachlorobutadiene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Hexachloroethane	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Isophorone	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Naphthalene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Nitrobenzene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	N-Nitrosodiphenylamine	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Pentachlorophenol	µg/Kg	1600	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Phenanthrene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Phenol	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270C	Pyrene	µg/Kg	330	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	1,2,4-Trichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	1,2-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	1,3-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	1,4-Dichlorobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4,5-Trichlorophenol	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4,6-Trichlorophenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4-Dichlorophenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4-Dimethylphenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4-Dinitrophenol	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,4-Dinitrotoluene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2,6-Dinitrotoluene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Chloronaphthalene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Chlorophenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Methylnaphthalene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Methylphenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	2-Nitrophenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	3,3´-Dichlorobenzidine	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	3-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4,6-Dinitro-2-methylphenol	µg/Kg	1900	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Bromophenyl-phenylether	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Chloro-3-methylphenol	µg/Kg	750	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Chloroaniline	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Chlorophenyl-phenylether	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Methylphenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Nitroaniline	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	4-Nitrophenol	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Acenaphthene	µg/Kg	370	UJ	HT>UCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002287	AOC14-2-8088	SW8270C	Acenaphthylene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Anthracene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzo(a)anthracene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzo(a)pyrene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzo(b)fluoranthene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzo(g,h,i)perylene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzo(k)fluoranthene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzoic acid	µg/Kg	1900	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Benzyl alcohol	µg/Kg	750	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Bis(2-chloroethoxy)methane	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Bis(2-chloroethyl)ether	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Bis(2-chloroisopropyl)ether	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Bis(2-ethylhexyl)phthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Butylbenzylphthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Chrysene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Dibenz(a,h)anthracene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Dibenzofuran	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Diethylphthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Dimethylphthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Di-n-butylphthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Di-n-octylphthalate	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Fluoranthene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Fluorene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Hexachlorobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Hexachlorobutadiene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Hexachloroethane	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Indeno(1,2,3-cd)pyrene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Isophorone	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Naphthalene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Nitrobenzene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	N-Nitrosodi-n-propylamine	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	N-Nitrosodiphenylamine	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Pentachlorophenol	µg/Kg	1800	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Phenanthrene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Phenol	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270C	Pyrene	µg/Kg	370	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	1-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	2-Methylnaphthalene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Acenaphthene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Acenaphthylene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Anthracene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Benzo(a)anthracene	µg/Kg	16	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Benzo(a)pyrene	µg/Kg	12	J	HT>UCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002287	AOC14-13-8089	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	17	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	6.6	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	12	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Chrysene	µg/Kg	17	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Fluoranthene	µg/Kg	25	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Fluorene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.8	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Naphthalene	µg/Kg	5	UJ	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Phenanthrene	µg/Kg	5.3	J	HT>UCL
N002287	AOC14-13-8089	SW8270SIM	Pyrene	µg/Kg	22	J	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	1-Methylnaphthalene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	2-Methylnaphthalene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Acenaphthene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Acenaphthylene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Anthracene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Benzo(a)anthracene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Benzo(a)pyrene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Chrysene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Dibenz(a,h)anthracene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Fluoranthene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Fluorene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Indeno(1,2,3-cd)pyrene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Naphthalene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Phenanthrene	µg/Kg	5.7	UJ	HT>UCL
N002287	AOC14-2-8088	SW8270SIM	Pyrene	µg/Kg	5.7	UJ	HT>UCL
979252	AOC14-13-8089	SW9045	PH	pH	8.85	J	HT>UCL
979252	AOC14-2-8088	SW9045	PH	pH	8.88	J	HT>UCL
Continuing Calibration Summary							
N002207	AOC14-10-8051	SW8260B	Bromoform	µg/Kg	4.7	UJ	CCV<LCL
N002207	AOC14-10-8052	SW8260B	Bromoform	µg/Kg	4.4	UJ	CCV<LCL
Field Duplicate Summary							
N002202	AOC14-2-8009	SW6010B	Copper	mg/Kg	16	J	FD>RPD
N002202	AOC14-2-8010	SW6010B	Copper	mg/Kg	11	J	FD>RPD
N002216	AOC14-SS-4-8086	SW8260B	Acetone	µg/Kg	290	J	FD>RPD
N002216	AOC14-SS-4-8087	SW8260B	Acetone	µg/Kg	37	UJ	FD>RPD
Laboratory Control Sample Summary							
979252	AOC14-13-8089	SW8015-E	TPH-Motor Oil	mg/kg	89.1	J	LCS>UCL
978903	AOC14-9-8045	SW8015-E	TPH-Motor Oil	mg/kg	57.5	J	LCS>UCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
978903	AOC14-9-8046	SW8015-E	TPH-Motor Oil	mg/kg	22.1	J	LCS>UCL
978903	AOC14-9-8047	SW8015-E	TPH-Motor Oil	mg/kg	57	J	LCS>UCL
978903	AOC14-9-8048	SW8015-E	TPH-Motor Oil	mg/kg	14	J	LCS>UCL
Matrix Spike Summary							
N002207	AOC14-3-8012	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002325	AOC14-8-8044	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002325	AOC14-9-8049	SW6010B	Antimony	mg/Kg	2	UJ	MS<LCL
N002207	AOC14-10-8050	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	700	UJ	MS<LCL
N002207	AOC14-10-8050	SW8270C	Acetophenone	µg/Kg	700	UJ	MS<LCL
N002207	AOC14-10-8050	SW8270C	Benzaldehyde	µg/Kg	700	UJ	MS<LCL
N002207	AOC14-10-8054	SW8270C	Benzoic acid	µg/Kg	1700	UJ	MS<LCL
N002216	AOC14-5-8025	SW8270C	Benzoic acid	µg/Kg	1700	R	MS<LCL
N002207	AOC14-10-8050	SW8270C	Caprolactam	µg/Kg	330	UJ	MS<LCL
N002325	AOC14-9-8049	SW6010B	Barium	mg/Kg	120	J	MS>UCL
Matrix Spike Duplicate Summary							
N002207	AOC14-3-8012	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002325	AOC14-8-8044	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002325	AOC14-9-8049	SW6010B	Antimony	mg/Kg	2	UJ	SD<LCL
N002207	AOC14-10-8050	SW8270C	1,2,4,5-Tetrachlorobenzene	µg/Kg	700	UJ	SD<LCL
N002207	AOC14-10-8050	SW8270C	Acetophenone	µg/Kg	700	UJ	SD<LCL
N002207	AOC14-10-8050	SW8270C	Benzaldehyde	µg/Kg	700	UJ	SD<LCL
N002207	AOC14-10-8054	SW8270C	Benzoic acid	µg/Kg	1700	UJ	SD<LCL
N002216	AOC14-5-8025	SW8270C	Benzoic acid	µg/Kg	1700	R	SD<LCL
N002207	AOC14-10-8050	SW8270C	Caprolactam	µg/Kg	330	UJ	SD<LCL
N002202	AOC14-1-8001	SW6010B	Barium	mg/Kg	190	J	SD>UCL
N002325	AOC14-9-8049	SW6010B	Barium	mg/Kg	120	J	SD>UCL
Post Digestion Spike							
NA	NA	NA	NA	NA	NA	NA	PDS>UCL
Serial Dilution Summary							
N002325	AOC14-8-8044	SW6010B	Barium	mg/Kg	73	J	SerDil
N002325	AOC14-8-8044	SW6010B	Chromium	mg/Kg	23	J	SerDil
N002207	AOC14-3-8012	SW6010B	Potassium	mg/Kg	2800	J	SerDil
N002325	AOC14-8-8044	SW6010B	Vanadium	mg/Kg	36	J	SerDil
N002325	AOC14-8-8044	SW6010B	Zinc	mg/Kg	42	J	SerDil
Surrogate Summary							
979156	AOC14-8-8044	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
979156	AOC14-8-8044	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
979156	AOC14-SS-1-8067	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
979156	AOC14-SS-1-8067	SW8015-E	TPH-Motor Oil	mg/kg	56.7	J	Sur<LCL
979156	AOC14-SS-4-8085	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
979156	AOC14-SS-4-8085	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
979156	AOC14-SS-4-8086	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
979156	AOC14-SS-4-8086	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
N002207	AOC14-3-8016	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	Sur<LCL
N002207	AOC14-9-8047	SW8015-P	TPH-Gasoline	µg/Kg	890	UJ	Sur<LCL
N002207	AOC14-9-8049	SW8015-P	TPH-Gasoline	µg/Kg	940	UJ	Sur<LCL
N002207	AOC14-SS-1-8068	SW8015-P	TPH-Gasoline	µg/Kg	1000	UJ	Sur<LCL
N002207	AOC14-SS-1-8069	SW8015-P	TPH-Gasoline	µg/Kg	1100	UJ	Sur<LCL
N002207	AOC14-SS-1-8070	SW8015-P	TPH-Gasoline	µg/Kg	1000	UJ	Sur<LCL
N002216	AOC14-SS-4-8087	SW8015-P	TPH-Gasoline	µg/Kg	970	UJ	Sur<LCL
978846	AOC14-1-8001	SW8015-E	TPH-Motor Oil	mg/kg	30.8	J	Sur>UCL
N002207	AOC14-3-8014	SW8260B	Acetone	µg/Kg	380	J	Sur>UCL
N002216	AOC14-6-8028	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	5.9	J	Sur>UCL
N002216	AOC14-6-8028	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	5.9	J	Sur>UCL
N002216	AOC14-6-8028	SW8270SIM	Chrysene	µg/Kg	5.2	J	Sur>UCL
N002216	AOC14-6-8028	SW8270SIM	Fluoranthene	µg/Kg	5.9	J	Sur>UCL
N002216	AOC14-6-8028	SW8270SIM	Pyrene	µg/Kg	5.3	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Benzo(b)fluoranthene	µg/Kg	11	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Benzo(g,h,i)perylene	µg/Kg	5.3	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Benzo(k)fluoranthene	µg/Kg	9.8	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Chrysene	µg/Kg	11	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Fluoranthene	µg/Kg	8.1	J	Sur>UCL
N002267	AOC14-SS-1-8066	SW8270SIM	Pyrene	µg/Kg	7.1	J	Sur>UCL
Internal Standard Summary							
N002207	AOC14-4-8019	SW8260B	1,1,1,2-Tetrachloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,1,1-Trichloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,1,2-Trichloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,1-Dichloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,1-Dichloroethene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2,3-Trichloropropane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2-Dibromoethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2-Dichlorobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2-Dichloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2-Dichloropropane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,3-Dichlorobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,4-Dichlorobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	2-Butanone	µg/Kg	45	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	2-Chlorotoluene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	4-Methyl-2-pentanone	µg/Kg	45	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Acetone	µg/Kg	490	J	IS<LCL

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002207	AOC14-4-8019	SW8260B	Acrolein	µg/Kg	90	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Acrylonitrile	µg/Kg	45	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Benzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Bromobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Bromodichloromethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Bromoform	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Bromomethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Carbon disulfide	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Carbon tetrachloride	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Chlorobenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Chloroethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Chloroform	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Chloromethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	cis-1,2-Dichloroethene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Dibromochloromethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Dichlorodifluoromethane	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Ethylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Freon-113	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Isopropylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	m,p-Xylene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Methylene chloride	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	MTBE	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	n-Butylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	n-Propylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	o-Xylene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	sec-Butylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Styrene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	tert-Butylbenzene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Tetrachloroethene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Toluene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	trans-1,2-Dichloroethene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Trichloroethene	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Vinyl chloride	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	Xylenes, Total	µg/Kg	4.5	UJ	IS<LCL
N002207	AOC14-4-8019	SW8260B	1,2,3-Trichloropropane	µg/Kg	4.5	UJ	IS<LCL
Contamination Summary							
N002207	AOC14-10-8051	SW8260B	Acetone	µg/Kg	72	R	Reject Contamination
N002202	AOC14-12-8059	SW8260B	Acetone	µg/Kg	260	R	Reject Contamination
N002202	AOC14-12-8060	SW8260B	Acetone	µg/Kg	220	R	Reject Contamination
N002266	AOC14-12-8061	SW8260B	Acetone	µg/Kg	180	R	Reject Contamination

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002202	AOC14-13-8062	SW8260B	Acetone	µg/Kg	170	R	Reject Contamination
N002202	AOC14-13-8063	SW8260B	Acetone	µg/Kg	500	R	Reject Contamination
N002266	AOC14-13-8064	SW8260B	Acetone	µg/Kg	300	R	Reject Contamination
N002266	AOC14-13-8065	SW8260B	Acetone	µg/Kg	470	R	Reject Contamination
N002202	AOC14-1-8002	SW8260B	Acetone	µg/Kg	98	R	Reject Contamination
N002202	AOC14-1-8004	SW8260B	Acetone	µg/Kg	430	R	Reject Contamination
N002266	AOC14-1-8005	SW8260B	Acetone	µg/Kg	750	R	Reject Contamination
N002202	AOC14-2-8007	SW8260B	Acetone	µg/Kg	300	R	Reject Contamination
N002202	AOC14-2-8008	SW8260B	Acetone	µg/Kg	190	R	Reject Contamination
N002202	AOC14-2-8009	SW8260B	Acetone	µg/Kg	260	R	Reject Contamination
N002202	AOC14-2-8010	SW8260B	Acetone	µg/Kg	400	R	Reject Contamination
N002266	AOC14-2-8011	SW8260B	Acetone	µg/Kg	1000	R	Reject Contamination
N002207	AOC14-3-8013	SW8260B	Acetone	µg/Kg	210	R	Reject Contamination
N002207	AOC14-3-8014	SW8260B	Acetone	µg/Kg	380	R	Reject Contamination
N002207	AOC14-3-8015	SW8260B	Acetone	µg/Kg	83	R	Reject Contamination
N002207	AOC14-3-8016	SW8260B	Acetone	µg/Kg	330	R	Reject Contamination
N002207	AOC14-4-8018	SW8260B	Acetone	µg/Kg	91	R	Reject Contamination
N002207	AOC14-4-8019	SW8260B	Acetone	µg/Kg	490	R	Reject Contamination
N002207	AOC14-9-8046	SW8260B	Acetone	µg/Kg	120	R	Reject Contamination
N002207	AOC14-9-8049	SW8260B	Acetone	µg/Kg	81	R	Reject Contamination
N002216	AOC14-SS-3-8081	SW8260B	Acetone	µg/Kg	2000	R	Reject Contamination
N002216	AOC14-SS-4-8086	SW8260B	Acetone	µg/Kg	290	R	Reject Contamination

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
J = the analyte is present but reported value may not be accurate or precise (estimated).
UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC

TABLE D9-1
Topock Soil RFI/RI Part A – AOC 14
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason

exceedances.
R = the result is rejected.

Validation Reasons:
CCV<LCL = Continuing calibration recovery less than the lower control limit.
FD>RPD = Field duplicate's relative percent difference is greater than the control limit.
HT>UCL = Holding time exceeded the upper control limit.
IS<LCL = Internal Standard recovery less than lower control limit.
LCS>UCL = Laboratory Control Sample greater than upper control limit.
MS<LCL = Matrix spike recovery less than lower control limit.
MS>UCL = Matrix spike recovery greater than upper control limit.
PDS>UCL = Post digestion spike recovery greater than upper control limit.
RejectContamination = Result was rejected due to possible contamination.
SD<LCL = Matrix spike duplicate recovery less than lower control limit.
SD>UCL = Matrix spike duplicate recovery greater than upper control limit.
SerDil = Serial Dilution is greater than 10% RPD.
Sur<LCL = Surrogate recovery less than lower control limit.
Sur>UCL = Surrogate recovery greater than upper control limit.

TABLE D9-2
Topock Soil RFI/RI Part A - AOC14 - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
AOC14-10-8052	AOC14-10-8053	AOC14-6-8031	AOC14-6-8032
AOC14-13-8064	AOC14-13-8065	AOC14-8-8042	AOC14-8-8043
AOC14-2-8009	AOC14-2-8010	AOC14-SS-2-8075	AOC14-SS-2-8076
AOC14-4-8020	AOC14-4-8021	AOC14-SS-4-8086	AOC14-SS-4-8087

TABLE D9-3
Topock Soil RFI/RI Part A - AOC14 - Equipment Blank Contamination Summary
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
NA	NA	NA	NA	NA	NA	NA	EB>RL	NA

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:
U = the analyte is qualified as "not detected" due to blank contamination.

Validation Reasons:
EB>RL = Equipment blank contamination greater than the RL.

Attachment D10
Summary of Samples Qualified in 300B

TABLE D10-1
Topock Soil RFI/RI Part A – 300B
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
Holding Time Summary							
NA	NA	NA	NA	NA	NA	NA	HT>UCL
Continuing Calibration Summary							
NA	NA	NA	NA	NA	NA	NA	CCV<LCL
Field Duplicate Summary							
NA	NA	NA	NA	NA	NA	NA	FD>RPD
Laboratory Control Sample Summary							
978928	300B-2-10005	SW8015-E	TPH-Motor Oil	mg/kg	15.1	J	LCS>UCL
978928	300B-2-10006	SW8015-E	TPH-Motor Oil	mg/kg	12.2	J	LCS>UCL
978928	300B-2-10007	SW8015-E	TPH-Motor Oil	mg/kg	13	J	LCS>UCL
978928	300B-5-10018	SW8015-E	TPH-Motor Oil	mg/kg	59.9	J	LCS>UCL
978928	300B-5-10019	SW8015-E	TPH-Motor Oil	mg/kg	29.7	J	LCS>UCL
978928	300B-5-10020	SW8015-E	TPH-Motor Oil	mg/kg	11.2	J	LCS>UCL
Matrix Spike Summary							
N002154	BKG-07-11024	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
N002058	BKG-08-11029	SW6010B	Antimony	mg/Kg	10	UJ	MS<LCL
N002186	BKG-17-11061	SW6010B	Antimony	mg/Kg	2.1	UJ	MS<LCL
Matrix Spike Duplicate Summary							
N002154	BKG-07-11024	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
N002154	BKG-07-11024	SW6010B	Barium	mg/Kg	190	J	SD<LCL
N002058	BKG-08-11029	SW6010B	Antimony	mg/Kg	10	UJ	SD<LCL
N002186	BKG-17-11061	SW6010B	Antimony	mg/Kg	2.1	UJ	SD<LCL
Serial Dilution Summary							
NA	NA	NA	NA	NA	NA	NA	SerDil
Surrogate Summary							
978928	300B-3-10013	SW8015-E	TPH-Diesel	mg/kg	10	UJ	Sur<LCL
978928	300B-3-10013	SW8015-E	TPH-Motor Oil	mg/kg	10	UJ	Sur<LCL
Internal Standard Summary							
N002312	300B-1-10003	SW8260B	1,1,2,2-Tetrachloroethane	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,2,3-Trichloropropane	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,2,4-Trichlorobenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,2,4-Trimethylbenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,2-Dibromo-3-chloropropane	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,2-Dichlorobenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,3,5-Trimethylbenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,3-Dichlorobenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	1,4-Dichlorobenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	2-Chlorotoluene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	Bromobenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	Isopropylbenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	n-Butylbenzene	µg/Kg	6.3	UJ	IS<LCL

TABLE D10-1
Topock Soil RFI/RI Part A – 300B
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason
N002312	300B-1-10003	SW8260B	n-Propylbenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	sec-Butylbenzene	µg/Kg	6.3	UJ	IS<LCL
N002312	300B-1-10003	SW8260B	tert-Butylbenzene	µg/Kg	6.3	UJ	IS<LCL

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

J = the analyte is present but reported value may not be accurate or precise (estimated).

UJ = the analyte is not detected and the specified detection limit value may not be accurate (estimated) due to QC exceedances.

R = the result is rejected.

Validation Reasons:

CCV<LCL = Continuing calibration recovery less than the lower control limit.

FD>RPD = Field duplicate's relative percent difference is greater than the control limit.

HT>UCL = Holding time exceeded the upper control limit.

IS<LCL = Internal Standard recovery less than lower control limit.

LCS>UCL = Laboratory Control Sample greater than upper control limit.

MS<LCL = Matrix spike recovery less than lower control limit.

RejectContamination = Result was rejected due to possible contamination.

SD<LCL = Matrix spike duplicate recovery less than lower control limit.

SerDil = Serial Dilution is greater than 10% RPD.

Sur<LCL = Surrogate recovery less than lower control limit.

TABLE D10-2
Topock Soil RFI/RI Part A - 300B - *Field Duplicate Pairs*
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

Sample	Field Duplicate	Sample	Field Duplicate
300B-3-10010	300B-3-10011		

TABLE D10-3
Topock Soil RFI/RI Part A - 300B - Equipment Blank Summary Table
Review of Analytical Data for the RCRA Facility Investigation/Remedial Investigation for Soil at the Topock Compressor Station, Needles, California

SDG	Sample ID	Method	Analyte	Units	Final Result	Validation Flag[a]	Validation Reason	Equipment Blank Result µg/L
NA	NA	NA	NA	NA	NA	NA	EB>RL	NA

[a] This is the qualifier flag for the analyte/method combination associated with the Validation Reason.

Validation Flags:

U = the analyte is qualified as "not detected" due to blank contamination.

Validation Reasons:

EB>RL = Equipment blank contamination greater than the reporting limit

Attachment D11
Site Completeness by Analyte – Qualified Data

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
D2216	Percent Moisture	%	2	2							100	100
D2216	SOLIDS, PERCENT	%	2	2							100	100
SW6010B	Aluminum, add	MG/KG	134	134			2				100	100
SW6010B	Antimony	MG/KG	721	6	715		38				100	100
SW6010B	Arsenic	MG/KG	721	705	16						100	100
SW6010B	Barium	MG/KG	721	721			17				100	100
SW6010B	Beryllium	MG/KG	721		721						100	100
SW6010B	Cadmium	MG/KG	721	6	715						100	100
SW6010B	Calcium, add	MG/KG	134	134			3				100	100
SW6010B	Chromium	MG/KG	731	731			10				100	100
SW6010B	Cobalt	MG/KG	721	711	10		4				100	100
SW6010B	Copper	MG/KG	721	713	8		4				100	100
SW6010B	Iron, add	MG/KG	134	134			8				100	100
SW6010B	Lead	MG/KG	721	717	4		12				100	100
SW6010B	Magnesium, add	MG/KG	134	134			6				100	100
SW6010B	Manganese, add	MG/KG	134	134			3				100	100
SW6010B	Molybdenum	MG/KG	721	148	573						100	100
SW6010B	Nickel	MG/KG	721	721			6				100	100
SW6010B	Potassium, add	MG/KG	134	134			7				100	100
SW6010B	Selenium	MG/KG	721	15	706						100	100
SW6010B	Silver	MG/KG	721		721						100	100
SW6010B	Sodium, add	MG/KG	134	117	17		1				100	100
SW6010B	Thallium	MG/KG	721	2	719						100	100
SW6010B	Vanadium	MG/KG	721	720	1		1				100	100
SW6010B	Zinc	MG/KG	721	720	1		8				100	100
SW6010B	Chromium, SPLP	MG/L	1	1							100	100
SW6020A	Chromium, SPLP	MG/L	16	16							100	100
SW7199	Chromium, hexavalent	MG/KG	731	212	519		12				100	100
SW7199	Chromium, hexavalent, SPLP	MG/L	17	17			17				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW7471A	Mercury	MG/KG	721	31	690		45				100	100
SW8015-E	Motor Oil	MG/KG	629	286	341		131			2	100	100
SW8015-E	TPH-Diesel	MG/KG	629	68	559		80			2	100	100
SW8015-P	TPH-Gasoline	µG/KG	446		445		35			1	100	100
SW8081A	4,4'-DDD	µG/KG	95		95		3				100	100
SW8081A	4,4'-DDE	µG/KG	95	3	92		6				100	100
SW8081A	4,4'-DDT	µG/KG	95	1	94		3				100	100
SW8081A	Aldrin	µG/KG	95		95		3				100	100
SW8081A	alpha-BHC	µG/KG	95		95		6				100	100
SW8081A	alpha-Chlordane	µG/KG	95	1	94		7				100	100
SW8081A	beta-BHC	µG/KG	95		95		5				100	100
SW8081A	delta-BHC	µG/KG	95		95		5				100	100
SW8081A	Dieldrin	µG/KG	95	1	94		7				100	100
SW8081A	Endosulfan I	µG/KG	95		95		3				100	100
SW8081A	Endosulfan II	µG/KG	95		95		3				100	100
SW8081A	Endosulfan sulfate	µG/KG	95		95		5				100	100
SW8081A	Endrin	µG/KG	95		95		3				100	100
SW8081A	Endrin aldehyde	µG/KG	95		95		4				100	100
SW8081A	Endrin ketone	µG/KG	94		94		7				100	100
SW8081A	gamma-BHC	µG/KG	95		95		5				100	100
SW8081A	gamma-Chlordane	µG/KG	95	1	94		5				100	100
SW8081A	Heptachlor	µG/KG	95		95		4				100	100
SW8081A	Heptachlor epoxide	µG/KG	95		95		5				100	100
SW8081A	Methoxychlor	µG/KG	95		95		3				100	100
SW8081A	Toxaphene	µG/KG	95		95		3				100	100
SW8082	Aroclor 1016	µG/KG	122		122		20				100	100
SW8082	Aroclor 1221	µG/KG	122		122		20				100	100
SW8082	Aroclor 1232	µG/KG	122		122		20				100	100
SW8082	Aroclor 1242	µG/KG	122		122		20				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8082	Aroclor 1248	µG/KG	122		122		20				100	100
SW8082	Aroclor 1254	µG/KG	122	45	77		20				100	100
SW8082	Aroclor 1260	µG/KG	122	4	118		21				100	100
SW8082	Aroclor 1262	µG/KG	122		122		20				100	100
SW8082	Aroclor 1268	µG/KG	122		122		20				100	100
SW8260B	1,1,1,2-Tetrachloroethane	µG/KG	447		447		6				100	100
SW8260B	1,1,1-Trichloroethane (TCA)	µG/KG	447		447		6				100	100
SW8260B	1,1,2,2-Tetrachloroethane	µG/KG	447		447		8				100	100
SW8260B	1,1,2-Trichloroethane	µG/KG	447		447		6				100	100
SW8260B	1,1,2-Trichlorotrifluoroethane (Freon 113)	µG/KG	447		447		6				100	100
SW8260B	1,1-Dichloroethane	µG/KG	447		447		6				100	100
SW8260B	1,1-Dichloroethene	µG/KG	447		447		6				100	100
SW8260B	1,1-Dichloropropene	µG/KG	447		447		5				100	100
SW8260B	1,2,3-Trichlorobenzene	µG/KG	447		447		5				100	100
SW8260B	1,2,3-Trichloropropane	µG/KG	447		447		8				100	100
SW8260B	1,2,4-Trichlorobenzene	µG/KG	447		447		8				100	100
SW8260B	1,2,4-Trimethylbenzene	µG/KG	447		447		8				100	100
SW8260B	1,2-Dibromo-3-chloropropane	µG/KG	447		447		9				100	100
SW8260B	1,2-Dibromoethane (EDB)	µG/KG	447		447		6				100	100
SW8260B	1,2-Dichlorobenzene	µG/KG	447		447		8				100	100
SW8260B	1,2-Dichloroethane (EDC)	µG/KG	447		447		6				100	100
SW8260B	1,2-Dichloropropane	µG/KG	447		447		6				100	100
SW8260B	1,3,5-Trimethylbenzene	µG/KG	447		447		8				100	100
SW8260B	1,3-Dichlorobenzene	µG/KG	447		447		8				100	100
SW8260B	1,3-Dichloropropane	µG/KG	447		447		5				100	100
SW8260B	1,4-Dichlorobenzene	µG/KG	447		447		8				100	100
SW8260B	2,2-Dichloropropane	µG/KG	447		447		5				100	100
SW8260B	2-Butanone (MEK)	µG/KG	447		447		6				100	100
SW8260B	2-Chlorotoluene	µG/KG	447		447		8				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8260B	2-Hexanone, add	µG/KG	76		76		1				100	100
SW8260B	4-Chlorotoluene	µG/KG	447		447		5				100	100
SW8260B	4-Isopropyltoluene	µG/KG	447		447		5				100	100
SW8260B	4-Methyl-2-Pentanone	µG/KG	447		447		6				100	100
SW8260B	Acetone	µG/KG	447		317		5			130	100	71
SW8260B	Acrolein	µG/KG	447		447		13				100	100
SW8260B	Acrylonitrile	µG/KG	447		447		6				100	100
SW8260B	Benzene	µG/KG	447		447		6				100	100
SW8260B	Bromobenzene	µG/KG	447		447		8				100	100
SW8260B	Bromochloromethane	µG/KG	447		447		5				100	100
SW8260B	Bromodichloromethane	µG/KG	447		447		6				100	100
SW8260B	Bromoform	µG/KG	447		447		41				100	100
SW8260B	Bromomethane	µG/KG	447		447		6				100	100
SW8260B	Carbon disulfide	µG/KG	447		447		6				100	100
SW8260B	Carbon tetrachloride	µG/KG	447		447		6				100	100
SW8260B	Chlorobenzene	µG/KG	447		447		6				100	100
SW8260B	Chloroethane	µG/KG	447		447		6				100	100
SW8260B	Chloroform	µG/KG	447		447		6				100	100
SW8260B	Chloromethane	µG/KG	447		447		6				100	100
SW8260B	cis-1,2-Dichloroethene	µG/KG	447		447		6				100	100
SW8260B	cis-1,3-Dichloropropene	µG/KG	447		447		5				100	100
SW8260B	Cyclohexane, add	µG/KG	67		67		1				100	100
SW8260B	Dibromochloromethane	µG/KG	447		447		6				100	100
SW8260B	Dibromomethane	µG/KG	447		447		5				100	100
SW8260B	Dichlorodifluoromethane	µG/KG	447		447		6				100	100
SW8260B	Ethylbenzene	µG/KG	447		447		6				100	100
SW8260B	Hexachlorobutadiene	µG/KG	447		447		5				100	100
SW8260B	Isopropylbenzene	µG/KG	447		447		8				100	100
SW8260B	m,p-Xylene	µG/KG	447		447		6				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8260B	Methyl Acetate, add	µG/KG	67	3	64		1				100	100
SW8260B	Methylcyclohexane, add	µG/KG	67		67		1				100	100
SW8260B	Methylene chloride	µG/KG	447		447		6				100	100
SW8260B	Naphthalene	µG/KG	447	1	446		5				100	100
SW8260B	n-Butylbenzene	µG/KG	447		447		8				100	100
SW8260B	n-Propylbenzene	µG/KG	447		447		8				100	100
SW8260B	o-Xylene	µG/KG	447		447		6				100	100
SW8260B	sec-Butylbenzene	µG/KG	447		447		8				100	100
SW8260B	Styrene	µG/KG	447		447		6				100	100
SW8260B	tert-Butyl Methyl Ether (MTBE)	µG/KG	447		447		6				100	100
SW8260B	tert-Butylbenzene	µG/KG	447		447		8				100	100
SW8260B	Tetrachloroethene (PCE)	µG/KG	447		447		7				100	100
SW8260B	Toluene	µG/KG	447		447		6				100	100
SW8260B	trans-1,2-Dichloroethene	µG/KG	447		447		6				100	100
SW8260B	trans-1,3-Dichloropropene	µG/KG	447		447		5				100	100
SW8260B	Trichloroethene (TCE)	µG/KG	447		447		6				100	100
SW8260B	Trichlorofluoromethane (Freon 11)	µG/KG	447		447		5				100	100
SW8260B	Vinyl chloride	µG/KG	447		447		6				100	100
SW8260B	Xylenes, Total	µG/KG	447		447		6				100	100
SW8270C	1,1´-Biphenyl, add	µG/KG	74		74		3				100	100
SW8270C	1,2,4,5-Tetrachlorobenzene, add	µG/KG	74		74		5				100	100
SW8270C	1,2,4-Trichlorobenzene	µG/KG	629		629		16				100	100
SW8270C	1,2-Dichlorobenzene	µG/KG	629		629		17				100	100
SW8270C	1,3-Dichlorobenzene	µG/KG	629		629		16				100	100
SW8270C	1,4-Dichlorobenzene	µG/KG	629		629		16				100	100
SW8270C	1,4-Dioxane, add	µG/KG	74		74		1				100	100
SW8270C	2,3,4,6-Tetrachlorophenol, add	µG/KG	74		74		2				100	100
SW8270C	2,4,5-Trichlorophenol	µG/KG	629		629		16				100	100
SW8270C	2,4,6-Trichlorophenol	µG/KG	629		629		16				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8270C	2,4-Dichlorophenol	µG/KG	629		629		16				100	100
SW8270C	2,4-Dimethylphenol	µG/KG	629		629		16				100	100
SW8270C	2,4-Dinitrophenol	µG/KG	629		629		17				100	100
SW8270C	2,4-Dinitrotoluene	µG/KG	629		629		16				100	100
SW8270C	2,6-Dinitrotoluene	µG/KG	629		629		16				100	100
SW8270C	2-Chloronaphthalene	µG/KG	629		629		16				100	100
SW8270C	2-Chlorophenol	µG/KG	629		629		16				100	100
SW8270C	2-Methylnaphthalene	µG/KG	629		629		16				100	100
SW8270C	2-Methylphenol	µG/KG	629		629		16				100	100
SW8270C	2-Nitroaniline	µG/KG	629		629		16				100	100
SW8270C	2-Nitrophenol	µG/KG	629		629		16				100	100
SW8270C	3,3'-Dichlorobenzidine	µG/KG	629		629		16				100	100
SW8270C	3-Nitroaniline	µG/KG	629		629		16				100	100
SW8270C	4,6-Dinitro-2-methylphenol	µG/KG	629		629		16				100	100
SW8270C	4-Bromophenyl phenyl ether	µG/KG	629		629		16				100	100
SW8270C	4-Chloro-3-methylphenol	µG/KG	629		629		16				100	100
SW8270C	4-Chloroaniline	µG/KG	629		629		16				100	100
SW8270C	4-Chlorophenyl phenyl ether	µG/KG	629		629		16				100	100
SW8270C	4-Methylphenol	µG/KG	629	2	627		16				100	100
SW8270C	4-Nitroaniline	µG/KG	629		629		16				100	100
SW8270C	4-Nitrophenol	µG/KG	629		629		16				100	100
SW8270C	Acenaphthene	µG/KG	629	1	628		16				100	100
SW8270C	Acenaphthylene	µG/KG	629		629		16				100	100
SW8270C	Acetophenone, add	µG/KG	74		74		7				100	100
SW8270C	Anthracene	µG/KG	629	1	628		16				100	100
SW8270C	Atrazine, add	µG/KG	74		74		1				100	100
SW8270C	Benzaldehyde, add	µG/KG	74		74		9				100	100
SW8270C	Benzo (a) anthracene	µG/KG	629	9	620		16				100	100
SW8270C	Benzo (a) pyrene	µG/KG	629	7	622		16				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8270C	Benzo (b) fluoranthene	µG/KG	629	11	618		16				100	100
SW8270C	Benzo (g,h,i) perylene	µG/KG	629	6	623		16				100	100
SW8270C	Benzo (k) fluoranthene	µG/KG	629	8	621		16				100	100
SW8270C	Benzoic acid	µG/KG	629		619		22			10	100	98
SW8270C	Benzyl alcohol	µG/KG	629		629		16				100	100
SW8270C	bis (2-chloroethoxy) methane	µG/KG	629		629		16				100	100
SW8270C	bis (2-chloroethyl) ether	µG/KG	629		629		16				100	100
SW8270C	bis (2-chloroisopropyl) ether	µG/KG	629		629		16				100	100
SW8270C	bis (2-ethylhexyl) phthalate	µG/KG	629	6	623		16				100	100
SW8270C	Butylbenzylphthalate	µG/KG	629		629		16				100	100
SW8270C	Caprolactam, add	µG/KG	74		72		19			2	100	97
SW8270C	Carbazole, add	µG/KG	74	1	73		1				100	100
SW8270C	Chrysene	µG/KG	629	10	619		16				100	100
SW8270C	Dibenzo (a,h) anthracene	µG/KG	629		629		16				100	100
SW8270C	Dibenzofuran	µG/KG	629		629		16				100	100
SW8270C	Diethyl phthalate	µG/KG	629		629		16				100	100
SW8270C	Dimethyl phthalate	µG/KG	629		629		16				100	100
SW8270C	Di-n-butylphthalate	µG/KG	629	2	627		16				100	100
SW8270C	Di-n-octylphthalate	µG/KG	629		629		16				100	100
SW8270C	Fluoranthene	µG/KG	629	17	612		16				100	100
SW8270C	Fluorene	µG/KG	629		629		16				100	100
SW8270C	Hexachlorobenzene	µG/KG	629		629		16				100	100
SW8270C	Hexachlorobutadiene	µG/KG	629		629		16				100	100
SW8270C	Hexachlorocyclopentadiene, add	µG/KG	74		74		2				100	100
SW8270C	Hexachloroethane	µG/KG	629		629		16				100	100
SW8270C	Indeno (1,2,3-c,d) pyrene	µG/KG	629	6	623		16				100	100
SW8270C	Isophorone	µG/KG	629		629		16				100	100
SW8270C	Naphthalene	µG/KG	629		629		16				100	100
SW8270C	Nitrobenzene	µG/KG	629		629		16				100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8270C	n-Nitrosodi-n-propylamine	µG/KG	629		629		16				100	100
SW8270C	n-Nitrosodiphenylamine	µG/KG	629		629		16				100	100
SW8270C	Pentachlorophenol	µG/KG	629	2	627		16				100	100
SW8270C	Phenanthrene	µG/KG	629	5	624		16				100	100
SW8270C	Phenol	µG/KG	629		629		16				100	100
SW8270C	Pyrene	µG/KG	629	13	616		16				100	100
SW8270SIM	1-Methylnaphthalene	µG/KG	683	9	674		21				100	100
SW8270SIM	2-Methylnaphthalene	µG/KG	683	9	674		21				100	100
SW8270SIM	Acenaphthene	µG/KG	683	11	672		19				100	100
SW8270SIM	Acenaphthylene	µG/KG	683	5	678		35				100	100
SW8270SIM	Anthracene	µG/KG	683	32	651		22				100	100
SW8270SIM	Benzo (a) anthracene	µG/KG	683	163	520		26				100	100
SW8270SIM	Benzo (a) pyrene	µG/KG	683	178	505		24				100	100
SW8270SIM	Benzo (b) fluoranthene	µG/KG	683	197	486		29				100	100
SW8270SIM	Benzo (g,h,i) perylene	µG/KG	683	185	498		25				100	100
SW8270SIM	Benzo (k) fluoranthene	µG/KG	683	177	506		36				100	100
SW8270SIM	Chrysene	µG/KG	683	199	484		30				100	100
SW8270SIM	Dibenzo (a,h) anthracene	µG/KG	683	91	592		24				100	100
SW8270SIM	Fluoranthene	µG/KG	683	221	462		30				100	100
SW8270SIM	Fluorene	µG/KG	683	10	673		19				100	100
SW8270SIM	Indeno (1,2,3-c,d) pyrene	µG/KG	683	165	518		24				100	100
SW8270SIM	Naphthalene	µG/KG	683	16	667		19				100	100
SW8270SIM	Phenanthrene	µG/KG	683	154	529		27				100	100
SW8270SIM	Pyrene	µG/KG	683	212	471		28				100	100
SW8290	1,2,3,4,6,7,8-Heptachlorodibenzofuran	PG/G	2		2						100	100
SW8290	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxi	PG/G	2	2							100	100
SW8290	1,2,3,4,7,8,9-Heptachlorodibenzofuran	PG/G	2	1	1						100	100
SW8290	1,2,3,4,7,8-Hexachlorodibenzofuran	PG/G	2	2							100	100
SW8290	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	PG/G	2	2							100	100

Attachment D-11
Site Completeness by Analyte – Qualified Data

			Number of Occurrences									
Method	Analyte	Units	Analyses	Detects	Non-detects	Blank Flags	J Flags	M Flags	Contractor R Flags	Total R Flags	Contractor Percent Completeness	Overall Percent Completeness
SW8290	1,2,3,6,7,8-Hexachlorodibenzofuran	PG/G	2	1	1						100	100
SW8290	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	PG/G	2	1	1						100	100
SW8290	1,2,3,7,8,9-Hexachlorodibenzofuran	PG/G	2	2							100	100
SW8290	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	PG/G	2	2							100	100
SW8290	1,2,3,7,8-Pentachlorodibenzofuran	PG/G	2	2							100	100
SW8290	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	PG/G	2	1	1						100	100
SW8290	2,3,4,6,7,8-Hexachlorodibenzofuran	PG/G	2	2							100	100
SW8290	2,3,4,7,8-Pentachlorodibenzofuran	PG/G	2	2							100	100
SW8290	2,3,7,8-Tetrachlorodibenzofuran	PG/G	2	2							100	100
SW8290	2,3,7,8-Tetrachlorodibenzo-p-dioxin	PG/G	2	2			1				100	100
SW8290	OCDD	PG/G	2	2							100	100
SW8290	OCDF	PG/G	2	2							100	100
SW8290	TEQ	PG/G	2	2							100	100
SW9012A	Cyanide	MG/KG	74		74		1				100	100
SW9045	pH	PH	444	444			4				100	100

Appendix E
Additional Inorganic Compounds – Soil Background Evaluation

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Attachments

E1 Data Set

Acronyms and Abbreviations

ANOVA	analysis of variance
bgs	below ground surface
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
IQR	interquartile range
PG&E	Pacific Gas and Electric Company
UTL	upper tolerance limit

APPENDIX E

Additional Detected Inorganic Compounds Background Investigation

E.1 Introduction

This appendix summarizes the data evaluation and calculation of representative background concentrations for the additional detected inorganic compounds (aluminum, calcium, iron, magnesium, manganese, potassium, and sodium) at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, located in eastern San Bernardino County, California, approximately 15 miles southeast of Needles, California.

The evaluation and calculation approaches used to evaluate the additional detected organic compounds data followed the approaches used in the *Soil Background Investigation at the Pacific Gas and Electric Company Topock Compressor Station, Needles, California* (hereafter referred to as the 2009 Soil Background Investigation) (CH2M HILL, 2009). The additional detected inorganic compounds were not analyzed or evaluated in the initial soil background investigation since they are not a constituent of potential concern at the compressor station. However, the United States Department of the Interior requested that a portion of soil samples be analyzed for the Contract Laboratory Procedure Target Analyte List/Target Compound List, which includes the additional inorganic compounds. These additional inorganic compounds will be carried through the risk assessment unless they can be screened out based on detected concentrations being at or below representative background concentrations at the PG&E Topock Compressor Station. Thus, it is useful to evaluate soil background concentrations for these constituents. Since the existing soil samples collected as part of the 2009 Topock Soil Background Investigation were still within the acceptable limits of the analytical hold time, these soil samples were analyzed for the Contract Laboratory Procedure Target Analyte List/Target Compound List using United States Environmental Protection Agency Method 6010B.

E.2 Combined Soil Background Additional Inorganic Compounds Data Evaluation

A combination of visual evaluation, statistical evaluation, and professional judgment were used to evaluate existing background data and establish a soil background data set. The additional inorganic compound dataset used for this background evaluation is provided in Attachment E1. To determine whether significant (practical or statistical) differences exist among the soil types and soil depths, two types of evaluation were performed:

1. Visual evaluation using graphical tools such as scatter and box-and-whisker plots

2. Statistical evaluation of the data using the analysis of variance (ANOVA), which includes a post hoc evaluation technique known as Tukey's test (Mason, Gunst, and Hess, 1993)

E.2.1 Visual Evaluation

To examine the relationship between depths and concentrations, the following depth partitioning was performed:

1. **Partition soil into two depth intervals.** The first interval consists of the 0 to 0.5 foot below ground surface (bgs), and the second interval consists of all subsurface depths (1, 2, 5, and 9 feet bgs). Note that most sample depths were recorded as the top of the sample interval. This corresponds to the surface and subsurface intervals.
2. **Partition soil into four depth intervals.** The first interval is 0 to 0.5 foot bgs, the second interval consists of 1 and 2 feet bgs, the third interval consists of 5 and 6 feet bgs, and the fourth interval consists of 9 and 10 feet bgs. These intervals are the surface interval, near-surface interval, typical maximum exposure depth for ecological receptors, and maximum depth for human receptors.

Scatter plots were prepared for each constituent, displaying the concentrations by soil type and depth intervals. Figures E-1 and E-2 present the scatter plots for the two-depth and four-depth partitioning, respectively. In these plots, blue closed symbols represent detected values while green open symbols represent proxy values of one-half of the reporting limit (i.e., non-detect samples). The detection frequencies for each partition are included at the top of each plot. In general, these plots suggest fairly consistent concentration spreads across each depth and soil type.

Additional visual evaluation was performed using the box-and-whisker plots, as shown in Figures E-3 and E-4. The box-and-whisker plot for each constituent presents the concentrations by soil type and depth separately.

Box-and-whisker plots present information on the central tendency, variability, and skewness for a sample data set by sketching the center 50 percent of the concentrations with a box and illustrating the tail regions of the distribution with whiskers. For concentrations that extend further from the center than the whiskers, individual data symbols are plotted.

Specifically, these box-and-whisker plots are constructed as follows:

- The height of the box represents the interquartile range (IQR). The IQR is the distance between the 25^{th} and the 75^{th} percentiles.
- The horizontal line in the box interior represents the median.
- The vertical lines issuing from the box extend to the minimum and maximum measured values (as long as these minimum and maximum values do not extend further from the box than a distance of 1.5 times the IQR).
- Individual data symbols are used for concentrations that exceed the whiskers.

Scatter plots were also prepared for each constituent, presenting concentrations by soil type and depth separately (Figures E-5 and E-6). These plots demonstrate an overall similarity across the soil types and depths for nutrient concentrations.

E.2.2 Statistical Evaluation

In addition to the visual evaluation, statistical evaluation was also performed to determine whether statistically significant differences (whether they carry practical significance or not) exist among the soil types and soil depths.

E.2.2.1 Analysis of Variance

To determine whether the mean values of multiple groups are statistically different from one another, a nonparametric ANOVA, using the ranks of the data as opposed to the concentrations themselves, was used for the background nutrient data. The ANOVA probabilities were compared to a significance level of 0.05. A more detailed discussion of ANOVA is presented in the 2009 Soil Background Investigation (CH2M HILL, 2009).

The ANOVA screening results suggest observed differences (at a significance level of 0.05) in the following groups: (1) between soil types (calcium and sodium), (2) between the two depth partitions (aluminum, calcium, iron, and sodium) and (3) between the four depth partitions (aluminum, iron, and sodium).

It is important to note that while the probabilities provide a quantitative measure of the degree of difference or similarity between soil types and depths, they should not be treated as precise representations of the actual confidences involved. For that to be true, the data would need to be balanced between the different partitions both in number of samples and variability. While this is not the case with most environmental evaluations, the ANOVA still offers useful insight into how similar the concentrations from the various partitions are to one another.

Realistic expectations from an evaluation of almost any data set with varying soil types and depths would suggest the presence of statistically significant differences for multiple constituents. Statistical differences from an ANOVA screening represent differences between partitions greater than the random variability in the data. Thus, if variability is small, even relatively minor differences between partitions (from a practical standpoint) may be statistically significant. From professional experience, it is not realistic to expect that all soil types or depths be statistically similar to one another in an evaluation (using ANOVA at a 0.05 significance level), regardless of the data set. As such, it is prudent to consider the practical significance of any statistical differences to gauge the usefulness of partitioning by soil type and/or depth. Complete reliance on statistical tests typically leads to varied assignments of soil types or depths, which can be problematic in actual site comparisons since many actual site samples tend to straddle two or more of these partitions. The statistical information provides an indication of the parameters that should be the focus of professional review.

E.2.2.2 Post Hoc Evaluation (Tukey's Test)

In addition to the ANOVA screen, a post hoc evaluation technique, otherwise known as a test of contrasts, was done to determine which soil types (and subsequently depths)

appeared statistically equivalent. Specifically, the Tukey's test (Mason, Gunst, and Hess, 1993) was performed to aid in this analysis. A more detailed discussion of the Tukey's Test is presented in the 2009 Soil Background Investigation (CH2M HILL, 2009).

The results of the Tukey's test are presented as alphabetic characters (A, B, etc.). Tables E-1 through E-5 consolidate the results of the Tukey soil type and depth partitions, with depth partitioned into two depth intervals and four depth intervals, respectively. Differences in soil type groupings and various depth intervals are displayed. The results suggest observed differences of the soil types and depths for aluminum, calcium, iron, magnesium, and sodium. As with the initial ANOVA screening, the tables suggest that professional review (i.e., geologist review) of the soil types and depths should focus on these constituents, since these were the constituents for which multiple soil type or depth categories were suggested using the ANOVA techniques.

E.2.2.3 Combined Data Evaluation Conclusions

A comparison of data collected from the various lithologic units and the two depth intervals and four depth intervals shows that aluminum, calcium, iron, magnesium, and sodium concentrations are very similar (i.e., well within an order of magnitude), and visual observations of the data plotted in the scatter plots in Figures E-5 and E-6 confirm that concentrations for the above-listed constituents are very similar. After careful review of the various graphical plots, the observed statistical differences between soil types or depth intervals are not sufficient to require separation of the data into separate partitions per constituent.

E.2.3 Evaluation of Outliers

With the combination of all soil types and depths for each constituent, the outlier analysis was evaluated by considering all data for each constituent that was detected in each soil type. Similar to the evaluation for soil type and depth differences, a combination of statistical evaluation, visual evaluation, and professional judgment were used to identify potential outliers.

Per United States Environmental Protection Agency guidance (2006), Rosner's test was applied when the sample size for a constituent is more than 25 with a 0.05 significance level. The Rosner's test was applied in such a way that multiple outliers would all be identified as mathematical outliers. A more detailed discussion of Rosner's test is presented in the 2009 Soil Background Investigation (CH2M HILL, 2009). The details of the Rosner's outlier analysis are provided in Table E-6. This table presents the selected transformation that promotes the best adherence to normality with the remaining concentrations (after the potential outlier is removed). It also provides, for each result, the Rosner-calculated statistic along with the critical value to which the statistic is compared. If the statistic is greater than the critical value, that result is considered a mathematical outlier. All results greater than that outlier result are also considered mathematical outliers, even if their statistics did not surpass the critical value. The mathematical outliers identified include two manganese concentrations of 540 and 1,100 milligrams per kilogram (mg/kg) and one potassium concentration of 8,700 mg/kg. These outliers have been removed from the dataset.

In addition, a visual evaluation of scatter plots (included in previous sections) and probability plots included in Figure E-7 were also used to identify potential outliers. No additional outliers were identified by this visual assessment.

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) previously recommended that outliers also be identified as those concentrations that exceed 1.5 times the IQR of the dataset above the third quartile as a simpler evaluation of identifying multiple outliers with each calculation (DTSC, 2007). The list of these quartile-based outliers (including nondetect proxy values of one-half the reporting limit) is included in Table E-7 and plots included in Figure E-8. These quartile-based outliers are also presented graphically on a box-and-whisker plot shown in Figures E-3 and E-4.

The dataset (excluding the two manganese and one potassium outliers) was carefully reviewed, and the outlier analysis evaluated both statistical outliers and outliers based on professional judgment. Based on the review of the background data set concentrations, the concentrations are representative of the natural variability of metals in soil.

E.3 Calculation of Background Threshold Values

Summary statistics for each constituent in the background soil data set are presented in Table E-8. These statistics include the mean, median, standard deviation, minimum detection limit, maximum detection limit, minimum detect, maximum detect, number of detects, number of samples, and percent detects for all concentrations retained in the data set after removal of outliers. These statistics also include the background threshold value calculated for the background data as an upper tolerance limit (UTL). These UTLs were targeted to be 95/95 UTLs (which are 95-percent upper confidence limits of the 95th percentile of the background population). The same statistical approaches used in the 2009 Soil Background Investigation for these UTL calculations were used for the nutrient inorganics.

E.4 References

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). 2007. Letter. "Soil Investigation Part A Work Plan Conditional Approval." August 10.

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Mason, Robert L., Richard F. Gunst, and James L. Hess. 1993. *Statistical Design and Analysis of Experiments: With Applications to Engineering and Science.* John Wiley & Sons, New York.

United States Environmental Protection Agency. 2006. *Data Quality Assessment: Statistical Methods for Practitioners*. Office of Environmental Information, Washington, D.C.

Tables

TABLE E-1
Post Hoc Soil Type Comparisons
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

			***Post hoc* Tukey Groupings[b]**			
Parameter	**Soil Type Probabilities**	**Soil Type Decisions 0.05[a]**	**Qa**	**Toa**	**Wash**	**pTbr**
Aluminum	0.219		A	A	A	A
Calcium	0.008	Diff	B	A	B	AB
Iron	0.310		A	A	A	A
Magnesium	0.058		AB	A	AB	B
Manganese	0.528		A	A	A	A
Potassium	0.123		A	A	A	A
Sodium	0.000	Diff	A	A	B	B

Notes:

[a] A probability of less than 0.05 means that there is statistical difference between the soil types.

[b] Tukey grouping designation:

1) If the mean value (of the ranks) in a soil type is highest, it will be assigned an “A”, if the mean value (of the ranks) of all soil types are statistically similar to one another, then they all are assigned an “A”. If the mean value (of the ranks) of the same constituent in another soil type is statistically lower than the A group, it will be assigned a “B”. If the mean value (of the ranks) of the same constituent in yet another soil type is statistically lower than the B group, it will be assigned a “C”, and so on.
2) A soil type designated AB is not statistically distinguishable from either A or B groups.

TABLE E-2
Post Hoc Depth Comparisons with Two Depth Intervals
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

				Depth Intervals[b] (feet below ground surface)	
Parameter	**Soil Group**	**Depth Probabilities[a]**	**Depth Decision 0.05**	**0**	**1,2,5,6,9,10**
Aluminum	Qa Toa Wash pTbr	0.024	Diff	B	A
Calcium	Qa Wash pTbr	0.039	Diff	A	B
Calcium	Toa	0.079		A	A
Iron	Qa Toa Wash pTbr	0.002	Diff	B	A
Magnesium	Qa Wash pTbr	0.042	Diff	B	A
Magnesium	Toa	0.237		A	A
Manganese	Qa Toa Wash pTbr	0.185		A	A
Potassium	Qa Toa Wash pTbr	0.065		A	A
Sodium	Qa Toa	0.000	Diff	B	A
Sodium	Wash pTbr	0.345		A	A

Notes:

[a] A probability of less than 0.05 means that there appears to be a statistical difference between the depth intervals.

[b] Tukey grouping designation:

1) If the mean value (of the ranks) in a depth interval is highest, it will be assigned an “A”, If the mean value (of the ranks) of all soil types are statistically similar to one another, then they all are assigned an “A”. If the mean value (of the ranks) of the same constituent in another depth interval is statistically lower than the A group, it will be assigned a “B”.
2) If a constituent has a low percentage of detects (less than 50-percent), it will be assigned a default “A” across the depth intervals.

TABLE E-3
Post Hoc Depth Comparisons with Four Depth Intervals
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

				Depth Intervals[b]			
Parameter	**Soil Group**	**Depth Probabilities[a]**	**Depth Decision 0.05**	**0**	**1,2**	**5,6**	**9,10**
Aluminum	Qa Toa Wash pTbr	0.019	Diff	B	AB	AB	A
Calcium	Qa Wash pTbr	0.103		A	A	A	A
Calcium	Toa	0.267		A	A	A	A
Iron	Qa Toa Wash pTbr	0.006	Diff	B	AB	AB	A
Magnesium	Qa Wash pTbr	0.191		A	A	A	A
Magnesium	Toa	0.193		A	A	A	A
Manganese	Qa Toa Wash pTbr	0.136		A	A	A	A
Potassium	Qa Toa Wash pTbr	0.270		A	A	A	A
Sodium	Qa Toa	0.005	Diff	B	A	A	A
Sodium	Wash pTbr	0.664		A	A	A	A

Notes:

[a] A probability of less than 0.05 means that there appears to be a statistical difference between the depth intervals.

[b] Tukey grouping designation:

1) If the mean value (of the ranks) in a depth interval is highest, it will be assigned an “A”, If the mean value (of the ranks) of all soil types are statistically similar to one another, then they all are assigned an “A”. If the mean value (of the ranks) of the same constituent in another depth interval is statistically lower than the A group, it will be assigned a “B”. If the mean value (of the ranks) of the same constituent in yet another depth interval is statistically lower than the B group, it will be assigned a “C”, and so on.
2) A soil type designated AB is not statistically distinguishable from either A or B groups.

TABLE E-4
Soil Type and Depth Statistical Categories with Two Depth Intervals
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	Soil Type	Depth Interval
Aluminum	Qa Toa Wash pTbr	1
Aluminum	Qa Toa Wash pTbr	2
Calcium	Qa Wash pTbr	1
Calcium	Qa Wash pTbr	2
Calcium	Toa	1 and 2
Iron	Qa Toa Wash pTbr	1
Iron	Qa Toa Wash pTbr	2
Magnesium	Qa Wash pTbr	1
Magnesium	Qa Wash pTbr	2
Magnesium	Toa	1 and 2
Manganese	Qa Toa Wash pTbr	1 and 2
Potassium	Qa Toa Wash pTbr	1 and 2
Sodium	Qa Toa	1
Sodium	Qa Toa	2
Sodium	Wash pTbr	1 and 2

Notes:

1 Depth interval includes surface soil samples only (collected at 0 foot).

2 Depth interval includes soil samples collected at 1, 2, 5, 6, 9, and 10 feet below ground surface.

TABLE E-5
Soil Type and Depth Statistical Categories with Four Depth Intervals
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	Soil Type	Depth Interval
Aluminum	Qa Toa Wash pTbr	1 and 2
Aluminum	Qa Toa Wash pTbr	4
Calcium	Qa Wash pTbr	1, 2, and 4
Calcium	Toa	1, 2, and 4
Iron	Qa Toa Wash pTbr	1 and 2
Iron	Qa Toa Wash pTbr	4
Magnesium	Qa Wash pTbr	1, 2, and 4
Magnesium	Toa	1, 2, and 4
Manganese	Qa Toa Wash pTbr	1, 2, and 4
Potassium	Qa Toa Wash pTbr	1, 2, and 4
Sodium	Qa Toa	1
Sodium	Qa Toa	2 and 4
Sodium	Wash pTbr	1, 2, and 4

Notes:

1 Depth interval includes surface soil samples only (collected at 0 foot).

2 Depth interval includes soil samples collected at 1 and 2 feet below ground surface.

3 Depth interval includes soil samples collected at 5 and 6 feet below ground surface.

4 Depth interval includes soil samples collected at 9 and 10 feet below ground surface.

TABLE E-6
Details on Mathematical Outlier Testing
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	Number of Samples When Potential Outlier Removed	Location	Transformed Result	Transformation	Original Result	Rosner's Critical Value	Rosner's Statistic	Exceeds Critical Value?	Result Identified as Mathematical Outlier?
Aluminum	54	BKG-07	18000	None	18000	3.13	2.598	no	no
Aluminum	53	BKG-06	17000	None	17000	3.12	2.442	no	no
Aluminum	52	BKG-07	16000	None	16000	3.11	2.235	no	no
Aluminum	51	BKG-07	15000	None	15000	3.1	1.975	no	no
Aluminum	50	BKG-11	15000	None	15000	3.09	2.076	no	no
Iron	61	BKG-06	34000	None	34000	3.2	2.967	no	no
Iron	60	BKG-07	32000	None	32000	3.19	2.832	no	no
Iron	59	BKG-06	27000	None	27000	3.19	1.990	no	no
Iron	58	BKG-07	26000	None	26000	3.18	1.857	no	no
Iron	57	BKG-07	26000	None	26000	3.17	1.932	no	no
Manganese	61	BKG-13	7.003	Logarithm	1100	3.2	4.343	**yes**	**yes**
Manganese	59	BKG-08	23.24	Square Root	540	3.19	3.207	**yes**	**yes**
Manganese	58	BKG-08	450	None	450	3.18	2.789	no	no
Manganese	57	EEBG-3	413	None	413	3.17	2.390	no	no
Calcium	54	BKG-13	40.62	Cubic Root	67000	3.13	2.438	no	no
Calcium	53	BKG-07	249.0	Square Root	62000	3.12	2.597	no	no
Calcium	52	BKG-13	228.0	Square Root	52000	3.11	2.235	no	no
Calcium	51	BKG-01	202.5	Square Root	41000	3.1	1.645	no	no
Calcium	50	BKG-06	202.5	Square Root	41000	3.09	1.707	no	no

TABLE E-6
Details on Mathematical Outlier Testing
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	Number of Samples When Potential Outlier Removed	Location	Transformed Result	Transformation	Original Result	Rosner's Critical Value	Rosner's Statistic	Exceeds Critical Value?	Result Identified as Mathematical Outlier?
Magnesium	54	BKG-07	13000	None	13000	3.13	2.467	no	no
Magnesium	53	BKG-06	12000	None	12000	3.12	2.132	no	no
Magnesium	52	BKG-07	12000	None	12000	3.11	2.252	no	no
Magnesium	51	BKG-07	11000	None	11000	3.1	1.840	no	no
Magnesium	50	BKG-08	11000	None	11000	3.09	1.923	no	no
Potassium	54	BKG-08	8700	None	8700	3.13	5.146	**yes**	**yes**
Potassium	53	BKG-12	4300	None	4300	3.12	1.914	no	no
Potassium	52	BKG-01	4100	None	4100	3.11	1.751	no	no
Potassium	51	BKG-15	4100	None	4100	3.1	1.823	no	no
Potassium	50	BKG-08	3900	None	3900	3.09	1.639	no	no
Sodium	54	BKG-05	8.412	Logarithm	4500	3.13	2.819	no	no
Sodium	53	BKG-17	7.650	Logarithm	2100	3.12	2.124	no	no
Sodium	52	BKG-13	7.438	Logarithm	1700	3.11	1.966	no	no
Sodium	51	BKG-13	7.438	Logarithm	1700	3.1	2.064	no	no
Sodium	50	BKG-06	7.313	Logarithm	1500	3.09	2.004	no	no
Sodium	50	BKG-06	7.313	Logarithm	1500	3.09	2.004	no	no

TABLE E-7
Concentrations Exceeding 1.5 times the Interquartile Range
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	Percent Detects	Result (mg/kg)	Detected?	Location	Upper Depth
Aluminum	100	17,000	Yes	BKG-06	9
Aluminum	100	18,000	Yes	BKG-07	9
Calcium	100	62,000	Yes	BKG-07	9
Calcium	100	67,000	Yes	BKG-13	0
Iron	100	34,000	Yes	BKG-06	9
Manganese	100	540	Yes	BKG-08	0
Manganese	100	450	Yes	BKG-08	1
Manganese	100	1,100	Yes	BKG-13	9
Sodium	93	45,00	Yes	BKG-05	0
Sodium	93	21,00	Yes	BKG-17	2

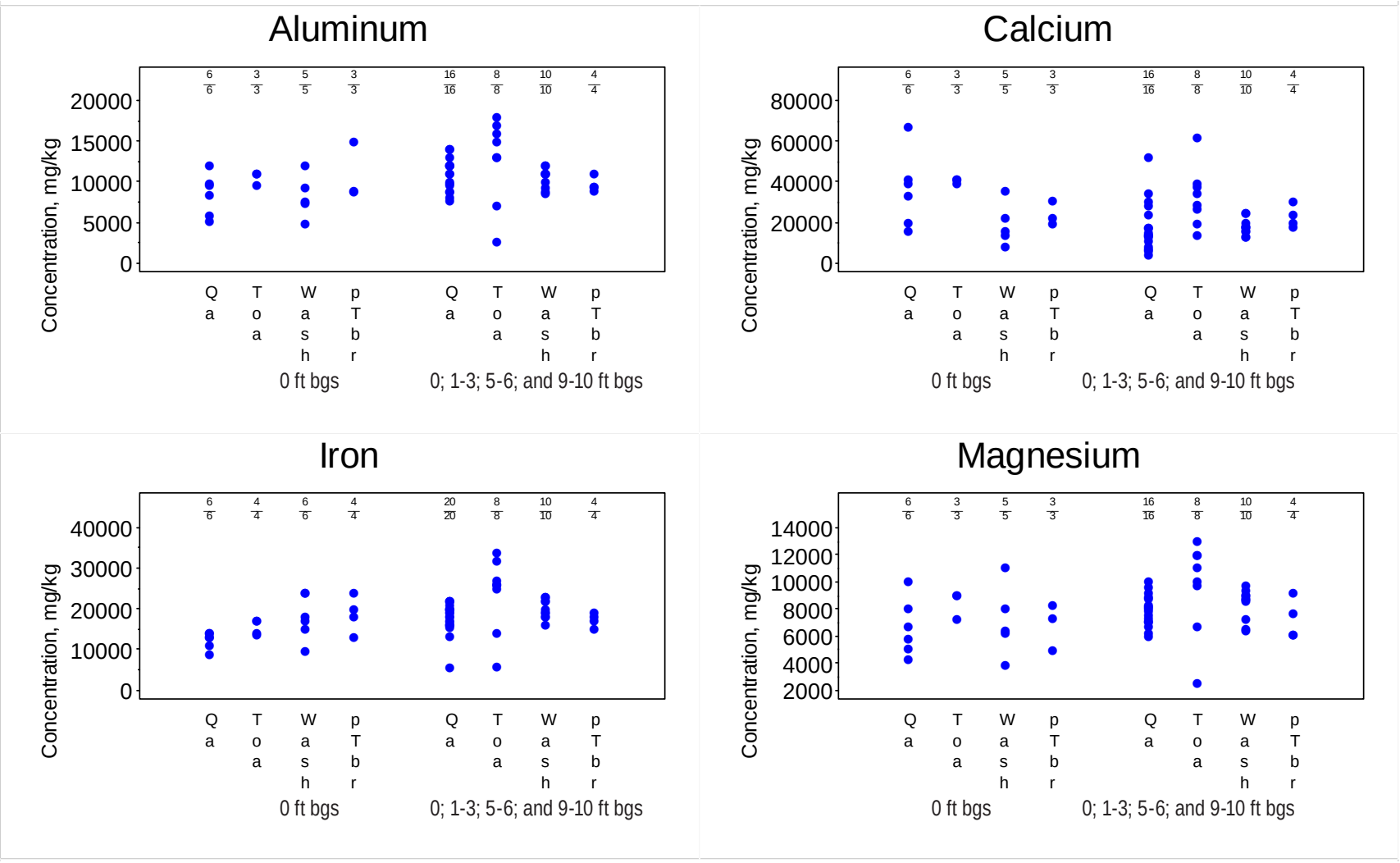
TABLE E-8
Summary Statistics Including Background Threshold Values for Combined Background Data
Soil Investigation Part A, Phase 1 Data Gaps Evaluation Report, Pacific Gas and Electric Topock Compressor Station, Needles, California

Parameter	BTV	BTV Basis (with target statistics a 95/95 UTL)	Mean	Median	Standard Deviation	Number of Detects	Number of Samples	Percent Detects	Minimum DL	Maximum DL	Minimum Detect	Maximum Detect
Aluminum	16,366	Normal	10,400	10,000	2,910	55	55	100	NA	NA	2,600	18,000
Calcium	66,459	Lognormal	24,300	20,000	13,300	55	55	100	NA	NA	4,100	67,000
Iron	29,303	Normal	18,400	18,000	5,380	59	59	100	NA	NA	5,570	34,000
Magnesium	12,117	Normal	7,950	8,100	2,050	55	55	100	NA	NA	2,500	13,000
Manganese	404.3	Normal	280	280	61.5	57	57	100	NA	NA	140	450
Potassium	4,402	Normal	2,750	2,750	811	54	54	100	NA	NA	540	4,300
Sodium	2,069	Kaplan Meier	617	290	721	51	55	93	240	1,100	170	4,500
Manganese	402.3	Normal	277	280	62.1	59	59	100	NA	NA	140	450

Notes:

95/95 UTL upper threshold limits, which are 95-percent upper confidence limits of the 95th percentile.
BTV background threshold value.
DL detection limit.
mg/kg milligrams per kilogram.
NA not applicable.

Figures



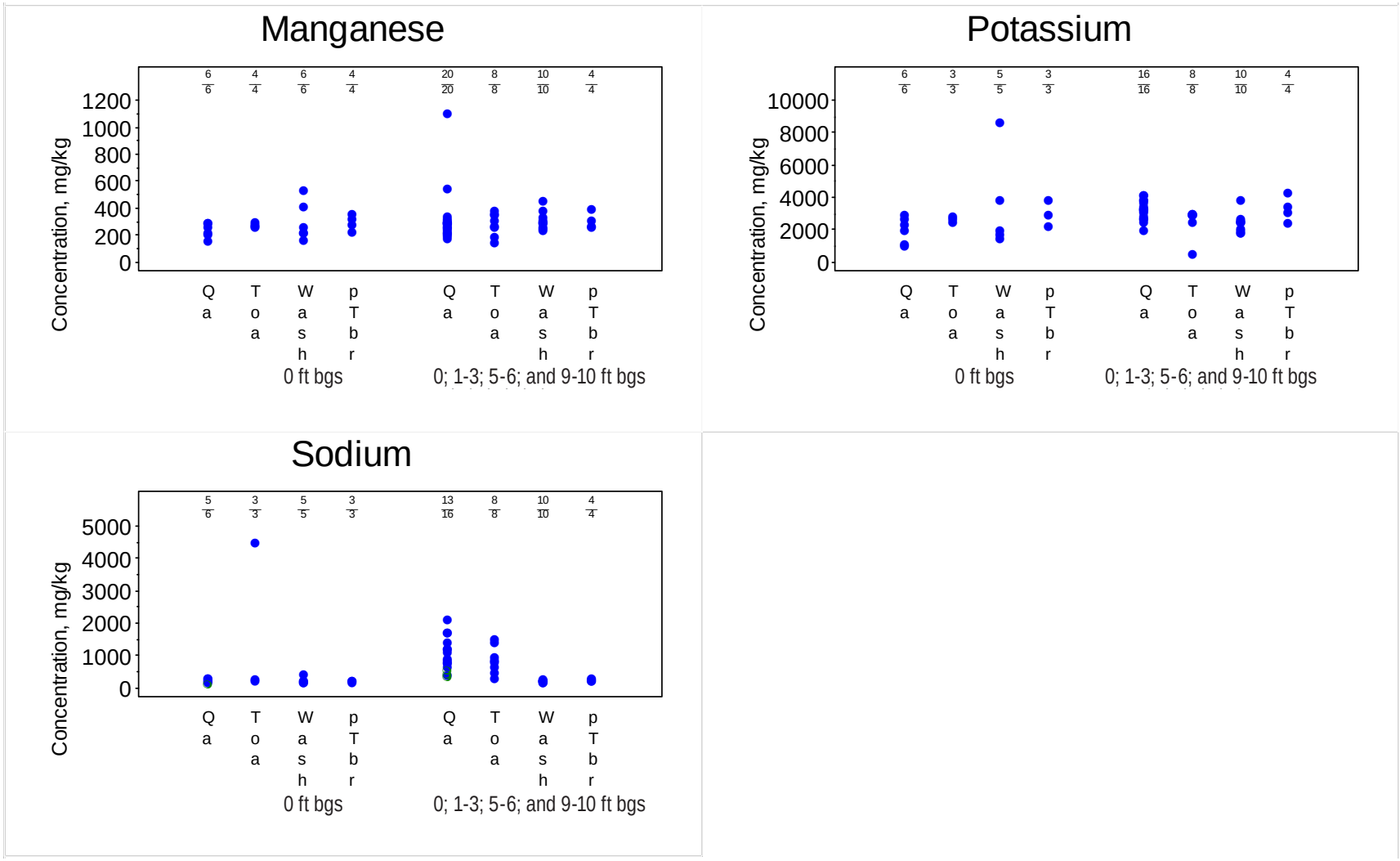
LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-1
SCATTER PLOTS BY FOUR SOIL TYPES AND TWO DEPTHS FOR BACKGROUND CONCENTRATIONS
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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LEGEND

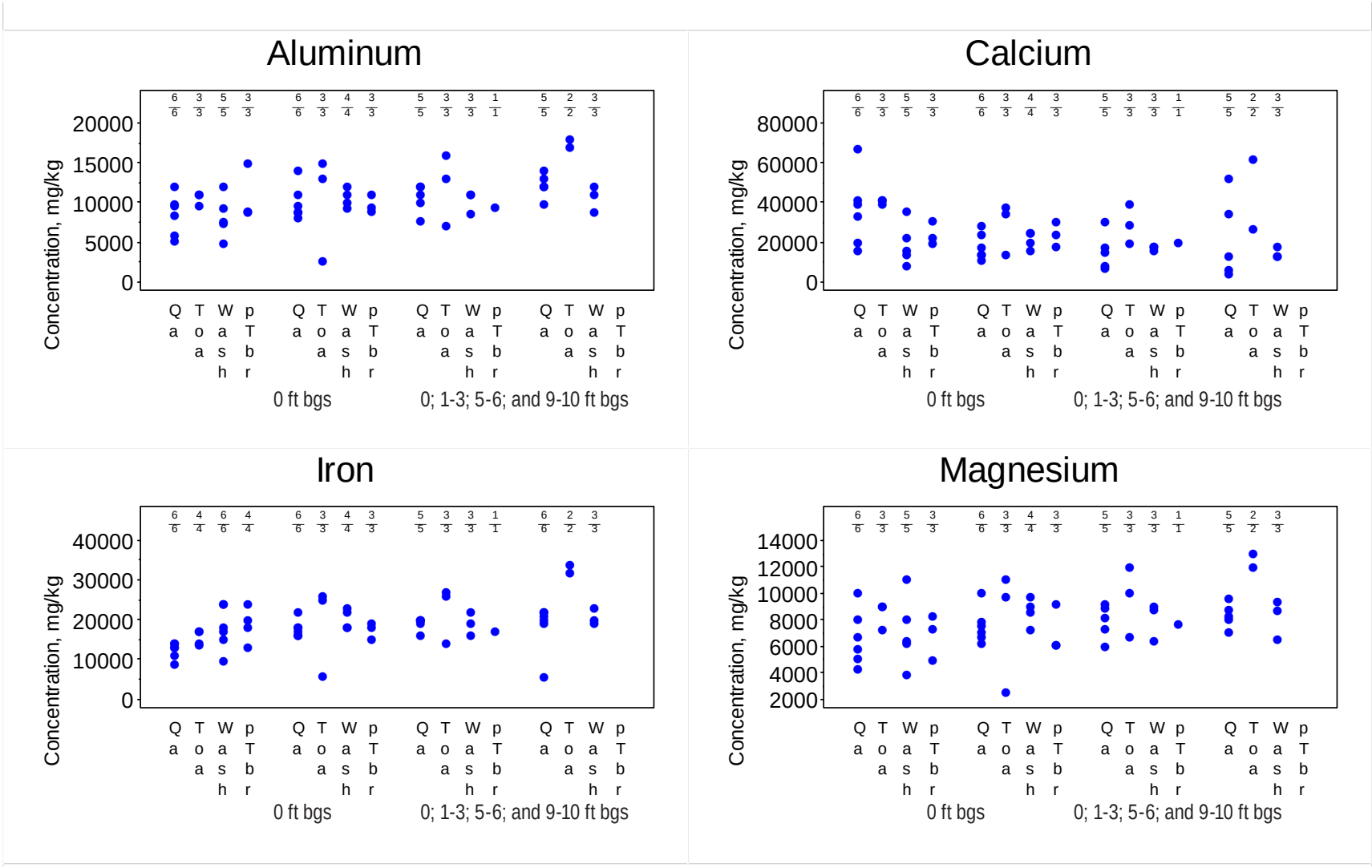
Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
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● Detected value
○ Non-detected value

FIGURE E-1
SCATTER PLOTS BY FOUR SOIL TYPES AND TWO DEPTHS FOR BACKGROUND CONCENTRATIONS
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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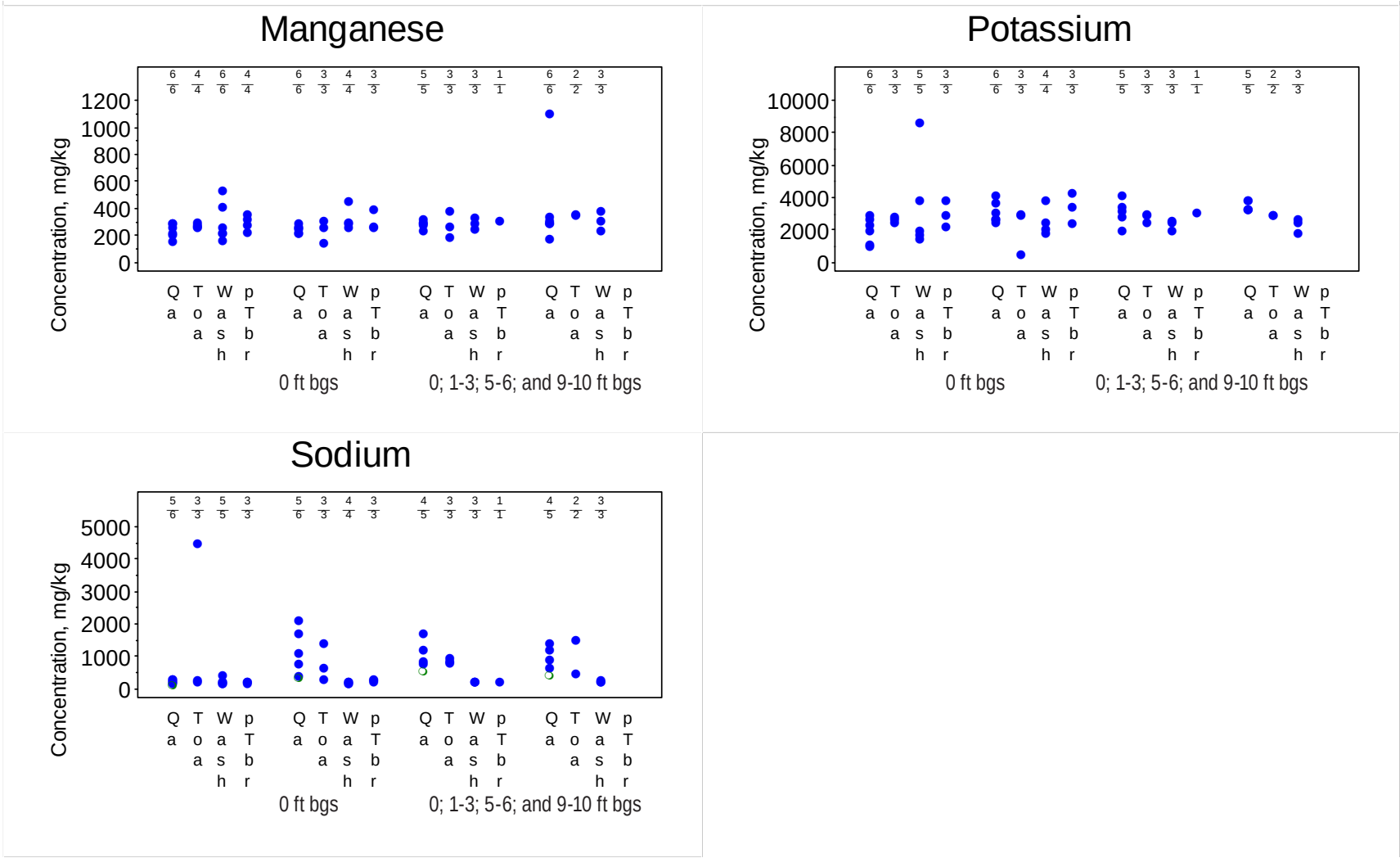
LEGEND

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Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-2
SCATTER PLOTS BY FOUR SOIL TYPES AND FOUR DEPTHS FOR BACKGROUND CONCENTRATIONS
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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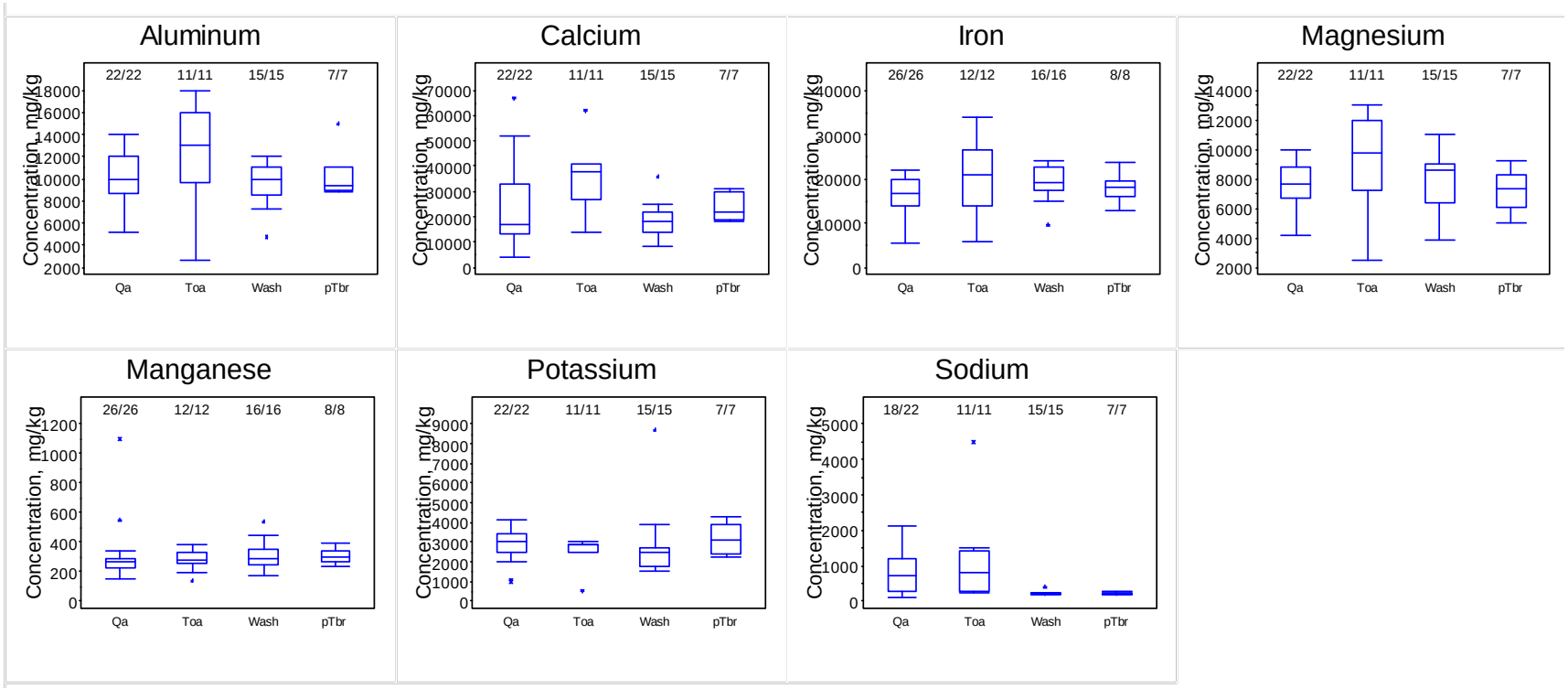
LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-2
SCATTER PLOTS BY FOUR SOIL TYPES AND FOUR DEPTHS FOR BACKGROUND CONCENTRATIONS
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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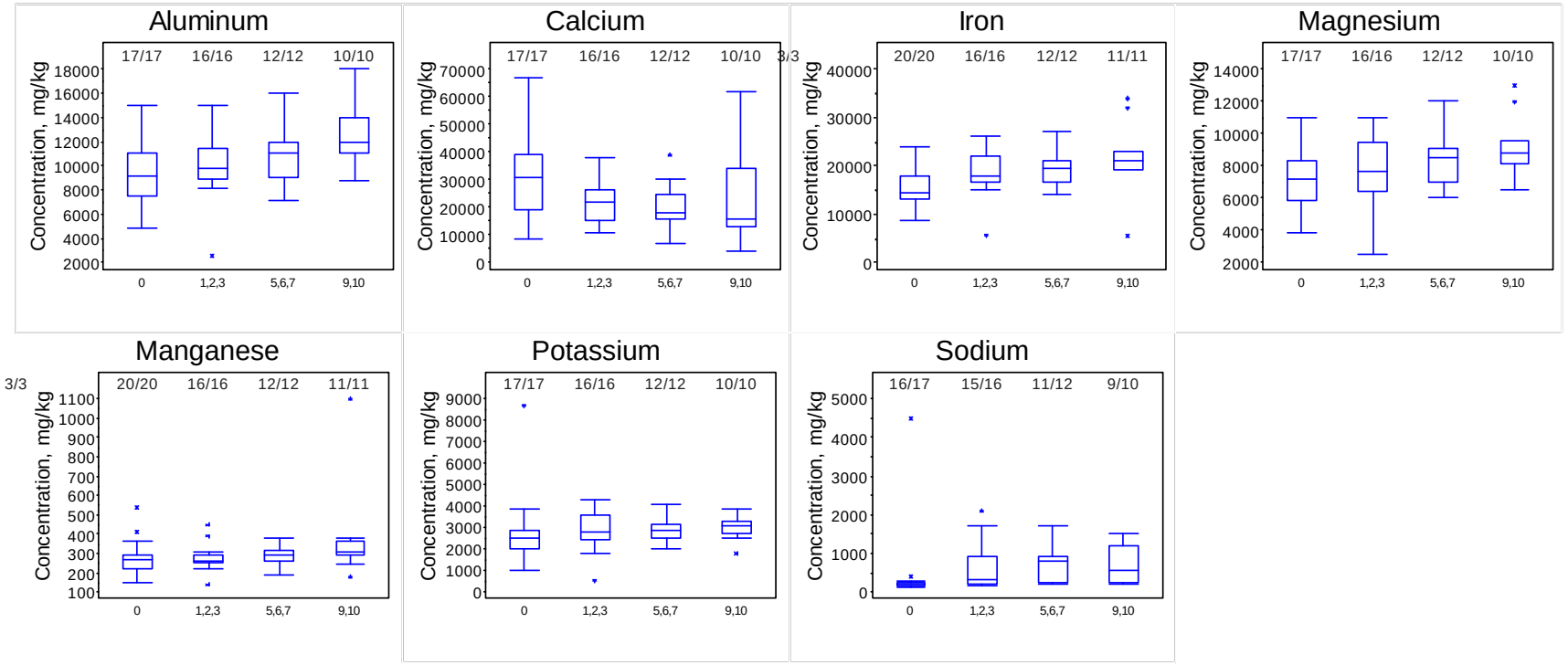
LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-3
BOX-AND-WHISKER PLOTS BY SOIL TYPES
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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LEGEND

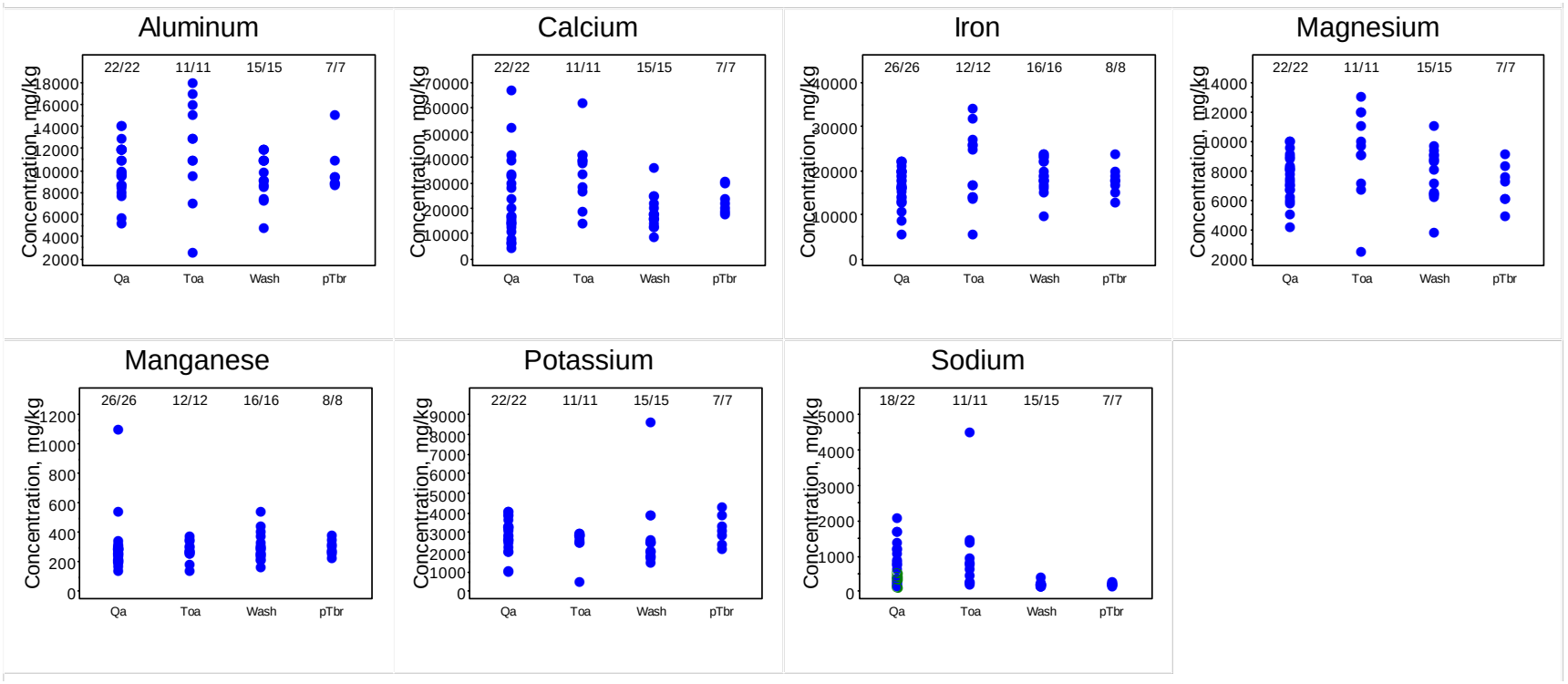
Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
mg/kg = milligram per kilogram

FIGURE E-4

BOX-AND-WHISKER PLOTS BY DEPTH

SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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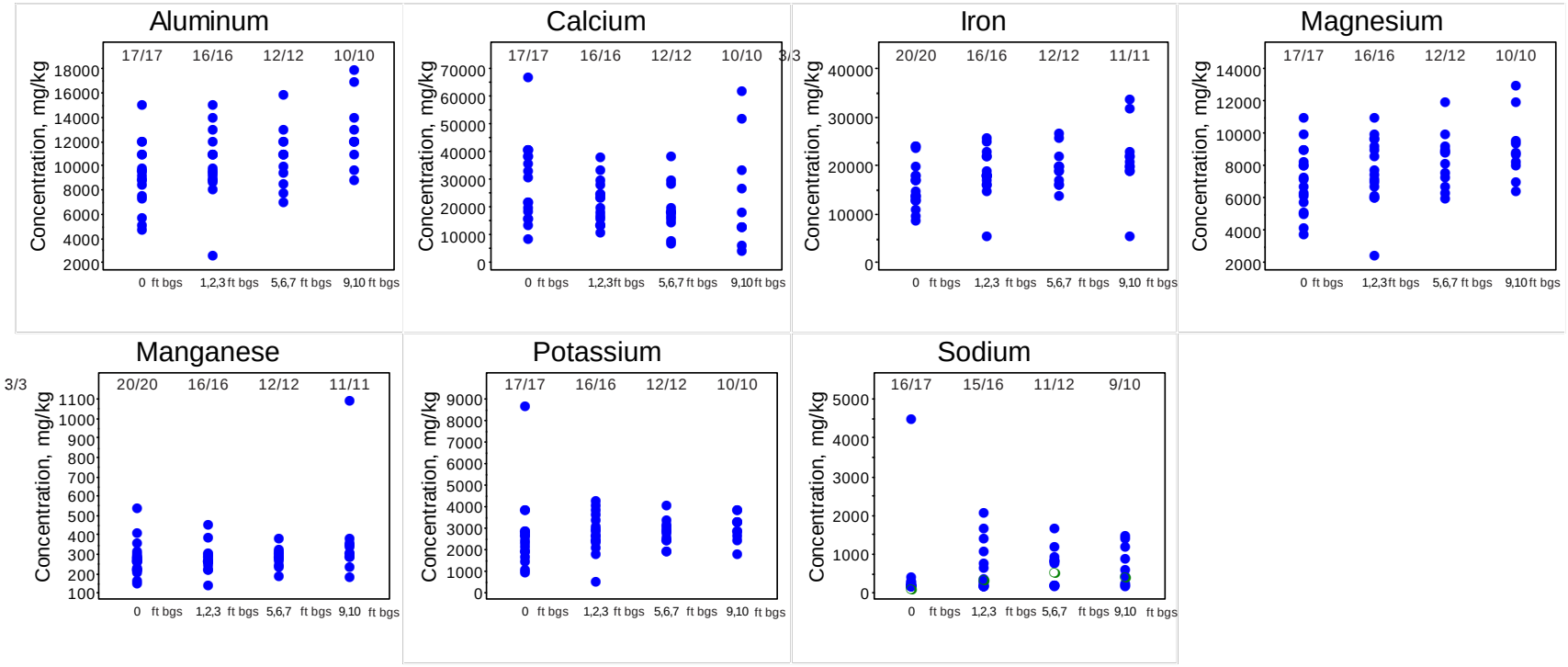


LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

FIGURE E-5
SCATTER PLOTS BY SOIL TYPE
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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LEGEND

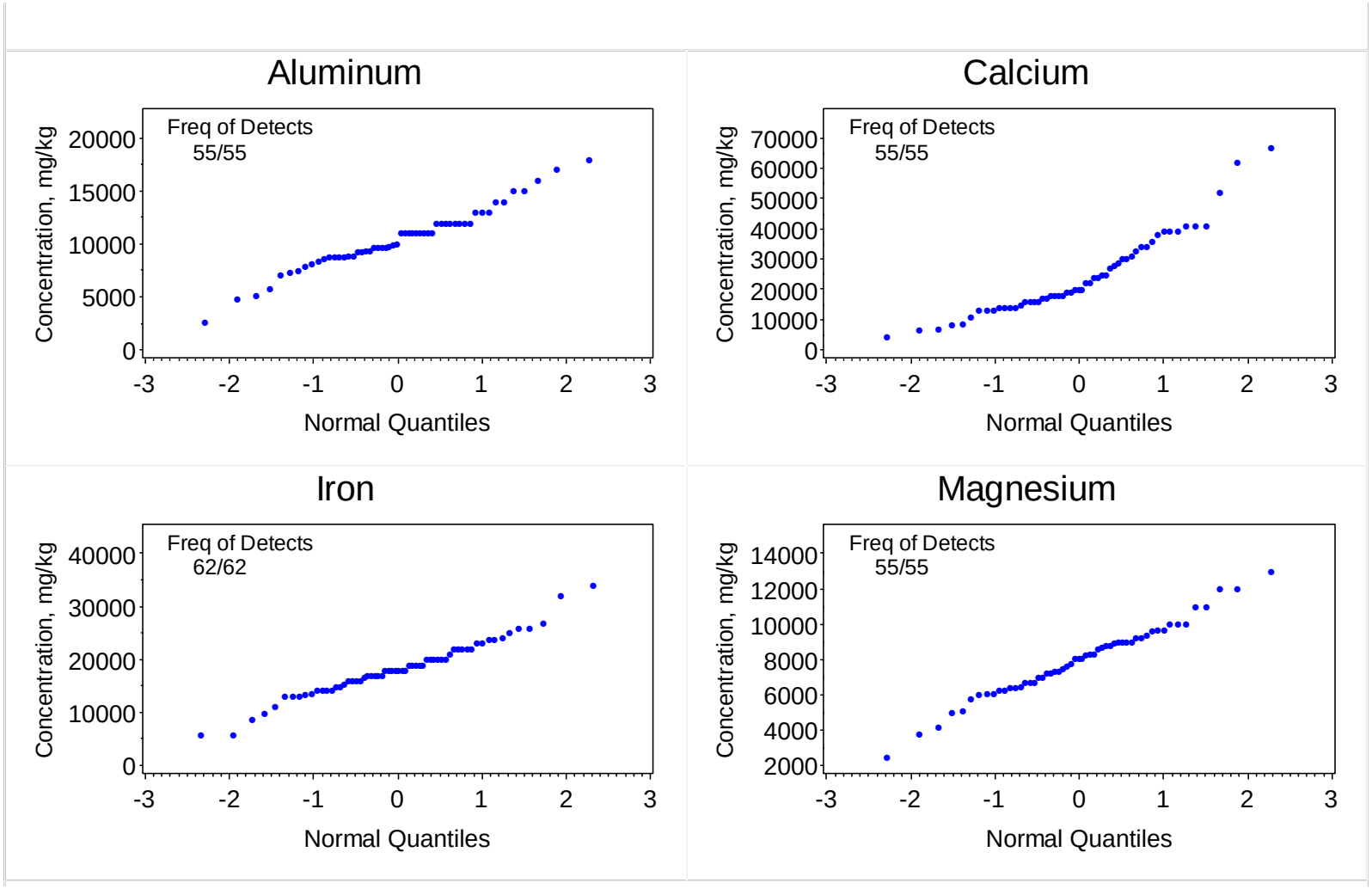
Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-6
SCATTER PLOTS BY DEPTH

SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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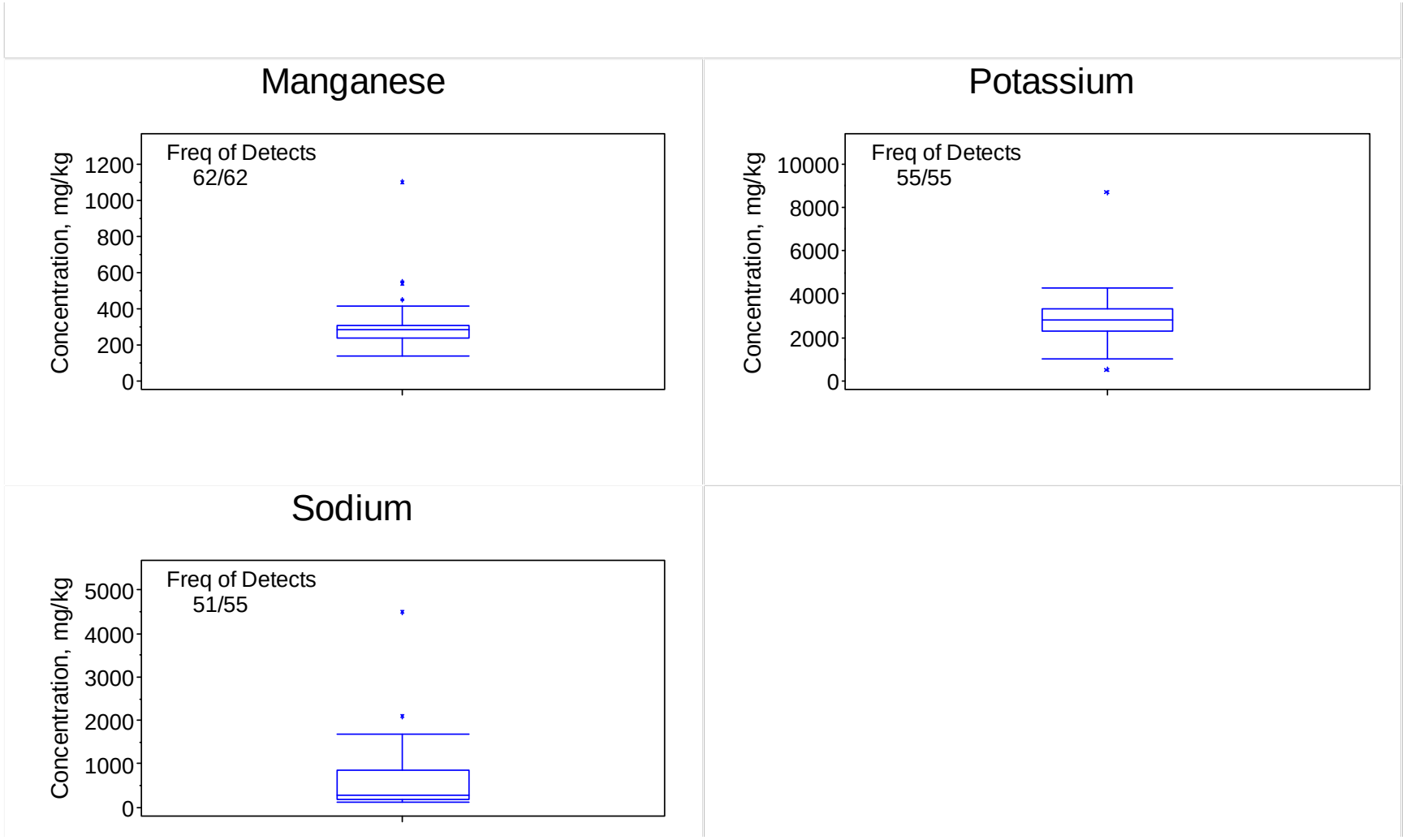
LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-7
PROBABILITY PLOTS OF COMBINED DATA
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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LEGEND

Qa = Quaternary Alluvium and Surficial deposits, undifferentiated
Toa = Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
Wash (Qya) = Recent wash deposits
pTbr = Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granite Rock)
ft bgs = feet below ground surface
mg/kg = milligram per kilogram

● Detected value
○ Non-detected value

FIGURE E-8
INTERQUARTILE RANGE PLOTS
SOIL INVESTIGATION PART A, PHASE 1 DATA GAPS EVALUATION REPORT
AT THE PACIFIC GAS AND ELECTRIC COMPANY,
TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA

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Attachment E1
Data Set

					Contract Laboratory Program (CLP) Inorganics (mg/kg)						
Location	**Lithologic Unit**	**Date**	**Depth (ft bgs)**	**Sample Type**	**Aluminum**	**Calcium**	**Iron**	**Magnesium**	**Manganese**	**Potassium**	**Sodium**
BKG-01	Qa	09/18/08	0 - 0.5	N	9,600	41,000	13,000	6,700	260	2,900	230
BKG-01	Qa	09/18/08	2 - 3	N	8,800	24,000	17,000	7,500	220	4,100	1,100
BKG-02	Wash (Qya)	09/18/08	0 - 0.5	N	7,500	16,000	15,000	6,400	220	1,700	170
BKG-02	Wash (Qya)	09/18/08	2 - 3	N	9,900	25,000	18,000	8,600	290	2,100	180
BKG-02	Wash (Qya)	09/18/08	5 - 6	N	11,000	16,000	19,000	8,800	290	2,500	220
BKG-02	Wash (Qya)	09/18/08	9 - 10	N	11,000	13,000	20,000	8,700	310	2,500	240
BKG-03	Wash (Qya)	09/18/08	0 - 0.5	N	9,200	22,000	18,000	8,100	260	2,000	180
BKG-03	Wash (Qya)	09/18/08	2 - 3	N	11,000	20,000	22,000	9,000	300	2,500	190
BKG-03	Wash (Qya)	09/18/08	5 - 6	N	11,000	18,000	22,000	9,000	330	2,600	230
BKG-03	Wash (Qya)	09/18/08	9 - 10	N	12,000	18,000	23,000	9,400	380	2,700	220
BKG-04	Wash (Qya)	09/18/08	0 - 0.5	N	7,300	13,000	17,000	6,100	220	1,500	160
BKG-04	Wash (Qya)	09/18/08	0 - 0.5	FD	7,300	14,000	17,000	6,200	220	1,500	190
BKG-04	Wash (Qya)	09/18/08	2 - 3	N	9,200	16,000	18,000	7,200	260	1,800	180
BKG-04	Wash (Qya)	09/18/08	5 - 6	N	8,600	18,000	16,000	6,400	250	2,000	190
BKG-04	Wash (Qya)	09/18/08	9 - 10	N	8,800	13,000	19,000	6,500	240	1,800	190
BKG-05	Toa	09/19/08	0 - 0.5	N	11,000	39,000	17,000	9,000	300	2,800	4,500
BKG-05	Toa	09/19/08	2 - 3	N	2,600	14,000	5,700	2,500	140	540	1,400
BKG-05	Toa	09/19/08	5 - 6	N	7,100	19,000	14,000	6,700	190	2,500	800
BKG-06	Toa	09/19/08	0 - 0.5	N	11,000	41,000	17,000	9,000	280	2,700	250
BKG-06	Toa	09/19/08	2 - 3	N	13,000	34,000	25,000	9,700	260	3,000	650
BKG-06	Toa	09/19/08	5 - 6	N	13,000	29,000	27,000	10,000	270	3,000	950
BKG-06	Toa	09/19/08	9 - 10	N	17,000	27,000	34,000	12,000	350	2,900	1,500
BKG-07	Toa	09/19/08	0 - 0.5	N	9,500	38,000	14,000	7,200	260	2,500	230
BKG-07	Toa	09/19/08	0 - 0.5	FD	9,600	41,000	13,000	7,100	270	2,200	200
BKG-07	Toa	09/19/08	2 - 3	N	15,000	38,000	26,000	11,000	310	2,900	280
BKG-07	Toa	09/19/08	5 - 6	N	16,000	39,000	26,000	12,000	380	2,900	840
BKG-07	Toa	09/19/08	9 - 10	N	18,000	62,000	32,000	13,000	360	2,900	460
BKG-08	Wash (Qya)	08/23/08	0 - 0.5	N	12,000	36,000	24,000	11,000	540 ^	8,700 ^	410
BKG-08	Wash (Qya)	08/23/08	1 - 2	N	12,000	25,000	23,000	9,700	450	3,900	200

					Contract Laboratory Program (CLP) Inorganics (mg/kg)						
Location	**Lithologic Unit**	**Date**	**Depth (ft bgs)**	**Sample Type**	**Aluminum**	**Calcium**	**Iron**	**Magnesium**	**Manganese**	**Potassium**	**Sodium**
BKG-09	Wash (Qya)	08/23/08	0 - 0.5	N	4,800	8,600	9,700	3,800	170	3,900	190
BKG-10	pTbr	09/19/08	0 - 0.5	N	8,800	22,000	13,000	5,000	230	2,200	210
BKG-10	pTbr	09/19/08	1 - 2	N	8,900	30,000	15,000	6,100	270	2,400	190
BKG-11	pTbr	09/19/08	0 - 0.5	N	15,000	31,000	20,000	8,300	360	3,800	230
BKG-11	pTbr	09/19/08	0 - 0.5	FD	15,000	31,000	20,000	8,300	350	3,900	230
BKG-11	pTbr	09/19/08	1 - 2	N	9,400	18,000	18,000	6,100	260	3,400	290
BKG-12	pTbr	08/23/08	0 - 0.5	N	8,900	19,000	18,000	7,300	320	2,900	180
BKG-12	pTbr	08/23/08	2 - 3	N	11,000	24,000	19,000	9,200	390	4,300	250
BKG-12	pTbr	08/23/08	5 - 6	N	9,400	20,000	17,000	7,600	310	3,100	210
BKG-13	Qa	09/20/08	0 - 0.5	N	12,000	67,000	14,000	10,000	290	2,300	300
BKG-13	Qa	09/20/08	2 - 3	N	11,000	17,000	18,000	7,800	250	3,100	1,700
BKG-13	Qa	09/20/08	5 - 6	N	12,000	6,900	20,000	8,900	280	3,200	1,700
BKG-13	Qa	09/20/08	9 - 10	N	14,000	52,000	20,000	8,100	1,100 ^	3,300	1,400
BKG-14	Qa	09/20/08	0 - 0.5	N	9,800	39,000	13,000	5,800	220	1,700	200
BKG-14	Qa	09/20/08	0 - 0.5	FD	9,700	36,000	13,000	5,600	210	2,000	200
BKG-14	Qa	09/20/08	2 - 3	N	9,600	11,000	16,000	6,700	220	2,700	760
BKG-14	Qa	09/20/08	5 - 6	N	12,000	8,200	20,000	9,200	320	3,400	780
BKG-14	Qa	09/20/08	9 - 10	N	13,000	6,300	21,000	9,600	310	3,900	630
BKG-15	Qa	09/20/08	0 - 0.5	N	5,200	20,000	11,000	5,100	210	1,100	290
BKG-15	Qa	09/20/08	2 - 3	N	8,100	14,000	18,000	6,200	260	2,500	380
BKG-15	Qa	09/20/08	5 - 6	N	10,000	15,000	20,000	7,300	300	4,100	850
BKG-15	Qa	09/20/08	9 - 10	N	12,000	34,000	22,000	8,300	340	3,300	890
BKG-16	Qa	09/23/08	0 - 0.5	N	8,400	33,000	14,000	8,100	290	2,700	ND (240)
BKG-16	Qa	09/23/08	2 - 3	N	8,700	28,000	16,000	7,000	260	2,700	ND (700)
BKG-16	Qa	09/23/08	5 - 6	N	7,800	17,000	16,000	6,000	240	2,800	ND (1,100)
BKG-16	Qa	09/23/08	9 - 10	N	9,700	13,000	19,000	7,000	290	3,900	ND (850)
BKG-17	Qa	09/20/08	0 - 0.5	N	5,800	16,000	8,800	4,200	150	1,000	170
BKG-17	Qa	09/20/08	2 - 3	N	14,000	14,000	22,000	10,000	290	3,700	2,100
BKG-17	Qa	09/20/08	5 - 6	N	11,000	30,000	19,000	8,200	290	2,000	1,200

					Contract Laboratory Program (CLP) Inorganics (mg/kg)						
Location	**Lithologic Unit**	**Date**	**Depth (ft bgs)**	**Sample Type**	**Aluminum**	**Calcium**	**Iron**	**Magnesium**	**Manganese**	**Potassium**	**Sodium**
BKG-17	Qa	09/20/08	9 - 10	N	12,000	4,100	22,000	8,800	290	3,300	1,200
EE-BG-1	pTbr	04/13/99	0	N	---	---	23,800	---	281	---	---
EE-BG-2	Toa	04/14/99	0	N	---	---	13,700	---	260	---	---
EE-BG-3	Wash (Qya)	04/14/99	0	N	---	---	23,900	---	413	---	---
MW-15	Qa	07/10/97	10	N	---	---	5,570	---	180	---	---

Notes:

mg/kg	milligrams per kilogram
ft bgs	feet below ground surface
N	primary sample
FD	field duplicate
^	This concentration was removed from the background dataset because it is considered an outlier
---	not analyzed
ND	not detected at the listed reporting limit
J	concentration or reporting limit estimated by laboratory or data validation
Qa	Quaternary Alluvium and surficial deposits undifferentiated
Toa	Tertiary Alluvium (Fanglomerate of Metzger and Loeltz)
pTbr	Pre-Tertiary Bedrock (Metadiorite, Gneiss, Granitic Rock)
Wash (Qya)	Recent wash deposits

Appendix F
Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

TABLE F-1

Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Agency	Comment Number	Section	Comment	Documentation of Compliance or Response to Comments
California Department of Toxic Substances Control (DTSC). 2007. *Comments and Conditional Approval of the RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan, Part A, Pacific Gas and Electric Company (PG&E), Topock Compressor Station, Needles, California (EPA ID No. CAT080011729)*. August 10.				
Conditions of Approval Included in Cover Letter				
		Condition #1	PG&E shall begin Phase 1 field work within 30 days of receiving all applicable permits associated with the approved portion of the Part A Work Plan.	Comment noted. PG&E completed mobilization within the required time frame.
		Condition #2	Per request of FMIT, PG&E shall prepare a site map depicting all study areas proposed in both Part A (outside the compressor station fence line) and Part B (inside the compressor station fence line) for reference. This site map shall be made available to interested parties upon their requests.	As agreed during the August 29, 2007 conference call, the existing figure in the RFI is adequate. The revised figure was included in the Part B work plan.
		Condition #3	PG&E shall issue a Phase 1 Part A Soil Sampling Data Gaps Evaluation Report within 60 days of completion of the field activities.	Comment noted. PG&E could not provide this report within 60 days of completion of the final field activities (data validation) since DTSC and DOI concurrence was not received on the Data Quality Objectives Technical Memorandum until March 2010. The Data Quality Objectives Technical Memorandum was required to provide a basis for the data evaluation**.**
		Condition #4	PG&E shall prepare a Phase 2 Part A Soil Sampling Work Plan when directed by DTSC after the evaluation of the Phase 1 Part A Soil Sampling Data Gaps Evaluation Report. The Phase 2 Part A Soil Sampling Work Plan shall address, at minimum, the remaining issues deferred to the Phase 2 investigation as specified in the attached GSU comments, as well as discussions and evaluation pertinent to the rejected sections of the Phase 1 Part A Work Plan.	Comment noted. PG&E will provide the Phase 2 Part A Soil Sampling Work Plan within 90 days of being directed by DTSC, provided that this Part A Phase 1 Data Gaps Evaluation Report has been approved by DTSC and DOI prior to the start of the 90-day period.

TABLE F-1

Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Agency	Comment Number	Section	Comment	Documentation of Compliance or Response to Comments
		Condition #5	PG&E shall make a reasonable attempt to work with the interested tribes to establish a tribal monitor during the site investigation field work.	PG&E invited Native American monitors to be present every day that work was performed. However, because PG&E can not require the Native American monitors to come to the site for this work, PG&E did not stop work when monitors were not present.
		Condition #6	PG&E shall ensure that all personnel associated with the field work be oriented on tribal sensitivity issues and to reasonably avoid unnecessary disturbance of the sensitive landscape.	Qualified PG&E staff provided this training to all PG&E personnel and contractors involved in the field investigation effort. Each person involved in this effort received the training prior to beginning their assigned work.
		Condition #7	At the request of the Fort Mojave Indian Tribe, DTSC requests that PG&E engage in discussions with the land owner/manager and interested tribes to explore options in managing non-contaminated investigation-derived wastes. PG&E must, however, properly characterize and manage hazardous waste pursuant to the California Code of Regulations, Title 22, Division 4.5, Chapter 12.	This issue was discussed during implementation of the field investigation program. However, direct-push borings are only 1.5 inches in diameter, and it is physically infeasible to put the drill cuttings back into such a narrow hole. Attempting to backfill the hole with native materials also compromises the ability to grout the hole in accordance with regulatory requirements. However, most shallow samples (0.5 foot bgs and 3.0 feet bgs) were collected using hand sampling equipment, and excess soil was backfilled into the sampling hole. Similarly, materials excavated from trenches were placed back into the trenches.
General Comments				
DTSC—The Geologic Services Unit (GSU)	1		The constituents of potential concern (COPCs) for each of the solid waste management units (SWMUs) and areas of concern (AOCs) have been previously identified in a GSU memorandum dated March 29, 2006. COPCs should not be reduced or eliminated without sampling analytical data at this point of the RCRA Facility Investigation (RFI) program. PG&E may provide past analytical data to demonstrate the absence of COPCs as identified in the GSU memorandum in support of a reduced laboratory analytical program which does not include all COPCs. However, in the absence of such information, all COPCs identified for each SWMU or AOC must be evaluated.	All COPCs listed for each unit in the March 29, 2006 comments were included in the analytical suites for each unit. It should be noted that the March 29, 2006 comments did not require analysis of all classes of compounds at all units. The analytical parameters evaluated in the Part A Phase 1 field investigation program, in many cases, exceeded the requirements defined in the March 29, 2006 letter.

TABLE F-1

Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Agency	Comment Number	Section	Comment	Documentation of Compliance or Response to Comments
	2		Due to the sensitive landscape in which the proposed soil sampling will take place, any modifications to the proposed sampling locations identified in the Workplan should only be conducted with prior DTSC approval.	Comment noted. All sampling locations were reviewed by DTSC. One boring (BKG-1) was relocated slightly; the new location was cleared by the agencies, the tribal monitor, and PG&E prior to installation of the boring. At the request of the tribal monitor and archeologist, no borings or trenches were installed and no samples were collected in UA-1.
	3	Section 6.2.4 on page 6-4	The third bullet in Section 6.2.4 on page 6-4 of the Workplan discusses an approach for analyzing Total Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons, and Volatile Organic Compounds (TPH, PAHs, and VOCs respectively). It states that if elevated organics are detected in lower yard samples, then they will be added to the COPCs at each AOC that is hydrologically connected to the compressor station. This approach, however, is not applicable to those AOCs that are not hydrologically connected to the lower yard, but may still be connected to the compressor station. DTSC notes that this lower yard organic screening approach could only be applied to AOC 1 and possibly to AOCs 4 and 14.	The approach to addressing organics was changed as a result of discussions with DTSC and DOI. Samples from all units were analyzed for VOCs, TPH (extractable and purgeable), PAHs, and SVOCs. Ten percent of all samples from each AOC were also analyzed for chemicals on the United States Environmental Protection Agency Contract Laboratory Program Target Analyte List/Target Compound List (TAL/TCL). All samples from the Former 300B Pipeline Liquids Tank area were analyzed for polychlorinated biphenyls (PCBs) using the Contract Laboratory Program protocol.
	4		For all AOCs and solid waste management unit (SWMUs), where potential asbestos-containing materials (ACM) are identified, the materials should be appropriately characterized to determine if the material does not indeed contain asbestos and if the asbestos is friable. Otherwise, the material should be assumed to contain friable asbestos and handled accordingly.	ACM was observed in soil in AOCs 4, 9, and 14. Soil samples collected from AOCs 4, 9, and 14 were analyzed for asbestos. Debris removal was not conducted during the Part A Phase 1 field investigation. Debris removal has occurred in AOC 4 as part of the time-critical removal action (TCRA) that is currently being conducted. In each case, the material will be handled as directed in the comment. Specifically during the AOC removal ACM was segregated from other removed materials for disposal as appropriate.
	5		The proposed soil sampling locations depicted on Workplan figures (6-7, 6-12, 6-16, 6-18, and 6-23) are differentiated into groups representing “Risk/Remediation/Characterization and “To/Toward Background”. In most cases this differentiation appears unfounded and arbitrary. The DTSC toxicologist has indicated that the ecological risk evaluation requires evaluation of inorganic chemicals to background, and organic chemicals to an	Figures showing the revised proposed sampling locations were provided to DTSC and DOI on September 13, 2007, with supplemental modifications for AOCs 1, 10, and 11 provided on July 25, 2008. These figures show only existing and proposed sampling locations.

TABLE F-1
Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Agency	Comment Number	Section	Comment	Documentation of Compliance or Response to Comments
			appropriate detection limit below the appropriate ecological screening levels. Therefore, no differentiation is warranted as each soil sampling location should provide the same level of information useful to the evaluation of risk and environmental conditions at the site. The GSU recommends that all future figures and text be prepared and/or revised to acknowledge this issue.	
	6		In order to facilitate an adequate review of the historical activities within the area of potential effect, please provide true photographic enlargements (at a scale which appropriately depicts the investigation area) of all historical aerial photographs. The electronic copies provided with the first draft of Volume 1 of the RFI are useful; however, magnification to a useful scale distorts the image. An alternative to photographic reprints would be to provide electronic images at a resolution which would allow detail to be preserved during magnification. Additionally, pertinent photographs of the PG&E Compressor Station (e.g., those photos kept at the site or at other PG&E offices) should be copied and provided to DTSC.	Additional high-resolution photographs were provided to DTSC on May 11, 2007. DTSC indicated that at the August 29, 2007 conference call that these photographs satisfied its needs. PG&E (via Glenn Caruso) provided construction photos of the Topock Compressor Station. DTSC later requested several pages of photographs that appeared to be missing (letter dated March 20, 2008), and PG&E confirmed that there were no pages of missing photographs.
	7		Two concerns exist regarding the perimeter of the compressor station (the fence line) that separates the Part A off-site soils investigation from the Part B on-site investigation. First, DTSC believes that sampling along historic discharge areas around the perimeter of the facility is warranted. Storm water discharge pipes (storm drains) are documented by PG&E as the suspected source of contamination at some areas of concern at the site (e.g., AOC 9—Southeast Fence Line; AOC-10a—East Ravine). Potential contamination associated with all storm drains that discharge off the site should be evaluated as part of the RFI soils investigation. It would be undesirable to have to wait for erosion channels along slopes to expose discolored, contaminated soil.	During the August 29, 2007 conference call it was agreed that perimeter and storm drain sampling could be conducted during the Part B investigation. Fifteen perimeter and storm drain sampling locations were identified during a site walk with DTSC and DOI on October 18, 2007. These locations are shown on Figure 1 of the Part B Phase 1 proposal, dated September 30, 2008. These sampling locations will be considered during the preparation of the upcoming Final Part B Work Plan (target for mid 2010).

TABLE F-1

Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
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			Historic releases from the facility to offsite areas should also be investigated near the fence line where contaminant concentrations would be expected to be higher and/or detectable closer to the source of contamination. The Workplan discusses a historic release from Cooling Tower B to the northeast ravine yet sampling along the perimeter of the site to evaluate this release is not proposed. At another area, debris (including apparent transite) is located outside the fence line along the perimeter of the site (see Figure 1). This type of waste is considered significant at other AOCs and should be addressed by PG&E. PG&E should submit a plan to DTSC to evaluate the perimeter of the site. A site survey of the perimeter of the station should be conducted to identify obvious areas requiring characterization. Concern also exists regarding the transition of the on-site area to the off-site area. Contaminant concentrations within an on-site area may be protective for industrial scenarios, but might cause excessive human or ecological risk at off-site areas if contaminated on-site soil is released offsite (via storm drains, wind storms, or storm water run off). Figure 2 illustrates this issue. PG&E's plan to evaluate the perimeter of the site should address this issue.	
Specific Comments				
	1	Section 4.2.2.5	**Calculation of Groundwater Leaching Screening Levels for Metals in Soil** Two documents referenced in this section (Hevesi et al., 2003 and Ronan et al., 1998) do not appear in the full references in Section 11. Please provide the full references so DTSC can evaluate the appropriateness of each document to the current investigation.	PG&E e-mailed DTSC and DOI the full references for the two documents for evaluation in 2007. The Hevesi et al., 2003 reference was also included in the June 23, 2008 *Calculation of Soil Screening Levels for Protection of Groundwater at the PG&E Topock Compressor Station* Technical Memorandum.

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			It is also recommended that preliminary calculations be provided for each metal to allow DTSC and other stakeholders to clearly understand the methodology.	Section 4.0 of the Part A work plan provides a detailed description of how the groundwater leaching screening levels will be calculated and the assumptions of the approach. Further, the *Calculation of Soil Screening Levels for Protection of Groundwater at the PG&E Topock Compressor Station* Technical Memorandum, submitted to the agencies on August 1, 2008, provided additional information on the proposed methodology for calculation of site-specific soil screening levels for the protection of groundwater (GPL). Please note also that, per this Technical Memorandum, the term GPL has been changed to soil screening level protective of groundwater and is now abbreviated SSL. A key variable in calculating the groundwater leaching screening levels is the areal extent of impacted soils. The screening levels cannot be calculated until the first phase of data are available. As agreed during the August 29, 2007 conference call, the GPL for each AOC will be calculated and included in the Part A Phase 1 Data Gaps Evaluation and Part A Phase 2 Soil Sampling Work Plan.
	2	Section 5.3.1	**Outlier Analysis** Based upon descriptions in the USEPA Data Quality Assessment document (USEPA QA/G9S), it appears that the proposed mathematical outlier tests (Rosner's test and Dixon's Extreme Value test) assume a normal distribution of the dataset. At the point in the dataset evaluation that the outlier test is conducted, a determination of normality has not been conducted. Utilization of a test which assumes normality would be inappropriate. The DTSC recommends identifying outliers as those data points which exceed 1.5 times the inter-quartile range of the dataset above the third quartile [i.e., Q3 + 1.5 (IRQ)] as a simpler evaluation capable of identifying multiple outliers with each calculation.	According to the USEPA guidance *Data Quality Assessment: Statistical Methods for Practitioners* (USEPA, 2006), the outlier analysis approach presented in the work plan is preferable to the box and whisker approach suggested by DTSC. Consequently, the proposed approach was used in the outlier analysis provided in the *Soil Background Investigation at the Pacific Gas and Electric Company Topock Compressor Station, Needles, California*, submitted to DTSC and DOI December 12, 2008. However, in response to this comment, PG&E also performed the inter-quartile range analysis, as requested by DTSC. This information is also presented in the December 12 technical memorandum.

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	3	Section 6	**Investigation Area Soil Sampling Plan** Comments regarding AOCs and SWMUs are presented below in the AOC/SWMU Specific Comments.	Comment noted.
	4	Section 7	**Soil Sampling Methods** In order to provide completeness of the description of the scope of work, relevant standard operating procedures (SOPs) should be included as attachments to all future workplans rather than inclusion only by reference.	Comment noted. SOPs were included in Appendix E for the Part B investigation work plan and will also be included in the Part A Phase 2 Soil Sampling Work Plan.
	5	Section 7.6	**Trenching** Each exploratory trench should extend no less than six feet below ground surface (bgs) in order to evaluate potential environmental conditions to the depths previously agreed to (see also Specific Comments for AOC12).	Trench depths were increased to ensure that native material would be encountered, where possible. Trench depths in AOC 12 ranged from 3 feet (impenetrable hardpan was encountered at 3.5 feet below ground surface [bgs]) to 11 feet bgs. Trench 12c-T1 apparently did not encounter native material and was terminated at 11 feet bgs. Two samples were typically collected at or near the bottom of each trench. Sidewall samples were also collected in trenches 12a-T1 and 12c-T1a. Trench depths in AOC 4 ranged from 3 to 6 feet bgs; this corresponded to bedrock in trenches AOC4-T1 through AOC4–T3. Samples were typically collected at the bottom of the trenches; surface soil samples (0.5 foot bgs) were also collected at AOC4-T1 and AOC4-T2. Trenches in SWMU 1 ranged from 8 to 22 feet bgs and penetrated from 6 to 20 feet into the slope. Samples were collected at the surface, from intermediate depths, and near the bottom, where feasible.
AOC/SWMU Specific Comments				
	1	Section 6.3	**SWMU 1/AOC 1—Former Percolation Bed** During a site walk of AOC 1 conducted on December 11, 2006, it appeared that excessive sampling density was employed at three soil sampling locations that had been staked out by PG&E. Two of the samples (one identified as WP-NEW-2) were staked in recently discovered white powdery material near the toe of	In accordance with DTSC's recommendation, the sampling plan was revised to provide more even coverage of the newly-discovered white powdery material, and sample locations were adjusted as recommended. Seven trenches were installed to explore the extent of the white powdery material in the bank, and 27 samples were collected for

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			the slope on the east side of the wash. The third stake was located just to the west in the wash. PG&E should indicate why such a tight sampling grid is needed. If sufficient rationale does not exist for each sample, DTSC suggests that one of the borings characterizing the white powder be dropped from the investigation and that third boring be moved 10 to 20 feet to the west away from the remaining boring.	laboratory analysis. See also discussion in response to General Comment 5.
			An additional sample location is suggested near a 55 gallon drum discovered in Bat Cave Wash (see Figure 3). The drum suggests a depositional environment within that specific portion of the wash and is located near boring SSB-8 that detected total chromium above background and Ecological Comparison Values as described in the Workplan. PG&E should locate the drum and determine if it contains waste that would require characterization and disposal. (Figure 3. Easterly view of a 55 gallon drum within Bat Cave Wash in the general vicinity of borings SSB-8 and MW-13.)	In response to this comment, sample location BCW-1 was added slightly to the north of boring SSB-8 at the location of the drum. The drum did not contain any waste, and was removed from Bat Cave Wash and properly disposed.
			The fourth bullet on page 6-7 of the workplan discusses elevated iron in well MW-17. Since well MW-17 is not associated with AOC 1, PG&E should clarify or amend the iron discussion.	Well MW-17 was erroneously included in the data table and discussion for AOC 1. Also, the screening level used in the work plan (23,000 mg/kg) was then the current residential PRG. The current soil RSL for iron is 55,000 mg/kg; no soil samples from any monitoring well exceed the current iron RSL.
	2	Section 6.4	**AOC 4 - Debris Ravine** Significant waste has been pushed off the northern edge of the ravine (See Figures 4 to 6). The AOC 4 area delineated on Figure 6-12 of the Workplan should be thoroughly walked and all debris carefully documented and mapped so the distribution of the debris and potential contamination associated with it can be established. The map generated should be provided to DTSC prior to the sampling effort. (Figure 4. Northwesterly view of the north side of the Debris Ravine. Green stained soil visible in Figure 7 within the erosion channel is located within the erosion channel below the black	On June 24, 2009, DOI issued an Action Memorandum entitled *Request for Time-Critical Removal Action Number 4 at AOC 4 Debris Ravine, Pacific Gas and Electric Topock Compressor Station* (DOI, 2009). DOI's Action Memorandum directed PG&E to implement a TCRA at AOC 4. The TCRA is intended to stabilize and mitigate the threat of release of contaminated material and is not intended to substitute for any investigative or remedial activities that may be required under RCRA or to be the final remedy for AOC 4. Debris within AOC 4 is also being removed as part of the TCRA.

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			tank on the bench road to the right of the picture. Figure 5. Northerly view of waste that has traveled down the north side of the ravine. Figure 6. Easterly view of waste that has traveled down the north side of the ravine to the floor of the ravine. Wood slats may be from cooling towers.) Borings are needed throughout fill areas to identify the thickness of fill and potentially contaminated soils/wastes. These data are needed to assist in evaluating remedial alternatives during the Corrective Measures Study. PG&E should consider ways to assess the thickness of fill areas and obtain samples along the slope. PG&E may be able to bench slopes or create small pads so that mechanized tools, such as small power augers, could be used to place borings and reach appropriate depths. PG&E might also be able to use an excavator bucket to reach out over the slope and bring soil/fill/waste to the road for evaluation and sampling. Soils that are identified as containing debris should be sampled if the debris is removed during implementation of this phase of the workplan. A DTSC site walk of the site resulted in the addition of sample locations AOC4-14 and 15 as pictured in revised workplan Figure 6-12. Figures 8 and 9 below illustrate the debris (metal, glass, red clay pipe, transite shingles, etc.) that was not originally planned to be sampled in the Workplan. A pile of wood slats (possibly from cooling towers) similar to those in Figure 6 was also identified near the AOC4-14/15 location. Some of the slats were encrusted with scale of unknown composition and toxicity. This wood and scale, and soil from the immediate area should be sampled and analyzed for all COPCs. Concern exists that slope materials will continue to erode and potentially contribute contaminants to the ravine and Bat Cave Wash/Havasu National Wildlife Refuge. (Figure 8. Northwesterly view of debris in foreground placed along old road within the central portion of AOC 4 (Debris Ravine). Figure 9. Southwesterly view of debris in foreground	

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			placed along old road within the central portion of AOC 4 (Debris Ravine).)	
			Section 6.4.4 on Page 6-12 of the Workplan appropriately indicates that additional samples will be collected if stained soils are found. Green stained soils have been identified on the northern slope exposed within an erosion channel below a black tank (see Figure 7 below). This stained area should be sampled and analyzed for all COPCs. (Figure 7. Northerly view from the floor of the ravine of green stained soil visible from an erosion channel on the north side of the ravine.)	Comment noted. A sample of the green stained soil was collected (AOC4-STAINED). Sample locations AOC4-GH10 and AOC4-GH30 were collected from the green stained soil area.
	3	Section 6.5	**AOC 9 – Southeast Fence Line** Historical aerial photographs (particularly the oblique images from 1955) identify the presence of a structure (potentially a historic wash rack) near the head of slope. Therefore, the limits of AOC 9 should be expanded approximately 50 feet to the southwest along the slope. Soil sampling shall be expanded in this area. Dark marks in the face of the slope, potentially indicating liquid migration, are also identified in the 1955 aerial photograph and shall be sampled as part of AOC 10.	The limits of AOC 9 were expanded to the southwest to include four samples (AOC9-10 through AOC9-13).
			Sufficient sampling and analysis is not proposed for AOC 9. Sample locations should be included in the former area where visibly contaminated soil had been noted (e.g., area where samples No. 4 to 9 were collected) and where elevated contaminant levels have already been identified (e.g., Sample No. 10). This will provide data on the nature of the contamination and assist in identifying specific constituents of concern for AOC 9. Sampling in potentially clean areas elsewhere will not meet this objective. Sampling for VOCs and SVOCs in these two areas is suggested as the source of contamination emanated from a storm water drainage pipe that has been characterized as possibly draining the facility's steam-cleaning wash rack area. Deeper samples (greater than 3 feet below ground surface) should also be collected from these two areas to determine the vertical extent of contamination. If	In addition to the seven samples originally proposed to delineate the extent of AOC 9, two samples were added near the former elevated detections at borings #4 and #9 (AOC9-8), and boring #10 (AOC9-9). Furthermore, as discussed above, four samples were added to assess potential impacts from the former structure near the top of the slope.

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			necessary, PG&E should develop ways to obtain samples along slope. PG&E may be able to bench slopes or create small pads so that mechanized tools, such as small power augers, could be used to obtain samples from appropriate depths. PG&E might also be able to use an excavator bucket to reach out over the slope and bring soil/fill to the road for evaluation and sampling. PG&E must evaluate field conditions and sampling logistics well in advance to minimize amendments to the sampling program just prior to the field effort.	
			Section 6.5.3, Page 6-14, Line 4 of the Workplan refers to a nonexistent Table 3-3 and a total number of samples (49) that does not correlate with the total number of proposed samples (47) contained in Table 3-2 of the Workplan. Table 3-2 should be checked for accuracy for all investigative areas and updated as necessary.	Comment noted. A table showing the number of samples collected at each unit is included in Appendix B of this Part A Phase 1 Data Gaps Evaluation Report. PG&E also understands that DTSC did not require a revised copy of Table 3-2.
	4	Section 6.6	**AOC 10 – East Ravine** During a site visit in July 2006, GSU staff observed small amounts of metal debris in either subarea 10b or subarea 10c. The debris identifies depositional areas in the wash that have been affected by former operations. The location of the metal debris should be confirmed, documented and mapped.	As agreed during the August 29, 2007 conference call, PG&E will conduct the requested mapping was conducted on May 2009, results of the mapping are presented in this Part A Phase 1 Data Gaps Evaluation Report. .
			Page 6-15 of the Workplan describes a white waste layer occurring in subarea 10c. However, the Workplan does not address sample collection, characterization, and delineation of this white layer. Additional sampling and analyses are required to characterize the waste layers (see Phase 2 Recommendations Section).	Five borings were installed in subarea 10c. The referenced white waste layer was not encountered in any of those borings. The data from the three samples collected by DTSC on January 18, 2008 were incorporated into the data gaps evaluation for AOC 10.
			The conceptual model for the East Ravine wash should be updated. The Workplan should acknowledge that prior to the construction of the dams, run off from the site, including potential contaminants, could have moved more freely down the wash during rain events or releases to the drainage. The fourth paragraph on page 6-15 of the Workplan indicates that the	As agreed during the August 29, 2007 conference call, an updated conceptual model for the East Ravine will be included in the Part A Phase 2 Soil Sampling Work Plan.

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			easternmost road/dam is not eroded suggesting water has not flowed over it. It is assumed that water could have overtopped this dam in the past as it is assumed that the road/dam is periodically maintained. PG&E has indicated that PG&E personnel have conducted training on earth moving equipment in this general area.	
			VOCs and SVOCs are recommended to be analyzed at location AOC-10a-1 due to the presence of stained soil, possibly old hydrocarbon staining, and at the storm drain discharge location discussed in the preceding paragraph.	As discussed in response to General Comment #3, VOCs, SVOCs, PAH, and TPH-extractable and -purgable were analyzed at all units.
			Samples AOC10-1 and 2 pictured in the original Figure 6-16 of the Workplan were removed in the revised figure. These sample locations should be reinstated because the Workplan indicates, "Because runoff from larger spills near the station access road could have entered the East Ravine, additional sampling along the slope leading into the East Ravine is also required."	The two samples were reinstated and are shown on the revised Figure 6-16 provided to DTSC and DOI on September 25, 2008.
			Sample AOC-10a-2 appears redundant with sample AOC-10a-1 and should be eliminated unless PG&E has selected it for a specific purpose (e.g., contaminant delineation) or the stained area downslope from AOC 9 is difficult to locate.	Sample AOC-10a-2 was removed from the sampling plan (see revised Figure 6-16 provided to DTSC and DOI on September 25, 2008).
			Additional soil borings seem necessary to evaluate specific potential contaminant pathways and further define the lateral extent of previously identified contamination. DTSC believes these locations should be further evaluated with additional soil borings: • within the defined area of AOC 10c to provide additional data in the area of former sample location L-2-2 (north of previous sample location) for further definition of elevated contaminant concentrations • approximately 60 feet downstream of area AOC 10c on outside of the wash meander to ensure sufficient sample coverage	In response to this comment, the following sampling locations were added to the investigation program (see revised Figure 6-16 provided to DTSC and DOI on September 25, 2008): • Sample AOC10c-5 was added within the defined area of AOC 10c to provide additional data in the area of former sample location L-2-2. • Sample AOC10-3 was added approximately 150 feet downstream of area AOC 10c on outside of the wash meander to ensure sufficient sample coverage. (The sample location formerly named AOC10-3 was relocated slightly and renamed AOC10-6; see discussion in fourth bullet, below.)

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			• approximately 20 feet upstream of area AOC 10d on the outside of the wash meander to ensure sufficient sample coverage • one to three samples in depositional areas downstream of AOC10-3 and before the Colorado River to ensure sufficient sample coverage	• Sample AOC10-4 was added approximately 30 feet upstream of area AOC 10d on the outside of the wash meander to ensure sufficient sample coverage. • Two samples were added to the area downstream of the road/dam forming the downstream end of AOC 10d, resulting in a total of three sample locations for this subarea. The sample locations were renumbered for consistency with the numbering of samples in the rest of AOC 10. Two sample locations (AOC10-6 and AOC10-7) are downstream of the former location of AOC10-3 and before the Colorado River to ensure sufficient sample coverage. One sample location (AOC10-5) is south (upstream) of the former location of AOC10-3.
	5	Section 6.7	**AOC 11 – Topographic Low Areas** Section 6.7.4 of the Workplan indicates that samples from subarea 11b and supplemental samples northwest of 11a can only be collected by hand and that only the top two samples will be collected. However, a track mounted limited access rig or equivalent should be utilized to obtain deeper samples.	As requested, PG&E set a target of collecting samples from the 6- and 10-foot-bgs intervals for all samples from AOC 11. Refusal was encountered 3.5 feet bgs in boring AOC11-SS-2; samples were collected from 5 to 6 feet bgs and 9 to 10 feet bgs from all other borings in this AOC.
			It is also recommended that all AOC 11 samples be analyzed for TPH and PAHs and not be held contingent on results from subarea 11a.	All samples from AOC 11, including supplemental samples, were analyzed for TPH and PAHs.
			PG&E has inadvertently eliminated boring location AOC11b-2 from the revised Figure 6-18 dated December 2006. DTSC believes that this boring is warranted to ensure sufficient sample coverage within the depositional area.	As shown in revised Figure 6-18, provided to DTSC and DOI on September 25, 2008, boring location AOC11b-2 was reinstated as requested.
			Figure 6-18 should be expanded to the south and southwest to depict the fence line of the compressor station. This visual depiction will provide assistance with evaluation of potential surface water flow pathways from the compressor station.	As shown in revised Figure 6-18, provided to DTSC and DOI on September 25, 2008, the figure was expanded as requested.

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			DTSC staff observed an area south of PG&E's staging area along the access road that should be added to the topographic low area. This area, pictured in Figures 10 and 11, has accepted waste (cement and debris) from PG&E operations and, therefore, warrants investigation similar to other AOC 11 subareas (see Phase 2 Recommendations Section). Figure 6-19 of the Workplan also includes an aerial view of the area. (Figure 10. Easterly view of topographic low area containing cement spoils and debris south of PG&E's staging area along the access road. Figure 11. Easterly view of topographic low area south of PG&E's staging area.)	Comment noted. As requested by DTSC, this area will be addressed in the Part A Phase 2 Soil Sampling Work Plan. It is included as a newly identified area in the discussion of AOC 11 (a portion of subarea AOC-11f).
	6	Section 6.8	**AOC 12 – Fill Area** Section 6.8.1 of the Workplan discusses the history of potential areas filled with waste materials. A detailed evaluation of aerial photographs and topographic maps should be conducted to search for soil disturbance in the area over time to better locate the disposal and fill areas.	As agreed during the August 29, 2007 conference call, this evaluation will be included in the Part A Phase 2 Soil Sampling Work Plan.
			Trenches should encounter native soil unless depth limitations for the selected trenching method are met (e.g., 15 to 20 feet bgs.). Trench logs should be prepared and included in the RFI report.	As requested, the objective in the trenching effort was to ensure that native soil was encountered in each trench. Trench depths in AOC 12 ranged from 3 feet bgs (impenetrable hardpan (native soil) was encountered at 3.5 feet bgs) to 11 feet bgs.
			During the trenching activities associated with AOC 12, soil samples shall be collected and analyzed from within each trench. Samples should be collected at the bottom of each trench at an approximate interval of one sample per 20 feet of trench length and at other areas identified in the field (e.g., debris or discoloration). Trenching without sampling and analysis as proposed in the Work Plan would require an unnecessary return to AOC 12 to conduct sampling. Sampling and analysis is required to assess potential impacts from documented disposal activities. The absence of buried debris and laboratory analytical data indicating no residual chemical contamination would provide the basis for a no further	Soil samples were added at the proposed trench locations. Samples were collected at the bottom of the trench**.** Two samples were collected at the bottom of each trench. In addition, sidewall samples were collected from AOC 12a-T1 and AOC 12c-T1.

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			investigation determination for this AOC. As indicated in General Comment 1 above, laboratory analytes shall consist of those previously identified in the GSU memorandum dated March 29, 2006.	
	7	Section 6.9	**AOC 14 – Railroad Debris Site** The GSU is unclear how the Railroad Debris Site Boundary pictured in Workplan figures (e.g., Figure 6-23) was derived and the rationale for indenting the northwest boundary.	The northwest boundary of this unit was defined by topography. There is a considerable (6 to 10 foot), abrupt rise in elevation in this area and it is difficult to access, even on foot.
			Text and illustrations should be prepared in sufficient detail with respect to the white powdery waste observed from old aerial photographs (circa 1950's and 1960's) to demonstrate that it has been accurately delineated on current site figures.	As agreed during the August 29, 2007 conference call, PG&E will provide an updated delineation of the white powdery material as part of the Part A Phase 2 Soil Sampling Work Plan. This updated delineation will include the expanded discussion of 1950s and 1960s information requested here, the mapping of visible powdery material and 1999 trench logs referenced below, and the relevant information collected during the Part A Phase 1 investigation.
			The May 18, 1964 aerial photograph (Figure 3-18) from the Volume I RFI Report (CH2MHill, 2006) suggests that the white waste is located further south from the railroad tracks than the current Railroad Debris Site Boundary (Figure 6-23) would suggest.	The more northerly boundary (closer to the railroad tracks) for AOC 14 was retained because there was minor surface debris in this area, and it is uncertain whether grading activities could have resulted in impacts beyond the area shown in the 1964 aerial photograph. The samples (ACO14-5 and AOC 14-7) from this area help define the northerly boundary of impacts for this unit.
			The first paragraph of Section 6.9.3 of the Workplan suggests that SVOC, TPH, and PAH results only correlated with the railroad ties and black sandy waste when in fact these analyses were only conducted and detected at the three railroad tie/black sandy waste sample locations. As SVOC, TPH, and PAH analyses have not been conducted within any soils from the Railroad Debris Site, it is recommended that these analytes be evaluated as a COPC for several more (e.g., 10 samples) of the proposed samples to provide sufficient coverage across the site. The SVOC, TPH, and PAH analyses should not just be limited	All soil samples from AOC 14 were analyzed for TPH (extractable and purgeable), PAHs, and SVOCs. In addition, all samples were analyzed for asbestos.

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			to sampling under the same three previous waste areas where they were detected. The section also states friable ACM encountered in past sampling events had been removed. A site visit conducted by DTSC in 2006 still observed apparent ACM material (transite) at the surface at AOC 14 supporting the asbestos analyses proposed in the Workplan.	
			Section 6.9.3 of the Workplan indicates that the extent of the white powdery residue will be defined by additional sampling. However, visible white powdery material (see Figure 12 on the following page) should be mapped and documented in figures. Additionally, previous investigations (e.g., PG&E, 1999) for this AOC need to be better summarized to ensure samples are being collected at appropriate locations. Trench logs from previous investigations should be utilized to delineate the known extent of the white material (as well as debris and encountered soils) in map and cross-sectional views. This framework should be developed to ensure the sampling program will meet its objectives. PG&E should identify additional sampling and analysis locations based on the preceding tasks. (Figure 12. Northerly view of AOC 14. White layer visible in the freeway cut on the north side of the I-40 and in the background.)	As agreed during the August 29, 2007 conference call, PG&E will provide an updated delineation of the white powdery material as part of the Part A Phase 2 Soil Sampling Work Plan. This updated delineation will include the expanded discussion of 1950s and 1960s information requested above, the mapping of visible powdery material and 1999 trench logs, and the relevant information collected during the Phase 1 investigation.
			Currently, tables and figures in the Workplan do not indicate which samples encountered soil and which samples were obtained from the white material in the past.	This information will be provided as part of the overall discussion of the white powdery material in this Part A Phase 1 Data Gaps Evaluation Report.
			Several samples of the white material should be collected and analyzed for the complete suite of COPCs to characterize this material. This characterization objective is not clearly stated in the Workplan which focuses on the extent of the white powdery material.	White powdery material was only encountered in two of the samples collected from this unit. Where it was encountered, the interval containing the white powdery material was specifically sampled and analyzed for the full suite of COPCs for this unit.

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			In PG&E's 1999 document regarding the Railroad Debris Site, black material is identified on maps, cross-sections and tables as "Black Material" or "Sandy Black Material". The Workplan identifies the Black Material as "Asphalt Material". The GSU is uncertain if the "Black Material" is actually asphalt and requests that PG&E clarify this issue. The black waste should be clearly defined in the Workplan report and associated boring logs.	As agreed during the August 29, 2007 conference call, this information is provided in this Part A Phase 1 Data Gaps Evaluation Report.
			Table 6-22, AOC 14 Proposed Sampling Plan, Footnotes: Footnote 1 from Table 6-22 indicates that "mechanical equipment" access may be an issue at the site. This does not appear to be a significant concern due to generally flat lying topography (see Figure 12). Unless PG&E obtains prior approval from DTSC, PG&E should utilize mechanical equipment (e.g., a drill rig) to collect samples from the proposed depths specified in the Workplan.	The presence of the railroad tracks to the north and Interstate 40 to the south makes bringing mechanical equipment to this unit difficult. Either location requires a permit to allow access for mechanical equipment. Due to the extreme difficulty of obtaining a permit to cross the railroad tracks, PG&E negotiated a permit with CalTrans to allow mechanical equipment to be lifted onto the site by crane from Interstate 40.
			Footnote 2 indicates that debris and white waste material "may" be sampled and analyzed. DTSC is uncertain of the rationale for not sampling and analyzing debris and waste material.	The white powdery material has already been sampled extensively, and prior comments from DTSC focused on concerns relating to underlying impacts to soil. Because the purpose of this stage of work was to delineate the boundaries of the affected area, it was not certain that any white powdery material or debris would be encountered. As described above, white powdery material was encountered in two locations and was sampled. Apparent ACM was encountered in two boring locations (AOC14-2 and AOC14-13). Samples of this suspect material were sent for asbestos analysis. Consistent with the approach to debris at other locations, surface debris was mapped and the mapping result is included in this Part A Phase 1 Data Gaps Evaluation Report.

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	8	Section 6.10	**Undesignated Area 1 – Potential Pipeline Disposal Area** The following additional information should be added to the investigation: • The evaluation of the presence of buried pipes should not be limited to metallic pipes. The geophysical method utilized should evaluate the presence of any buried material with subsequent confirmation of the composition.	The geophysical investigation program for UA-1 included vertical magnetic gradient, electromagnetic, metal detection electromagnetic line locating, and ground-penetrating radar methods to identify buried debris, undifferentiated utilities, and pipelines. Two undifferentiated utilities were identified in UA-1.
			• The suspected dates of disposal should be identified so appropriate aerial photographs can be carefully examined to look for disturbed surface soil where potential burial could have taken place.	A former employee indicated that the suspected time of disposal was in the late 1960s or early 1970s; the exact dates are unknown. Historic photographs from the 1960s through the 1980s were examined; however, areas of disturbed soil were not apparent on the photographs.
			• The facility process from which the asbestos-covered pipes originated should be disclosed to determine if other COPCs should be included in the assessment. With the limited information currently provided, it is recommended that a larger list of COPCs be included in the investigation (currently the only COPC is asbestos). This would require soil sampling that is not proposed in the Workplan.	All available information was provided in the work plan. The potential source of the piping is not known. In accordance with DTSC's request, soil sampling was planned for this unit, and soil samples were to be analyzed for the full suite of COPCs, including ACM. However, as discussed in this Part A Phase 1 Data Gaps Evaluation Report, intrusive sampling was suspended at the request of the DOI.
			• Sampling soil from the trenches is not included in the Workplan. Soil associated with the pipe disposal should be sampled for related COPCs. Additional analyses may be required if soil discoloration, odors, etc. are observed during trenching.	See above response.

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			• If the geophysical survey does not locate the pipelines, then the geophysical survey should be expanded and include information obtained from examination of aerial photographs and site reconnaissance. The geophysical search would terminate if the expanded search did not locate geophysical anomalies. Should geophysics not provide valuable information, trenching in the most likely disposal area (disturbed area) is still suggested to confirm the results of the geophysical survey.	Five trenches were proposed in the vicinity of UA-1 These trenches were to be located as appropriate based on the geophysical results. However, as described above, intrusive investigation was suspended at this unit until another geophysical survey is performed at the new suspected disposal area shown on Figure B-5 in Appendix B.
	9	Section 6.11	**Undesignated Area 2 – Former 300B Pipeline Liquids Tank** CH2M Hill, on behalf of PG&E, submitted a technical memorandum, dated April 27, 2007, which summarizes information pertaining to the closure of the Former 300B Pipeline Liquids Tank (Unit). Additional historic information about the Unit has been obtained since the Workplan was prepared. The Tech Memo concludes that the site investigation and closure process at the Former 300B Pipeline Liquids Tank is complete and no further investigation is proposed for this location. However, the GSU's review of the Tech Memo has found that the historic data are insufficient to characterize the nature and extent of the contamination and, therefore, insufficient to asses risk. Only one sample was collected on April 16, 1996 to assess COPCs. Unfortunately, the sample collected was a composite sample from a depth of 0 to four inches bgs and was placed in a glass jar. The composite sample is not appropriate to assess COPCs and the VOC data are invalid due to the poor sampling methodology employed. Reporting limits for PAHs were also significantly elevated (8 mg/kg) and would not be appropriate for risk purposes. It is therefore recommended that the sampling proposed in the Workplan be conducted for the Unit for the COPCs originally established in the 1990's (i.e., TPH, Metals, SVOCs, VOCs, PAHs, and polychlorinated biphenyls).	As shown on Figure 6-25 for the Former 300B Pipeline Liquids Tank area, provided to DTSC and DOI on September 13, 2007, five boring locations were proposed in this area. Samples were to be collected from 0.5., 1, 3, and 6 feet bgs; refusal (bedrock) was encountered in Borings 300B-2, 300B-4, and 300B-5. All samples were analyzed for Cr(VI), cyanide, TPH-extractable and -purgable, Title 22 metals, VOCs, PAHs, SVOCs, and PCBs. Ten percent of the soil samples collected at Former 300B Pipeline Liquids Tank area were also analyzed for TAL metals and pesticides.

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	10	Section 6.12	**Identification of Existing White Powdery Residue** Section 6.12.1 of the Workplan should also identify the white powdery material described in the Workplan for AOC 10 – East Ravine. Characterization of this white material is requested as a Phase 2 activity (see Phase 2 Recommendations Section).	As requested, characterization of this material was conducted in AOC10 – East Ravine in May 2009 and results of this characterization are presented in this Part A Phase 1 Data Gaps Evaluation Report, Appendix C Attachment 4 Section 2.5.
Phase 2 AOC/SWMU Sampling Recommendations				
	1		The following comments capture issues which the GSU believes are best addressed during a second round of sampling (Phase 2 sampling) after the Phase 1 data are collected and reviewed and/or after PG&E has developed acceptable workplans to implement the activities identified below. **Phase 2 SWMU 1/AOC 1 Former Percolation Bed** In addition to the sampling proposed for the white powdery material, shallow trenching or potholing combined with careful and precise documentation is recommended to quickly determine and document the extent of the white material based on visual observation. The easterly extent of the white powdery material for this AOC should be delineated to evaluate how far back it extends within the slope leading up to facility operations. Concerns exist that either the material or potentially contaminated soil within this slope could continue to impact the wash over time.	As described in this report, PG&E performed trenching and sampling in this area (see discussion in Attachment 1 of Appendix C)**.** Eight trenches were dug in the eastern side of SWMU 1 to evaluate the extent of white powder on the hillside, as shown in the inset of Figures A1-1 to A1-7 of Attachment 1 to Appendix C. The lateral extent of the white powder material within the hillside of SWMU 1 ***has been*** defined. Trench SWMU1-WP-2h defines the northern extent of the white powder, and the southern extent is defined by Trench SWMU1-WP-10 and the topography and native material outcrop just south of trench SWMU1 –WP-10. Additional sampling near and into the sidewall of Bat Cave Wash is not warranted and additional data would not significantly improve data quality, or risk assessment or site remediation decisions. No additional sample locations for evaluating the extent of white powder material are proposed in the Part A, Phase 2 Soil Investigation.
	2		**Phase 2 AOC 4 Debris Ravine** DTSC believes that one or two additional sampling locations should be added to the Bat Cave Wash where the Debris Ravine discharges to the wash on the Havasu National Wildlife Refuge. This outfall area appears to be visible in the wash as	As shown in the revised sample location figures provided to DTSC and DOI on September 13, 2007, sample AOC4-1 was relocated to the mouth of the Debris Ravine to assess whether AOC 4 may be contributing COPCs to Bat Cave

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			seen in the aerial view pictured in Figure 6-12 of the Workplan. The data from these locations will assess potential contaminant transport and deposition that would occur as the ravine discharges to the wash during storm events. GSU staff have noted limited amounts of visible debris material (metal, rubber, concrete) emanating from this outfall area in the wash. Plans for sampling soils that are identified as containing debris should be developed based on the debris mapping to be conducted as part of the Workplan.	Wash.
	3		**Phase 2 AOC 10 East Ravine** During a site visit in July 2006, GSU staff observed small amounts of metal debris in either subarea 10b or subarea 10c. The debris identifies depositional areas in the wash that have been affected by former operations. The location of the metal debris should be confirmed, documented and mapped. Samples and analyses of the soil from this debris area should be conducted during Phase 2.	See response to AOC 10 Specific Comment 4.
			Additional sampling and analysis is required to characterize the white layer occurring in subarea 10c. Shallow trenching or potholing is recommended to quickly determine the extent of the white waste layer. PG&E should indicate exactly where the white waste layer was found in the past and if it was sampled and analyzed. The same requirements apply to the greenish gray layer identified in subarea 10b (CH2MHill, 2006).	See response to AOC 10 Specific Comment 4.

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			The Workplan documents that the history of the two small dams in the East Ravine wash located on the Havasu National Wildlife Refuge is uncertain. Furthermore, the source of the soil used to construct the dams is also of unknown origin. DTSC believes that the dams should be investigated since the dams could contain contaminated materials or buried contaminated soils or wastes when they were constructed. DTSC speculates that the dams may have incorporated contaminated soil from the East Ravine wash.	In response to this comment and DOI Condition 3 in DOI's June 4, 2008 letter, PG&E conducted XRF analysis, followed by confirmatory laboratory analysis, of soil samples collected from the embankment area downstream of subarea AOC 10c. This analysis required modification for accessing subareas AOC 10b and 10c. XRF and laboratory analytical data were correlated before the modifications began to provide a threshold value for future laboratory confirmation samples. Cr(VI) was non-detect in all 10 samples, and the maximum Cr(T) concentration detect in 10 samples submitted to the laboratory was 26 mg/kg, indicating that the embankment was not impacted by Cr(T) or Cr(VI). Additional sampling needs for AOC 10 have been identified in this data gaps evaluation report.
			Since there is a storm drain that discharges and feeds the East Ravine from the west, DTSC believes an additional sample point is needed at the storm drain outfall. This area is located in a vegetated area near the intersection of the access road and visitor parking lot. This particular storm drain has existed since at least 1955 as illustrated by visible discharges in oblique aerial photographs of the site dated May 19, 1955. Contaminant concentrations may be concentrated near the storm drain outfalls similar to releases identified at AOC-9 and AOC-10a.	As requested by DTSC, sampling of this area will be addressed in the Part B Soil Sampling Work Plan as part of the perimeter sampling effort.
	4		**Phase 2 AOC 11 Topographic Low Areas** The first paragraph of Section 6.7.1 of the Workplan indicates that the topographic low area designated L6 was separated from AOC 11 and incorporated into AOC1 – Former Percolation Bed. However, review of the AOC 1 section of the Workplan reveals that no investigation of the L6 area is proposed as part of AOC-1. DTSC is puzzled over this oversight and recommends that at least two borings be installed at the L6 area and that the samples be analyzed for the AOC 11 COPCs.	L6 is not a true topographic low area; rather, it is an area at the bottom of the slope roughly in line with sample location AOC1-T1c. Because of the changeable depositional environment in Bat Cave Wash, the cross-wash transect sampling points of AOC1-T1a, -T1b, and -T1c, combined with the proposed Phase 2 perimeter sampling, was determined to be a more effective means of assessing potential discharges from the compressor station. Samples collected from this area were analyzed for the AOC 1 COPCs, as there is no connection between this area and AOC 11.

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				As described in Attachment 2 of Appendix C, further sampling is proposed in the vicinity of AOC1-T1c (proposed locations AOC1-T1e and AOC1-T1h), as well as north of this area in another location that could receive run-off from the compressor station (proposed location AOC1-T2g).
			The second paragraph of Section 6.7.1 on page 6-18 of the Workplan indicates that a release from Cooling Tower B had entered the drainage to the east as do storm drain discharges. Storm drains and potential soil discoloration are observed along the slope above the AOC 11 ravine in the May 19, 1955 oblique aerial photograph of the site. Therefore, sampling along the top of the ravine outside the northeast facility fence line should be conducted. Furthermore, sampling at the base of the storm drain outlets in the area should also be considered as contaminants may be concentrated near the source of releases as observed at AOC-9 and AOC-10a. TPH, PAHs, and possibly VOCs should also be analyzed from these "source" areas. Approximately four locations are suggested for sample collection and analyses to characterize the topographic low area pictured in Figures 10 and 11 of this memorandum.	Phase 1 sample collection at AOC11e was at the maximum feasible upslope location (the rig cannot climb any further up the slope in this area; the slope becomes very steep). Perimeter sampling will be conducted at the top of the slope during the Part B sampling effort. Data from AOC11e and AOC11c were used to evaluate the need to sample on the upper slope of this area, which is very steep and/or directly below the outfall (also located high on the steep slope). Limited (physically feasible) additional sampling is proposed in this area and presented in this Part A Phase 1 Data Gaps Evaluation Report. See response to Specific Comment 5
	5		**Phase 2 AOC 14 Railroad Debris Site** Additional samples are requested to assess contaminant transport via surface run off from the Railroad Debris Site. Current and historic transport should be considered and assessed. PG&E should submit sample locations for DTSC review and approval. DTSC believes the site currently drains to Bat Cave Wash to the west and, therefore, requests that samples from the wash also be obtained at known outfall locations. Metal debris has been observed entering Bat Cave Wash from the Railroad Debris Site area near the northwest corner of the site.	An additional cross-wash transect (AOC1-T6) was added in Bat Cave Wash immediately below AOC 14. Also AOC14 samples AOC14-SS-3 and AOC14-SS-4 were located west of AOC 14 to assess impacts west of the AOC boundary.

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	6		**Phase 2 Identification of Existing White Powdery Residue** The workplan indicates that no sampling program is proposed unless additional white material is identified. It is necessary to provide a general description of a sampling program to guide sampling of white material (e.g., AOC - 10) and any new areas of white material that may also be identified. PG&E should prepare procedures of the investigation program for DTSC review and approval. It should be noted that areas of white residue have been recently identified within Bat Cave Wash and at the Railroad Debris Site.	As noted in the work plan, there is a difference in the two types of white powdery material likely to be present in the Railroad Debris Site and Bat Cave Wash. The material present in the Railroad Debris site is most likely lime sludge from the former water treatment system; this is supported by the relatively low levels of chromium detected in this material in extensive previous investigation. The white powdery material in Bat Cave Wash is more likely due to mineral deposition from former cooling water discharges. Both of these locations were investigated extensively as part of the Phase 1 investigation, and a map of the white powdery material in the two areas is included in this report. The data from the recent DTSC sampling in SWMU 1 and AOC 14 are consistent with the prior data, indicating again that levels of chromium (and all other metals) are low in the white powdery material in AOC 14 and slightly elevated in SWMU 1. No white powdery material was encountered in any borings in the East Ravine. The potential source of the white powdery material in the East Ravine has not been determined. Evaluation of this material will be conducted as described for AOC 10 Specific Comment 4
	7		**Phase 2 Site Perimeter and Storm Drain Sampling** PG&E should prepare a sampling plan for the site perimeter/fence line area and areas associated with historic releases and historic storm drain discharges to address concerns described in General Comment 7 of this memorandum.	See response to General Comment 7.

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United States Department of the Interior (DOI). 2008. *PG&E Topock Compressor Station Remediation Site – DOI Direction to PG&E on the RFI/RI Soil Investigation Work Plan Part A.* April 24.				
	1		The Federal Agencies are providing the following information for incorporation into the draft RFI/RI Soil Investigation Work Plan Part A (Work Plan). Once these changes have been made, we will review the revised document in order to determine if we can approve it. We look forward to discussing this information further at the planned meeting on May 6th, 2008, in Oakland, CA. 1. Please revise the Work Plan to indicate that PG&E will perform analysis for chemicals on the Target Analyte List/Target Compound List (TAL/TCL) on 10% of all samples in each AOC to be sampled. The chemicals on all four lists must be included. The lists can be found at: http://www.epa.gov/superfund/programs/clp/target.htm. This analysis must include samples collected vertically and horizontally. When the total number of samples in an individual AOC is less than 10, then a minimum of one sample for this suite of analyses must be collected from the AOC to satisfy the 10% requirement. The Federal Agencies will work with PG&E to determine locations where samples for the TAL/TCL scan should be collected.	Comment noted. The requested change to the planned sampling program was made. A list of samples to be analyzed for the complete TAL/TCL list was developed in collaboration with DOI, and the proposed samples were analyzed as proposed.
	2		2. IM-3 Baseline Soil Sampling proposed as part of Part A – The four samples proposed near the effluent pipeline do not appear to satisfy the criteria for background or baseline samples because the pipeline has been in place and operating for over two years. However, these samples could possibly be used to bolster the Category 2 data gaps, if collected from locations that have had no anthropogenic impact. Our understanding is that DTSC personnel will be on site during the Part A Soil Sampling to assist in selecting sampling locations.	The proposed sample locations along the IM No. 3 pipeline were added to replace several data quality Category 2 samples formerly contained in the background data set. As noted in the June 12, 2008 email from Keith Sheets/CH2M HILL to DOI, five potential sampling locations near the IM No. 3 effluent pipeline (Locations Q, R, and S) and IM No. 3 treatment plant (Locations K and N) were selected jointly by representatives from DTSC, PG&E, and the federal agencies during a site visit on May 21, 2008. During the site walk, it was confirmed that there was no evidence of anthropogenic influence on these sample locations, and DOI approved these background sampling locations in its June 4, 2008 letter.

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	3		3. Please revise the Work Plan to indicate that PG&E will evaluate surface soils in order to asses the nature and extent of potential windborne contaminants to determine whether or not contamination has been deposited on Federal property. Please indicate proposed sampling techniques to be utilized. The Federal Agencies will work with PG&E to determine suitable sampling sites and consultation requirements.	A surface soil sample was collected at each proposed boring location, including all background sampling locations. As expressed at the May 7, 2008 RCRA/CERCLA meeting, PG&E believes that the proposed Part A soil sampling program will adequately address the nature and extent of contaminants via the potential windborne pathway. See also response to Condition 4 in the June 4, 2008 letter below.
	4		4. The BLM completed consultation requirements with respect to the Work Plan and received concurrence from the California State Historic Preservation Officer on the determination that the undertaking will not adversely affect historic properties (see attachment 1). The stipulations that are required in the Work Plan to avoid effects to known historic properties are as follows: - All routes of travel must be clearly identified prior to initiation of the undertaking; - All project participants must be given a pre-implementation briefing; and - Archeological and Native American monitors will be present during implementation of the testing.	The routes of travel were identified on the planned sampling figures provided to DTSC and DOI on September 13, 2007. Pre-project briefings were provided by qualified PG&E staff to all personnel participating in the field work effort. PG&E invited Native American monitors to be present every day that work was performed. However, because PG&E cannot require the Native American monitors to come to the site for this work, PG&E did not stop work when tribal monitors were not present.
	5		5. Tribal Consultation on the Work Plan was completed in December of 2007, and the package was sent to the CA SHPO on January 11th, before the added level of detail about the grading at AOC-10 and AOC-11 was discussed. The grading is an added level of detail that was not specifically described in PG&E's September 13, 2007, letter, or in the Part A Soil Investigation Work Plan submitted for consultation. As a result of the most recent site visit by PG&E and DOI personnel on April 17th, 2008, please revise the Work Plan to incorporate the final decisions made for access pathways to be utilized for AOCs 10 and 11 and sampling locations in Bat Cave Wash. Include design details and	Please see response to Condition 2 in DOI's Conditional Approval Letter for the Phase 1 investigation, below.

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			updated figures that describe your latest proposal as to how and where to access sampling locations on Federal property. Upon receipt of the updated information, the Federal Agencies will determine if the Work Plan will require additional consultation.	
	6		6. The Federal Agencies had previously agreed to allow the Part A Soil Investigation to proceed if the information and analytical results from the investigation would be used to develop DQOs for subsequent sampling efforts. Please state in the Work Plan that the results from Part A will be used to develop DQOs for subsequent sampling efforts in AOCs outside the Compressor Station fence line. This will be necessary to support risk assessment and closure efforts. Please note that the Federal Agencies are preparing a letter that outlines several issues that are broader in scope than just the Part A Soil Sampling Plan. The identified issues will need to be fully addressed and resolved to the satisfaction of the Federal Agencies in order to ensure that the project can move forward expeditiously. The letter will also propose a Senior Managers Meeting between PG&E and the Federal Agencies on June 26, 2008, from 1:00 to 3:00 pm, in Phoenix, AZ, at the BLM State Office.	DQOs were drafted as a result of meetings held between June and September 2008 with representatives from DOI, DTSC, and PG&E to discuss and agree upon DQO Steps 1 through 5. Data from the Phase 1 investigation were required to complete Steps 6 and 7, as outlined in this Report; Step 7 provided the sampling requirements for the Phase 2 investigation. Comment noted.
United States Department of the Interior (DOI). 2008. *PG&E Topock Compressor Station Remediation Site – DOI Conditional Approval of Phase 1 of the Topock RFI/RI Soil Investigation Work Plan Part A, November 16, 2006.* June 4.				
DOI	1		The Bureau of Land Management completed Section 106 consultation requirements with respect to the Work Plan and received concurrence from the California State Historic Preservation Officer on the determination that the undertaking will not adversely affect historic properties (see attachment 1). PG&E will be required to adhere to the following stipulations in order to avoid effects to known historic properties: - All routes of travel must be clearly identified prior to initiation	See response to Comment 4 in April 24, 2008 letter from DOI to PG&E regarding *DOI Direction to PG&E on the RFI/RI Soil Investigation Work Plan Part A* above.

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			of the undertaking; - All project participants must be given a pre-implementation briefing - Archeological and Native American monitors will be present during implementation of the testing.	
DOI	2		PG&E will provide updated figures reflecting final decisions made during the May 21st, 2008, site visit for access pathways and sampling locations for AOCs 10 and 11 and Bat Cave Wash. All approved access pathways and sampling locations agreed during the site visit have undergone Section 106 consultation.	The requirements of this condition were addressed in an email from Mike Cavaliere/CH2M HILL sent to DOI and DTSC July 25, 2008. This response (reiterated below) served as the basis for field implementation of the Phase 1 sampling program. "The revised figures for AOC-1 (northern area including Bat Cave Wash), AOC-10, and AOC-11 are attached to this email. The revised access pathways and sampling locations shown on each figure were discussed in the May 21, 2008 site walk with Federal Agencies. In addition, the sampling locations for AOC-1 near the mouth of Bat Cave Wash were revised at the direction of Dawn Arnold/SAIC during a July 15, 2008 phone call and a July 17, 2008 email. Based on direction received on the phone call and the email, one existing sample (BCW-3) was moved and three new samples were added (BCW-4, BCW-5, BCW-6)." In addition, background sample locations BKG-12 through BKG-16 were added during the May 21, 2008 site walk. A revised figure including the background sampling locations was also attached to the July 25, 2008 email.
DOI	3		PG&E will provide construction information related to gain access for soil sampling in the East Ravine including; design specifications for any earth work required on the largest embankment, flood event mitigation measures and a restoration plan.	The requirements of Condition 3 were addressed in a series of conference calls, the results of which were subsequently provided in an email from Mike Cavaliere/CH2M HILL sent to DOI and DTSC July 25, 2008. The content of the email is summarized below and served as the basis for field implementation.

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				A drawing with specifications for earthwork required to modify the upper embankment in the East Ravine for access to soil sampling locations within East Ravine (AOC-10) was transmitted to DOI and DTSC on June 12, 2008 via email from Keith Sheets/CH2M HILL. The details provided in these documents were discussed between Mike Cavaliere/CH2M HILL and Bernard Freeman/USFWS, Chief of Division of Engineering on May 28, 2008. PG&E conducted the embankment construction in accordance with the drawing and specifications. Flood water mitigation and embankment restoration were discussed during a June 5, 2008 telephone call between Mike Cavaliere/CH2M HILL and Cindi Hall/USFWS. Soils displaced for embankment modification were compacted using a combination of potable water (which was also used for dust control) and mechanical compaction. Temporary silt fences were installed during investigation activities. It is not anticipated that stormwater will flow over the embankment; observations by PG&E indicate that no more than 1 to 2 feet of standing water have been noted in the past, and the embankment modification leaves the embankment approximately 4 feet in height. No danger of flooding was noted during the Phase 1 investigation. Nonetheless, during storm events, onsite staff will periodically check for standing water in the impoundment behind the embankment. If, based on these observations, standing water may rise to levels near the height of the lowered embankment, PG&E is prepared to raise the effective height of the embankment by either using sandbags and plastic sheeting or by replacing some or all of the material displaced to construct the access pathway, whichever can be implemented most quickly. The access route will remain intact until soil and groundwater investigation activities in the East Ravine are complete, at which time PG&E will develop embankment restoration details in consultation with USFWS, as required.

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			In addition, PG&E will work with the Fish and Wildlife Service about how to screen and/or sample the soil that will be disturbed for construction purposes in the embankment for elevated Cr VI and Cr III concentrations. In addition, PG&E will work with the Fish and Wildlife Service regarding how to satisfactorily manage any chromium contaminated soil encountered in the embankment.	Screening/sampling of embankment soil disturbed during embankment modification was discussed during a June 19, 2008 conference call including Mike Cavaliere/CH2M HILL, Keith Sheets/CH2M HILL, Shawn Duffy/CH2M HILL, Curt Russell/PG&E, Cindi Hall/USFWS, and Carrie Marr/USFWS. A technical memorandum describing the initial screening process and proposed screening process during field construction was submitted to DOI on September 17, 2008. Screening and sampling in the field were performed in accordance with the procedures outlined in the technical memorandum. A summary of the embankment modification data is included in Appendix B of this Part A Phase 1 Data Gaps Evaluation Report**.**
DOI	4		PG&E will perform analysis for chemicals on the Target Analyte List/Target Compound List (TAL/TCL) on 10% of all samples in each AOC to be sampled. The chemicals on all four lists must be included. The lists can be found at http://www.epa.gov/superfund/programs/clp/target.htm This analysis will include samples collected vertically and horizontally. When the total number of samples in an individual AOC is less than 10, then a minimum of one sample for this suite of analyses must be collected from the AOC to satisfy the 10% requirement. The Federal Agencies will work with PG&E to determine locations where samples for the TAL/TCL scan should be collected.	PG&E conducted the required analysis as outlined in this condition. The chemical lists found at http://www.epa.gov/superfund/programs/clp/target.htm were used to ensure that the full range of chemical parameters required was analyzed. Sixty-six samples were analyzed for the full TAL/TCL suite of parameters. This included 28 samples from AOC/SWMU-1, seven samples from AOC 4, three samples from AOC 9, nine samples from AOC 10, seven samples from AOC 11, two samples from AOC 12, eight samples from AOC 14, and two samples from UA-2 (the Former 300B Pipeline Liquids Tank). The specific sample locations were identified in concert with DOI and were confirmed in the August 14, 2008 email from Mike Cavaliere/CH2M HILL to Kris Doebbler and other DOI staff. The August 14 email included one modification. Locations AOC14-7 and AOC14-10 were added to the list of locations to be analyzed for the full suite of TAL/TCL parameters in place of locations AOC14-11 and AOC14-13 because it was determined that surface soil samples were not scheduled to be collected at AOC14-11 and AOC14-13.

TABLE F-1

Documentation of Compliance and Response to California Department of Toxic Substances Control (DTSC) and United States Department of the Interior (DOI) Comments

Topock RCRA Facility Investigation/Remedial Investigation Soil Investigation Work Plan Part A
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DOI	5		Four potential sampling locations near the IM-3 effluent pipeline were selected jointly by representatives from CA DTSC, PG&E and the Federal Agencies during the site visit on May 21, 2008. These soil samples will be collected during the Part A Soil Investigation and have already undergone required consultation as part of the IM-3 Baseline project. Soil samples will be taken at multiple depths, including the same lithologic unit from which some previous samples identified as Category 2 data were taken. These samples may be utilized by PG&E to supplement the existing Category 2 dataset. DTSC personnel will be on site during the Part A Soil Sampling field work to assist in selecting sampling locations.	As noted in the June 12, 2008 email from Keith Sheets/CH2M HILL to DOI, five potential sampling locations near the IM No. 3 effluent pipeline (Locations Q, R, and S) and IM No. 3 treatment plant (Locations K and N) were selected jointly by representatives from DTSC, PG&E, and the federal agencies at a site visit on May 21, 2008. During the site walk, it was confirmed that there was no evidence of anthropogenic influence on these sample locations. The resulting background data set therefore consists of Category 1 data only. The five sample locations were used to supplement the existing data set and replaced the Mittelhauser Category 2 data within the background data set. It should be noted that the intention was to supplement the Category 1 background data set, not the Category 2 data set as stated here.
DOI	6		The Federal Agencies had previously agreed to allow the Part A Soil Investigation to proceed if the information and analytical results from the investigation would be used to develop DQOs for subsequent sampling efforts. Please state in the Work Plan that the results from Part A will be used to develop DQOs for subsequent sampling efforts in AOCs outside the Compressor Station fence line. This will be necessary to support risk assessment and closure efforts.	As discussed on June 4, 2008, DOI did not require revision to the RCRA Facility Investigation/Remedial Investigation Work Plan Part A. The reference to a work plan in this condition is any written communication from PG&E to DOI. As required by this condition and as confirmed in the June 12, 2008 email from Keith Sheets/CH2M HILL, the results from Part A Phase 1 will be used to develop DQOs for subsequent sampling efforts at AOCs outside the compressor station fence line. It should be noted that Steps 1 through 5 of the DQO process have already been completed through joint meetings between PG&E, DOI, and DTSC and that it is anticipated that Steps 6 and 7 will be completed in joint meetings, including these and other stakeholders, following completion of the data evaluation process for the Phase 1 sampling.

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DOI	7		PG&E will begin implementation of a risk assessment data specification and data gap process using a management tool such as the "Risk Assessors Data Usability Specification Matrix" (or a functional equivalent) provided by DOI via email on May 21. By completing this process and utilizing such a tool, PG&E will be able to identify shortcomings and data gaps upon completion of Phase 1 which can be addressed in the Phase 2 DQOs.	As discussed during the June 4, 2008 RCRA/CERCLA meeting, the matrix outline provided by DOI via email on May 21 is an example of a management tool and not a requirement. There is flexibility in the type and amount of information to be incorporated into the tool. This management tool did not need to be completed or approved prior to the start of field work for the Part A Phase 1 investigation.
			<u>Additional Information for Upcoming Part A Phase 2</u>: 1. PG&E will evaluate surface soils in order to asses the nature and extent of potential windborne contaminants to determine the possibility that contamination originating from the Topock Compressor Station has been deposited on Federal property. The Federal agencies will work with PG&E to determine proposed sampling techniques, analytical suites, suitable sampling sites and consultation requirements	A surface soil sample was collected at each proposed boring location, including all background sampling locations. As expressed at the May 7, 2008 RCRA/CERCLA meeting, PG&E believes that the proposed Part A soil sampling program will adequately address the nature and extent of contaminants via the potential windborne pathway.
			2. PG&E, with input from the Federal agencies, will identify Bat Cave Wash sediment sampling needs within the interior of the tamarisk habitat during the Phase 2 DQO process. Additional Section 106 Consultation will be conducted to address proposed routes and mechanical means to access the interior of the habit to facilitate collection of additional sediment samples.	Comment noted. Sediment sampling needs within the tamarisk habitat will be evaluated during the Phase 2 DQO process.