

Devon Energy

Cotton Draw #237

CLOSURE REPORT

U/L M, Section 10, Township 25S, Range 32E
Lea County, New Mexico

NAB1909857043

30-025-41996

1RP-5420

April 14, 2020



Prepared for:

Devon Energy Production Company 6488
Seven Rivers Hwy. Artesia, NM 88210

By:

Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510

Devon Energy**Lea County, New Mexico**

I. Company Contacts

Representative	Company	Telephone	E-mail
Tom Bynum	Devon Energy	580-748-1613	Tom.Bynum@dvn.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc. (SESI), was engaged by Devon Energy to assess a spill area on the Cotton Draw 237 Battery. According to the C-141, the cause of release was due to the three phase separator that had developed a pin-hole leak, causing the release of fluid around the separation equipment. Approximately 180 yards of surface area on the pad area, as well as approximately 609 cubic feet inside the bermed area were impacted (1RP-5420).

III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer, also revealed no records for Groundwater. However, research of the Lea County Chevron-Texaco topography Map indicates the depth to groundwater to be between 276' to 300' bgs.

IV. Characterization

As noted in the workplan approval sent via email by Robert Hamlet on October 4, 2019, target levels for chlorides are 20,000 mg/kg on the pad and 600 mg/kg in the pasture. The TPH target levels are 1,000 mg/kg on the pad and 100 mg/kg in the pasture. Benzene target levels are 10 mg/kg.

V. Work Performed

Upon receiving approval of the workplan, SESI personnel performed remediation by removing all the contaminated material and replacing it with clean material. Most areas were remediated to a depth of 1 foot as feasible without compromising the integrity of the structures. Approximately 90 yd³ of contaminated dirt was disposed of in an NMOCD approved landfill. SESI performed confirmation bottom and sidewall sampling then approximately 105 yds of backfill was placed in the excavated area. The results reveal that the release area has been cleaned to closure criteria as all 23 confirmation samples were well below the closure criteria established for this release. The results are captured in the table below:

Devon Energy**Lea County, New Mexico**

Sample ID	Chloride	DRO	MRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SP9 @ N WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP10 @ BOTTOM	ND	ND	ND	ND	ND	ND	ND	ND
SP11 @ W WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP12 @ E WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP13 @ BOTTOM	ND	ND	ND	ND	ND	ND	ND	ND
SP14 @ W WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP15 @ BOTTOM	ND	ND	ND	ND	ND	ND	ND	ND
SP16 @ E WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP17 @ W WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP18 @ E WALL	ND	ND	ND	ND	ND	ND	ND	ND
SP19 @ BOTTOM	ND	ND	ND	ND	ND	ND	ND	ND
SP20 @ S WALL	320	ND	ND	ND	ND	ND	ND	ND
SP21 @ E WALL	320	ND	ND	ND	ND	ND	ND	ND
SP22 @ BOTTOM	320	ND	ND	ND	ND	ND	ND	ND
SP23 @ BOTTOM	ND	ND	ND	ND	ND	ND	ND	ND

VI. Conclusion

Based on the results of the confirmation sampling, SESI personnel recommends no further remediation of this release. Therefore, on behalf of Devon Energy, we respectfully submit this closure plan for approval as all closure criteria have been met.

VII. Supporting Documentation for Closure

C-141, page 6 for closure

Closure map with confirmation samples

Photos of the remediation prior to backfill

Laboratory Analysis

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: Tom Bynum Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

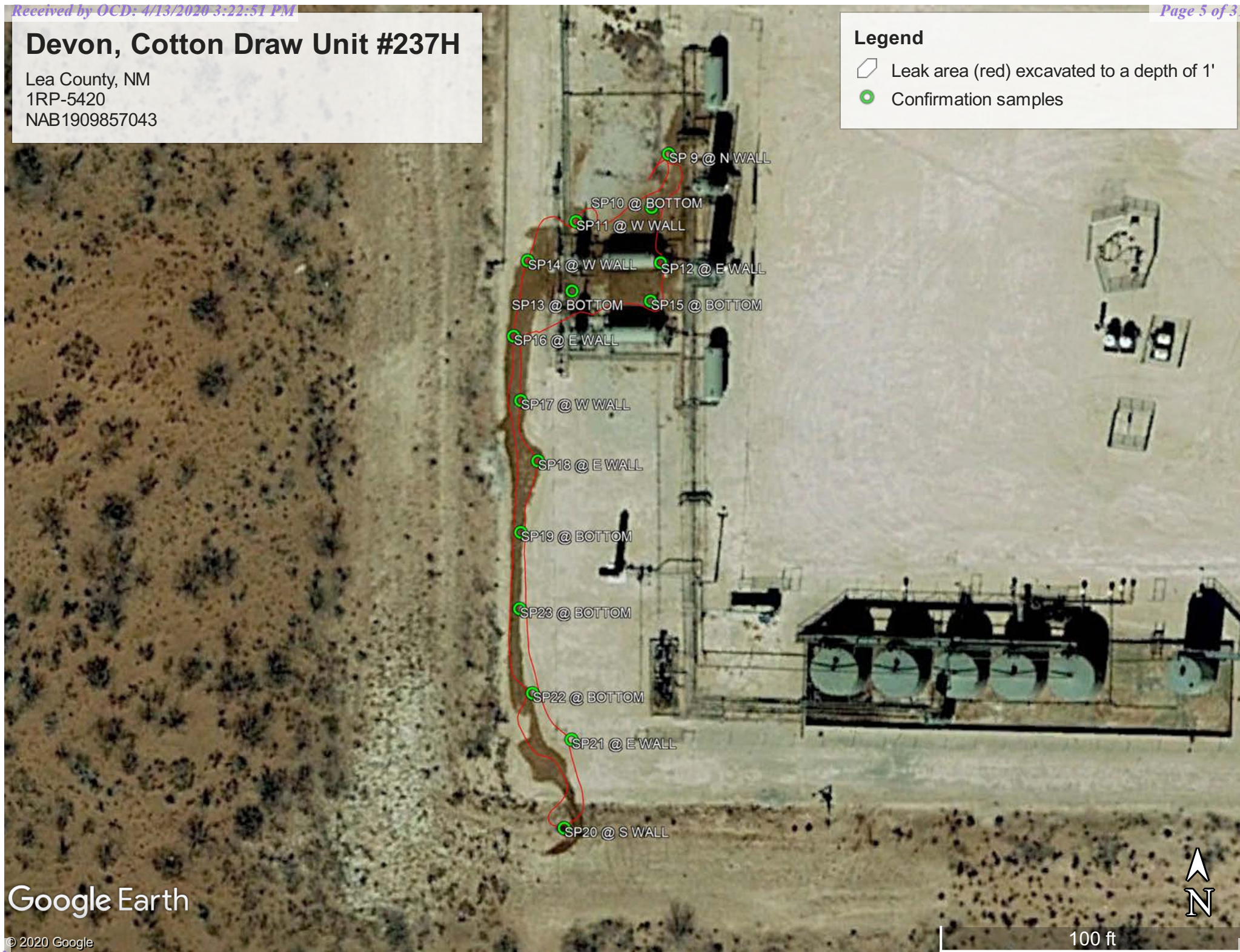
Printed Name: _____ Title: _____

Devon, Cotton Draw Unit #237H

Lea County, NM
1RP-5420
NAB1909857043

Legend

-  Leak area (red) excavated to a depth of 1'
-  Confirmation samples









Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 10, 2020

Bob Allen
Safety & Environmental Solutions
PO Box 1613
Hobbs, NM 88241
TEL: (575) 397-0510
FAX (575) 393-4388

RE: DEVON COTTON DRAW 237 IRP-5420

OrderNo.: 2003132

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 15 sample(s) on 3/4/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-9 North Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 9:10:00 AM

Lab ID: 2003132-001

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 9:52:16 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/8/2020 12:30:38 PM	50944
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/8/2020 12:30:38 PM	50944
Surr: DNOP	108	55.1-146		%Rec	1	3/8/2020 12:30:38 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2020 7:39:14 PM	50914
Surr: BFB	82.0	66.6-105		%Rec	1	3/7/2020 7:39:14 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2020 7:39:14 PM	50914
Toluene	ND	0.049		mg/Kg	1	3/7/2020 7:39:14 PM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2020 7:39:14 PM	50914
Xylenes, Total	ND	0.099		mg/Kg	1	3/7/2020 7:39:14 PM	50914
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	3/7/2020 7:39:14 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-10 Bottom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 9:20:00 AM

Lab ID: 2003132-002

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	59		mg/Kg	20	3/9/2020 10:29:29 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/8/2020 1:06:12 PM	50944
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/8/2020 1:06:12 PM	50944
Surr: DNOP	106	55.1-146		%Rec	1	3/8/2020 1:06:12 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2020 8:49:19 PM	50914
Surr: BFB	79.9	66.6-105		%Rec	1	3/7/2020 8:49:19 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2020 8:49:19 PM	50914
Toluene	ND	0.049		mg/Kg	1	3/7/2020 8:49:19 PM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2020 8:49:19 PM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/7/2020 8:49:19 PM	50914
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	3/7/2020 8:49:19 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-11 West Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 9:35:00 AM

Lab ID: 2003132-003

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 10:41:54 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	8.0		mg/Kg	1	3/8/2020 2:19:07 PM	50944
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	3/8/2020 2:19:07 PM	50944
Surr: DNOP	115	55.1-146		%Rec	1	3/8/2020 2:19:07 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2020 10:00:35 PM	50914
Surr: BFB	84.3	66.6-105		%Rec	1	3/7/2020 10:00:35 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2020 10:00:35 PM	50914
Toluene	ND	0.049		mg/Kg	1	3/7/2020 10:00:35 PM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2020 10:00:35 PM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/7/2020 10:00:35 PM	50914
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	3/7/2020 10:00:35 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-12 East Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 9:45:00 AM

Lab ID: 2003132-004

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 10:54:18 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/8/2020 2:43:15 PM	50944
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/8/2020 2:43:15 PM	50944
Surr: DNOP	95.4	55.1-146		%Rec	1	3/8/2020 2:43:15 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/7/2020 10:24:22 PM	50914
Surr: BFB	82.8	66.6-105		%Rec	1	3/7/2020 10:24:22 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2020 10:24:22 PM	50914
Toluene	ND	0.050		mg/Kg	1	3/7/2020 10:24:22 PM	50914
Ethylbenzene	ND	0.050		mg/Kg	1	3/7/2020 10:24:22 PM	50914
Xylenes, Total	ND	0.10		mg/Kg	1	3/7/2020 10:24:22 PM	50914
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	3/7/2020 10:24:22 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-13 Bottom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 9:55:00 AM

Lab ID: 2003132-005

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 11:06:42 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/8/2020 3:07:31 PM	50944
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/8/2020 3:07:31 PM	50944
Surr: DNOP	93.5	55.1-146		%Rec	1	3/8/2020 3:07:31 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/7/2020 10:48:10 PM	50914
Surr: BFB	81.4	66.6-105		%Rec	1	3/7/2020 10:48:10 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2020 10:48:10 PM	50914
Toluene	ND	0.047		mg/Kg	1	3/7/2020 10:48:10 PM	50914
Ethylbenzene	ND	0.047		mg/Kg	1	3/7/2020 10:48:10 PM	50914
Xylenes, Total	ND	0.095		mg/Kg	1	3/7/2020 10:48:10 PM	50914
Surr: 4-Bromofluorobenzene	87.7	80-120		%Rec	1	3/7/2020 10:48:10 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-14 West Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 10:10:00 AM

Lab ID: 2003132-006

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	59		mg/Kg	20	3/9/2020 11:19:06 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/8/2020 3:31:41 PM	50944
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/8/2020 3:31:41 PM	50944
Surr: DNOP	102	55.1-146		%Rec	1	3/8/2020 3:31:41 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2020 11:11:45 PM	50914
Surr: BFB	80.6	66.6-105		%Rec	1	3/7/2020 11:11:45 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2020 11:11:45 PM	50914
Toluene	ND	0.049		mg/Kg	1	3/7/2020 11:11:45 PM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2020 11:11:45 PM	50914
Xylenes, Total	ND	0.099		mg/Kg	1	3/7/2020 11:11:45 PM	50914
Surr: 4-Bromofluorobenzene	87.2	80-120		%Rec	1	3/7/2020 11:11:45 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-15 Bottoom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 11:00:00 AM

Lab ID: 2003132-007

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 11:31:30 PM	50977
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/8/2020 3:55:58 PM	50944
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/8/2020 3:55:58 PM	50944
Surr: DNOP	102	55.1-146		%Rec	1	3/8/2020 3:55:58 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2020 11:35:39 PM	50914
Surr: BFB	80.8	66.6-105		%Rec	1	3/7/2020 11:35:39 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/7/2020 11:35:39 PM	50914
Toluene	ND	0.049		mg/Kg	1	3/7/2020 11:35:39 PM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2020 11:35:39 PM	50914
Xylenes, Total	ND	0.099		mg/Kg	1	3/7/2020 11:35:39 PM	50914
Surr: 4-Bromofluorobenzene	87.0	80-120		%Rec	1	3/7/2020 11:35:39 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-16 East Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 11:20:00 AM

Lab ID: 2003132-008

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	59		mg/Kg	20	3/9/2020 5:57:58 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	3/8/2020 4:20:03 PM	50944
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/8/2020 4:20:03 PM	50944
Surr: DNOP	103	55.1-146		%Rec	1	3/8/2020 4:20:03 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/7/2020 11:59:21 PM	50914
Surr: BFB	79.9	66.6-105		%Rec	1	3/7/2020 11:59:21 PM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2020 11:59:21 PM	50914
Toluene	ND	0.048		mg/Kg	1	3/7/2020 11:59:21 PM	50914
Ethylbenzene	ND	0.048		mg/Kg	1	3/7/2020 11:59:21 PM	50914
Xylenes, Total	ND	0.097		mg/Kg	1	3/7/2020 11:59:21 PM	50914
Surr: 4-Bromofluorobenzene	85.8	80-120		%Rec	1	3/7/2020 11:59:21 PM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-17 West Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 12:40:00 PM

Lab ID: 2003132-009

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 6:59:41 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/8/2020 4:44:19 PM	50944
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/8/2020 4:44:19 PM	50944
Surr: DNOP	96.3	55.1-146		%Rec	1	3/8/2020 4:44:19 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/8/2020 12:23:09 AM	50914
Surr: BFB	81.3	66.6-105		%Rec	1	3/8/2020 12:23:09 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2020 12:23:09 AM	50914
Toluene	ND	0.049		mg/Kg	1	3/8/2020 12:23:09 AM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2020 12:23:09 AM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/8/2020 12:23:09 AM	50914
Surr: 4-Bromofluorobenzene	87.7	80-120		%Rec	1	3/8/2020 12:23:09 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-18 East Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 12:55:00 PM

Lab ID: 2003132-010

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	61		mg/Kg	20	3/9/2020 7:12:02 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/8/2020 5:08:24 PM	50944
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/8/2020 5:08:24 PM	50944
Surr: DNOP	99.2	55.1-146		%Rec	1	3/8/2020 5:08:24 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/8/2020 12:46:58 AM	50914
Surr: BFB	82.0	66.6-105		%Rec	1	3/8/2020 12:46:58 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2020 12:46:58 AM	50914
Toluene	ND	0.049		mg/Kg	1	3/8/2020 12:46:58 AM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2020 12:46:58 AM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/8/2020 12:46:58 AM	50914
Surr: 4-Bromofluorobenzene	88.0	80-120		%Rec	1	3/8/2020 12:46:58 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-19 Bottom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 1:10:00 PM

Lab ID: 2003132-011

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	61		mg/Kg	20	3/9/2020 7:24:23 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/8/2020 5:32:36 PM	50944
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/8/2020 5:32:36 PM	50944
Surr: DNOP	99.3	55.1-146		%Rec	1	3/8/2020 5:32:36 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/8/2020 2:46:17 AM	50914
Surr: BFB	88.6	66.6-105		%Rec	1	3/8/2020 2:46:17 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/8/2020 2:46:17 AM	50914
Toluene	ND	0.050		mg/Kg	1	3/8/2020 2:46:17 AM	50914
Ethylbenzene	ND	0.050		mg/Kg	1	3/8/2020 2:46:17 AM	50914
Xylenes, Total	ND	0.10		mg/Kg	1	3/8/2020 2:46:17 AM	50914
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	3/8/2020 2:46:17 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-20 South Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 1:35:00 PM

Lab ID: 2003132-012

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	320	60		mg/Kg	20	3/9/2020 7:36:44 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/8/2020 5:56:40 PM	50944
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/8/2020 5:56:40 PM	50944
Surr: DNOP	97.6	55.1-146		%Rec	1	3/8/2020 5:56:40 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/8/2020 3:10:09 AM	50914
Surr: BFB	89.4	66.6-105		%Rec	1	3/8/2020 3:10:09 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/8/2020 3:10:09 AM	50914
Toluene	ND	0.050		mg/Kg	1	3/8/2020 3:10:09 AM	50914
Ethylbenzene	ND	0.050		mg/Kg	1	3/8/2020 3:10:09 AM	50914
Xylenes, Total	ND	0.099		mg/Kg	1	3/8/2020 3:10:09 AM	50914
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	3/8/2020 3:10:09 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-21 East Wall

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 1:50:00 PM

Lab ID: 2003132-013

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	320	60		mg/Kg	20	3/9/2020 7:49:04 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/8/2020 6:20:49 PM	50944
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/8/2020 6:20:49 PM	50944
Surr: DNOP	99.1	55.1-146		%Rec	1	3/8/2020 6:20:49 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/8/2020 3:34:04 AM	50914
Surr: BFB	89.5	66.6-105		%Rec	1	3/8/2020 3:34:04 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2020 3:34:04 AM	50914
Toluene	ND	0.049		mg/Kg	1	3/8/2020 3:34:04 AM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2020 3:34:04 AM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/8/2020 3:34:04 AM	50914
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	3/8/2020 3:34:04 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-22 Bottom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 2:05:00 PM

Lab ID: 2003132-014

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	320	60		mg/Kg	20	3/9/2020 8:01:25 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/8/2020 7:08:55 PM	50944
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/8/2020 7:08:55 PM	50944
Surr: DNOP	116	55.1-146		%Rec	1	3/8/2020 7:08:55 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/8/2020 3:57:59 AM	50914
Surr: BFB	83.6	66.6-105		%Rec	1	3/8/2020 3:57:59 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/8/2020 3:57:59 AM	50914
Toluene	ND	0.049		mg/Kg	1	3/8/2020 3:57:59 AM	50914
Ethylbenzene	ND	0.049		mg/Kg	1	3/8/2020 3:57:59 AM	50914
Xylenes, Total	ND	0.098		mg/Kg	1	3/8/2020 3:57:59 AM	50914
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	3/8/2020 3:57:59 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order 2003132

Date Reported: 3/10/2020

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-23 Bottom

Project: DEVON COTTON DRAW 237 IRP-542

Collection Date: 3/2/2020 2:20:00 PM

Lab ID: 2003132-015

Matrix: SOIL

Received Date: 3/4/2020 10:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/9/2020 8:13:46 PM	50978
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/8/2020 7:32:52 PM	50944
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/8/2020 7:32:52 PM	50944
Surr: DNOP	103	55.1-146		%Rec	1	3/8/2020 7:32:52 PM	50944
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/8/2020 4:21:48 AM	50914
Surr: BFB	87.7	66.6-105		%Rec	1	3/8/2020 4:21:48 AM	50914
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/8/2020 4:21:48 AM	50914
Toluene	ND	0.050		mg/Kg	1	3/8/2020 4:21:48 AM	50914
Ethylbenzene	ND	0.050		mg/Kg	1	3/8/2020 4:21:48 AM	50914
Xylenes, Total	ND	0.10		mg/Kg	1	3/8/2020 4:21:48 AM	50914
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	3/8/2020 4:21:48 AM	50914

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2003132

10-Mar-20

Client: Safety & Environmental Solutions
Project: DEVON COTTON DRAW 237 IRP-5420

Sample ID: MB-50978	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 50978	RunNo: 67121								
Prep Date: 3/9/2020	Analysis Date: 3/9/2020	SeqNo: 2312564 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-50978	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 50978	RunNo: 67121								
Prep Date: 3/9/2020	Analysis Date: 3/9/2020	SeqNo: 2312565 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Sample ID: MB-50977	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 50977	RunNo: 67142								
Prep Date: 3/9/2020	Analysis Date: 3/9/2020	SeqNo: 2312810 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-50977	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 50977	RunNo: 67142								
Prep Date: 3/9/2020	Analysis Date: 3/9/2020	SeqNo: 2312811 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.4	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2003132

10-Mar-20

Client: Safety & Environmental Solutions
Project: DEVON COTTON DRAW 237 IRP-5420

Sample ID: 2003132-002AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SP-10 Bottom	Batch ID: 50944	RunNo: 67097								
Prep Date: 3/6/2020	Analysis Date: 3/8/2020	SeqNo: 2310247 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.7	48.73	0	103	47.4	136			
Surr: DNOP	4.9		4.873		101	55.1	146			

Sample ID: LCS-50944	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 50944	RunNo: 67097								
Prep Date: 3/6/2020	Analysis Date: 3/8/2020	SeqNo: 2310267 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	115	70	130			
Surr: DNOP	5.5		5.000		111	55.1	146			

Sample ID: MB-50944	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 50944	RunNo: 67097								
Prep Date: 3/6/2020	Analysis Date: 3/8/2020	SeqNo: 2310268 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	55.1	146			

Sample ID: 2003132-002AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SP-10 Bottom	Batch ID: 50944	RunNo: 67097								
Prep Date: 3/6/2020	Analysis Date: 3/8/2020	SeqNo: 2310298 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	49.07	0	90.9	47.4	136	11.6	43.4	
Surr: DNOP	3.6		4.907		72.8	55.1	146	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2003132

10-Mar-20

Client: Safety & Environmental Solutions
Project: DEVON COTTON DRAW 237 IRP-5420

Sample ID: mb-50914	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310114		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		82.9	66.6	105			

Sample ID: lcs-50914	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310115		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.3	80	120			
Surr: BFB	910		1000		91.3	66.6	105			

Sample ID: 2003132-001ams	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SP-9 North Wall	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310117		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.65	0	83.8	69.1	142			
Surr: BFB	860		986.2		87.1	66.6	105			

Sample ID: 2003132-001amsd	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SP-9 North Wall	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310118		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.88	0	84.8	69.1	142	2.13	20	
Surr: BFB	880		995.0		88.2	66.6	105	0	0	

Sample ID: MB-50932	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 50932			RunNo: 67094						
Prep Date: 3/6/2020	Analysis Date: 3/8/2020			SeqNo: 2310138		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		85.8	66.6	105			

Sample ID: LCS-50932	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 50932			RunNo: 67094						
Prep Date: 3/6/2020	Analysis Date: 3/8/2020			SeqNo: 2310139		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	920		1000		92.1	66.6	105			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003132

10-Mar-20

Client: Safety & Environmental Solutions
Project: DEVON COTTON DRAW 237 IRP-5420

Sample ID: mb-50914	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310229		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID: LCS-50914	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310230		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.6	80	120			
Toluene	0.97	0.050	1.000	0	96.7	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.5	80	120			

Sample ID: 2003132-002ams	SampType: MS			TestCode: EPA Method 8021B: Volatiles						
Client ID: SP-10 Bottom	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310233		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	0.9980	0	83.2	78.5	119			
Toluene	0.89	0.050	0.9980	0.01427	88.0	75.7	123			
Ethylbenzene	0.92	0.050	0.9980	0	92.3	74.3	126			
Xylenes, Total	2.8	0.10	2.994	0.02229	93.2	72.9	130			
Surr: 4-Bromofluorobenzene	0.88		0.9980		88.3	80	120			

Sample ID: 2003132-002amsd	SampType: MSD			TestCode: EPA Method 8021B: Volatiles						
Client ID: SP-10 Bottom	Batch ID: 50914			RunNo: 67094						
Prep Date: 3/5/2020	Analysis Date: 3/7/2020			SeqNo: 2310239		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9775	0	87.5	78.5	119	2.97	20	
Toluene	0.92	0.049	0.9775	0.01427	92.8	75.7	123	3.25	20	
Ethylbenzene	0.95	0.049	0.9775	0	97.5	74.3	126	3.46	20	
Xylenes, Total	2.9	0.098	2.933	0.02229	98.3	72.9	130	3.24	20	
Surr: 4-Bromofluorobenzene	0.94		0.9775		96.4	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2003132

10-Mar-20

Client: Safety & Environmental Solutions

Project: DEVON COTTON DRAW 237 IRP-5420

Sample ID: MB-50932		SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS		Batch ID: 50932			RunNo: 67094					
Prep Date: 3/6/2020		Analysis Date: 3/8/2020			SeqNo: 2310287		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		92.7	80	120			

Sample ID: LCS-50932		SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS		Batch ID: 50932			RunNo: 67094					
Prep Date: 3/6/2020		Analysis Date: 3/8/2020			SeqNo: 2310288		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Safety Env Solutions**Work Order Number: **2003132**RcptNo: **1**Received By: *Jeryna Peterson* **3/4/2020 10:17:00 AM**Completed By: **Juan Rojas** **3/4/2020 11:51:01 AM** *Juan Rojas*Reviewed By: *JE 3/4/20*

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *DAS 3/4/20*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.5	Good				

Chain-of-Custody Record

Client: Safety & Environmental SolutionsMailing Address: 703 E ClintonHobbs NM 88240Phone #: 575-397-0510

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Date	Time	Matrix	Sample Name
03/02	0910	S	SP-9 North Wall
	0920	S	SP-10 Bottom
	0935	S	SP-11 West Wall
	0945	S	SP-12 Gas Wall
	0955	S	SP-13 Bottom
	1010	S	SP-14 West Wall
	1100	S	SP-15 Bottom
	1120	S	SP-16 East Wall
	1240	S	SP-17 West Wall
	1255	S	SP-18 East Wall
	1310	S	SP-19 Bottom
	1335	S	SP-20 South Wall

Relinquished by: San Jerry Date: 03/03/20 Time: 0800

Relinquished by: San Jerry Date: 3/3/20 Time: 1900

Turn-Around Time:

☒ Standard ☐ RushProject Name: Devon 237 Cotton Draw 237 (RP-5420)Project #: Dev-29-003

Project Manager:

Allen, BobSampler: San JerryOn Ice: ☒ Yes ☐ No

of Coolers:

Cooler Temp (including CF): 4.3 + CF = 4.5°C

Container Type and #

Preservative Type

HEAL No. 2003132

BTEX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, PO₄, SO₄

8270 (Semi-VOA)

8260 (VOA)

Total Coliform (Present/Absent)

Analysis Request

Remarks:

Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMBs (8021)	X
TPH:8015D(GRO / DRO / MRO)	X
8081 Pesticides/8082 PCBs	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₃ , PO ₄ , SO ₄	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	X

Remarks:

Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800Received by: San Jerry Date: 3/3/20 Time: 0800

Chain-of-Custody Record

Client: Safety & EnvironmentalMailing Address: 703 E ClintonHobbs N.M. 88240Phone #: 575-397-0570

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ RushProject Name: DevonProject #: DEV-19-003Project Manager: Aiken, BobSampler: See SamOn Ice: ☒ Yes ☐ No# of Coolers: 2Cooler Temp (including CF): 4.7 + 0.2 = 4.9 °C

Container Type and #

Preservative Type

HEAL No.

Date

Time

Matrix

Sample Name

Date

Time

Matrix

Sample Name

Date

Time

Matrix

Sample Name

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