



Wednesday, December 20, 2017

Ron Hudson
Aptim
6380 S. Fiddler's Green Circle, Ste. 310
Greenwood Village, CO 80111

Re: ALS Workorder: 1712227
Project Name: ConocoPhillips Soil
Project Number: 148083

Dear Mr. Hudson:

Ten soil samples were received from Aptim, on 12/9/2017. The samples were scheduled for the following analyses:

GC/MS Semivolatiles

GC/MS Volatiles

Inorganics

Metals

Total Extractable Petroleum Hydrocarbons (Diesel)

Total Volatile Petroleum Hydrocarbons (Gasoline)

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Jeff R. Kujawa
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



1712227

GC/MS Volatiles:

The samples were analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C.

All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
M+P-Xylene	MS/MSD	Low
M+P-Xylene	MS/MSD	RPD High
Benzene	MSD	Low
Benzene	MS/MSD	RPD High
Toluene	MSD	Low
Toluene	MS/MSD	RPD High
Ethylbenzene	MSD	Low
Ethylbenzene	MS/MSD	RPD High
O-Xylene	MSD	Low
O-Xylene	MS/MSD	RPD High

The recoveries of these compounds in the laboratory control sample and laboratory control sample duplicate were within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects. No further action was taken.

All remaining acceptance criteria were met.

GC/MS Semivolatiles:

The samples were analyzed using GC/MS following the current revision of SOP 506 based on SW-846 Method 8270D. The samples were analyzed using selective ion monitoring (SIM), in order to achieve lower reporting limits.

All acceptance criteria were met.

GRO:

The samples were analyzed following the current revision of SOP 425 generally based on SW-846 Methods 8000C and 8015D. TVPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C6 to C10.



All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
Gasoline range organics	MS/MSD	Low

The recoveries for gasoline range organics in the laboratory control sample and laboratory control sample duplicate were within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects, so no further action was taken.

All remaining acceptance criteria were met.

DRO:

The samples were analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exception:

Spiked Compound	QC Sample	Direction
Diesel Range Organics	MSD	High

The recovery of this compound in the laboratory control sample and laboratory control sample duplicate was within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects. No further action was taken.

All remaining acceptance criteria were met.

Metals:

The samples were analyzed following SW-846, 3rd Edition procedures. Analysis by ICPMS followed method 6020A and the current revision of SOP 827. Mercury analysis by CVAA followed method 7471A and the current revision of SOP 812.

All acceptance criteria were met.

Inorganics:

The samples were analyzed following USDA Handbook 60 Chapter 6 procedures for the current revision of the following SOP and method:

Analyte	Method	SOP #
Electrical conductivity	USDA60	810 Draft
Sodium Adsorption Ratio	USDA60	810 Draft



Paste pH

USDA60

810 Draft

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1712227

Client Name: Aptim

Client Project Name: ConocoPhillips Soil

Client Project Number: 148083

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B-1	1712227-1		SOIL	08-Dec-17	14:02
B-2	1712227-2		SOIL	08-Dec-17	14:12
B-3	1712227-3		SOIL	08-Dec-17	14:20
B-4	1712227-4		SOIL	08-Dec-17	14:32
S-1	1712227-5		SOIL	08-Dec-17	14:42
S-2	1712227-6		SOIL	08-Dec-17	15:00
S-3	1712227-7		SOIL	08-Dec-17	15:10
S-4	1712227-8		SOIL	08-Dec-17	15:21
S-5	1712227-9		SOIL	08-Dec-17	15:34
S-6	1712227-10		SOIL	08-Dec-17	15:46
B-1	1712227-11		SatExtract	08-Dec-17	14:02
B-2	1712227-12		SatExtract	08-Dec-17	14:12
B-3	1712227-13		SatExtract	08-Dec-17	14:20
B-4	1712227-14		SatExtract	08-Dec-17	14:32
S-1	1712227-15		SatExtract	08-Dec-17	14:42
S-2	1712227-16		SatExtract	08-Dec-17	15:00
S-3	1712227-17		SatExtract	08-Dec-17	15:10
S-4	1712227-18		SatExtract	08-Dec-17	15:21
S-5	1712227-19		SatExtract	08-Dec-17	15:34
S-6	1712227-20		SatExtract	08-Dec-17	15:46

Chain-of-Custody

Form 202r8

ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

PROJECT NAME	SAMPLER	R. Sucato	DATE	TURNAROUND	WORKORDER #	PAGE	By Lab or	Return to Client
PROJECT No.	ConocoPhillips Soil Sampling	SITE ID Prosper Farms - Soil	12/8/2017	RUSH		1	of	1
PROJECT No.	148083	EDD FORMAT COGCC						
COMPANY NAME	APTIM	PURCHASE ORDER						
SEND REPORT TO	Ron Hudson	BILL TO COMPANY APTIM						
ADDRESS	6380 S. Fiddler's Green Cir Ste 310	INVOICE ATTN TO Ron Hudson						
CITY / STATE / ZIP	Greenwood Village, CO 80111	ADDRESS 6380 S. Fiddler's Green Cir Ste 310						
PHONE	303.741.7161	CITY / STATE / ZIP Greenwood Village, CO 80111						
FAX		PHONE 303.741.7161						
E-MAIL	ron.hudson	FAX						
		E-MAIL ron.hudson@aptim.com						
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	USEPA Method
1 ①	B-1	S	12/8/2017	14:02	3	8	X	X
1 ②	B-2	S	12/8/2017	14:12	3	8	X	X
1 ③	B-3	S	12/8/2017	14:20	3	8	X	X
1 ④	B-4	S	12/8/2017	14:32	3	8	X	X
1 ⑤	S-1	S	12/8/2017	14:42	3	8	X	X
1 ⑥	S-2	S	12/8/2017	15:00	3	8	X	X
1 ⑦	S-3	S	12/8/2017	15:10	3	8	X	X
1 ⑧	S-4	S	12/8/2017	15:21	3	8	X	X
1 ⑨	S-5	S	12/8/2017	15:34	3	8	X	X
1 ⑩	S-6	S	12/8/2017	15:46	3	8	X	X

*Time Zone (Circle): / EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:		QC PACKAGE (check below)						
		X	LEVEL II (Standard QC)		LEVEL III (Std QC + forms)		LEVEL IV (Std QC + forms + raw data)	

RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME
RECEIVED BY	<i>[Signature]</i>	Rocco S. Webb	12/8/2007	5:30 PM
RELINQUISHED BY	<i>[Signature]</i>	C Trimble	12-9-17	0 P 15
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Preservative Key:		1-HCl	2-HNO3	3-H2SO4	4-NaOH	5-NaHSO4	7-Other	8-4 degrees C	9-5035

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Table 910-1 CONCENTRATION LEVELS:

Contaminant of Concern	Concentrations
Organic Compounds in Soil	
TPH (total volatile and extractable petroleum	500 mg/kg
Benzene	0.17 mg/kg ₂
Toluene	85 mg/kg ₂
Ethylbenzene	100 mg/kg ₂
Xylenes (total)	175 mg/kg ₂
Acenaphthene	1,000 mg/kg ₂
Anthracene	1,000 mg/kg ₂
Benz(a)anthracene	0.22 mg/kg ₂
Benzo(b)fluoranthene	0.22 mg/kg ₂
Benzo(k)fluoranthene	2.2 mg/kg ₂
Benzo(a)pyrene	0.022 mg/kg ₂
Chrysene	22 mg/kg ₂
Dibenzo(a,h)anthracene	0.022 mg/kg ₂
Fluoranthene	1,000 mg/kg ₂
Fluorene	1,000 mg/kg ₂
Indeno(1,2,3,c,d)pyrene	0.22 mg/kg ₂
Naphthalene	23 mg/kg ₂
Pyrene	1,000 mg/kg ₂
Organic Compounds in Ground Water	
Benzene	5 µg/l ₃
Toluene	560 to 1,000 µg/l ₃
Ethylbenzene	700 µg/l ₃
Xylenes (Total)	1,400 to 10,000 µg/l _{3,4}
Inorganics in Soils	
Electrical Conductivity (EC)	<4 mmhos/cm or 2x background
Sodium Adsorption Ratio (SAR)	<12 ₅
pH	6-9
Inorganics in Ground Water	
Total Dissolved Solids (TDS)	<1.25 x background ₃
Chlorides	<1.25 x background ₃
Sulfates	<1.25 x background ₃
Metals in Soils	
Arsenic	0.39 mg/kg ₂
Barium (LDNR True Total Barium)	15,000 mg/kg ₂
Boron (Hot Water Soluble)	2 mg/l ₃
Cadmium	70 mg/kg _{3,6}
Chromium (III)	120,000 mg/kg ₂
Chromium (VI)	23 mg/kg _{2,6}
Copper	3,100 mg/kg ₂
Lead (inorganic)	400 mg/kg ₂
Mercury	23 mg/kg ₂
Nickel (soluble salts)	1,600 mg/kg _{2,6}
Selenium	390 mg/kg _{2,6}
Silver	390 mg/kg ₂
Zinc	23,000 mg/kg _{2,6}
Liquid Hydrocarbons in Soils and Ground Water	
Liquid hydrocarbons including condensate and oil	Below detection level



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: APTIM

Workorder No: 1710227

Project Manager: _____

Initials: CDT Date: 12-9-17

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	<input checked="" type="radio"/> N/A	YES	NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>3.4</u>			
No. of custody seals on cooler: <u>1</u>			
External µR/hr reading: <u>10</u>			
Background µR/hr reading: <u>10</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / ☒ NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: [Signature] 12-13-17

FedEx Package
Express
US Airbill

FedEx Tracking Number

1 From
Date 12/8/2017

Sender's Name R. Sucato

Company APTIM

Address 6380 Fiddlers Green Ste 310

City Greenwood Village State CO ZIP 80111

2 Your Internal Billing Reference LA Plata

3 To
Recipient's Name

Company ALS ENVIRONMENTAL GCP

Address 225 COMMERCE DR

Address 36

City FORT COLLINS State CO ZIP 80524-2762

0126606245



8115 6358-5673

0215 171222 Recipient's Copy

4 Express Package Service

Packages up to 150 lbs.
For packages over 150 lbs., see the
FedEx Express Freight US Airbill

*To most locations.

Next Business Day

FedEx First Overnight
Earliest next business morning delivery to select
locations. Friday shipments will be delivered on
Monday unless Saturday delivery is selected.

FedEx Priority Overnight
Next business morning. Friday shipments will be
delivered on Monday unless Saturday delivery
is selected.

FedEx Standard Overnight
Next business afternoon.
Saturday delivery NOT available.

2 or 3 Business Days

FedEx 2Day A.M.
Saturday delivery NOT available.

FedEx 2Day
Saturday afternoon & Thursday shipments
will be delivered on Monday unless Saturday
delivery is selected.

FedEx Express Saver
Thursday delivery NOT available.

5 Packaging *Declared value limit \$500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options Fees may apply. See the FedEx Service Guide.

☒ Saturday Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required
Package may be left without
signature for delivery.

☐ Direct Signature
Someone at recipient's address
may sign for delivery.

☐ Indirect Signature
Pro use is available at recipient's
address only when a shipping label
address uses a business or
residential destination only.

Does this shipment contain dangerous goods?
One box must be checked.
☐ No ☐ Yes
Yes (per attached
Shipper's Declaration,
not required.) ☐ Dry Ice ☐ UN 1465 ☐ Cargo Aircraft Only

7 Payment Bill to

Sender ☐ Enter FedEx Acct. No. or Credit Card No. below. Obtain recip.
Acct. No. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages Total Weight 255 lbs.

Credit Card Auth.

Your liability is limited to US\$500 unless you declare a higher value. See the current FedEx Service Guide for details.

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: B-1
 Legal Location:
 Collection Date: 12/8/2017 14:02

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-1
 Matrix: SOIL
 Percent Moisture: 7.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	72	DMH	5.3	MG/KG	1	12/13/2017 16:12
Surr: O-TERPHENYL	89		49-114	%REC	1	12/13/2017 16:12
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.53	MG/KG	1	12/13/2017 10:53
Surr: 2,3,4-TRIFLUOROTOLUENE	101		76-126	%REC	1	12/13/2017 10:53
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	ND		3.5	UG/KG	1	12/14/2017 23:00
ACENAPHTHENE	ND		3.5	UG/KG	1	12/14/2017 23:00
FLUORENE	ND		3.5	UG/KG	1	12/14/2017 23:00
ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:00
FLUORANTHENE	1.9	J	3.5	UG/KG	1	12/14/2017 23:00
PYRENE	7.4		3.5	UG/KG	1	12/14/2017 23:00
BENZO(A)ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:00
CHRYSENE	1.1	J	3.5	UG/KG	1	12/14/2017 23:00
BENZO(B)FLUORANTHENE	2.8	J	3.5	UG/KG	1	12/14/2017 23:00
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	12/14/2017 23:00
BENZO(A)PYRENE	ND		3.5	UG/KG	1	12/14/2017 23:00
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	12/14/2017 23:00
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:00
Surr: NITROBENZENE-D5	72		28-113	%REC	1	12/14/2017 23:00
Surr: 2-FLUOROBIPHENYL	77		41-106	%REC	1	12/14/2017 23:00
Surr: TERPHENYL-D14	90		25-147	%REC	1	12/14/2017 23:00
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.4	UG/KG	1	12/13/2017 17:44
TOLUENE	ND		5.4	UG/KG	1	12/13/2017 17:44
ETHYLBENZENE	ND		5.4	UG/KG	1	12/13/2017 17:44
M+P-XYLENE	ND		5.4	UG/KG	1	12/13/2017 17:44
O-XYLENE	ND		5.4	UG/KG	1	12/13/2017 17:44
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 17:44
Surr: DIBROMOFLUOROMETHANE	105		61-134	%REC	1	12/13/2017 17:44
Surr: TOLUENE-D8	102		57-135	%REC	1	12/13/2017 17:44
Surr: 4-BROMOFLUOROBENZENE	100		52-151	%REC	1	12/13/2017 17:44
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.05	MG/KG	10	12/19/2017 17:03
ARSENIC	3.4		0.2	MG/KG	10	12/19/2017 17:03
BORON	ND		15	MG/KG	10	12/19/2017 17:03
BARIUM	260		0.5	MG/KG	10	12/19/2017 17:03
CADMIUM	ND		0.2	MG/KG	10	12/19/2017 17:03
CHROMIUM	14		1	MG/KG	10	12/19/2017 17:03
COPPER	40		2	MG/KG	10	12/19/2017 17:03
NICKEL	14		2	MG/KG	10	12/19/2017 17:03
LEAD	8.1		0.2	MG/KG	10	12/19/2017 17:03
SELENIUM	1.6		1	MG/KG	10	12/19/2017 17:03
ZINC	97		10	MG/KG	10	12/19/2017 17:03

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-1
Legal Location:
Collection Date: 12/8/2017 14:02

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-1
Matrix: SOIL
Percent Moisture: 7.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.04	SW7471	0.035	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 20:46
Sodium Adsorption Ratio PASTE PH	7.5	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: B-2
 Legal Location:
 Collection Date: 12/8/2017 14:12

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-2
 Matrix: SOIL
 Percent Moisture: 5.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
Diesel Range Organics	110	DMH	SW8015M 5.2	MG/KG	1	Prep Date: 12/13/2017 PrepBy: JFN 12/13/2017 17:16
Surr: O-TERPHENYL	86		49-114	%REC	1	12/13/2017 17:16
Gasoline Range Organics						
GASOLINE RANGE ORGANICS	ND		SW8015 0.47	MG/KG	1	Prep Date: 12/13/2017 PrepBy: JFN 12/13/2017 11:15
Surr: 2,3,4-TRIFLUOROTOLUENE	101		76-126	%REC	1	12/13/2017 11:15
GC/MS Semi-volatiles						
NAPHTHALENE	ND		SW8270SIM 3.5	UG/KG	1	Prep Date: 12/13/2017 PrepBy: LML 12/14/2017 23:51
ACENAPHTHENE	ND		3.5	UG/KG	1	12/14/2017 23:51
FLUORENE	ND		3.5	UG/KG	1	12/14/2017 23:51
ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:51
FLUORANTHENE	ND		3.5	UG/KG	1	12/14/2017 23:51
PYRENE	6.8		3.5	UG/KG	1	12/14/2017 23:51
BENZO(A)ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:51
CHRYSENE	ND		3.5	UG/KG	1	12/14/2017 23:51
BENZO(B)FLUORANTHENE	ND		3.5	UG/KG	1	12/14/2017 23:51
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	12/14/2017 23:51
BENZO(A)PYRENE	ND		3.5	UG/KG	1	12/14/2017 23:51
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	12/14/2017 23:51
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	12/14/2017 23:51
Surr: NITROBENZENE-D5	83		28-113	%REC	1	12/14/2017 23:51
Surr: 2-FLUOROBIPHENYL	74		41-106	%REC	1	12/14/2017 23:51
Surr: TERPHENYL-D14	86		25-147	%REC	1	12/14/2017 23:51
GC/MS Volatiles						
BENZENE	ND		SW8260 5.2	UG/KG	1	Prep Date: 12/13/2017 PrepBy: JXK 12/13/2017 18:08
TOLUENE	ND		5.2	UG/KG	1	12/13/2017 18:08
ETHYLBENZENE	ND		5.2	UG/KG	1	12/13/2017 18:08
M+P-XYLENE	ND		5.2	UG/KG	1	12/13/2017 18:08
O-XYLENE	ND		5.2	UG/KG	1	12/13/2017 18:08
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 18:08
Surr: DIBROMOFLUOROMETHANE	108		61-134	%REC	1	12/13/2017 18:08
Surr: TOLUENE-D8	96		57-135	%REC	1	12/13/2017 18:08
Surr: 4-BROMOFLUOROBENZENE	101		52-151	%REC	1	12/13/2017 18:08
ICPMS Metals						
SILVER	ND		SW6020 0.052	MG/KG	10	Prep Date: 12/14/2017 PrepBy: JML 12/19/2017 17:06
ARSENIC	3.4		0.21	MG/KG	10	12/19/2017 17:06
BORON	ND		16	MG/KG	10	12/19/2017 17:06
BARIUM	510		0.52	MG/KG	10	12/19/2017 17:06
CADMIUM	ND		0.21	MG/KG	10	12/19/2017 17:06
CHROMIUM	15		1	MG/KG	10	12/19/2017 17:06
COPPER	42		2.1	MG/KG	10	12/19/2017 17:06
NICKEL	15		2.1	MG/KG	10	12/19/2017 17:06
LEAD	7.2		0.21	MG/KG	10	12/19/2017 17:06
SELENIUM	1.3		1	MG/KG	10	12/19/2017 17:06
ZINC	93		10	MG/KG	10	12/19/2017 17:06

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-2
Legal Location:
Collection Date: 12/8/2017 14:12

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-2
Matrix: SOIL
Percent Moisture: 5.1

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.023	J	SW7471 0.034	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:06
Sodium Adsorption Ratio PASTE PH	7.8		USDA60 0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: B-3
 Legal Location:
 Collection Date: 12/8/2017 14:20

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-3
 Matrix: SOIL
 Percent Moisture: 6.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/14/2017	PrepBy: JFN
Diesel Range Organics	140	DMH	5.3	MG/KG	1	12/14/2017 15:06
Surr: O-TERPHENYL	96		49-114	%REC	1	12/14/2017 15:06
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.52	MG/KG	1	12/13/2017 11:36
Surr: 2,3,4-TRIFLUOROTOLUENE	101		76-126	%REC	1	12/13/2017 11:36
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	ND		3.5	UG/KG	1	12/15/2017 00:08
ACENAPHTHENE	ND		3.5	UG/KG	1	12/15/2017 00:08
FLUORENE	ND		3.5	UG/KG	1	12/15/2017 00:08
ANTHRACENE	ND		3.5	UG/KG	1	12/15/2017 00:08
FLUORANTHENE	ND		3.5	UG/KG	1	12/15/2017 00:08
PYRENE	ND		3.5	UG/KG	1	12/15/2017 00:08
BENZO(A)ANTHRACENE	ND		3.5	UG/KG	1	12/15/2017 00:08
CHRYSENE	ND		3.5	UG/KG	1	12/15/2017 00:08
BENZO(B)FLUORANTHENE	ND		3.5	UG/KG	1	12/15/2017 00:08
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	12/15/2017 00:08
BENZO(A)PYRENE	ND		3.5	UG/KG	1	12/15/2017 00:08
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	12/15/2017 00:08
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	12/15/2017 00:08
Surr: NITROBENZENE-D5	76		28-113	%REC	1	12/15/2017 00:08
Surr: 2-FLUOROBIPHENYL	66		41-106	%REC	1	12/15/2017 00:08
Surr: TERPHENYL-D14	81		25-147	%REC	1	12/15/2017 00:08
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.3	UG/KG	1	12/13/2017 18:31
TOLUENE	ND		5.3	UG/KG	1	12/13/2017 18:31
ETHYLBENZENE	ND		5.3	UG/KG	1	12/13/2017 18:31
M+P-XYLENE	ND		5.3	UG/KG	1	12/13/2017 18:31
O-XYLENE	ND		5.3	UG/KG	1	12/13/2017 18:31
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 18:31
Surr: DIBROMOFLUOROMETHANE	107		61-134	%REC	1	12/13/2017 18:31
Surr: TOLUENE-D8	99		57-135	%REC	1	12/13/2017 18:31
Surr: 4-BROMOFLUOROBENZENE	98		52-151	%REC	1	12/13/2017 18:31
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	0.11		0.053	MG/KG	10	12/19/2017 17:09
ARSENIC	3.5		0.21	MG/KG	10	12/19/2017 17:09
BORON	ND		16	MG/KG	10	12/19/2017 17:09
BARIUM	650		0.53	MG/KG	10	12/19/2017 17:09
CADMIUM	ND		0.21	MG/KG	10	12/19/2017 17:09
CHROMIUM	14		1.1	MG/KG	10	12/19/2017 17:09
COPPER	190		2.1	MG/KG	10	12/19/2017 17:09
NICKEL	13		2.1	MG/KG	10	12/19/2017 17:09
LEAD	11		0.21	MG/KG	10	12/19/2017 17:09
SELENIUM	2.7		1.1	MG/KG	10	12/19/2017 17:09
ZINC	88		11	MG/KG	10	12/19/2017 17:09

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-3
Legal Location:
Collection Date: 12/8/2017 14:20

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-3
Matrix: SOIL
Percent Moisture: 6.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.025	J	SW7471 0.034	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:08
Sodium Adsorption Ratio PASTE PH	7.7		USDA60 0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: B-4
 Legal Location:
 Collection Date: 12/8/2017 14:32

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-4
 Matrix: SOIL
 Percent Moisture: 7.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	180	DMH	5.3	MG/KG	1	12/13/2017 17:37
Surr: O-TERPHENYL	98		49-114	%REC	1	12/13/2017 17:37
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.52	MG/KG	1	12/13/2017 11:59
Surr: 2,3,4-TRIFLUOROTOLUENE	102		76-126	%REC	1	12/13/2017 11:59
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	3.3	J	3.5	UG/KG	1	12/15/2017 00:25
ACENAPHTHENE	ND		3.5	UG/KG	1	12/15/2017 00:25
FLUORENE	42		3.5	UG/KG	1	12/15/2017 00:25
ANTHRACENE	ND		3.5	UG/KG	1	12/15/2017 00:25
FLUORANTHENE	ND		3.5	UG/KG	1	12/15/2017 00:25
PYRENE	43		3.5	UG/KG	1	12/15/2017 00:25
BENZO(A)ANTHRACENE	1.4	J	3.5	UG/KG	1	12/15/2017 00:25
CHRYSENE	4.8		3.5	UG/KG	1	12/15/2017 00:25
BENZO(B)FLUORANTHENE	1.4	J	3.5	UG/KG	1	12/15/2017 00:25
BENZO(K)FLUORANTHENE	ND		3.5	UG/KG	1	12/15/2017 00:25
BENZO(A)PYRENE	ND		3.5	UG/KG	1	12/15/2017 00:25
INDENO(1,2,3-CD)PYRENE	ND		3.5	UG/KG	1	12/15/2017 00:25
DIBENZO(A,H)ANTHRACENE	ND		3.5	UG/KG	1	12/15/2017 00:25
Surr: NITROBENZENE-D5	87		28-113	%REC	1	12/15/2017 00:25
Surr: 2-FLUOROBIPHENYL	76		41-106	%REC	1	12/15/2017 00:25
Surr: TERPHENYL-D14	89		25-147	%REC	1	12/15/2017 00:25
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.4	UG/KG	1	12/13/2017 18:55
TOLUENE	ND		5.4	UG/KG	1	12/13/2017 18:55
ETHYLBENZENE	ND		5.4	UG/KG	1	12/13/2017 18:55
M+P-XYLENE	ND		5.4	UG/KG	1	12/13/2017 18:55
O-XYLENE	ND		5.4	UG/KG	1	12/13/2017 18:55
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 18:55
Surr: DIBROMOFLUOROMETHANE	108		61-134	%REC	1	12/13/2017 18:55
Surr: TOLUENE-D8	100		57-135	%REC	1	12/13/2017 18:55
Surr: 4-BROMOFLUOROBENZENE	99		52-151	%REC	1	12/13/2017 18:55
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.054	MG/KG	10	12/19/2017 17:12
ARSENIC	3.8		0.21	MG/KG	10	12/19/2017 17:12
BORON	ND		16	MG/KG	10	12/19/2017 17:12
BARIUM	710		0.54	MG/KG	10	12/19/2017 17:12
CADMIUM	ND		0.21	MG/KG	10	12/19/2017 17:12
CHROMIUM	15		1.1	MG/KG	10	12/19/2017 17:12
COPPER	58		2.1	MG/KG	10	12/19/2017 17:12
NICKEL	15		2.1	MG/KG	10	12/19/2017 17:12
LEAD	7.4		0.21	MG/KG	10	12/19/2017 17:12
SELENIUM	1.6		1.1	MG/KG	10	12/19/2017 17:12
ZINC	92		11	MG/KG	10	12/19/2017 17:12

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-4
Legal Location:
Collection Date: 12/8/2017 14:32

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-4
Matrix: SOIL
Percent Moisture: 7.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.019	J	SW7471 0.035	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:10
Sodium Adsorption Ratio PASTE PH	7.6		USDA60 0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-1
 Legal Location:
 Collection Date: 12/8/2017 14:42

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-5
 Matrix: SOIL
 Percent Moisture: 14.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	42	DM	5.8	MG/KG	1	12/13/2017 17:59
Surr: O-TERPHENYL	99		49-114	%REC	1	12/13/2017 17:59
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.56	MG/KG	1	12/13/2017 12:22
Surr: 2,3,4-TRIFLUOROTOLUENE	107		76-126	%REC	1	12/13/2017 12:22
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	1.5	J	3.8	UG/KG	1	12/15/2017 00:41
ACENAPHTHENE	ND		3.8	UG/KG	1	12/15/2017 00:41
FLUORENE	ND		3.8	UG/KG	1	12/15/2017 00:41
ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 00:41
FLUORANTHENE	ND		3.8	UG/KG	1	12/15/2017 00:41
PYRENE	12		3.8	UG/KG	1	12/15/2017 00:41
BENZO(A)ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 00:41
CHRYSENE	ND		3.8	UG/KG	1	12/15/2017 00:41
BENZO(B)FLUORANTHENE	1.3	J	3.8	UG/KG	1	12/15/2017 00:41
BENZO(K)FLUORANTHENE	ND		3.8	UG/KG	1	12/15/2017 00:41
BENZO(A)PYRENE	ND		3.8	UG/KG	1	12/15/2017 00:41
INDENO(1,2,3-CD)PYRENE	ND		3.8	UG/KG	1	12/15/2017 00:41
DIBENZO(A,H)ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 00:41
Surr: NITROBENZENE-D5	84		28-113	%REC	1	12/15/2017 00:41
Surr: 2-FLUOROBIPHENYL	75		41-106	%REC	1	12/15/2017 00:41
Surr: TERPHENYL-D14	86		25-147	%REC	1	12/15/2017 00:41
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.8	UG/KG	1	12/13/2017 19:21
TOLUENE	ND		5.8	UG/KG	1	12/13/2017 19:21
ETHYLBENZENE	ND		5.8	UG/KG	1	12/13/2017 19:21
M+P-XYLENE	ND		5.8	UG/KG	1	12/13/2017 19:21
O-XYLENE	ND		5.8	UG/KG	1	12/13/2017 19:21
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 19:21
Surr: DIBROMOFLUOROMETHANE	107		61-134	%REC	1	12/13/2017 19:21
Surr: TOLUENE-D8	98		57-135	%REC	1	12/13/2017 19:21
Surr: 4-BROMOFLUOROBENZENE	102		52-151	%REC	1	12/13/2017 19:21
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.056	MG/KG	10	12/19/2017 17:15
ARSENIC	4.8		0.23	MG/KG	10	12/19/2017 17:15
BORON	ND		17	MG/KG	10	12/19/2017 17:15
BARIUM	89		0.56	MG/KG	10	12/19/2017 17:15
CADMIUM	0.26		0.23	MG/KG	10	12/19/2017 17:15
CHROMIUM	8.1		1.1	MG/KG	10	12/19/2017 17:15
COPPER	46		2.3	MG/KG	10	12/19/2017 17:15
NICKEL	10		2.3	MG/KG	10	12/19/2017 17:15
LEAD	16		0.23	MG/KG	10	12/19/2017 17:15
SELENIUM	1.4		1.1	MG/KG	10	12/19/2017 17:15
ZINC	58		11	MG/KG	10	12/19/2017 17:15

Client:	Aptim	Date:	20-Dec-17
Project:	148083 ConocoPhillips Soil	Work Order:	1712227
Sample ID:	S-1	Lab ID:	1712227-5
Legal Location:		Matrix:	SOIL
Collection Date:	12/8/2017 14:42	Percent Moisture:	14.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.11	SW7471	0.038	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:12
Sodium Adsorption Ratio PASTE PH	7.7	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-2
 Legal Location:
 Collection Date: 12/8/2017 15:00

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-6
 Matrix: SOIL
 Percent Moisture: 18.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	ND		6.1	MG/KG	1	12/13/2017 18:20
Surr: O-TERPHENYL	99		49-114	%REC	1	12/13/2017 18:20
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.53	MG/KG	1	12/13/2017 12:44
Surr: 2,3,4-TRIFLUOROTOLUENE	107		76-126	%REC	1	12/13/2017 12:44
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	1.2	J	4	UG/KG	1	12/15/2017 00:58
ACENAPHTHENE	ND		4	UG/KG	1	12/15/2017 00:58
FLUORENE	ND		4	UG/KG	1	12/15/2017 00:58
ANTHRACENE	ND		4	UG/KG	1	12/15/2017 00:58
FLUORANTHENE	ND		4	UG/KG	1	12/15/2017 00:58
PYRENE	12		4	UG/KG	1	12/15/2017 00:58
BENZO(A)ANTHRACENE	ND		4	UG/KG	1	12/15/2017 00:58
CHRYSENE	ND		4	UG/KG	1	12/15/2017 00:58
BENZO(B)FLUORANTHENE	1.5	J	4	UG/KG	1	12/15/2017 00:58
BENZO(K)FLUORANTHENE	1.5	J	4	UG/KG	1	12/15/2017 00:58
BENZO(A)PYRENE	ND		4	UG/KG	1	12/15/2017 00:58
INDENO(1,2,3-CD)PYRENE	ND		4	UG/KG	1	12/15/2017 00:58
DIBENZO(A,H)ANTHRACENE	ND		4	UG/KG	1	12/15/2017 00:58
Surr: NITROBENZENE-D5	80		28-113	%REC	1	12/15/2017 00:58
Surr: 2-FLUOROBIPHENYL	72		41-106	%REC	1	12/15/2017 00:58
Surr: TERPHENYL-D14	84		25-147	%REC	1	12/15/2017 00:58
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		6	UG/KG	1	12/13/2017 19:49
TOLUENE	ND		6	UG/KG	1	12/13/2017 19:49
ETHYLBENZENE	ND		6	UG/KG	1	12/13/2017 19:49
M+P-XYLENE	ND		6	UG/KG	1	12/13/2017 19:49
O-XYLENE	ND		6	UG/KG	1	12/13/2017 19:49
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 19:49
Surr: DIBROMOFLUOROMETHANE	106		61-134	%REC	1	12/13/2017 19:49
Surr: TOLUENE-D8	100		57-135	%REC	1	12/13/2017 19:49
Surr: 4-BROMOFLUOROBENZENE	100		52-151	%REC	1	12/13/2017 19:49
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.059	MG/KG	10	12/19/2017 17:18
ARSENIC	1.5		0.23	MG/KG	10	12/19/2017 17:18
BORON	ND		18	MG/KG	10	12/19/2017 17:18
BARIUM	35		0.59	MG/KG	10	12/19/2017 17:18
CADMIUM	0.28		0.23	MG/KG	10	12/19/2017 17:18
CHROMIUM	4		1.2	MG/KG	10	12/19/2017 17:18
COPPER	24		2.3	MG/KG	10	12/19/2017 17:18
NICKEL	14		2.3	MG/KG	10	12/19/2017 17:18
LEAD	14		0.23	MG/KG	10	12/19/2017 17:18
SELENIUM	ND		1.2	MG/KG	10	12/19/2017 17:18
ZINC	36		12	MG/KG	10	12/19/2017 17:18

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-2
Legal Location:
Collection Date: 12/8/2017 15:00

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-6
Matrix: SOIL
Percent Moisture: 18.2

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.071	SW7471	0.04	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:14
Sodium Adsorption Ratio PASTE PH	8.7	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-3
 Legal Location:
 Collection Date: 12/8/2017 15:10

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-7
 Matrix: SOIL
 Percent Moisture: 11.5

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/14/2017	PrepBy: JFN
Diesel Range Organics	500	DMH	5.6	MG/KG	1	12/14/2017 15:27
Surr: O-TERPHENYL	100		49-114	%REC	1	12/14/2017 15:27
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.5	MG/KG	1	12/13/2017 13:05
Surr: 2,3,4-TRIFLUOROTOLUENE	106		76-126	%REC	1	12/13/2017 13:05
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	1.1	J	3.7	UG/KG	1	12/15/2017 01:15
ACENAPHTHENE	ND		3.7	UG/KG	1	12/15/2017 01:15
FLUORENE	ND		3.7	UG/KG	1	12/15/2017 01:15
ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 01:15
FLUORANTHENE	ND		3.7	UG/KG	1	12/15/2017 01:15
PYRENE	9.3		3.7	UG/KG	1	12/15/2017 01:15
BENZO(A)ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 01:15
CHRYSENE	ND		3.7	UG/KG	1	12/15/2017 01:15
BENZO(B)FLUORANTHENE	1.5	J	3.7	UG/KG	1	12/15/2017 01:15
BENZO(K)FLUORANTHENE	1.4	J	3.7	UG/KG	1	12/15/2017 01:15
BENZO(A)PYRENE	ND		3.7	UG/KG	1	12/15/2017 01:15
INDENO(1,2,3-CD)PYRENE	ND		3.7	UG/KG	1	12/15/2017 01:15
DIBENZO(A,H)ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 01:15
Surr: NITROBENZENE-D5	81		28-113	%REC	1	12/15/2017 01:15
Surr: 2-FLUOROBIPHENYL	67		41-106	%REC	1	12/15/2017 01:15
Surr: TERPHENYL-D14	82		25-147	%REC	1	12/15/2017 01:15
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.5	UG/KG	1	12/13/2017 20:18
TOLUENE	ND		5.5	UG/KG	1	12/13/2017 20:18
ETHYLBENZENE	ND		5.5	UG/KG	1	12/13/2017 20:18
M+P-XYLENE	ND		5.5	UG/KG	1	12/13/2017 20:18
O-XYLENE	ND		5.5	UG/KG	1	12/13/2017 20:18
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 20:18
Surr: DIBROMOFLUOROMETHANE	107		61-134	%REC	1	12/13/2017 20:18
Surr: TOLUENE-D8	98		57-135	%REC	1	12/13/2017 20:18
Surr: 4-BROMOFLUOROBENZENE	98		52-151	%REC	1	12/13/2017 20:18
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.055	MG/KG	10	12/19/2017 17:21
ARSENIC	4.3		0.22	MG/KG	10	12/19/2017 17:21
BORON	ND		17	MG/KG	10	12/19/2017 17:21
BARIUM	380		0.55	MG/KG	10	12/19/2017 17:21
CADMIUM	0.34		0.22	MG/KG	10	12/19/2017 17:21
CHROMIUM	12		1.1	MG/KG	10	12/19/2017 17:21
COPPER	45		2.2	MG/KG	10	12/19/2017 17:21
NICKEL	13		2.2	MG/KG	10	12/19/2017 17:21
LEAD	13		0.22	MG/KG	10	12/19/2017 17:21
SELENIUM	1.9		1.1	MG/KG	10	12/19/2017 17:21
ZINC	73		11	MG/KG	10	12/19/2017 17:21

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-3
Legal Location:
Collection Date: 12/8/2017 15:10

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-7
Matrix: SOIL
Percent Moisture: 11.5

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.093	SW7471	0.036	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:16
Sodium Adsorption Ratio PASTE PH	8.2	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-4
 Legal Location:
 Collection Date: 12/8/2017 15:21

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-8
 Matrix: SOIL
 Percent Moisture: 12.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	5.4	J	5.5	MG/KG	1	12/13/2017 18:41
Surr: O-TERPHENYL	93		49-114	%REC	1	12/13/2017 18:41
Gasoline Range Organics			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.55	MG/KG	1	12/13/2017 13:28
Surr: 2,3,4-TRIFLUOROTOLUENE	101		76-126	%REC	1	12/13/2017 13:28
GC/MS Semi-volatiles			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	ND		3.8	UG/KG	1	12/15/2017 01:32
ACENAPHTHENE	ND		3.8	UG/KG	1	12/15/2017 01:32
FLUORENE	ND		3.8	UG/KG	1	12/15/2017 01:32
ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 01:32
FLUORANTHENE	ND		3.8	UG/KG	1	12/15/2017 01:32
PYRENE	ND		3.8	UG/KG	1	12/15/2017 01:32
BENZO(A)ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 01:32
CHRYSENE	ND		3.8	UG/KG	1	12/15/2017 01:32
BENZO(B)FLUORANTHENE	ND		3.8	UG/KG	1	12/15/2017 01:32
BENZO(K)FLUORANTHENE	ND		3.8	UG/KG	1	12/15/2017 01:32
BENZO(A)PYRENE	ND		3.8	UG/KG	1	12/15/2017 01:32
INDENO(1,2,3-CD)PYRENE	ND		3.8	UG/KG	1	12/15/2017 01:32
DIBENZO(A,H)ANTHRACENE	ND		3.8	UG/KG	1	12/15/2017 01:32
Surr: NITROBENZENE-D5	84		28-113	%REC	1	12/15/2017 01:32
Surr: 2-FLUOROBIPHENYL	71		41-106	%REC	1	12/15/2017 01:32
Surr: TERPHENYL-D14	85		25-147	%REC	1	12/15/2017 01:32
GC/MS Volatiles			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.7	UG/KG	1	12/13/2017 20:47
TOLUENE	ND		5.7	UG/KG	1	12/13/2017 20:47
ETHYLBENZENE	ND		5.7	UG/KG	1	12/13/2017 20:47
M+P-XYLENE	ND		5.7	UG/KG	1	12/13/2017 20:47
O-XYLENE	ND		5.7	UG/KG	1	12/13/2017 20:47
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 20:47
Surr: DIBROMOFLUOROMETHANE	110		61-134	%REC	1	12/13/2017 20:47
Surr: TOLUENE-D8	99		57-135	%REC	1	12/13/2017 20:47
Surr: 4-BROMOFLUOROBENZENE	103		52-151	%REC	1	12/13/2017 20:47
ICPMS Metals			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	0.066		0.056	MG/KG	10	12/19/2017 17:24
ARSENIC	6.4		0.22	MG/KG	10	12/19/2017 17:24
BORON	ND		17	MG/KG	10	12/19/2017 17:24
BARIUM	200		0.56	MG/KG	10	12/19/2017 17:24
CADMIUM	0.27		0.22	MG/KG	10	12/19/2017 17:24
CHROMIUM	15		1.1	MG/KG	10	12/19/2017 17:24
COPPER	20		2.2	MG/KG	10	12/19/2017 17:24
NICKEL	16		2.2	MG/KG	10	12/19/2017 17:24
LEAD	13		0.22	MG/KG	10	12/19/2017 17:24
SELENIUM	1.4		1.1	MG/KG	10	12/19/2017 17:24
ZINC	57		11	MG/KG	10	12/19/2017 17:24

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-4
Legal Location:
Collection Date: 12/8/2017 15:21

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-8
Matrix: SOIL
Percent Moisture: 12.7

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.012	J	SW7471 0.037	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:19
Sodium Adsorption Ratio PASTE PH	8.7		USDA60 0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-5
 Legal Location:
 Collection Date: 12/8/2017 15:34

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-9
 Matrix: SOIL
 Percent Moisture: 19.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	2.7	J	6.1	MG/KG	1	12/13/2017 19:03
Surr: O-TERPHENYL	101		49-114	%REC	1	12/13/2017 19:03
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.56	MG/KG	1	12/13/2017 13:51
Surr: 2,3,4-TRIFLUOROTOLUENE	99		76-126	%REC	1	12/13/2017 13:51
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	ND		4.1	UG/KG	1	12/15/2017 01:49
ACENAPHTHENE	ND		4.1	UG/KG	1	12/15/2017 01:49
FLUORENE	ND		4.1	UG/KG	1	12/15/2017 01:49
ANTHRACENE	ND		4.1	UG/KG	1	12/15/2017 01:49
FLUORANTHENE	ND		4.1	UG/KG	1	12/15/2017 01:49
PYRENE	ND		4.1	UG/KG	1	12/15/2017 01:49
BENZO(A)ANTHRACENE	ND		4.1	UG/KG	1	12/15/2017 01:49
CHRYSENE	ND		4.1	UG/KG	1	12/15/2017 01:49
BENZO(B)FLUORANTHENE	ND		4.1	UG/KG	1	12/15/2017 01:49
BENZO(K)FLUORANTHENE	ND		4.1	UG/KG	1	12/15/2017 01:49
BENZO(A)PYRENE	ND		4.1	UG/KG	1	12/15/2017 01:49
INDENO(1,2,3-CD)PYRENE	ND		4.1	UG/KG	1	12/15/2017 01:49
DIBENZO(A,H)ANTHRACENE	ND		4.1	UG/KG	1	12/15/2017 01:49
Surr: NITROBENZENE-D5	80		28-113	%REC	1	12/15/2017 01:49
Surr: 2-FLUOROBIPHENYL	70		41-106	%REC	1	12/15/2017 01:49
Surr: TERPHENYL-D14	86		25-147	%REC	1	12/15/2017 01:49
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		6.2	UG/KG	1	12/13/2017 21:15
TOLUENE	ND		6.2	UG/KG	1	12/13/2017 21:15
ETHYLBENZENE	ND		6.2	UG/KG	1	12/13/2017 21:15
M+P-XYLENE	ND		6.2	UG/KG	1	12/13/2017 21:15
O-XYLENE	ND		6.2	UG/KG	1	12/13/2017 21:15
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 21:15
Surr: DIBROMOFLUOROMETHANE	109		61-134	%REC	1	12/13/2017 21:15
Surr: TOLUENE-D8	97		57-135	%REC	1	12/13/2017 21:15
Surr: 4-BROMOFLUOROBENZENE	102		52-151	%REC	1	12/13/2017 21:15
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	ND		0.061	MG/KG	10	12/19/2017 17:36
ARSENIC	1.3		0.24	MG/KG	10	12/19/2017 17:36
BORON	ND		18	MG/KG	10	12/19/2017 17:36
BARIUM	56		0.61	MG/KG	10	12/19/2017 17:36
CADMIUM	ND		0.24	MG/KG	10	12/19/2017 17:36
CHROMIUM	5		1.2	MG/KG	10	12/19/2017 17:36
COPPER	29		2.4	MG/KG	10	12/19/2017 17:36
NICKEL	5.9		2.4	MG/KG	10	12/19/2017 17:36
LEAD	14		0.24	MG/KG	10	12/19/2017 17:36
SELENIUM	ND		1.2	MG/KG	10	12/19/2017 17:36
ZINC	24		12	MG/KG	10	12/19/2017 17:36

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-5
Legal Location:
Collection Date: 12/8/2017 15:34

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-9
Matrix: SOIL
Percent Moisture: 19.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.091	SW7471	0.04	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:21
Sodium Adsorption Ratio PASTE PH	9	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

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SAMPLE SUMMARY REPORT

Client: Aptim
 Project: 148083 ConocoPhillips Soil
 Sample ID: S-6
 Legal Location:
 Collection Date: 12/8/2017 15:46

Date: 20-Dec-17
 Work Order: 1712227
 Lab ID: 1712227-10
 Matrix: SOIL
 Percent Moisture: 12.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Diesel Range Organics						
			SW8015M		Prep Date: 12/13/2017	PrepBy: JFN
Diesel Range Organics	5.2	J	5.6	MG/KG	1	12/13/2017 19:24
Surr: O-TERPHENYL	103		49-114	%REC	1	12/13/2017 19:24
Gasoline Range Organics						
			SW8015		Prep Date: 12/13/2017	PrepBy: JFN
GASOLINE RANGE ORGANICS	ND		0.54	MG/KG	1	12/13/2017 14:12
Surr: 2,3,4-TRIFLUOROTOLUENE	99		76-126	%REC	1	12/13/2017 14:12
GC/MS Semi-volatiles						
			SW8270SIM		Prep Date: 12/13/2017	PrepBy: LML
NAPHTHALENE	ND		3.7	UG/KG	1	12/15/2017 02:06
ACENAPHTHENE	ND		3.7	UG/KG	1	12/15/2017 02:06
FLUORENE	ND		3.7	UG/KG	1	12/15/2017 02:06
ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 02:06
FLUORANTHENE	ND		3.7	UG/KG	1	12/15/2017 02:06
PYRENE	ND		3.7	UG/KG	1	12/15/2017 02:06
BENZO(A)ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 02:06
CHRYSENE	ND		3.7	UG/KG	1	12/15/2017 02:06
BENZO(B)FLUORANTHENE	ND		3.7	UG/KG	1	12/15/2017 02:06
BENZO(K)FLUORANTHENE	ND		3.7	UG/KG	1	12/15/2017 02:06
BENZO(A)PYRENE	ND		3.7	UG/KG	1	12/15/2017 02:06
INDENO(1,2,3-CD)PYRENE	ND		3.7	UG/KG	1	12/15/2017 02:06
DIBENZO(A,H)ANTHRACENE	ND		3.7	UG/KG	1	12/15/2017 02:06
Surr: NITROBENZENE-D5	69		28-113	%REC	1	12/15/2017 02:06
Surr: 2-FLUOROBIPHENYL	61		41-106	%REC	1	12/15/2017 02:06
Surr: TERPHENYL-D14	80		25-147	%REC	1	12/15/2017 02:06
GC/MS Volatiles						
			SW8260		Prep Date: 12/13/2017	PrepBy: JXK
BENZENE	ND		5.7	UG/KG	1	12/13/2017 21:43
TOLUENE	ND		5.7	UG/KG	1	12/13/2017 21:43
ETHYLBENZENE	ND		5.7	UG/KG	1	12/13/2017 21:43
M+P-XYLENE	ND		5.7	UG/KG	1	12/13/2017 21:43
O-XYLENE	ND		5.7	UG/KG	1	12/13/2017 21:43
TOTAL XYLENES	ND		5	UG/KG	1	12/13/2017 21:43
Surr: DIBROMOFLUOROMETHANE	111		61-134	%REC	1	12/13/2017 21:43
Surr: TOLUENE-D8	97		57-135	%REC	1	12/13/2017 21:43
Surr: 4-BROMOFLUOROBENZENE	101		52-151	%REC	1	12/13/2017 21:43
ICPMS Metals						
			SW6020		Prep Date: 12/14/2017	PrepBy: JML
SILVER	0.089		0.057	MG/KG	10	12/19/2017 17:39
ARSENIC	6.2		0.23	MG/KG	10	12/19/2017 17:39
BORON	ND		17	MG/KG	10	12/19/2017 17:39
BARIUM	170		0.57	MG/KG	10	12/19/2017 17:39
CADMIUM	0.61		0.23	MG/KG	10	12/19/2017 17:39
CHROMIUM	17		1.1	MG/KG	10	12/19/2017 17:39
COPPER	62		2.3	MG/KG	10	12/19/2017 17:39
NICKEL	23		2.3	MG/KG	10	12/19/2017 17:39
LEAD	16		0.23	MG/KG	10	12/19/2017 17:39
SELENIUM	2.2		1.1	MG/KG	10	12/19/2017 17:39
ZINC	72		11	MG/KG	10	12/19/2017 17:39

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-6
Legal Location:
Collection Date: 12/8/2017 15:46

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-10
Matrix: SOIL
Percent Moisture: 12.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Mercury MERCURY	0.075	SW7471	0.037	MG/KG	1	Prep Date: 12/13/2017 PrepBy: CHW 12/14/2017 21:23
Sodium Adsorption Ratio PASTE PH	8.3	USDA60	0.1	pH	1	Prep Date: 12/18/2017 PrepBy: AMW 12/18/2017

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-1
Legal Location:
Collection Date: 12/8/2017 14:02

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-11
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	46		1	MG/L	1	12/18/2017 14:40
MAGNESIUM	10		1	MG/L	1	12/18/2017 14:40
SODIUM	29		1	MG/L	1	12/18/2017 14:40
Sodium Adsorption Ratio		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	5400		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	1		0.17	NU	1	12/18/2017 14:40

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-2
Legal Location:
Collection Date: 12/8/2017 14:12

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-12
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	57		1	MG/L	1	12/18/2017 14:43
MAGNESIUM	13		1	MG/L	1	12/18/2017 14:43
SODIUM	38		1	MG/L	1	12/18/2017 14:43
Sodium Adsorption Ratio						
		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	6800		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	1.2		0.17	NU	1	12/18/2017 14:43

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-3
Legal Location:
Collection Date: 12/8/2017 14:20

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-13
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	58		1	MG/L	1	12/18/2017 14:46
MAGNESIUM	20		1	MG/L	1	12/18/2017 14:46
SODIUM	81		1	MG/L	1	12/18/2017 14:46
Sodium Adsorption Ratio						
		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	9700		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	2.3		0.17	NU	1	12/18/2017 14:46

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: B-4
Legal Location:
Collection Date: 12/8/2017 14:32

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-14
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	56		1	MG/L	1	12/18/2017 14:49
MAGNESIUM	15		1	MG/L	1	12/18/2017 14:49
SODIUM	30		1	MG/L	1	12/18/2017 14:49
Sodium Adsorption Ratio						
		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	6400		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	0.93		0.17	NU	1	12/18/2017 14:49

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-1
Legal Location:
Collection Date: 12/8/2017 14:42

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-15
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	46		1	MG/L	1	12/18/2017 14:52
MAGNESIUM	25		1	MG/L	1	12/18/2017 14:52
SODIUM	110		1	MG/L	1	12/18/2017 14:52
Sodium Adsorption Ratio		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	10000		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	3.1		0.17	NU	1	12/18/2017 14:52

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-2
Legal Location:
Collection Date: 12/8/2017 15:00

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-16
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	2		1	MG/L	1	12/18/2017 14:55
MAGNESIUM	1.1		1	MG/L	1	12/18/2017 14:55
SODIUM	20		1	MG/L	1	12/18/2017 14:55
Sodium Adsorption Ratio						
		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	1300		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	2.8		0.17	NU	1	12/18/2017 14:55

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-3
Legal Location:
Collection Date: 12/8/2017 15:10

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-17
Matrix: SATEXTRACT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	45		1	MG/L	1	12/18/2017 14:58
MAGNESIUM	18		1	MG/L	1	12/18/2017 14:58
SODIUM	76		1	MG/L	1	12/18/2017 14:58
Sodium Adsorption Ratio						
		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	8400		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	2.4		0.17	NU	1	12/18/2017 14:58

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-4
Legal Location:
Collection Date: 12/8/2017 15:21

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-18
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
			USDA60		Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	2			1 MG/L	1	12/18/2017 15:01
MAGNESIUM	ND			1 MG/L	1	12/18/2017 15:01
SODIUM	19			1 MG/L	1	12/18/2017 15:01
Sodium Adsorption Ratio						
			USDA60		Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	1300			1 umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	2.8	S	0.17	NU	1	12/18/2017 15:01

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-5
Legal Location:
Collection Date: 12/8/2017 15:34

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-19
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals						
			USDA60		Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	ND			1 MG/L	1	12/18/2017 15:04
MAGNESIUM	ND			1 MG/L	1	12/18/2017 15:04
SODIUM	11			1 MG/L	1	12/18/2017 15:04
Sodium Adsorption Ratio						
			USDA60		Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	650			1 umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	1.8	S	0.17	NU	1	12/18/2017 15:04

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-6
Legal Location:
Collection Date: 12/8/2017 15:46

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-20
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals		USDA60			Prep Date: 12/18/2017	PrepBy: AJL2
CALCIUM	43		1	MG/L	1	12/18/2017 15:13
MAGNESIUM	17		1	MG/L	1	12/18/2017 15:13
SODIUM	92		1	MG/L	1	12/18/2017 15:13
Sodium Adsorption Ratio		USDA60			Prep Date: 12/18/2017	PrepBy: AMW
ELECTRICAL CONDUCTIVITY @ SATURATION	9200		1	umhos/cm	1	12/18/2017
SODIUM ADSORPTION RATIO	3		0.17	NU	1	12/18/2017 15:13

Client: Aptim
Project: 148083 ConocoPhillips Soil
Sample ID: S-6
Legal Location:
Collection Date: 12/8/2017 15:46

Date: 20-Dec-17
Work Order: 1712227
Lab ID: 1712227-20
Matrix: SATExtract
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

U or ND - Result is less than the sample specific MDC.	M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.	L - LCS Recovery below lower control limit.
Y2 - Chemical Yield outside default limits.	H - LCS Recovery above upper control limit.
W - DER is greater than Warning Limit of 1.42	P - LCS, Matrix Spike Recovery within control limits.
* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.	N - Matrix Spike Recovery outside control limits
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.	NC - Not Calculated for duplicate results less than 5 times MDC
G - Sample density differs by more than 15% of LCS density.	B - Analyte concentration greater than MDC.
D - DER is greater than Control Limit	B3 - Analyte concentration greater than MDC but less than Requested MDC.
M - Requested MDC not met.	
LT - Result is less than requested MDC but greater than achieved MDC.	

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
 U or ND - Indicates that the compound was analyzed for but not detected.
 E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 M - Duplicate injection precision was not met.
 N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 * - Duplicate analysis (relative percent difference) not within control limits.
 S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.
 B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
 E - Analyte concentration exceeds the upper level of the calibration range.
 J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
 A - A tentatively identified compound is a suspected aldol-condensation product.
 X - The analyte was diluted below an accurate quantitation level.
 * - The spike recovery is equal to or outside the control criteria used.
 + - The relative percent difference (RPD) equals or exceeds the control criteria.
 G - A pattern resembling gasoline was detected in this sample.
 D - A pattern resembling diesel was detected in this sample.
 M - A pattern resembling motor oil was detected in this sample.
 C - A pattern resembling crude oil was detected in this sample.
 4 - A pattern resembling JP-4 was detected in this sample.
 5 - A pattern resembling JP-5 was detected in this sample.
 H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
 L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
 Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 12/20/2017 7:40

Client: Aptim
Work Order: 1712227

QC BATCH REPORT

Project: 148083 ConocoPhillips Soil

Batch ID: HC171213-61-1

Instrument ID: FUELS-1

Method: SW8015

LCS	Sample ID: HC171213-61				Units: MG/KG		Analysis Date: 12/13/2017 09:47				
Client ID:	Run ID: HC171213-6A				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.45	0.5	2.5		98	79-118				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.548		0.5		110	76-126					

LCSD	Sample ID: HC171213-61				Units: MG/KG		Analysis Date: 12/13/2017 16:50				
Client ID:	Run ID: HC171213-6A				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	2.33	0.5	2.5		93	79-118		2.45	5	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.512		0.5		102	76-126			7		

MB	Sample ID: HC171213-61				Units: MG/KG		Analysis Date: 12/13/2017 10:09				
Client ID:	Run ID: HC171213-6A				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	0.5									
Surr: 2,3,4-TRIFLUOROTOLUENE	0.505		0.5		101	76-126					

MS	Sample ID: 1712227-7				Units: MG/KG		Analysis Date: 12/13/2017 19:02				
Client ID: S-3		Run ID: HC171213-6A				Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	3.02	0.554	5.54	0.5	55	79-118				40	*
Surr: 2,3,4-TRIFLUOROTOLUENE	0.581		0.554		105	76-126					

MSD	Sample ID: 1712227-7				Units: MG/KG		Analysis Date: 12/13/2017 19:23				
Client ID: S-3	Run ID: HC171213-6A				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	3.02	0.548	5.48	0.5	55	79-118		3.02	0	40	*
Surr: 2,3,4-TRIFLUOROTOLUENE	0.567		0.548		103	76-126			3		

The following samples were analyzed in this batch:

1712227-1	1712227-2	1712227-3
1712227-4	1712227-5	1712227-6
1712227-7	1712227-8	1712227-9
1712227-10		

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **HC171213-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC171213-81				Units: MG/KG		Analysis Date: 12/13/2017 15:29			
Client ID:		Run ID: HC171213-8A				Prep Date: 12/13/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	68.1	5	62.5		109	81-129				20	
Surr: O-TERPHENYL	10.9		12.5		87	49-114					

LCSD	Sample ID: HC171213-81				Units: MG/KG		Analysis Date: 12/13/2017 15:50				
Client ID:	Run ID: HC171213-8A				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	65	5	62.5		104	81-129		68.1	5	20	
Surr: O-TERPHENYL	10.1		12.5		81	49-114			7		

MB		Sample ID: HC171213-81				Units: MG/KG		Analysis Date: 12/13/2017 15:07			
Client ID:		Run ID: HC171213-8A				Prep Date: 12/13/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	5									
Surr: O-TERPHENYL	11		12.5		88	49-114					

MS		Sample ID: 1712227-1				Units: MG/KG		Analysis Date: 12/13/2017 16:33			
Client ID: B-1		Run ID: HC171213-8A				Prep Date: 12/13/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	140	5.26	65.8	72	104	81-129				20	
Surr: O-TERPHENYL	11.9		13.2		91	49-114					

MSD		Sample ID: 1712227-1				Units: MG/KG		Analysis Date: 12/13/2017 16:55			
Client ID: B-1		Run ID: HC171213-8A				Prep Date: 12/13/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	162	5.32	66.5	72	136	81-129		140	15	20	*
Surr: O-TERPHENYL	12.7		13.3		95	49-114			6		

The following samples were analyzed in this batch:

1712227-1	1712227-2	1712227-3
1712227-4	1712227-5	1712227-6
1712227-7	1712227-8	1712227-9
1712227-10		

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **HC171214-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS	Sample ID: HC171214-81				Units: MG/KG		Analysis Date: 12/14/2017 16:32				
Client ID:	Run ID: HC171214-8AA				Prep Date: 12/14/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	127	5	125		102	81-129				20	
Surr: O-TERPHENYL	9.68		12.5		77	49-114					

MB	Sample ID: HC171214-81				Units: MG/KG			Analysis Date: 12/14/2017 14:23			
Client ID:	Run ID: HC171214-8AA				Prep Date: 12/14/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	5									
Surr: O-TERPHENYL	11.1		12.5		88	49-114					

MS	Sample ID: 1712227-7				Units: MG/KG			Analysis Date: 12/14/2017 15:49			
Client ID: S-3		Run ID: HC171214-8AA				Prep Date: 12/14/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	621	5.6	140	500	90	81-129				20	
Surr: O-TERPHENYL	12.6		14		90	49-114					

MSD	Sample ID: 1712227-7				Units: MG/KG			Analysis Date: 12/14/2017 16:10			
Client ID: S-3	Run ID: HC171214-8AA				Prep Date: 12/14/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	629	5.63	141	500	95	81-129		621	1	20	
Surr: O-TERPHENYL	13.3		14.1		94	49-114			6		

The following samples were analyzed in this batch:

1712227-3 1712227-7

Client: Aptim
Work Order: 1712227
Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **HG171213-10-1** Instrument ID: **CETAC7500** Method: **SW7471**

LCS	Sample ID: HG171213-10				Units: MG/KG			Analysis Date: 12/14/2017 20:44			
Client ID:	Run ID: HG171214-3A2				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	0.163	0.0333	0.167		98	80-120				20	

MB	Sample ID: HG171213-10				Units: MG/KG			Analysis Date: 12/14/2017 20:42			
Client ID:	Run ID: HG171214-3A2				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	-0.00025	0.033									J

MS	Sample ID: 1712227-1				Units: MG/KG			Analysis Date: 12/14/2017 20:52			
Client ID: B-1		Run ID: HG171214-3A2				Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	0.362	0.0347	0.347	0.04	93	80-120				20	

MSD	Sample ID: 1712227-1				Units: MG/KG			Analysis Date: 12/14/2017 20:59			
Client ID: B-1	Run ID: HG171214-3A2				Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
MERCURY	0.357	0.0346	0.346	0.04	92	80-120		0.362	1	20	

The following samples were analyzed in this batch:

1712227-1	1712227-2	1712227-3
1712227-4	1712227-5	1712227-6
1712227-7	1712227-8	1712227-9
1712227-10		

Client: Aptim
Work Order: 1712227
Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **IP171214-2-1** Instrument ID: **ICPMS2** Method: **SW6020**

LCS	Sample ID: IM171214-2				Units: MG/KG		Analysis Date: 12/19/2017 17:00				
Client ID:	Run ID: IM171219-10A3				Prep Date: 12/14/2017			DF: 10			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
ARSENIC	10.6	0.2	10		106	80-120				20	
BARIUM	9.74	0.5	10		97	80-120				20	
BORON	105	15	100		105	80-120				20	
CADMIUM	3.11	0.2	3		104	80-120				20	
CHROMIUM	50.9	1	50		102	80-120				20	
COPPER	108	2	100		108	80-120				20	
LEAD	4.83	0.2	5		97	80-120				20	
NICKEL	52.7	2	50		105	80-120				20	
SELENIUM	10.7	1	10		107	80-120				20	
SILVER	1.02	0.05	1		102	80-120				20	
ZINC	212	10	200		106	80-120				20	

MB		Sample ID: IP171214-2			Units: MG/KG			Analysis Date: 12/19/2017 16:57				
Client ID:		Run ID: IM171219-10A3				Prep Date: 12/14/2017			DF: 10			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual	
ARSENIC	ND	0.2										
BARIUM	ND	0.5										
BORON	ND	15										
CADMIUM	ND	0.2										
CHROMIUM	ND	1										
COPPER	ND	2										
LEAD	ND	0.2										
NICKEL	ND	2										
SELENIUM	ND	1										
SILVER	ND	0.05										
ZINC	ND	10										

The following samples were analyzed in this batch:

1712227-1	1712227-2	1712227-3
1712227-4	1712227-5	1712227-6
1712227-7	1712227-8	1712227-9
1712227-10		

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **EX171213-2-1** Instrument ID: **HPSV1** Method: **SW8270SIM**

LCS		Sample ID: EX171213-2			Units: UG/KG		Analysis Date: 12/14/2017 22:44				
Client ID:		Run ID: SV171214-4			Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	52.3	3.33	66.7		78	40-107				30	
ACENAPHTHENE	54.5	3.33	66.7		82	46-108				30	
FLUORENE	53.4	3.33	66.7		80	49-108				30	
ANTHRACENE	50.3	3.33	66.7		75	53-107				30	
FLUORANTHENE	52.8	3.33	66.7		79	54-114				30	
PYRENE	51	3.33	66.7		76	46-123				30	
BENZO(A)ANTHRACENE	47.6	3.33	66.7		71	52-111				30	
CHRYSENE	51.7	3.33	66.7		78	53-112				30	
BENZO(B)FLUORANTHENE	51.2	3.33	66.7		77	45-114				30	
BENZO(K)FLUORANTHENE	55.5	3.33	66.7		83	45-123				30	
BENZO(A)PYRENE	49.3	3.33	66.7		74	50-111				30	
INDENO(1,2,3-CD)PYRENE	51.8	3.33	66.7		78	38-121				30	
DIBENZO(A,H)ANTHRACENE	51.1	3.33	66.7		77	41-125				30	
Surr: NITROBENZENE-D5	50.8		66.7		76	28-113					
Surr: 2-FLUOROBIPHENYL	55		66.7		83	41-106					
Surr: TERPHENYL-D14	55		66.7		82	25-147					

MB		Sample ID: EX171213-2			Units: UG/KG		Analysis Date: 12/14/2017 22:27				
Client ID:		Run ID: SV171214-4			Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	ND	3.3									
ACENAPHTHENE	ND	3.3									
FLUORENE	ND	3.3									
ANTHRACENE	ND	3.3									
FLUORANTHENE	ND	3.3									
PYRENE	ND	3.3									
BENZO(A)ANTHRACENE	ND	3.3									
CHRYSENE	ND	3.3									
BENZO(B)FLUORANTHENE	ND	3.3									
BENZO(K)FLUORANTHENE	ND	3.3									
BENZO(A)PYRENE	ND	3.3									
INDENO(1,2,3-CD)PYRENE	ND	3.3									
DIBENZO(A,H)ANTHRACENE	ND	3.3									
Surr: NITROBENZENE-D5	51.4		66.7		77	28-113					
Surr: 2-FLUOROBIPHENYL	55.5		66.7		83	41-106					
Surr: TERPHENYL-D14	63.6		66.7		95	25-147					

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: EX171213-2-1 Instrument ID: HPSV1 Method: SW8270SIM

MS Sample ID: 1712227-1				Units: UG/KG			Analysis Date: 12/14/2017 23:17				
Client ID: B-1			Run ID: SV171214-4			Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	52.3	3.53	70.6	3.5	74	40-107				30	
ACENAPHTHENE	55.2	3.53	70.6	3.5	78	46-108				30	
FLUORENE	58	3.53	70.6	3.5	82	49-108				30	
ANTHRACENE	59.3	3.53	70.6	3.5	84	53-107				30	
FLUORANTHENE	59.8	3.53	70.6	1.9	82	54-114				30	
PYRENE	67.1	3.53	70.6	7.4	85	46-123				30	
BENZO(A)ANTHRACENE	67.9	3.53	70.6	3.5	96	52-111				30	
CHRYSENE	54.4	3.53	70.6	1.1	76	53-112				30	
BENZO(B)FLUORANTHENE	55	3.53	70.6	2.8	74	45-114				30	
BENZO(K)FLUORANTHENE	50.9	3.53	70.6	3.5	72	45-123				30	
BENZO(A)PYRENE	54.9	3.53	70.6	3.5	78	50-111				30	
INDENO(1,2,3-CD)PYRENE	57.6	3.53	70.6	3.5	82	38-121				30	
DIBENZO(A,H)ANTHRACENE	57.4	3.53	70.6	3.5	81	41-125				30	
Surr: NITROBENZENE-D5	55.4		70.6		79	28-113					
Surr: 2-FLUOROBIPHENYL	53.7		70.6		76	41-106					
Surr: TERPHENYL-D14	61.5		70.6		87	25-147					

MSD Sample ID: 1712227-1				Units: UG/KG			Analysis Date: 12/14/2017 23:34				
Client ID: B-1			Run ID: SV171214-4			Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	55	3.53	70.6	3.5	78	40-107		52.3	5	30	
ACENAPHTHENE	58.3	3.53	70.6	3.5	83	46-108		55.2	5	30	
FLUORENE	61.9	3.53	70.6	3.5	88	49-108		58	6	30	
ANTHRACENE	62	3.53	70.6	3.5	88	53-107		59.3	4	30	
FLUORANTHENE	62.1	3.53	70.6	1.9	85	54-114		59.8	4	30	
PYRENE	67.2	3.53	70.6	7.4	85	46-123		67.1	0	30	
BENZO(A)ANTHRACENE	70.4	3.53	70.6	3.5	100	52-111		67.9	4	30	
CHRYSENE	54.6	3.53	70.6	1.1	76	53-112		54.4	0	30	
BENZO(B)FLUORANTHENE	58.8	3.53	70.6	2.8	79	45-114		55	7	30	
BENZO(K)FLUORANTHENE	50.2	3.53	70.6	3.5	71	45-123		50.9	1	30	
BENZO(A)PYRENE	56.9	3.53	70.6	3.5	81	50-111		54.9	4	30	
INDENO(1,2,3-CD)PYRENE	59.3	3.53	70.6	3.5	84	38-121		57.6	3	30	
DIBENZO(A,H)ANTHRACENE	58.4	3.53	70.6	3.5	83	41-125		57.4	2	30	
Surr: NITROBENZENE-D5	57.8		70.6		82	28-113			4		
Surr: 2-FLUOROBIPHENYL	56.1		70.6		79	41-106			4		
Surr: TERPHENYL-D14	61.5		70.6		87	25-147			0		

Client: Aptim
Work Order: 1712227
Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: EX171213-2-1 Instrument ID: HPSV1 Method: SW8270SIM

The following samples were analyzed in this batch:	1712227-1	1712227-2	1712227-3
	1712227-4	1712227-5	1712227-6
	1712227-7	1712227-8	1712227-9
	1712227-10		

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **VL171213-2-2** Instrument ID: **HPV2** Method: **SW8260**

LCS		Sample ID: VL171213-2			Units: UG/KG		Analysis Date: 12/13/2017 12:58				
Client ID:		Run ID: VL171213-2A			Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	39.4	5	40		99	73-126				30	
TOLUENE	40	5	40		100	71-127				30	
ETHYLBENZENE	40.5	5	40		101	74-127				30	
M+P-XYLENE	80.8	5	80		101	79-126				30	
O-XYLENE	39.6	5	40		99	77-125				30	
Surr: DIBROMOFLUOROMETHANE	53.2		50		106	61-134					
Surr: TOLUENE-D8	50.1		50		100	57-135					
Surr: 4-BROMOFLUOROBENZENE	50.6		50		101	52-151					

LCSD		Sample ID: VL171213-2			Units: UG/KG		Analysis Date: 12/13/2017 13:21				
Client ID:		Run ID: VL171213-2A			Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	37.7	5	40		94	73-126		39.4	5	30	
TOLUENE	38.3	5	40		96	71-127		40	4	30	
ETHYLBENZENE	38.4	5	40		96	74-127		40.5	5	30	
M+P-XYLENE	77.8	5	80		97	79-126		80.8	4	30	
O-XYLENE	39.1	5	40		98	77-125		39.6	1	30	
Surr: DIBROMOFLUOROMETHANE	53.3		50		107	61-134			0		
Surr: TOLUENE-D8	49.5		50		99	57-135			1		
Surr: 4-BROMOFLUOROBENZENE	50.9		50		102	52-151			0		

MB			Sample ID: VL171213-2			Units: UG/KG			Analysis Date: 12/13/2017 14:07		
Client ID:			Run ID: VL171213-2A			Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	ND	5									
TOLUENE	ND	5									
ETHYLBENZENE	ND	5									
M+P-XYLENE	ND	5									
O-XYLENE	ND	5									
TOTAL XYLENES	ND	5									
Surr: DIBROMOFLUOROMETHANE	54		50		108	61-134					
Surr: TOLUENE-D8	50.2		50		100	57-135					
Surr: 4-BROMOFLUOROBENZENE	50.2		50		100	52-151					

Client: Aptim
 Work Order: 1712227
 Project: 148083 ConocoPhillips Soil

QC BATCH REPORT

Batch ID: **VL171213-2-2** Instrument ID: **HPV2** Method: **SW8260**

MS		Sample ID: 1712227-10			Units: UG/KG		Analysis Date: 12/13/2017 22:12				
Client ID: S-6		Run ID: VL171213-2A			Prep Date: 12/13/2017			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	37.7	5.73	45.8	5.7	82	73-126				30	
TOLUENE	37.3	5.73	45.8	5.7	81	71-127				30	
ETHYLBENZENE	35.7	5.73	45.8	5.7	78	74-127				30	
M+P-XYLENE	71.1	5.73	91.7	5.7	78	79-126				30	*
O-XYLENE	35.8	5.73	45.8	5.7	78	77-125				30	
Surr: DIBROMOFLUOROMETHANE	62		57.3		108	61-134					
Surr: TOLUENE-D8	56.5		57.3		99	57-135					
Surr: 4-BROMOFLUOROBENZENE	58.4		57.3		102	52-151					

MSD	Sample ID: 1712227-10				Units: UG/KG		Analysis Date: 12/13/2017 22:40				
Client ID: S-6		Run ID: VL171213-2A				Prep Date: 12/13/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	26.7	5.64	45.1	5.7	59	73-126		37.7	34	30	*+
TOLUENE	25.8	5.64	45.1	5.7	57	71-127		37.3	36	30	*+
ETHYLBENZENE	25.5	5.64	45.1	5.7	57	74-127		35.7	33	30	*+
M+P-XYLENE	50.4	5.64	90.2	5.7	56	79-126		71.1	34	30	*+
O-XYLENE	25.8	5.64	45.1	5.7	57	77-125		35.8	32	30	*+
Surr: DIBROMOFLUOROMETHANE	62		56.4		110	61-134			0		
Surr: TOLUENE-D8	55.3		56.4		98	57-135			2		
Surr: 4-BROMOFLUOROBENZENE	58.7		56.4		104	52-151			1		

The following samples were analyzed in this batch:

1712227-1	1712227-2	1712227-3
1712227-4	1712227-5	1712227-6
1712227-7	1712227-8	1712227-9
1712227-10		