WESTERN WELCH UNIT #002 SOIL REMEDIATION AND CLOSURE WORKPLAN

JUDAH OIL LLC
30-015-02674 WESTERN WELCH #002
SECTION 9, T18S, R28E
EDDY COUNTY, NEW MEXICO

Prepared For:

Mr. James B Campanella
Judah Oil LLC

Prepared By:
Souder Miller & Associates

201 S. Halagueno
Carlsbad, NM 88221

Office: (575) 689-7040

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INTRODUCTION

On behalf of Judah Oil, LLC. SMA has prepared this remediation workplan to describe the remedial approach for a hydrocarbon release associated at the Western Welch #002 battery on July 3, 2014 The release was due to a failure in the production tank from localized corrosion at the tank bottom. As a result, 190bbl crude oil was released onto the pad. The release was reported July 3, 2014 and was located in Unit 1, Section 9, Township 18 South, Range 28 East, Eddy County, New Mexico. Figure 1, illustrates the location of the release. This document presents the results of initial soil sampling results performed at the Site, a regulatory framework for existing and proposed activities as well as a soil remediation and closure workplan designed to facilitate Site closure. Site details, sampling locations and the proposed remedial excavation area are presented as FIGURE 2. Appendices are provided to include laboratory analytical reports, NMOCD regulatory form C-141(initial) and the invoice for the RCRA exempt disposal of highly saturated soils to the NMOCD approved facility Lea Land Landfarm.

REGULATORY FRAMEWORK AND SITE CLASSIFICATION

This project is conducted under the regulatory jurisdiction of the NMOCD, which requires the vadose zone shall be abated so that water contaminants in the vadose zone will not, with reasonable probability, contaminate groundwater or surface water (toxic pollutants as defined in 20.6.2.7 New Mexico Administration Code shall not be present) through leaching, percolation, or other transport mechanisms (19.15.1.19 NMAC, Subsection B, Paragraphs 1 and 2). The NMOCD hydrocarbon soil remediation levels are determined by ranking criteria on a site-by-site basis, as outlined in the NMOCD Guidelines for Remediation of Spills, Leaks, and Releases, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection, and distance to surface water.

Currently, no wells are located within 1,000 feet of the well pad and battery estimated depth to groundwater of greater than 100 feet below ground surface. No surface water bodies are located within 1,000 feet or less of the well pad and battery. The table below illustrates the ranking criteria, used by the NMOCD, and includes site specific characteristics at the Western Welch #002.

Criteria Site Characteristics Ranking Score
Depth to Ground Water >100 feet 0
Wellhead Protection Area >1000 feet 0
Distance to Surface Water >1,000 feet 0
Total Ranking Score 0

Based on the sites' characteristics and the "Guidelines for Remediation of Spills, Leaks, and Releases" the site has a ranking score of 0. Consequently, the ranking criteria Recommended Remediation Action Levels (RRALs) of 10 milligrams per kilogram (mg/Kg) Benzene, 50 mg/Kg total Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), and 5000 mg/Kg Total Petroleum Hydrocarbons (TPH) are proposed for remediation at the Site

INITIAL SOIL SAMPLING RESULTS

Samples were taken after immediate corrective actions and initial release response was concluded as outlined in Form C141 received by the NMOCD on 7/17/14(APPENDIX B). A vacuum truck was called to recover the released liquids. A third party contractor excavated impacted soils from release by 2:00pm 7/4/14. An approximate area of 150' X 200' was scraped to an approximate depth of 6 inches and placed on a synthetic liner and bermed. The battery and well were shut-in, and the production tank taken out of service. 22yds of heavily impacted soils were excavated and from release area and were hauled to an NMOCD approved facility.

Samples locations below are representative, randomized block samples taken from 0-6inches in depth. Sample locations #1 and #2 are off the spill pile and are composite soil samples. Sample locations #3, #4, #5, and #6 are grab soil samples. All samples were collected and processed using "Guidelines for Remediation of Spills, Leaks, and Releases" soil sampling procedures. Sampling details and Sample location Map is provided as FIGURE 2 presenting the soil sample locations. The samples were analyzed for BTEX utilizing EPA Method 8021B, TPH using EPA 8015 Modified for diesel range organics/gasoline range organics (DRO/GRO), and total Chlorides using EPA Method 300.0 The analytical results collected and submitted for analysis at the location are summarized below.

Table 1

Analytical Report-1407629	Sample Date	Depth	BTEX	GRO	DRO	Cl-
Spill Pile #1	7/11/2014	N/A	9.9	180	2600	290
Note: Composite sample collected from the excavated material.						
Spill Pile #2	7/11/2014	N/A	7.31	150	16000	260
Note: Composite sample collected from the excavated material.						
Location #3	7/11/2014	0'-6'	<.048	<4.8	<9.9	
Note: Grab sample collected from the Southwest of the affected area.						
Locations #4	7/11/2014	0'-6'	.43	14	4500	
Note: Grab sample collected from the Southeast of the affected area.						
Location #5	7/11/2014	0'-6'	<.048	<4.8	410	
Note: Grab sample collected from the center of the affected area						
Location #6	7/11/2014	0'-6'	<.048	<4.8	4100	
Note: Grab sample collected from the Northeast of the affected area						

SOIL REMEDIATION WORKPLAN

The initial soil assessment activities performed by SMA effectively delineated the horizontal and vertical extent of hydrocarbon-affected soils in accordance to NMOCD regulatory guidance. Analytical results indicate that the primary area of affected soils above NMOCD RRALs at the Site have been removed and placed in a synthetically lined and bermed as represented by spill pile soil sample locations #1 and #2.

The primary objectives of this Soil Remediation Workplan is the in-situ remediation of the affected soils from the Site that exhibit hydrocarbon concentrations above NMOCD regulatory guidelines and obtain written acknowledgement from the NMOCD regarding the implemented soil remediation workplan activities. Upon completion of these work plan activities SMA will file for closure on behalf of its client Judah Oil LLC.

Based on the initial soil sampling results for the Site, excavation activities are anticipated to be limited in nature and are not anticipated to exceed the 6 inches reached in the Initial Response Action. Heavy equipment will be utilized to turn affected soils in the synthetically lined and bermed spill pile adjacent to the remedial excavation. The Spill Pile with be turned periodically and water and ***Micro-Blaze® Emergency Liquid Spill Control*** added at the recommended 3-6% rate to encourage Biodegradation and Volatilization of the hydrocarbons found in the affected soils. Soil samples will periodically be collected within the spill pile based on the judgment of SMA field personnel to assess the completeness of bioremediation and volatilization of the affected soils in the pile. The soil samples will be field screened utilizing a photoionization detector (PID) calibrated to a 100-ppm isobutylene standard. Each soil sample will be placed in resalable plastic bags leaving a headspace for volatile organic compounds (VOCs) to collect. After sufficient time has passed to allow for volatilization, the headspace in each bagged sample will be measured using the PID.

CONFIRMATION SAMPLING PLAN

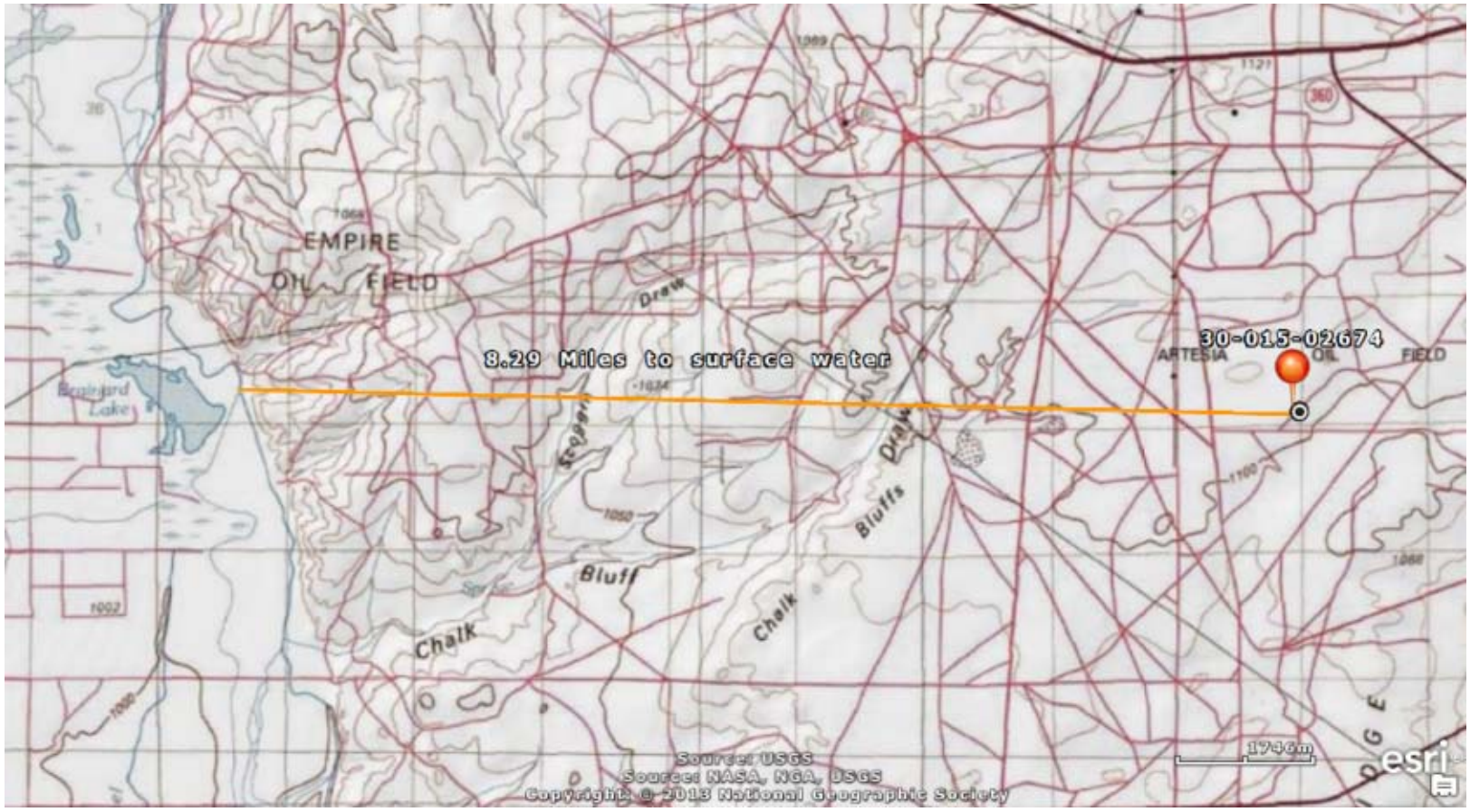
Once field screenings appear to reach the Recommended Remediation Action Levels (RRALs) The NMOCD District 2 Artesia office will be notified at least 48 hours in advance of planned confirmation sampling activities. Soil samples for confirmation will be taken of the spill pile. The composite sample locations will be based on the geometry of the turned spill pile. The soil samples will be delivered to Hall Environmental Analysis Laboratory, in Albuquerque, New Mexico for TPH (GRO/ DRO) analysis by EPA Method 8015 (modified) and BTEX analyses by EPA Method\8021B. Each sample container will be labeled, placed on ice in an insulated cooler, and chilled to a temperature of approximately 40°F (4°C). The cooler will be sealed for shipment to the laboratory. Proper chain-of-custody documentation will accompany the samples to the laboratory.

SITE CLOSURE

After third party lab confirmation anticipated site-specific NMOCD ranking criteria cleanup levels of 10 mg/Kg Benzene, 50 mg/Kg total BTEX and 5000 mg/Kg TPH are reached Final grading of construction-affected surface areas will be performed to mitigate erosion and closure of the spill will be requested. The closure request will be submitted to the NMOCD as a C-141 final.

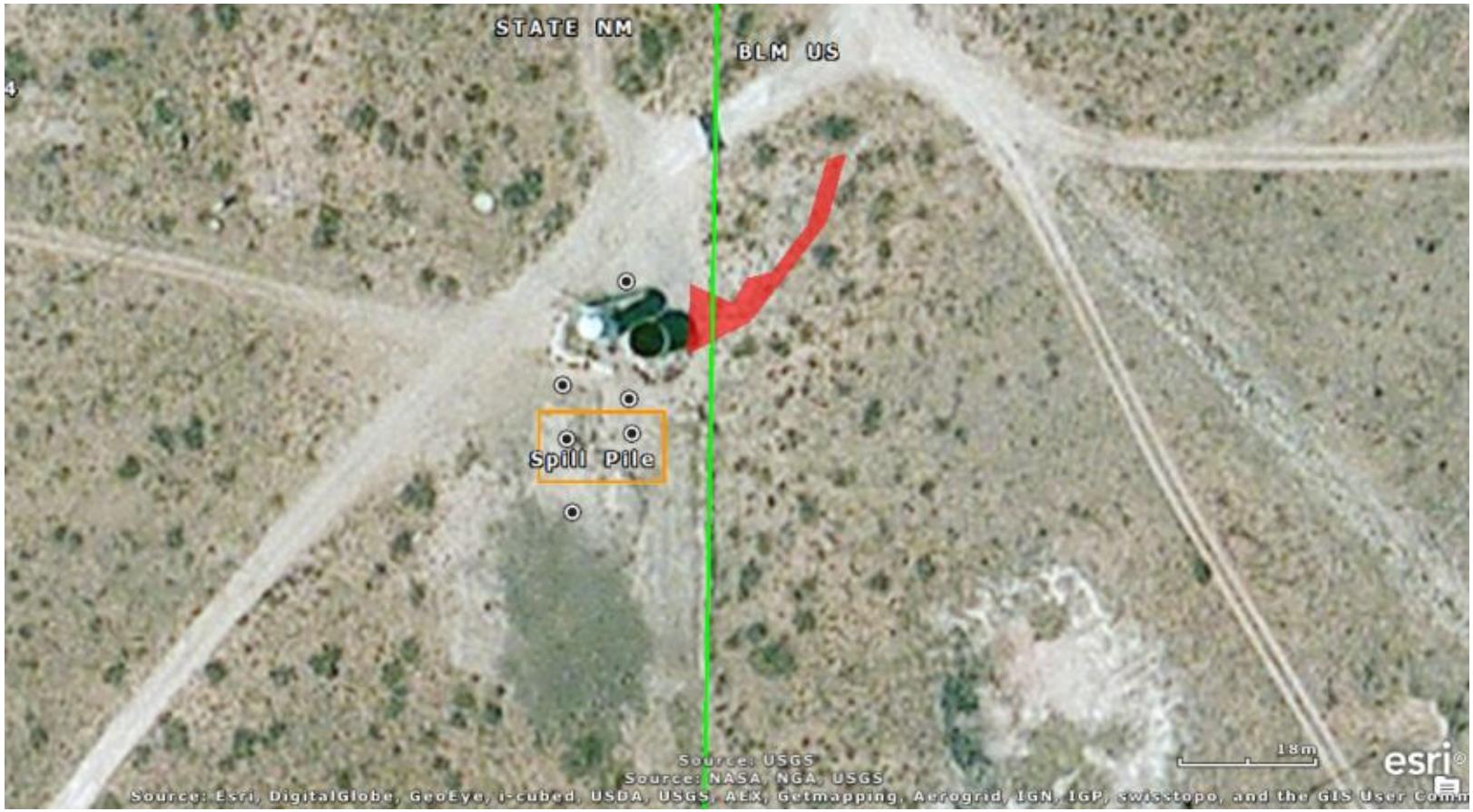
LIST OF FIGURES

Distance To Surface Water



Welch Western #2 Sample Locations

WELCH WESTERN #002 OVERFLOW TO BLM



APPENDICES

APPENDIX A LABORATORY ANALYTICAL REPORTS
APPENDIX B INITIAL FORM C141 RELEASE NOTIFICATION AND CORRECTIVE ACTION
APPENDIX C WASTE MANIFEST LEA LAND LANDFARM
APPENDIX D MSDS FOR ***Micro-Blaze® Emergency Liquid Spill Control***

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

July 23, 2014

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

RE: Welch Western 002 OrderNo.: 1407629

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/15/2014 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 **1407629**
Date Reported: **7/23/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S1
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-001
Matrix: SOIL
Received Date: 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	2600	100		mg/Kg	10	7/18/2014 5:15:45 PM	14220
Surr: DNOP	0	57.9-140	S	%REC	10	7/18/2014 5:15:45 PM	14220
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	180	47		mg/Kg	10	7/21/2014 1:45:10 PM	14224
Surr: BFB	187	80-120	S	%REC	10	7/21/2014 1:45:10 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.23		mg/Kg	10	7/21/2014 1:45:10 PM	14224
Toluene	1.1	0.47		mg/Kg	10	7/21/2014 1:45:10 PM	14224
Ethylbenzene	3.1	0.47		mg/Kg	10	7/21/2014 1:45:10 PM	14224
Xylenes, Total	5.7	0.93		mg/Kg	10	7/21/2014 1:45:10 PM	14224
Surr: 4-Bromofluorobenzene	121	80-120	S	%REC	10	7/21/2014 1:45:10 PM	14224
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	290	30		mg/Kg	20	7/16/2014 5:13:02 PM	14251

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S2
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-002
Matrix: SOIL
Received Date: 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	16000	990		mg/Kg	100	7/19/2014 11:47:34 AM	14220
Surr: DNOP	0	57.9-140	S	%REC	100	7/19/2014 11:47:34 AM	14220
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	150	24		mg/Kg	5	7/17/2014 7:34:51 PM	14224
Surr: BFB	269	80-120	S	%REC	5	7/17/2014 7:34:51 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.12		mg/Kg	5	7/17/2014 7:34:51 PM	14224
Toluene	0.81	0.24		mg/Kg	5	7/17/2014 7:34:51 PM	14224
Ethylbenzene	2.2	0.24		mg/Kg	5	7/17/2014 7:34:51 PM	14224
Xylenes, Total	4.3	0.49		mg/Kg	5	7/17/2014 7:34:51 PM	14224
Surr: 4-Bromofluorobenzene	155	80-120	S	%REC	5	7/17/2014 7:34:51 PM	14224
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	260	30		mg/Kg	20	7/16/2014 5:37:50 PM	14251

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S3
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-003
Matrix: SOIL
Received Date: 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/19/2014 1:15:28 PM	14315
Surr: DNOP	74.9	57.9-140		%REC	1	7/19/2014 1:15:28 PM	14315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/17/2014 8:04:46 PM	14224
Surr: BFB	93.9	80-120		%REC	1	7/17/2014 8:04:46 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.048		mg/Kg	1	7/17/2014 8:04:46 PM	14224
Toluene	ND	0.048		mg/Kg	1	7/17/2014 8:04:46 PM	14224
Ethylbenzene	ND	0.048		mg/Kg	1	7/17/2014 8:04:46 PM	14224
Xylenes, Total	ND	0.096		mg/Kg	1	7/17/2014 8:04:46 PM	14224
Surr: 4-Bromofluorobenzene	98.9	80-120		%REC	1	7/17/2014 8:04:46 PM	14224

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S4
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-004
Matrix: SOIL
Received Date: 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	4500	98		mg/Kg	10	7/18/2014 6:50:15 PM	14220
Surr: DNOP	0	57.9-140	S	%REC	10	7/18/2014 6:50:15 PM	14220
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	14	9.5		mg/Kg	2	7/17/2014 8:34:56 PM	14224
Surr: BFB	152	80-120	S	%REC	2	7/17/2014 8:34:56 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.095		mg/Kg	2	7/17/2014 8:34:56 PM	14224
Toluene	ND	0.095		mg/Kg	2	7/17/2014 8:34:56 PM	14224
Ethylbenzene	0.14	0.095		mg/Kg	2	7/17/2014 8:34:56 PM	14224
Xylenes, Total	0.29	0.19		mg/Kg	2	7/17/2014 8:34:56 PM	14224
Surr: 4-Bromofluorobenzene	125	80-120	S	%REC	2	7/17/2014 8:34:56 PM	14224

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S5
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-005 **Matrix:** SOIL **Received Date:** 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	410	100		mg/Kg	10	7/18/2014 7:21:37 PM	14220
Surr: DNOP	0	57.9-140	S	%REC	10	7/18/2014 7:21:37 PM	14220
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	9.5		mg/Kg	2	7/17/2014 9:05:04 PM	14224
Surr: BFB	110	80-120		%REC	2	7/17/2014 9:05:04 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.095		mg/Kg	2	7/17/2014 9:05:04 PM	14224
Toluene	ND	0.095		mg/Kg	2	7/17/2014 9:05:04 PM	14224
Ethylbenzene	ND	0.095		mg/Kg	2	7/17/2014 9:05:04 PM	14224
Xylenes, Total	ND	0.19		mg/Kg	2	7/17/2014 9:05:04 PM	14224
Surr: 4-Bromofluorobenzene	119	80-120		%REC	2	7/17/2014 9:05:04 PM	14224

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: S6
Project: Welch Western 002
Collection Date: 7/11/2014 12:24:00 PM
Lab ID: 1407629-006
Matrix: SOIL
Received Date: 7/15/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	4100	100		mg/Kg	10	7/18/2014 7:52:39 PM	14220
Surr: DNOP	0	57.9-140	S	%REC	10	7/18/2014 7:52:39 PM	14220
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	9.6		mg/Kg	2	7/17/2014 9:35:04 PM	14224
Surr: BFB	113	80-120		%REC	2	7/17/2014 9:35:04 PM	14224
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.096		mg/Kg	2	7/17/2014 9:35:04 PM	14224
Toluene	ND	0.096		mg/Kg	2	7/17/2014 9:35:04 PM	14224
Ethylbenzene	ND	0.096		mg/Kg	2	7/17/2014 9:35:04 PM	14224
Xylenes, Total	ND	0.19		mg/Kg	2	7/17/2014 9:35:04 PM	14224
Surr: 4-Bromofluorobenzene	122	80-120	S	%REC	2	7/17/2014 9:35:04 PM	14224

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
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407629**

23-Jul-14

Client: Souder, Miller & Associates

Project: Welch Western 002

Sample ID	**MB-14251**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**14251**	RunNo:	**19944**				
Prep Date:	**7/16/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579600**	Units:	**mg/Kg**		

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

Sample ID	**LCS-14251**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**14251**	RunNo:	**19944**				
Prep Date:	**7/16/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579601**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407629**

23-Jul-14

Client: Souder, Miller & Associates

Project: Welch Western 002

Sample ID **MB-14220**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **14220**	RunNo: **19942**
Prep Date: **7/15/2014**	Analysis Date: **7/18/2014**	SeqNo: **580642** 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	9.0		10.00		90.2	57.9	140			

Sample ID **LCS-14220**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **14220**	RunNo: **19942**
Prep Date: **7/15/2014**	Analysis Date: **7/18/2014**	SeqNo: **580643** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	68.6	130			
Surr: DNOP	4.0		5.000		80.7	57.9	140			

Sample ID **MB-14301**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **14301**	RunNo: **19974**
Prep Date: **7/18/2014**	Analysis Date: **7/18/2014**	SeqNo: **581081** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.4		10.00		73.9	57.9	140			

Sample ID **LCS-14301**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **14301**	RunNo: **19974**
Prep Date: **7/18/2014**	Analysis Date: **7/18/2014**	SeqNo: **581082** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.0		5.000		79.6	57.9	140			

Sample ID **MB-14315**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **14315**	RunNo: **19999**
Prep Date: **7/19/2014**	Analysis Date: **7/19/2014**	SeqNo: **581179** 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	7.4		10.00		74.1	57.9	140			

Sample ID **LCS-14315**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **14315**	RunNo: **19999**
Prep Date: **7/19/2014**	Analysis Date: **7/19/2014**	SeqNo: **581181** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.6	68.6	130			
Surr: DNOP	3.9		5.000		77.3	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407629**

23-Jul-14

Client: Souder, Miller & Associates

Project: Welch Western 002

Sample ID	**MB-14323**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**14323**	RunNo:	**20022**					
Prep Date:	**7/21/2014**	Analysis Date:	**7/21/2014**	SeqNo:	**581855**	Units:	**%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.6		10.00		76.2	57.9	140			

Sample ID	**LCS-14323**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**14323**	RunNo:	**20022**					
Prep Date:	**7/21/2014**	Analysis Date:	**7/21/2014**	SeqNo:	**581965**	Units:	**%REC**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		89.7	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407629**

23-Jul-14

Client: Souder, Miller & Associates

Project: Welch Western 002

Sample ID	**MB-14224**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBS**	Batch ID:	**14224**	RunNo:	**19932**
Prep Date:	**7/15/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579401** 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	910		1000		91.1	80	120			

Sample ID	**LCS-14224**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSS**	Batch ID:	**14224**	RunNo:	**19932**
Prep Date:	**7/15/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579402** 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	71.7	134			
Surr: BFB	990		1000		99.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407629**

23-Jul-14

Client: Souder, Miller & Associates

Project: Welch Western 002

Sample ID	**MB-14224**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**14224**	RunNo:	**19932**					
Prep Date:	**7/15/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579421**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	**LCS-14224**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**14224**	RunNo:	**19932**					
Prep Date:	**7/15/2014**	Analysis Date:	**7/16/2014**	SeqNo:	**579422**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	107	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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: 1407629 RcptNo: 1

Received by/date: 07/15/14

Logged By: **Ashley Gallegos** 7/15/2014 8:50:00 AM

Completed By: **Ashley Gallegos** 7/15/2014 9:31:55 AM

Reviewed By: 07/15/14

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?	FedEx		

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	4.6	Good	Yes			

Chain-of-Custody Record

Client: SMA / Judah Oil LLC

Mailing Address: 201 S Halagueno
Carlsbad, NM 88221

Phone #: 575-689-7040

email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
Welch Western 002

Project #:
5123318

Project Manager:
Austin Weyant

Sampler: JAW
On Ice: ☑ Yes ☐ No
Sample Temperature: 4.6

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. 1407629	Analysis Request: BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Cl- 4500				Air Bubbles (Y or N)
7/11/14	12:24pm	Soil	S1	4oz/1		-001	X		X									X				
7/11/14	12:24pm	Soil	S2	4oz/1		-002	X		X									X				
7/11/14	12:24pm	Soil	S3	4oz/1		-003	X		X													
7/11/14	12:24pm	Soil	S4	4oz/1		-004	X		X													
7/11/14	12:24pm	Soil	S5	4oz/1		-005	X		X													
7/11/14	12:24pm	Soil	S6	4oz/1		-006	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
				07/15/14	0850	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

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.

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 Judah Oil LLC	Contact James B Campanella
Address 611 W Mahone Drive # D Artesia, NM 88210	Telephone No. 575-748-5488
Facility Name Welch Western #002	Facility Type Oil Well

Surface Owner State of New Mexico	Mineral Owner	API No. 30-015-02674

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	09	18S	28E	1650	S	330	E	EDDY

Latitude 32.75908 **Longitude** -104.17297

NATURE OF RELEASE

Type of Release Oil	Volume of Release 180bbl	Volume Recovered 30bbl
Source of Release Production Tank	Date and Hour of Occurrence 7/4/14 Early Morning	Date and Hour of Discovery 7/4/14 9am
Was Immediate Notice Given? ☐ Yes X No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*

A load of oil was prepared for transport in the locations' battery when a failure in the production tank from localized corrosion at the tank bottom occurred. As a result, crude oil was released onto the pad. Vacuum truck(s) called to recover released liquids. Backhoe crew on location excavating impacted soils from release by 2:00pm 7/4/14. An approximate area of 150' X 200'. Battery and well were shut-in. And the tank taken out of service. 22yrds of impacted soils were excavated and scraped from release area and were hauled to an NMOCD approved facility.

Describe Area Affected and Cleanup Action Taken.*

Vertical and horizontal delineation samples will be taken and analysis ran for TPH and BTEX (chlorides for documentation). If initial analytical results for TPH and BTEX are under RRAL's (site ranking is 0) a final report, C-141 will be submitted to the OCD requesting closure. If the analytical results are above the RRAL a work plan will be submitted to the OCD. Depth to ground water:>100' (112' New Mexico State Office of the State Engineer), Wellhead protection area: No, distance to surface water body:>1000', site ranking is 0.

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:	OIL CONSERVATION DIVISION	
Printed Name:	Approved by Environmental Specialist:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: Phone:		

DAIKIN AC
absolute comfort

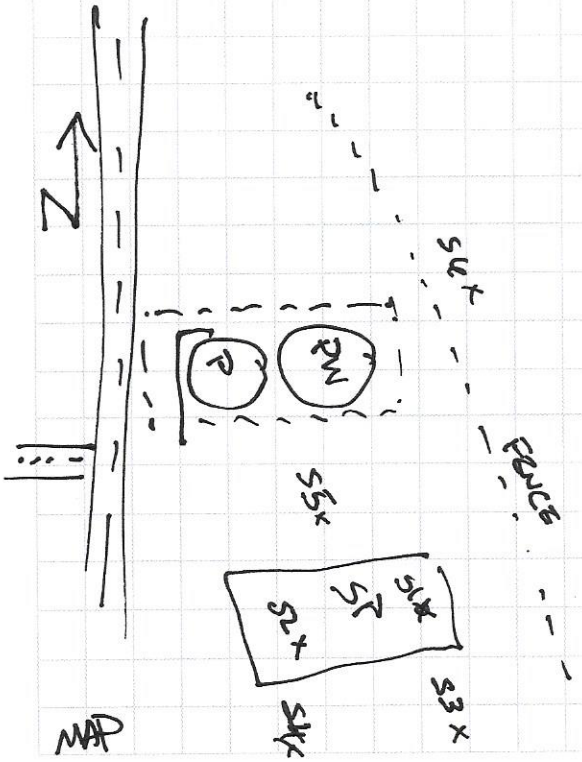
7/11/14 START 12:24 PM
END

30-015-02674
WELCH WESTERN #002
JUDAH OIL LLC

32.75908 -104.17297

-SAMPLE LOCATION 4OZ TPH & BTEX

SAMPLE	LOCATION	TYPE	LAT/LONG	DEPTH
#1	SPILL PILE E	C		
#2	SPILL PILE W	C		
#3	SOUTH EAST	G	32.7564 -104.1727	0-6"
#4	SOUTH WEST	G	32.7565 -104.1725	0-6"
#5	NORTH OF SP	G	32.7556 -104.1724	0-6"
#6	ON RED PIPE	G	32.7564 -104.1725	0-6"



RANDOM # TABLE USED FOR S3-S6

-TALKED TO PUMPER

14' OF OIL
1' OF WATER

LOAD WAS READY TO HAUL

DAIKIN AC (Americas), Inc.
1645 Wallace Drive, Suite 110
Carrollton, TX 75006 USA

Tel: 866-4DAIKIN
Fax: 972-245-1038
www.daikinac.com

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 11857 POD1		ED	1	1	2	05	18S	26E	577784	3625988	1616	235	95	140
RA 09588		ED		1	2	33	18S	28E	576976	3619384*	5743	300		
RA 04048		LE	1	4	4	14	18S	27E	570841	3623030*	5963	2096		
RA 03917		LE	4	1	2	10	18S	27E	569019	3625660*	7434	130	50	80
RA 04561		ED		4	2	26	17S	27E	570871	3630142*	7505	250		
RA 04554		ED			1	23	17S	27E	569859	3631947*	9490	220	40	180
RA 01493		ED		2	1	27	17S	27E	568468	3630529*	9638	876		
CP 00361		ED	3	1	3	09	19S	28E	576094	3615246*	9861	365	265	100

Average Depth to Water: **112 feet**

Minimum Depth: **40 feet**

Maximum Depth: **265 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 576433 **Northing (Y):** 3625102 **Radius:** 10000

***UTM location was derived from PLSS - see Help**