REVIEWED
By Kristen Lynch at 2:06 pm, Oct 20, 2016

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

x☐ Initial Report ☐ Final Report

Name of Company Matador Resources Company	Contact Catherine Green
Address 500 N Main St Ste One Roswell NM 88201	Telephone No.575-623-6601
Facility Name Young Deep Unit 23	Facility Type Oil

Surface Owner	Mineral Owner Federal	API No.30-025-29896

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	18S	09	32E	2310	S	1980	E	Lea

Latitude 32.761017 **Longitude** -103.7693566

NATURE OF RELEASE

Type of Release Oil	Volume of Release ~10BBLs	Volume Recovered ~7BBLS
Source of Release Equalizer on tank not open	Date and Hour of Occurrence	Date and Hour of Discovery 9-29-16, 8am
Was Immediate Notice Given? X☐ Yes ☐ No ☐ Not Required	If YES, To Whom? Jason Thibodeaux	
By Whom? Michael Morris	Date and Hour Sep. 29, 2016 8am	
Was a Watercourse Reached? ☐ Yes x☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Equalizer line was shut. Oil could not flow to next production tank,

Describe Area Affected and Cleanup Action Taken.*
~10 BBLS of oil spilled into containment. ~7 BBLS recovered.
Soil in containment will be removed and replaced.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Catherine Green	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Kristen Lynch	
Printed Name: Catherine Green		
Title: Regulatory Analyst	Approval Date: 10/20/2016	Expiration Date: 12/20/2016
E-mail Address: cgreen@matadorresources.com	Conditions of Approval: NMOCD Requires sampling to take place NMOCD accepts discrete samples only Please submit remediation plan no later than 11/20/2016.	Attached ☐ 1RP 4474
Date: Oct. 10, 2016 Phone: 575-623-6601		

* Attach Additional Sheets If Necessary

nKL1629450522
pKL1629450685

PRELIMINARY RESULTS

1RP-4474

Investigation Summary and Work Plan

Young Deep Unit 23 Oil Production tank overflow in containment

Oct. 10, 2016

Introduction

This summary and work plan by Matador Resources details knowledge and plans for remediation of the Young Deep Unit (YDU) 11 and 23 battery production tank overflow into the containment that occurred during the morning hours of September 29, 2016. The YDU 11 and 23 battery is located in Section 18S, Township 9, Range 32E of Lea County, NM. The surface is owned by Jim Ross Caviness of Hobbs, NM, with the mineral rights controlled by the Bureau of Land Management (BLM). The geodetic position is 32°45.8745 N, 103°46.3907W. The release occurred on September 29, 2016 due to an equalizer line being in the closed position. Approximately 10 barrels of fluid was released. 7 barrels were recovered. The release was reported to the New Mexico Oil Conservation Division Hobbs office on October 10, 2016. OCD issued remediation project (RP) number 1RP-4474. Attachments include surveys, pictures, and map.

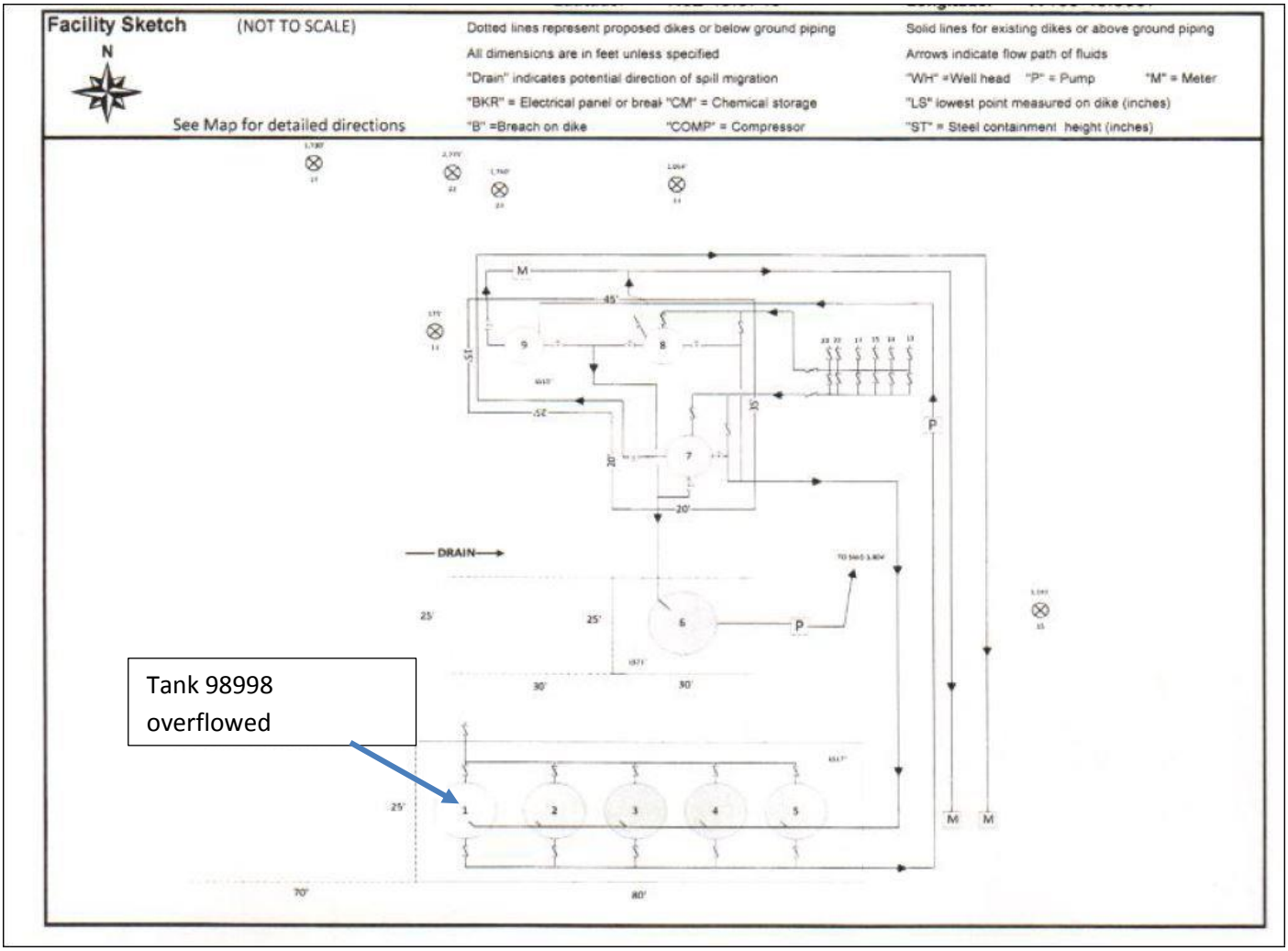
Setting

The setting is as follows:

- The surface elevation is approximately 3,830 feet above sea level.
- The topography is undulating sands.
- Groundwater is deeper than 400 feet below surface according to records from the New Mexico Office of the State Engineer (OSE)
- No fresh water wells in the area. (See attached OSE water well reports)

Remediation Action

Collect soil samples at a minimum depth of 24 inches below surface near the source to be analyzed by Hall Labs in Albuquerque, NM. Upon return of results, determine whether or not soil needs to be remediated deeper than 24 inches below surface.


Facility Sketch
(NOT TO SCALE)
N
See Map for detailed directions
Dotted lines represent proposed dikes or below ground piping
All dimensions are in feet unless specified
"Drain" indicates potential direction of spill migration
"BKR" = Electrical panel or breal "CM" = Chemical storage
"B" =Breach on dike "COMP" = Compressor
Solid lines for existing dikes or above ground piping
Arrows indicate flow path of fluids
"WH" =Well head "P" = Pump "M" = Meter
"LS" lowest point measured on dike (inches)
"ST" = Steel containment height (inches)
DRAIN
Tank 98998 overflowed

Tank on far right overflowed.

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner of well Billy Williams Owner's Well No. TH #1

Street or Post Office Address

City and State Maljamar, N. Mx.

Well was drilled under Permit No. and is located in the:

a. SE ¼ SW ¼ NE ¼ NE ¼ of Section 16 Township 18S Range 32E N.M.P.M.

b. Tract No. of Map No. of the

c. Lot No. of Block No. of the Subdivision, recorded in County.

d. X= feet, Y= feet, N.M. Coordinate System Zone in the Grant.

(B) Drilling Contractor Larry Felkins License No.

Address Hobbs, N. Mx.

Drilling Began 9/3/91 Completed 9/3/91 Type tools Rotary Size of hole 5¼ in.

Elevation of land surface or at well is ft. Total depth of well 100 ft.

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well Dry ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			

Section 1. GENERAL INFORMATION

(A) Owner of well T X O Prod. Owner's Well No. _____
Street or Post Office Address c/o Glenn's Water Well Service, Inc.
City and State Box 692 Tatum, New Mexico 88267

Well was drilled under Permit No. CP-677 and is located in the:

a. _____ ¼ W½ ¼ NW ¼ NW ¼ of Section 26 Township 18-S. Range 32-E. N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in _____ County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor Glenn's Water Well Service License No. WD 421

Address Box 692 Tatum, New Mexico 88267

Drilling Began 5/9/85 Completed 5/9/85 Type tools Rotary Size of hole 7 7/8 in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 700 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well _____ ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			
			Dry Hole	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To


Young Deep Unit # 11
© 2016 Google
Google earth
1996
Imagery Date: 2/13/2014 32°45'52.72" N 103°46'23.54" W elev 3830 ft eye alt 4235 ft

Detailed Site Map and Sample Map

Detailed Site and Sample Map
Young Deep Unit 23- Matador Resources
Maljamar ,New Mexico

Figure 2

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halagueno Street
Carlsbad, New Mexico 88221
(575) 689-7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains

Document: C:\Users\lcm.CBO\Documents\GIS DATA\MAPS\Figure2 Young Deep 23.mxd
Date Saved: 2/17/2017

Table 2: Summary of Laboratory Analyses

Analytical Report- 1702A48	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1702A48-001	L1	3/1/2017	1'	31.7	>0.24	450	2100	N/A
1702A48-002	L1	3/1/2017	3'	0.55	>0.047	27	550	N/A
1702A48-003	L2	3/1/2017	1'	62.63	0.53	1300	8400	N/A
1702A48-004	L2	3/1/2017	3'	0.93	>0.049	53	830	>30
1702A48-005	L3	3/1/2017	1'	4.2	285.2	3300	14000	>30
1702A48-006	L3	3/1/2017	3'	0.241	>0.024	5	97	>30

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 01, 2017

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX

RE: Young Deep #11 OrderNo.: 1702A48

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/23/2017 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 qualifers 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1702A48**
Date Reported: **3/1/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-001 **Matrix:** SOIL

Client Sample ID: L1-1
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	2100	94		mg/Kg	10	2/28/2017 10:45:25 PM	30399
Surr: DNOP	0	70-130	S	%Rec	10	2/28/2017 10:45:25 PM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	450	49		mg/Kg	10	2/27/2017 8:59:37 PM	30385
Surr: BFB	425	54-150	S	%Rec	10	2/27/2017 8:59:37 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.24		mg/Kg	10	2/27/2017 8:59:37 PM	30385
Toluene	6.1	0.49		mg/Kg	10	2/27/2017 8:59:37 PM	30385
Ethylbenzene	5.6	0.49		mg/Kg	10	2/27/2017 8:59:37 PM	30385
Xylenes, Total	21	0.98		mg/Kg	10	2/27/2017 8:59:37 PM	30385
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	10	2/27/2017 8:59:37 PM	30385

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-002 **Matrix:** SOIL

Client Sample ID: L1-3
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	2/28/2017 7:06:39 PM	30454
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	550	9.8		mg/Kg	1	2/28/2017 11:33:23 PM	30399
Surr: DNOP	104	70-130		%Rec	1	2/28/2017 11:33:23 PM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	27	9.4		mg/Kg	2	2/27/2017 9:25:53 PM	30385
Surr: BFB	251	54-150	S	%Rec	2	2/27/2017 9:25:53 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.047		mg/Kg	2	2/27/2017 9:25:53 PM	30385
Toluene	ND	0.094		mg/Kg	2	2/27/2017 9:25:53 PM	30385
Ethylbenzene	ND	0.094		mg/Kg	2	2/27/2017 9:25:53 PM	30385
Xylenes, Total	0.55	0.19		mg/Kg	2	2/27/2017 9:25:53 PM	30385
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	2	2/27/2017 9:25:53 PM	30385

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1702A48**
Date Reported: **3/1/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-003 **Matrix:** SOIL

Client Sample ID: L2-1
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	8400	95		mg/Kg	10	3/1/2017 12:21:24 AM	30399
Surr: DNOP	0	70-130	S	%Rec	10	3/1/2017 12:21:24 AM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	1300	98		mg/Kg	20	2/27/2017 9:52:05 PM	30385
Surr: BFB	473	54-150	S	%Rec	20	2/27/2017 9:52:05 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.53	0.49		mg/Kg	20	2/27/2017 9:52:05 PM	30385
Toluene	5.1	0.98		mg/Kg	20	2/27/2017 9:52:05 PM	30385
Ethylbenzene	ND	0.98		mg/Kg	20	2/27/2017 9:52:05 PM	30385
Xylenes, Total	57	2.0		mg/Kg	20	2/27/2017 9:52:05 PM	30385
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	20	2/27/2017 9:52:05 PM	30385

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1702A48**
Date Reported: **3/1/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-004 **Matrix:** SOIL

Client Sample ID: L2-3
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	2/28/2017 7:19:03 PM	30454
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	830	9.6		mg/Kg	1	3/1/2017 1:09:27 AM	30399
Surr: DNOP	102	70-130		%Rec	1	3/1/2017 1:09:27 AM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	53	9.8		mg/Kg	2	2/27/2017 10:18:24 PM	30385
Surr: BFB	365	54-150	S	%Rec	2	2/27/2017 10:18:24 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.049		mg/Kg	2	2/27/2017 10:18:24 PM	30385
Toluene	ND	0.098		mg/Kg	2	2/27/2017 10:18:24 PM	30385
Ethylbenzene	ND	0.098		mg/Kg	2	2/27/2017 10:18:24 PM	30385
Xylenes, Total	0.93	0.20		mg/Kg	2	2/27/2017 10:18:24 PM	30385
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	2	2/27/2017 10:18:24 PM	30385

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-005 **Matrix:** SOIL

Client Sample ID: L3-1
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	2/28/2017 7:56:17 PM	30454
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	14000	940		mg/Kg	100	3/1/2017 1:57:23 AM	30399
Surr: DNOP	0	70-130	S	%Rec	100	3/1/2017 1:57:23 AM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	3300	240		mg/Kg	50	2/27/2017 10:44:38 PM	30385
Surr: BFB	385	54-150	S	%Rec	50	2/27/2017 10:44:38 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	4.2	1.2		mg/Kg	50	2/27/2017 10:44:38 PM	30385
Toluene	51	2.4		mg/Kg	50	2/27/2017 10:44:38 PM	30385
Ethylbenzene	40	2.4		mg/Kg	50	2/27/2017 10:44:38 PM	30385
Xylenes, Total	190	4.9		mg/Kg	50	2/27/2017 10:44:38 PM	30385
Surr: 4-Bromofluorobenzene	132	80-120	S	%Rec	50	2/27/2017 10:44:38 PM	30385

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1702A48**
Date Reported: **3/1/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Project: Young Deep #11
Lab ID: 1702A48-006 **Matrix:** SOIL

Client Sample ID: L3-3
Collection Date: 2/15/2017 12:20:00 PM
Received Date: 2/23/2017 9:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	30		mg/Kg	20	2/28/2017 8:08:41 PM	30454
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	97	9.7		mg/Kg	1	3/1/2017 2:45:21 AM	30399
Surr: DNOP	95.6	70-130		%Rec	1	3/1/2017 2:45:21 AM	30399
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	5.0	4.8		mg/Kg	1	2/27/2017 11:10:50 PM	30385
Surr: BFB	145	54-150		%Rec	1	2/27/2017 11:10:50 PM	30385
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	2/27/2017 11:10:50 PM	30385
Toluene	ND	0.048		mg/Kg	1	2/27/2017 11:10:50 PM	30385
Ethylbenzene	0.051	0.048		mg/Kg	1	2/27/2017 11:10:50 PM	30385
Xylenes, Total	0.19	0.095		mg/Kg	1	2/27/2017 11:10:50 PM	30385
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	2/27/2017 11:10:50 PM	30385

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
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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1702A48**

01-Mar-17

Client: Souder, Miller & Associates

Project: Young Deep #11

Sample ID	MB-30454	SampType:	mblk	TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	30454	RunNo:	41047				
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286795	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-30454	SampType:	lcs	TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	30454	RunNo:	41047				
Prep Date:	2/28/2017	Analysis Date:	2/28/2017	SeqNo:	1286796	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.	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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1702A48**

01-Mar-17

Client: Souder, Miller & Associates

Project: Young Deep #11

Sample ID	MB-30431	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	30431		RunNo:	41032				
Prep Date:	2/28/2017	Analysis Date:	2/28/2017		SeqNo:	1285370	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.8	70	130			

Sample ID	LCS-30399	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	30399		RunNo:	41033				
Prep Date:	2/27/2017	Analysis Date:	2/28/2017		SeqNo:	1285372	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.2	63.8	116			
Surr: DNOP	4.7		5.000		93.9	70	130			

Sample ID	MB-30399	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	30399		RunNo:	41033				
Prep Date:	2/27/2017	Analysis Date:	2/28/2017		SeqNo:	1285373	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		108	70	130			

Sample ID	LCS-30431	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	30431		RunNo:	41032				
Prep Date:	2/28/2017	Analysis Date:	2/28/2017		SeqNo:	1285512	Units:	%Rec		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.5	70	130			

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1702A48**

01-Mar-17

Client: Souder, Miller & Associates

Project: Young Deep #11

Sample ID	MB-30385	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	30385	RunNo:	41013					
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284702	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		82.5	54	150			

Sample ID	LCS-30385	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	30385	RunNo:	41013					
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284703	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	76.4	125			
Surr: BFB	1000		1000		103	54	150			

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1702A48**

01-Mar-17

Client: Souder, Miller & Associates

Project: Young Deep #11

Sample ID	MB-30385	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBS	Batch ID:	30385	RunNo:	41013				
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284760	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	0.89		1.000		89.0	80	120			

Sample ID	LCS-30385	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles				
Client ID:	LCSS	Batch ID:	30385	RunNo:	41013				
Prep Date:	2/24/2017	Analysis Date:	2/27/2017	SeqNo:	1284761	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.5	75.2	115			
Toluene	0.99	0.050	1.000	0	99.4	80.7	112			
Ethylbenzene	0.98	0.050	1.000	0	98.3	78.9	117			
Xylenes, Total	3.0	0.10	3.000	0	100	79.2	115			
Surr: 4-Bromofluorobenzene	0.84		1.000		84.4	80	120			

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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: SMA-CARLSBAD Work Order Number: 1702A48 RcptNo: 1

Received by/date: LM 02/24/17

Logged By: Andy Jansson 2/23/2017 9:20:00 AM

Completed By: Andy Jansson 02/24/17

Reviewed By: 02/24/17

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. 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: _____

Special Handling (if applicable)

16. 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: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Young Deep #11

Project #:

Project Manager: Austin Weyant

Sampler: LGM

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1702148	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2/15/17	12:20	Soil	~~B-3~~	~~1 4oz~~																		
			L1-1			-001	X		X	percent moisture												
			L1-3			-002	X		X					X								
			L2-1			-003	X		X													
			L2-3			-004	X		X					X								
			L3-1			-005	X		X					X								
			L3-3			-006	X		X					X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
2-21-17	4:30			02/23/17	0920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Soil Remediation Work Plan

Upon approval of this work plan, affected soils will be removed and disposed of in an NMOCD approved land disposal facility. Clean backfill material will be placed in the affected area. Final soil samples will be collected and submitted to NMOCD with the final C-141.