OIL CONS. DIV DIST. 3

JAN 23 2017

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 to accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 258-1607**
Facility Name: **Davis A Federal 1**	Facility Type: **Gas Well**

Surface Owner **Federal**	Mineral Owner **Federal (SF 079962)**	API No. **3004509210**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	**25**	**30N**	**11W**	**1190**	**North**	**990**	**West**	**San Juan**

Latitude 36. 78718 Longitude -107. 94857

NATURE OF RELEASE

Type of Release **Hydrocarbon (Historic)**	Volume of Release **Unknown**	Volume Recovered **540 cyd**
Source of Release **Production Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **02/17/16 @ 12:00 pm**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **N/A**	
By Whom? **N/A**	Date and Hour **N/A**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **N/A**	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Evidence of release was reported by OCD inspector from bottom of Production Tank. Volume of release is unknown, and suspect that had been seeping for unknown duration.

Describe Area Affected and Cleanup Action Taken.*
Excavation was 37.5' x 32' x 19' Deep. 540 c/yds of soil was transported to an approved Land Farm. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.

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 Approved by Environmental Specialist:	
Printed Name: **Lisa Hunter**		
Title: **Field Environmental Specialist**	Approval Date: 2/21/2017	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: **January 18, 2017** Phone: **(505) 258-1607**	NCS1629241395	

* Attach Additional Sheets If Necessary

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Davis A Federal #1 Release Report

Unit Letter D, Section 25, Township 30 North, Range 11 West
San Juan County, New Mexico

January 17, 2017

Prepared for:
ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Rule Engineering, LLC
Solutions to Regulations for Industry

ConocoPhillips
Davis A Federal #1 Release Report

Prepared for:

ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Heather M. Woods

Heather M. Woods, P.G., Area Manager

Reviewed by:

Kerri Crawford by HW

Kerri Crawford, P.E., Senior Engineer

January 17, 2017

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1.0 Introduction

The ConocoPhillips Davis A Federal #1 release site is located in Unit Letter D, Section 25, Township 30 North, Range 11 West, in San Juan County, New Mexico. A release was discovered on February 17, 2016, during below grade tank (BGT) closure activities at the site.

A topographic map of the location reproduced from the United States Geological Society quadrangle map of the area is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name	Davis A Federal #1		
Site Location Description	Unit Letter D, Section 25, Township 30 North, Range 11 West		
Wellhead GPS Location	N36.78709 and W107.94821	***Release GPS Location***	N36.78718 and W107.94857
Land Jurisdiction	Bureau of Land Management	***Discovery Date***	February 17, 2016
Release Description	A release from the base of the above grade production tank was discovered by an inspector as evidenced by wet soils near the sales valve.		
NMOCD Site Rank	10		
Distance to Nearest Surface Water	An ephemeral tributary of Bloomfield Canyon is located approximately 400 feet to the west of the release location		
Estimated Depth to Groundwater	Greater than 100 feet below grade surface (bgs)	***Distance to Nearest Water Well or Spring***	Greater than 1,000 feet

3.0 NMOCD Site Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 10. Refer to Table 1.

Depth to groundwater at the site is estimated to be greater than 100 feet bgs based on the information published on the New Mexico Office of the State Engineer (NMOSE) online New Mexico Water Rights Reporting System (NMWRRS) and elevation differential between the location and large, local washes.

A review was completed of the NMWRRS and no water wells were identified within a 1,000 foot radius of the location. No water wells were observed within a 1,000 foot radius of the location during a visual inspection.

An ephemeral tributary of Bloomfield Canyon is located approximately 400 feet west of the release location.

Based on the ranking score of 10, NMOCD action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH).

4.0 Site Assessment

A site assessment was conducted to delineate the horizontal and vertical extents of the release.

4.1 Field Activities

On February 26, 2016, Rule Engineering, LLC (Rule) personnel advanced five soil borings (SB-1 through SB-5) utilizing a hand auger. Soil boring SB-1 was advanced near the observed release location near the sales valve of the production tank at a slight angle in an attempt to sample the soils beneath the tank. The remaining soil borings were advanced vertically. All five soil borings were advanced to the maximum extent of the equipment which is about 12 to 14 feet in depth.

Based on laboratory analytical results in excess of the NMOCD action level for TPH in soil boring SB-1 for the deepest sample collected at approximately 14 feet bgs, the site assessment was continued utilizing a Geoprobe® on March 19, 2016. Soil borings SB-6 through SB-9 were advanced vertically to depths ranging from approximately 24 to 28 feet bgs.

Soil boring locations are illustrated on Figure 2.

4.2 Soil Sampling

Rule collected soil samples from the soil borings at one to four foot intervals with sample lengths of approximately six inches. The lithology encountered at the site included poorly graded sand with varying amounts of clay to about 16 to 20 feet, underlain by clayey sand grading to clay to the total depths drilled. A portion of each sample was field screened for VOCs and selected samples were analyzed for TPH. Field screening for volatile organic compounds (VOC) vapors was conducted with a photoionization detector (PID). Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis

Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B and TPH per USEPA 8015M/D.

4.3 Field Screening Results

Field screening results for site assessment samples collected from soil borings SB-1 through SB-9 indicated VOC concentrations ranging from 1.1 ppm to 1,648 ppm. Site assessment field screening results are summarized in Table 2.

4.4 Laboratory Analytical Results

Laboratory analytical results for samples collected from soil borings SB-1 through SB-9 reported benzene concentrations below the laboratory reporting limits and total BTEX concentrations ranging from below the laboratory reporting limits to 168 mg/kg. Concentrations of TPH as gasoline range organics (GRO) and diesel range organics (DRO) for samples collected from soil borings SB-1 through SB-9 ranged from below the laboratory reporting limits to 17,930 mg/kg.

5.0 Excavation Confirmation Sampling

5.1 Field Activities

On December 7, 2016, Rule personnel returned to the location to provide excavation guidance and collect confirmation samples from the resultant excavation. A sample was also collected from stockpiled soils associated with the excavation bench which was constructed to increase the depth the onsite equipment could reach. The maximum extent of the excavation measured approximately 37.5 feet by 32 feet by 16 to 19 feet in depth. Excavated soils were transported to a local NMOCD approved landfarm for disposal/remediation. The excavation was backfilled with clean imported material and the laboratory confirmed reusable stockpiled bench soils. A depiction of the final excavation with sample locations is included on Figure 3.

5.2 Soil Sampling

Rule collected nine composite confirmation soil samples (SC-1 and SC-9) from the final excavation and one composite sample from the stockpiled bench soils (SC-10) for field screening and laboratory analysis. Each confirmation soil sample is a representative composite comprised of five equivalent portions of soil collected from the sampled area.

A portion of each sample was field screened for VOCs and TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the analyzer was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards. Rule's practical quantitation limit TPH utilizing this method is 20 mg/kg.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B and TPH per USEPA 8015M/D.

Field screening and laboratory analytical results are summarized in Table 3. The analytical laboratory report is included in Appendix A.

5.3 Field Screening Results

Field screening results for soil confirmation samples SC-1 through SC-6 indicated VOC concentrations ranging from 0.4 ppm to 135 ppm. The field TPH concentration results for samples SC-1 through SC-10 ranged from below the reporting limit of 20 mg/kg to 539 mg/kg. Excavation confirmation field screening results are summarized in Table 3.

5.4 Laboratory Analytical Results

Laboratory analytical results for soil confirmation samples SC-1 through SC-10 reported benzene and total BTEX concentrations below the laboratory reporting limits, which are below the NMOCD action level of 10 mg/kg and 50 mg/kg, respectively. Concentrations of TPH for samples SC-1 through SC-10 ranged from below the laboratory reporting limits to 528 mg/kg, which are below the NMOCD action level of 1,000 mg/kg for a site rank of 10.

Excavation confirmation laboratory analytical results are summarized in Table 3. The analytical laboratory reports are included in Appendix A.

6.0 Conclusions

Hydrocarbon impacted soils associated with a release discovered on February 17, 2016, at the ConocoPhillips Davis A Federal #1 have been excavated and transported to a NMOCD approved landfarm for disposal/remediation. The excavation has been backfilled with clean, imported material and laboratory confirmed reusable stockpiled bench soils. Field screening and laboratory analytical results for samples collected from the final excavation sidewalls and base indicate that concentrations of benzene, total BTEX, and TPH are below NMOCD action levels for a site rank of 10. Therefore, no further work is recommended at this time.

7.0 Closure and Limitations

This report has been prepared for the exclusive use of ConocoPhillips and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with ConocoPhillips. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Tables

Table 1. NMOCD Site Ranking Determination
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Based on local cathodic well groundwater elevations and elevation differential information derived from the topographic map of the area between the site and large, local washes.	NMOCD Online database, Aztec Quadrangle, Google Earth, and Visual Inspection
50-99 feet	10			
>100 feet	0			
Wellhead Protection Area				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells within 1,000 foot radius of location.	NMOSE NMWRRS, Aztec Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An ephemeral tributary of Bloomfield Canyon is located approximately 400 feet west of release location.	Aztec Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		**10**		

Table 2. Site Assessment Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	10	NE	NE	NE	50	1,000	
SB-4	2/26/2016	0.5	2.2	--	--	--	--	--	--	--
		5	1.3	--	--	--	--	--	--	--
		6.5	1.7	--	--	--	--	--	--	--
		8.5	1.9	--	--	--	--	--	--	--
		11	2.0	--	--	--	--	--	--	--
		12	1.9	--	--	--	--	--	--	--
SB-5	2/26/2016	1	2.0	--	--	--	--	--	--	--
		5	2.2	--	--	--	--	--	--	--
		7.5	1.6	--	--	--	--	--	--	--
		9	1.3	--	--	--	--	--	--	--
		10	1.5	--	--	--	--	--	--	--
		12.5	1.4	--	--	--	--	--	--	--
SB-6	4/19/2016	0 to 2	**1,648**	--	--	--	--	--	--	--
		2 to 4	**1,112**	--	--	--	--	--	--	--
		4 to 6	**1,453**	--	--	--	--	--	--	--
		6 to 8	**1,505**	--	--	--	--	--	--	--
		8 to 10	**1,390**	--	--	--	--	--	--	--
		10 to 12	**1,364**	--	--	--	--	--	--	--
		12 to 14	**1,365**	--	--	--	--	--	--	--
		14 to 16	**1,244**	--	--	--	--	--	--	--
		16 to 18	**720**	--	--	--	--	--	--	--
		18 to 20	**615**	<0.23	<0.46	<0.46	<0.92	ND	<46	**2,100**
		20 to 22	**473**	<0.25	<0.49	<0.49	<0.98	ND	<49	1,000
		22 to 24	38.4	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.3
		24 to 26	20.1	--	--		--	--	--	--
		28	3.3	--	--	--	--	--	--	--

Table 2. Site Assessment Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	10	NE	NE	NE	50	1,000	
SB-1	2/26/2016	0.25	--	--	--	--	--	--	--	--
		1.25	--	--	--	--	--	--	--	--
		2.5	--	--	--	--	--	--	--	--
		3	--	--	--	--	--	--	--	--
		4.5	**984**	--	--	--	--	--	--	--
		8	**940**	--	--	--	--	--	--	--
		9	**678**	<0.59	11	7.2	150	**168**	**930**	**17,000**
		12	**680**	<0.24	0.55	0.97	22	24	**230**	**3,500**
		13.5	**741**	--	--	--	--	--	--	--
		14	**896**	<0.48	2.9	3.4	79	**85**	**640**	**8,800**
SB-2	2/26/2016	2	4.5	--	--	--	--	--	--	--
		6	5.5	--	--	--	--	--	--	--
		8	5.1	--	--	--	--	--	--	--
		11	5.0	--	--	--	--	--	--	--
		12	3.8	--	--	--	--	--	--	--
		13	1.3	--	--	--	--	--	--	--
SB-3	2/26/2016	0.5	2.5	--	--	--	--	--	--	--
		2.5	3.8	--	--	--	--	--	--	--
		5.5	2.4	--	--	--	--	--	--	--
		6.5	1.6	--	--	--	--	--	--	--
		9	2.3	--	--	--	--	--	--	--
		12	2.2	--	--	--	--	--	--	--
		14	2.5	--	--	--	--	--	--	--

Table 2. Site Assessment Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	10	NE	NE	NE	50	1,000	
SB-7	4/19/2016	0 to 2	367	--	--	--	--	--	--	--
		2 to 4	55.6	--	--	--	--	--	--	--
		4 to 6	17.4	--	--	--	--	--	--	--
		6 to 8	8.3	--	--	--	--	--	--	--
		8 to 10	16.0	--	--	--	--	--	--	--
		10 to 12	14.8	--	--	--	--	--	--	--
		12 to 14	6.0	--	--	--	--	--	--	--
		14 to 16	3.2	--	--	--	--	--	--	--
		16 to 18	4.5	--	--	--	--	--	--	--
		18 to 20	5.1	--	--	--	--	--	--	--
		20 to 22	4.4	--	--	--	--	--	--	--
		22 to 24	3.7	--	--	--	--	--	--	--
SB-8	4/19/2016	0 to 2	3.9	--	--	--	--	--	--	--
		2 to 4	3.3	--	--	--	--	--	--	--
		4 to 6	3.6	--	--	--	--	--	--	--
		6 to 8	3.0	--	--	--	--	--	--	--
		8 to 10	3.1	--	--	--	--	--	--	--
		10 to 12	3.9	--	--	--	--	--	--	--
		12 to 14	2.5	--	--	--	--	--	--	--
		14 to 16	2.8	--	--	--	--	--	--	--
		16 to 18	2.9	--	--	--	--	--	--	--
		18 to 20	3.1	--	--	--	--	--	--	--
		20 to 22	3.5	--	--	--	--	--	--	--
		22 to 24	3.0	--	--	--	--	--	--	--

Table 2. Site Assessment Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NMOCD Action Level*			100	10	NE	NE	NE	50	1,000	
SB-9	4/19/2016	0 to 2	2.4	--	--	--	--	--	--	--
		2 to 4	2.0	--	--	--	--	--	--	--
		4 to 6	2.1	--	--	--	--	--	--	--
		6 to 8	1.2	--	--	--	--	--	--	--
		8 to 10	1.8	--	--	--	--	--	--	--
		10 to 12	1.1	--	--	--	--	--	--	--
		12 to 14	2.1	--	--	--	--	--	--	--
		14 to 16	1.8	--	--	--	--	--	--	--
		16 to 18	1.3	--	--	--	--	--	--	--
		18 to 20	1.7	--	--	--	--	--	--	--
		20 to 22	1.3	--	--	--	--	--	--	--
		22 to 24	1.1	--	--	--	--	--	--	--

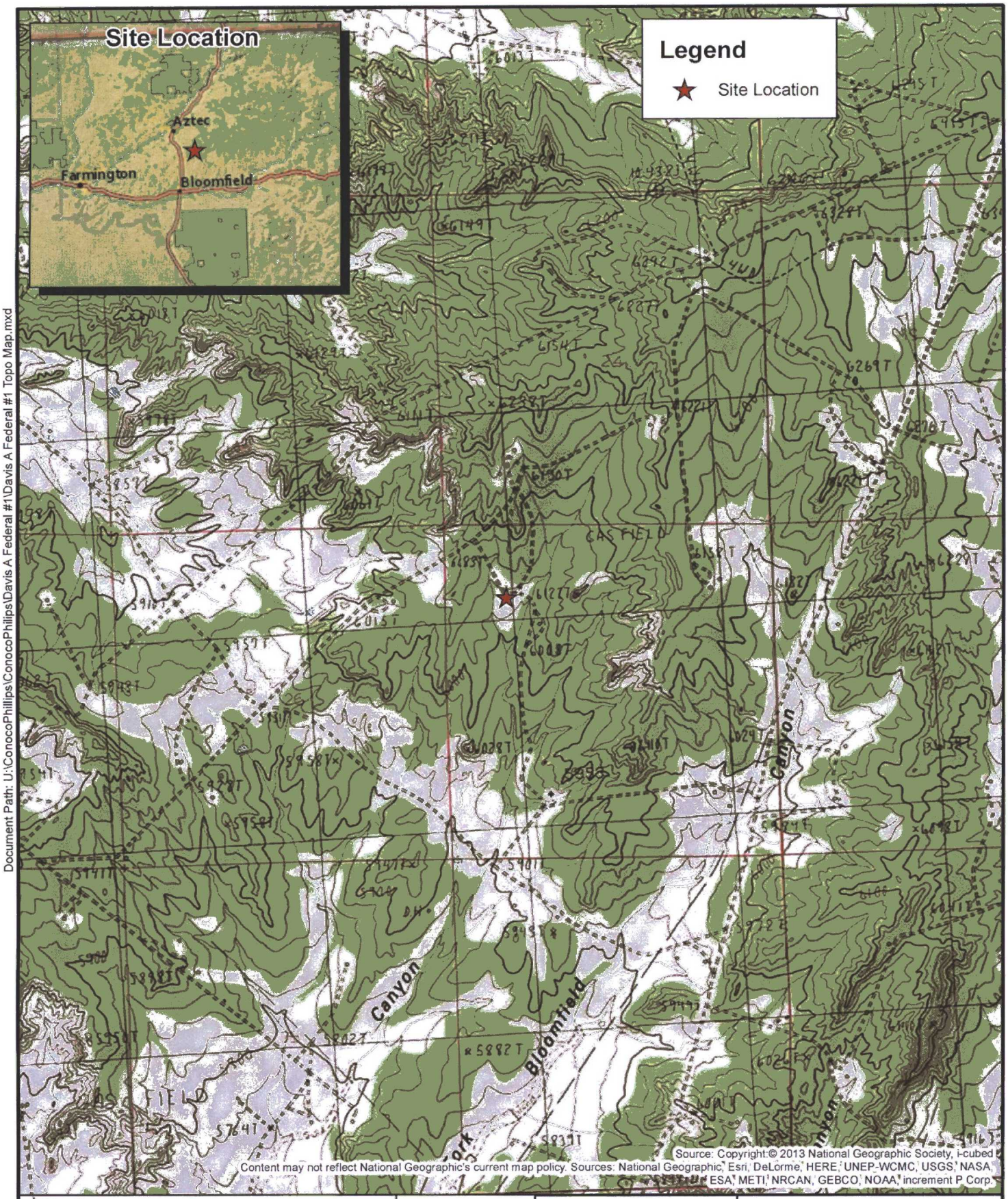
Notes:
VOCs - volatile organic compounds
PID - photoionization detector
ft bgs - feet below grade surface
ppm - parts per million by volume
mg/kg - milligrams per kilogram
NE - not-established
NE - not-established
ND - not detected above laboratory reporting limits
BTEX - benzene, toluene, ethylbenzene, and xylenes
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*
**Based on a site ranking of 10.

Table 3. Excavation Confirmation Field Screening and Laboratory Analytical Results
ConocoPhillips
Davis A Federal #1
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Field TPH by 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)	TPH as MRO (mg/kg)
NMOCD Action Level*			100	1,000**	10	NE	NE	NE	50	1,000**		
SC-1	12/7/2016	16 to 19	135	448	<0.018	<0.037	0.037	0.20	0.20	8.2	520	<48
SC-2	12/7/2016	10 to 19	3.4	<20	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.5	<47
SC-3	12/7/2016	10 to 19	1.2	<20	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.6	<48
SC-4	12/7/2016	0.5 to 10	0.7	<20	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.4	<47
SC-5	12/7/2016	10 to 19	3.5	<20	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49
SC-6	12/7/2016	0.5 to 10	5.6	<20	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.7	<48
SC-7	12/7/2016	0.5 to 10	4.0	<20	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.6	<48
SC-8	12/7/2016	10 to 19	19.9	44.5	<0.024	<0.048	<0.048	<0.096	ND	<4.8	19	<47
SC-9	12/7/2016	16 to 19	112	539	<0.022	<0.043	<0.043	<0.086	ND	9.2	390	<47
SC-10	12/7/2016	Stockpile	0.4	<20	<0.025	<0.049	<0.049	<0.099	ND	<4.9	<9.7	<49

Notes:
VOCs - volatile organic compounds
PID - photoionization detector
ft bgs - feet below grade surface
ppm - parts per million by volume
mg/kg - milligrams per kilogram
NMOCD - New Mexico Oil Conservation Division
NE - not-established
ND - not detected above laboratory reporting limits
BTEX - benzene, toluene, ethylbenzene, and xylenes
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
MRO - mineral oil range organics
*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*
**Based on a site ranking of 10.

Figures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Farmington
Bloomfield
Legend
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Solutions to Regulations for Industry
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ConocoPhillips
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San Juan County, NM
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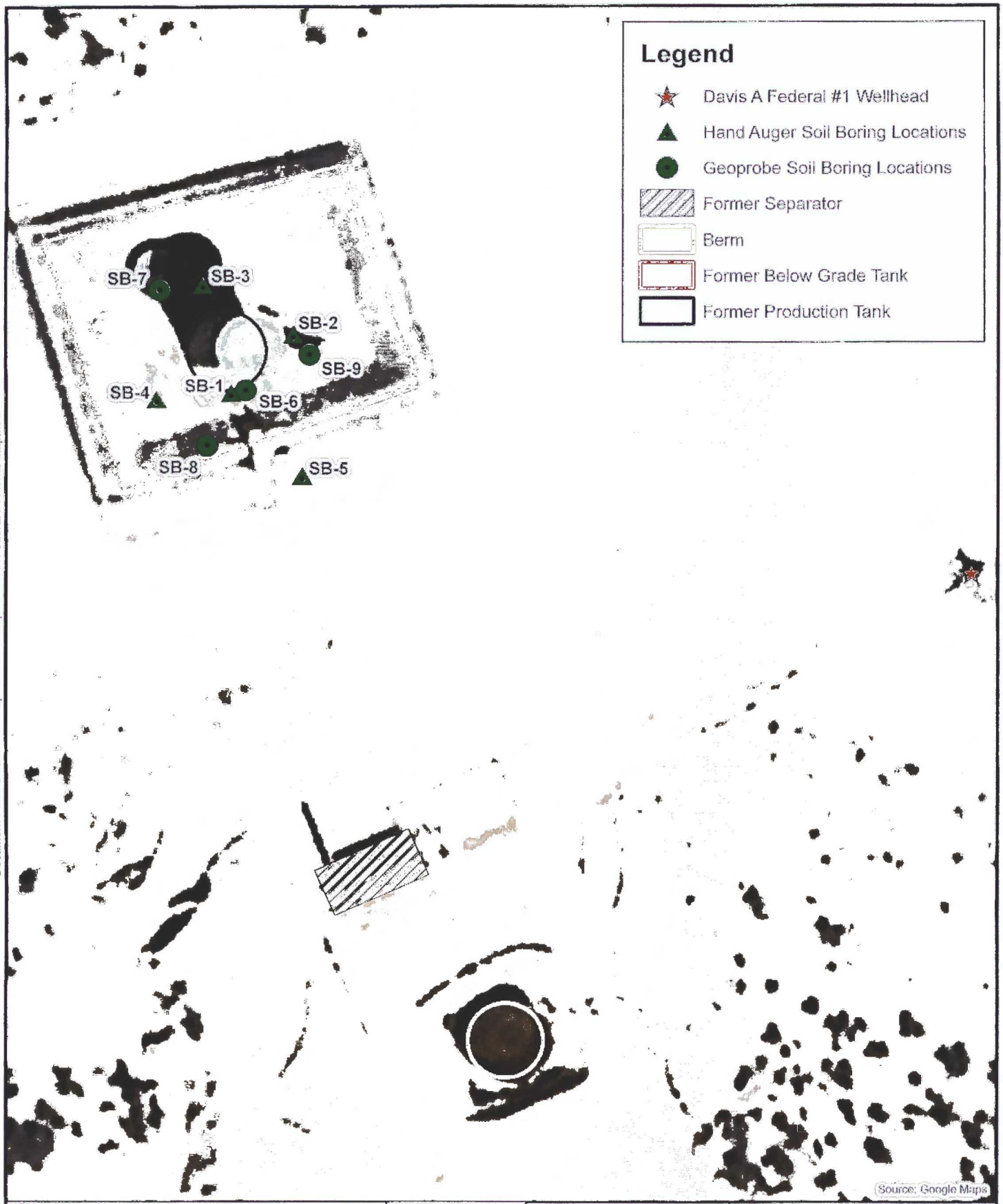
Figure 1
Topographic Site Map
Davis A Federal #1



Document Path: U:\ConocoPhillips\ConocoPhillips\Davis A Federal #1\Aerial Map.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

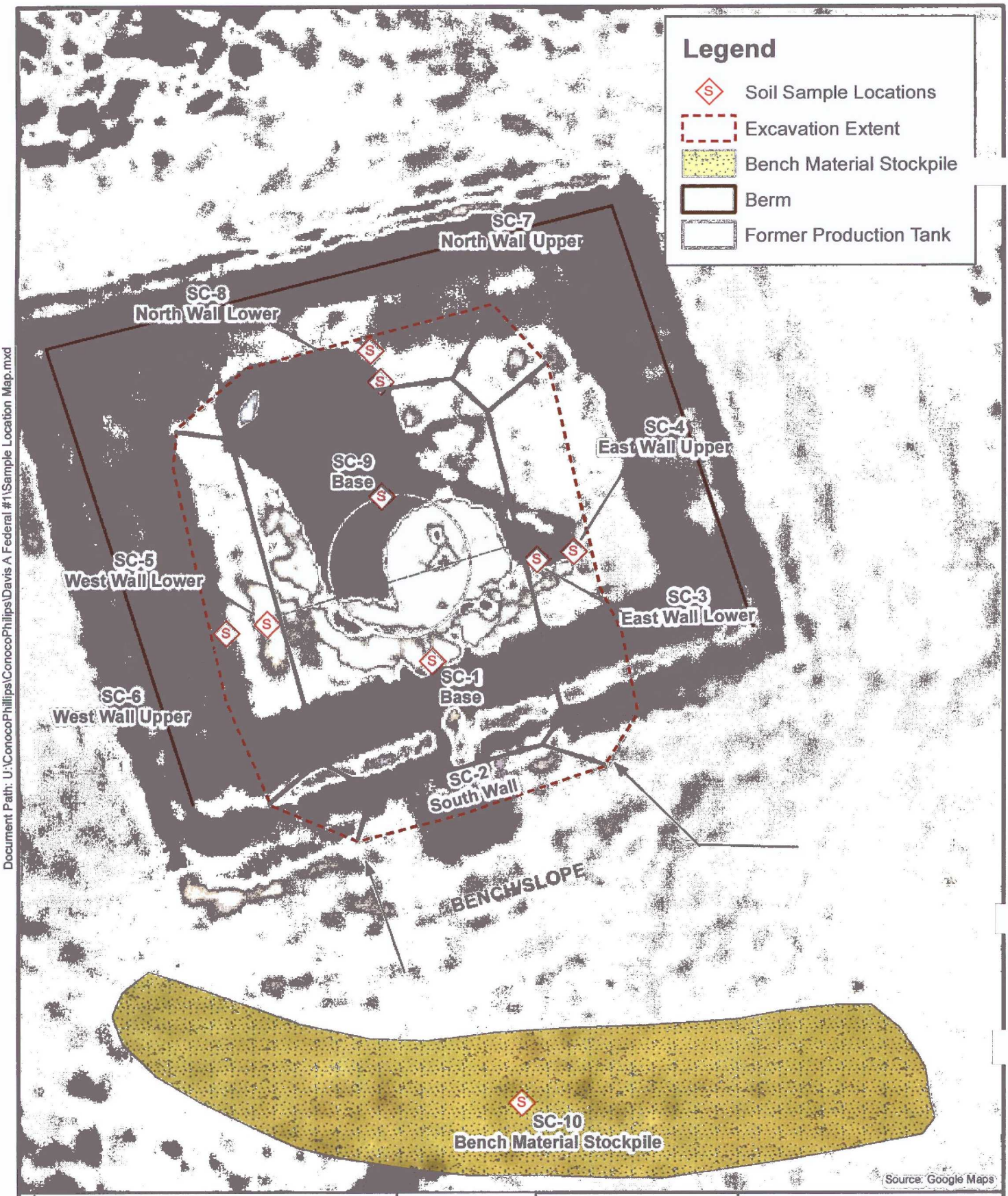
0 5 10 20 30 Feet

1 inch = 18 feet

ConocoPhillips

D-S25-T30N-R11W
N36.78718, W107.94857
San Juan County, NM
API: 30-045-09210

Figure 2
Site Assessment Map
Davis A Federal #1



Document Path: U:\ConocoPhillips\ConocoPhillips\Davis A Federal #1\Sample Location Map.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

0 2.5 5 10 15 20 Feet

1 inch = 10 feet

ConocoPhillips

D-S25-T30N-R11W
N36.78718, W107.94857
San Juan County, NM
API: 30-045-09210

Figure 3
Excavation Confirmaton Sample Location Map
Davis A Federal #1

Appendix A

Analytical Laboratory Reports

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 04, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: CoP Davis A Federal #1 OrderNo.: 1602B80

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/27/2016 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 **1602B80**
Date Reported: **3/4/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP Davis A Federal #1
Lab ID: 1602B80-001 **Matrix:** SOIL

Client Sample ID: SB-1 @ 9
Collection Date: 2/26/2016 9:30:00 AM
Received Date: 2/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	17000	980		mg/Kg	100	3/3/2016 9:54:36 AM	24005
Surr: DNOP	0	70-130	S	%Rec	100	3/3/2016 9:54:36 AM	24005
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	930	120		mg/Kg	25	3/2/2016 4:36:35 PM	24008
Surr: BFB	200	66.2-112	S	%Rec	25	3/2/2016 4:36:35 PM	24008
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.59		mg/Kg	25	3/2/2016 4:36:35 PM	24008
Toluene	11	1.2		mg/Kg	25	3/2/2016 4:36:35 PM	24008
Ethylbenzene	7.2	1.2		mg/Kg	25	3/2/2016 4:36:35 PM	24008
Xylenes, Total	150	2.4		mg/Kg	25	3/2/2016 4:36:35 PM	24008
Surr: 4-Bromofluorobenzene	144	80-120	S	%Rec	25	3/2/2016 4:36:35 PM	24008

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: Rule Engineering LLC
Client Sample ID: SB-1 @ 12
Project: CoP Davis A Federal #1
Collection Date: 2/26/2016 9:45:00 AM
Lab ID: 1602B80-002 **Matrix:** SOIL **Received Date:** 2/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	3500	93		mg/Kg	10	3/3/2016 8:50:50 AM	24005
Surr: DNOP	0	70-130	S	%Rec	10	3/3/2016 8:50:50 AM	24005
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	230	48		mg/Kg	10	3/2/2016 5:01:01 PM	24008
Surr: BFB	178	66.2-112	S	%Rec	10	3/2/2016 5:01:01 PM	24008
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.24		mg/Kg	10	3/2/2016 5:01:01 PM	24008
Toluene	0.55	0.48		mg/Kg	10	3/2/2016 5:01:01 PM	24008
Ethylbenzene	0.97	0.48		mg/Kg	10	3/2/2016 5:01:01 PM	24008
Xylenes, Total	22	0.96		mg/Kg	10	3/2/2016 5:01:01 PM	24008
Surr: 4-Bromofluorobenzene	134	80-120	S	%Rec	10	3/2/2016 5:01:01 PM	24008

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: Rule Engineering LLC
Project: CoP Davis A Federal #1
Lab ID: 1602B80-003 **Matrix:** SOIL

Client Sample ID: SB-1 @ 14
Collection Date: 2/26/2016 10:00:00 AM
Received Date: 2/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	8800	93		mg/Kg	10	3/3/2016 9:12:14 AM	24005
Surr: DNOP	0	70-130	S	%Rec	10	3/3/2016 9:12:14 AM	24005
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	640	97		mg/Kg	20	3/2/2016 5:25:31 PM	24008
Surr: BFB	192	66.2-112	S	%Rec	20	3/2/2016 5:25:31 PM	24008
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.48		mg/Kg	20	3/2/2016 5:25:31 PM	24008
Toluene	2.9	0.97		mg/Kg	20	3/2/2016 5:25:31 PM	24008
Ethylbenzene	3.4	0.97		mg/Kg	20	3/2/2016 5:25:31 PM	24008
Xylenes, Total	79	1.9		mg/Kg	20	3/2/2016 5:25:31 PM	24008
Surr: 4-Bromofluorobenzene	140	80-120	S	%Rec	20	3/2/2016 5:25:31 PM	24008

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1602B80**

04-Mar-16

Client: Rule Engineering LLC

Project: CoP Davis A Federal #1

Sample ID **LCS-24005**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24005**	RunNo: **32499**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994768** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.0	65.8	136			
Surr: DNOP	4.6		5.000		91.0	70	130			

Sample ID **MB-24005**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24005**	RunNo: **32499**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994770** 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	8.5		10.00		85.4	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#: **1602B80**

04-Mar-16

Client: Rule Engineering LLC

Project: CoP Davis A Federal #1

Sample ID **MB-24008**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **24008**	RunNo: **32521**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994929** 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		91.4	66.2	112			

Sample ID **LCS-24008**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **24008**	RunNo: **32521**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994930** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	80	120			
Surr: BFB	1000		1000		104	66.2	112			

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#: **1602B80**

04-Mar-16

Client: Rule Engineering LLC

Project: CoP Davis A Federal #1

Sample ID **MB-24008**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **24008**	RunNo: **32521**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994973** 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	1.1		1.000		115	80	120			

Sample ID **LCS-24008**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **24008**	RunNo: **32521**
Prep Date: **3/1/2016**	Analysis Date: **3/2/2016**	SeqNo: **994974** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.9	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		127	80	120			S

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: RULE ENGINEERING LL Work Order Number: 1602B80 RcptNo: 1

Received by/date: KM 02/27/16

Logged By: Ashley Gallegos 2/27/2016 8:00:00 AM AG

Completed By: Ashley Gallegos 2/29/2016 4:51:23 PM AG

Reviewed By: LB 3/1/2016

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	1.6	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Dr, Suite 205, Farmington, NM 87401

Phone #: (505) 716-2787

Email or Fax#: hwoods@ruleengineering.com

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

Accreditation: ☒ NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: CoP Davis A Federal #1

Project #:

Project Manager: H. Woods

Sampler: H. Woods / J. Valdez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.6

HEAL No.: 1602B80

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB (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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
4/26/16	0930	Soil	SB-1@9	1(4oz) Glass	Cold	-001	X		X									
4/26/16	0945	Soil	SB-1@12	1	1	-002	X		X									
4/26/16	1000	Soil	SB-1@14	1	1	-003	X		X									

NES NW

Remarks: Direct Bill to ConocoPhillips

WO: 2133458

Supervisor: Dusty Mars

User ID: MKSPENCE

Ordered by Lisa Hunter

Date	Time	Relinquished by:	Received by:	Date	Time
4/26/16	1700	Heather M. Woods	Christine Walters	4/26/16	1700
4/26/16	1905	Christine Walters		04/27/16	0800

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.

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

April 25, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: CoP Davis Federal A #1 OrderNo.: 1604854

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/20/2016 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SB-6 @ 18-20'
Project: CoP Davis Federal A #1
Collection Date: 4/19/2016 1:19:00 PM
Lab ID: 1604854-001 **Matrix:** SOIL **Received Date:** 4/20/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	2100	93		mg/Kg	10	4/22/2016 12:56:08 PM	24929
Surr: DNOP	0	70-130	S	%Rec	10	4/22/2016 12:56:08 PM	24929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	46	D	mg/Kg	10	4/21/2016 3:51:38 PM	24908
Surr: BFB	108	80-120	D	%Rec	10	4/21/2016 3:51:38 PM	24908
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.23	D	mg/Kg	10	4/21/2016 3:51:38 PM	24908
Toluene	ND	0.46	D	mg/Kg	10	4/21/2016 3:51:38 PM	24908
Ethylbenzene	ND	0.46	D	mg/Kg	10	4/21/2016 3:51:38 PM	24908
Xylenes, Total	ND	0.92	D	mg/Kg	10	4/21/2016 3:51:38 PM	24908
Surr: 4-Bromofluorobenzene	99.0	80-120	D	%Rec	10	4/21/2016 3:51:38 PM	24908

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: Rule Engineering LLC
Client Sample ID: SB-6 @ 20-22'
Project: CoP Davis Federal A #1
Collection Date: 4/19/2016 1:23:00 PM
Lab ID: 1604854-002 **Matrix:** SOIL **Received Date:** 4/20/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1000	93		mg/Kg	10	4/22/2016 12:34:21 PM	24929
Surr: DNOP	0	70-130	S	%Rec	10	4/22/2016 12:34:21 PM	24929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	49	D	mg/Kg	10	4/21/2016 4:15:02 PM	24908
Surr: BFB	108	80-120	D	%Rec	10	4/21/2016 4:15:02 PM	24908
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.25	D	mg/Kg	10	4/21/2016 4:15:02 PM	24908
Toluene	ND	0.49	D	mg/Kg	10	4/21/2016 4:15:02 PM	24908
Ethylbenzene	ND	0.49	D	mg/Kg	10	4/21/2016 4:15:02 PM	24908
Xylenes, Total	ND	0.98	D	mg/Kg	10	4/21/2016 4:15:02 PM	24908
Surr: 4-Bromofluorobenzene	99.6	80-120	D	%Rec	10	4/21/2016 4:15:02 PM	24908

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: Rule Engineering LLC
Client Sample ID: SB-6 @ 22-24'
Project: CoP Davis Federal A #1
Collection Date: 4/19/2016 1:25:00 PM
Lab ID: 1604854-003 **Matrix:** SOIL **Received Date:** 4/20/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/22/2016 11:07:40 AM	24929
Surr: DNOP	75.7	70-130		%Rec	1	4/22/2016 11:07:40 AM	24929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/21/2016 12:19:48 PM	24908
Surr: BFB	94.8	80-120		%Rec	1	4/21/2016 12:19:48 PM	24908
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/21/2016 12:19:48 PM	24908
Toluene	ND	0.050		mg/Kg	1	4/21/2016 12:19:48 PM	24908
Ethylbenzene	ND	0.050		mg/Kg	1	4/21/2016 12:19:48 PM	24908
Xylenes, Total	ND	0.099		mg/Kg	1	4/21/2016 12:19:48 PM	24908
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	4/21/2016 12:19:48 PM	24908

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: Rule Engineering LLC
Client Sample ID: SB-6 @ 28'
Project: CoP Davis Federal A #1
Collection Date: 4/19/2016 1:30:00 PM
Lab ID: 1604854-004 **Matrix:** SOIL **Received Date:** 4/20/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/22/2016 9:41:23 AM	24929
Surr: DNOP	74.9	70-130		%Rec	1	4/22/2016 9:41:23 AM	24929
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/21/2016 1:30:20 PM	24908
Surr: BFB	94.6	80-120		%Rec	1	4/21/2016 1:30:20 PM	24908
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/21/2016 1:30:20 PM	24908
Toluene	ND	0.049		mg/Kg	1	4/21/2016 1:30:20 PM	24908
Ethylbenzene	ND	0.049		mg/Kg	1	4/21/2016 1:30:20 PM	24908
Xylenes, Total	ND	0.099		mg/Kg	1	4/21/2016 1:30:20 PM	24908
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	4/21/2016 1:30:20 PM	24908

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604854**

25-Apr-16

Client: Rule Engineering LLC
Project: CoP Davis Federal A #1

Sample ID **MB-24929**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24929**	RunNo: **33715**
Prep Date: **4/21/2016**	Analysis Date: **4/22/2016**	SeqNo: **1038493** 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	8.5		10.00		84.8	70	130			

Sample ID **LCS-24929**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24929**	RunNo: **33715**
Prep Date: **4/21/2016**	Analysis Date: **4/22/2016**	SeqNo: **1038494** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.2	65.8	136			
Surr: DNOP	3.9		5.000		78.3	70	130			

Sample ID **1604854-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB-6 @ 28'**	Batch ID: **24929**	RunNo: **33715**
Prep Date: **4/21/2016**	Analysis Date: **4/22/2016**	SeqNo: **1038496** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.4	47.21	0	95.9	31.2	162			
Surr: DNOP	3.7		4.721		78.0	70	130			

Sample ID **1604854-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB-6 @ 28'**	Batch ID: **24929**	RunNo: **33715**
Prep Date: **4/21/2016**	Analysis Date: **4/22/2016**	SeqNo: **1038497** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.4	47.17	0	94.0	31.2	162	2.09	31.7	
Surr: DNOP	3.7		4.717		78.5	70	130	0	0	

Sample ID **LCS-24946**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24946**	RunNo: **33715**
Prep Date: **4/22/2016**	Analysis Date: **4/22/2016**	SeqNo: **1039133** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.6		5.000		72.4	70	130			

Sample ID **MB-24946**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24946**	RunNo: **33715**
Prep Date: **4/22/2016**	Analysis Date: **4/22/2016**	SeqNo: **1039134** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		10.00		70.8	70	130			

Qualifiers:

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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#: **1604854**

25-Apr-16

Client: Rule Engineering LLC
Project: CoP Davis Federal A #1

Sample ID	**MB-24908**	SampType: **MBLK**		TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID: **24908**		RunNo: **33691**					
Prep Date:	**4/20/2016**	Analysis Date: **4/21/2016**		SeqNo: **1038225**		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	940		1000		93.7	80	120			

Sample ID	**LCS-24908**	SampType: **LCS**		TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID: **24908**		RunNo: **33691**					
Prep Date:	**4/20/2016**	Analysis Date: **4/21/2016**		SeqNo: **1038226**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	80	120			
Surr: BFB	1000		1000		101	80	120			

Sample ID	**5ML RB**	SampType: **MBLK**		TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID: **R33691**		RunNo: **33691**					
Prep Date:		Analysis Date: **4/21/2016**		SeqNo: **1038254**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.1	80	120			

Sample ID	**2.5UG GRO LCS**	SampType: **LCS**		TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID: **R33691**		RunNo: **33691**					
Prep Date:		Analysis Date: **4/21/2016**		SeqNo: **1038255**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604854**

25-Apr-16

Client: Rule Engineering LLC
Project: CoP Davis Federal A #1

Sample ID **MB-24908**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **24908**	RunNo: **33691**
Prep Date: **4/20/2016**	Analysis Date: **4/21/2016**	SeqNo: **1038272** 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	0.95		1.000		95.1	80	120			

Sample ID **LCS-24908**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **24908**	RunNo: **33691**
Prep Date: **4/20/2016**	Analysis Date: **4/21/2016**	SeqNo: **1038273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	75.3	123			
Toluene	0.95	0.050	1.000	0	95.3	80	124			
Ethylbenzene	0.91	0.050	1.000	0	91.3	82.8	121			
Xylenes, Total	2.7	0.10	3.000	0	88.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID **1604854-003AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SB-6 @ 22-24'**	Batch ID: **24908**	RunNo: **33691**
Prep Date: **4/20/2016**	Analysis Date: **4/21/2016**	SeqNo: **1038277** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9515	0	103	71.5	122			
Toluene	0.96	0.048	0.9515	0	101	71.2	123			
Ethylbenzene	0.94	0.048	0.9515	0	98.5	75.2	130			
Xylenes, Total	2.8	0.095	2.854	0	98.1	72.4	131			
Surr: 4-Bromofluorobenzene	0.95		0.9515		99.6	80	120			

Sample ID **1604854-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SB-6 @ 22-24'**	Batch ID: **24908**	RunNo: **33691**
Prep Date: **4/20/2016**	Analysis Date: **4/21/2016**	SeqNo: **1038278** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9533	0	120	71.5	122	15.3	20	
Toluene	1.1	0.048	0.9533	0	114	71.2	123	12.6	20	
Ethylbenzene	1.0	0.048	0.9533	0	110	75.2	130	11.0	20	
Xylenes, Total	3.1	0.095	2.860	0	108	72.4	131	10.1	20	
Surr: 4-Bromofluorobenzene	0.97		0.9533		102	80	120	0	0	

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: RULE ENGINEERING LL Work Order Number: 1604854 RcptNo: 1

Received by/date: AT 04/20/16

Logged By: Anne Thorne 4/20/2016 7:30:00 AM Anne Thorne

Completed By: Anne Thorne 4/20/2016 Anne Thorne

Reviewed By: IO 04/20/16

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: per HW - Use SB-6 not SB-1 AT 04/20/16

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Rule Engineering	Turn-Around Time: ☒ Standard ☐ Rush
Mailing Address: 501 Airport Dr, Suite 205 Farmington, NM 87401	Project Name: CoP Davis Federal A #1
Phone #: (505) 716-2787	Project #:
email or Fax#: hwoods@ruleengineering.com	Project Manager: H. Woods
QA/QC Package: Standard ☐ Level 4 (Full Validation)	Sampler: H. Woods / J. Valdez
Accreditation: NELAP ☐ Other	On Ice: ☒ Yes ☐ No
EDD (Type)	Sample Temperature: 2.4 -CF-1.0 = 1.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1604854	BTEX + MTBE + TMB (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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/19/16	1319	Soil	SB-6 @ 18-20'	(1) 4oz Glass	Cold	-001	X		X													
4/19/16	1323	Soil	SB-6 @ 20-22'	(1) 4oz Glass	Cold	-002	X		X													
4/19/16	1325	Soil	SB-6 @ 22-24'	(1) 4oz Glass	Cold	-003	X		X													
4/19/16	1330	Soil	SB-6 @ 28'	(1) 4oz Glass	Cold	-004	X		X													

Date	Time	Relinquished by:	Received by:	Date	Time
4/19/16	1524	Heather M. Woods	Christine Walters	4/19/16	1524
4/19/16	1849	Christine Walters		04/20/16	0730

Remarks:
Direct bill to ConocoPhillips
WO: 21334581 ordered by: Lisa Hunter
Supervisor: Dusty Mars
User: MKSPENC

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.

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

December 09, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Davis A Federal 1 OrderNo.: 1612404

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/8/2016 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-1
Project: Davis A Federal 1
Collection Date: 12/7/2016 10:15:00 AM
Lab ID: 1612404-001
Matrix: MEOH (SOIL)
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	520	9.6		mg/Kg	1	12/8/2016 10:54:13 AM	29071
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/8/2016 10:54:13 AM	29071
Surr: DNOP	83.3	70-130		%Rec	1	12/8/2016 10:54:13 AM	29071
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	8.2	3.7		mg/Kg	1	12/8/2016 11:44:33 AM	G39252
Surr: BFB	160	68.3-144	S	%Rec	1	12/8/2016 11:44:33 AM	G39252
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	12/8/2016 11:44:33 AM	B39252
Toluene	ND	0.037		mg/Kg	1	12/8/2016 11:44:33 AM	B39252
Ethylbenzene	ND	0.037		mg/Kg	1	12/8/2016 11:44:33 AM	B39252
Xylenes, Total	0.20	0.074		mg/Kg	1	12/8/2016 11:44:33 AM	B39252
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	12/8/2016 11:44:33 AM	B39252

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: Rule Engineering LLC
Client Sample ID: SC-9
Project: Davis A Federal 1
Collection Date: 12/7/2016 12:50:00 PM
Lab ID: 1612404-002
Matrix: MEOH (SOIL)
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	390	9.4		mg/Kg	1	12/8/2016 11:21:14 AM	29071
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/8/2016 11:21:14 AM	29071
Surr: DNOP	88.0	70-130		%Rec	1	12/8/2016 11:21:14 AM	29071
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	9.2	4.3		mg/Kg	1	12/8/2016 12:09:09 PM	G39252
Surr: BFB	171	68.3-144	S	%Rec	1	12/8/2016 12:09:09 PM	G39252
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	12/8/2016 12:09:09 PM	B39252
Toluene	ND	0.043		mg/Kg	1	12/8/2016 12:09:09 PM	B39252
Ethylbenzene	ND	0.043		mg/Kg	1	12/8/2016 12:09:09 PM	B39252
Xylenes, Total	ND	0.086		mg/Kg	1	12/8/2016 12:09:09 PM	B39252
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/8/2016 12:09:09 PM	B39252

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1612404**

09-Dec-16

Client: Rule Engineering LLC

Project: Davis A Federal 1

Sample ID **LCS-29071**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **29071**	RunNo: **39237**
Prep Date: **12/8/2016**	Analysis Date: **12/8/2016**	SeqNo: **1227846** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	62.6	124			
Surr: DNOP	4.4		5.000		88.0	70	130			

Sample ID **MB-29071**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **29071**	RunNo: **39237**
Prep Date: **12/8/2016**	Analysis Date: **12/8/2016**	SeqNo: **1227849** 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	9.5		10.00		95.1	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#: **1612404**

09-Dec-16

Client: Rule Engineering LLC
Project: Davis A Federal 1

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G39252**	RunNo: **39252**
Prep Date:	Analysis Date: **12/8/2016**	SeqNo: **1228807** 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	850		1000		85.1	68.3	144			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G39252**	RunNo: **39252**
Prep Date:	Analysis Date: **12/8/2016**	SeqNo: **1228808** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.2	74.6	123			
Surr: BFB	940		1000		93.6	68.3	144			

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#: **1612404**

09-Dec-16

Client: Rule Engineering LLC

Project: Davis A Federal 1

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B39252**	RunNo: **39252**
Prep Date:	Analysis Date: **12/8/2016**	SeqNo: **1228831** 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	0.96		1.000		96.4	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B39252**	RunNo: **39252**
Prep Date:	Analysis Date: **12/8/2016**	SeqNo: **1228832** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	111	75.2	115			
Toluene	1.1	0.050	1.000	0	107	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	103	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	97.9	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	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: RULE ENGINEERING LL Work Order Number: 1612404 RcptNo: 1

Received by/date: 12/08/16

Logged By: Lindsay Mangin 12/8/2016 8:10:00 AM

Completed By: Lindsay Mangin 12/8/2016 8:34:59 AM

Reviewed By: IO 12/08/16

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 ✔	# of preserved bottles checked for pH:
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✔	No	(<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ✔	No	Adjusted?
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	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	1.1	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

ent: Rule Engineering, LLC

iling Address: 501 Airport Dr. Suite D5 Farmington, NM 87401

one #: 505 793 9486

ail or Fax#: jvalder@rule engineering

/QC Package:

Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time: Same Day

☐ Standard ☑ Rush & Overnight

Project Name: Davis A Federal #1

Project #:

Project Manager: Heatner Woods

Sampler: Justin Valdez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.1

HEAL No. 1612404

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612404
/16	1015	Soil	SC-1	4oz Glass	Cold	-001
/16	1250	Soil	SC-9	4oz Glass	Cold	-002

Analysis Request

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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
+		+													
+		+													

e:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
/16	1822	Justin Valdez	[illegible]	12/7/16	1822	Direct Bill to Conoco Phillips
e:	Time:	Relinquished by:	Received by:	Date	Time	
2/16	1910	[illegible]	[illegible]	12/08/16	0810	

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.

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

December 12, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Davis A Federal #1 OrderNo.: 1612403

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/8/2016 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 **1612403**
Date Reported: **12/12/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-2
Project: Davis A Federal #1
Collection Date: 12/7/2016 10:20:00 AM
Lab ID: 1612403-001 **Matrix:** SOIL **Received Date:** 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/9/2016 2:53:29 PM	29082
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/9/2016 2:53:29 PM	29082
Surr: DNOP	83.4	70-130		%Rec	1	12/9/2016 2:53:29 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2016 6:58:59 PM	29078
Surr: BFB	85.7	68.3-144		%Rec	1	12/9/2016 6:58:59 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/9/2016 6:58:59 PM	29078
Toluene	ND	0.049		mg/Kg	1	12/9/2016 6:58:59 PM	29078
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2016 6:58:59 PM	29078
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2016 6:58:59 PM	29078
Surr: 4-Bromofluorobenzene	93.5	80-120		%Rec	1	12/9/2016 6:58:59 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-3
Project: Davis A Federal #1
Collection Date: 12/7/2016 10:25:00 AM
Lab ID: 1612403-002
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/9/2016 3:20:25 PM	29082
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/9/2016 3:20:25 PM	29082
Surr: DNOP	86.3	70-130		%Rec	1	12/9/2016 3:20:25 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/9/2016 7:22:27 PM	29078
Surr: BFB	84.5	68.3-144		%Rec	1	12/9/2016 7:22:27 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/9/2016 7:22:27 PM	29078
Toluene	ND	0.050		mg/Kg	1	12/9/2016 7:22:27 PM	29078
Ethylbenzene	ND	0.050		mg/Kg	1	12/9/2016 7:22:27 PM	29078
Xylenes, Total	ND	0.099		mg/Kg	1	12/9/2016 7:22:27 PM	29078
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	12/9/2016 7:22:27 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-4
Project: Davis A Federal #1
Collection Date: 12/7/2016 10:30:00 AM
Lab ID: 1612403-003
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/9/2016 3:46:56 PM	29082
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/9/2016 3:46:56 PM	29082
Surr: DNOP	86.0	70-130		%Rec	1	12/9/2016 3:46:56 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2016 7:45:49 PM	29078
Surr: BFB	85.3	68.3-144		%Rec	1	12/9/2016 7:45:49 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/9/2016 7:45:49 PM	29078
Toluene	ND	0.049		mg/Kg	1	12/9/2016 7:45:49 PM	29078
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2016 7:45:49 PM	29078
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2016 7:45:49 PM	29078
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	12/9/2016 7:45:49 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-5
Project: Davis A Federal #1
Collection Date: 12/7/2016 10:35:00 AM
Lab ID: 1612403-004
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/9/2016 4:13:36 PM	29082
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/9/2016 4:13:36 PM	29082
Surr: DNOP	85.8	70-130		%Rec	1	12/9/2016 4:13:36 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/9/2016 8:09:12 PM	29078
Surr: BFB	84.1	68.3-144		%Rec	1	12/9/2016 8:09:12 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/9/2016 8:09:12 PM	29078
Toluene	ND	0.049		mg/Kg	1	12/9/2016 8:09:12 PM	29078
Ethylbenzene	ND	0.049		mg/Kg	1	12/9/2016 8:09:12 PM	29078
Xylenes, Total	ND	0.098		mg/Kg	1	12/9/2016 8:09:12 PM	29078
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	12/9/2016 8:09:12 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-6
Project: Davis A Federal #1
Collection Date: 12/7/2016 10:40:00 AM
Lab ID: 1612403-005
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/9/2016 4:40:07 PM	29082
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/9/2016 4:40:07 PM	29082
Surr: DNOP	84.8	70-130		%Rec	1	12/9/2016 4:40:07 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/9/2016 8:32:38 PM	29078
Surr: BFB	85.7	68.3-144		%Rec	1	12/9/2016 8:32:38 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/9/2016 8:32:38 PM	29078
Toluene	ND	0.047		mg/Kg	1	12/9/2016 8:32:38 PM	29078
Ethylbenzene	ND	0.047		mg/Kg	1	12/9/2016 8:32:38 PM	29078
Xylenes, Total	ND	0.093		mg/Kg	1	12/9/2016 8:32:38 PM	29078
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	12/9/2016 8:32:38 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-7
Project: Davis A Federal #1
Collection Date: 12/7/2016 12:40:00 PM
Lab ID: 1612403-006
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/9/2016 5:06:38 PM	29082
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/9/2016 5:06:38 PM	29082
Surr: DNOP	87.1	70-130		%Rec	1	12/9/2016 5:06:38 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2016 8:56:05 PM	29078
Surr: BFB	88.0	68.3-144		%Rec	1	12/9/2016 8:56:05 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/9/2016 8:56:05 PM	29078
Toluene	ND	0.048		mg/Kg	1	12/9/2016 8:56:05 PM	29078
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2016 8:56:05 PM	29078
Xylenes, Total	ND	0.097		mg/Kg	1	12/9/2016 8:56:05 PM	29078
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	12/9/2016 8:56:05 PM	29078

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: Rule Engineering LLC
Client Sample ID: SC-8
Project: Davis A Federal #1
Collection Date: 12/7/2016 12:55:00 PM
Lab ID: 1612403-007 **Matrix:** SOIL **Received Date:** 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	19	9.5		mg/Kg	1	12/9/2016 5:33:25 PM	29082
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/9/2016 5:33:25 PM	29082
Surr: DNOP	88.0	70-130		%Rec	1	12/9/2016 5:33:25 PM	29082
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2016 9:19:36 PM	29078
Surr: BFB	84.1	68.3-144		%Rec	1	12/9/2016 9:19:36 PM	29078
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/9/2016 9:19:36 PM	29078
Toluene	ND	0.048		mg/Kg	1	12/9/2016 9:19:36 PM	29078
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2016 9:19:36 PM	29078
Xylenes, Total	ND	0.096		mg/Kg	1	12/9/2016 9:19:36 PM	29078
Surr: 4-Bromofluorobenzene	90.1	80-120		%Rec	1	12/9/2016 9:19:36 PM	29078

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1612403**

12-Dec-16

Client: Rule Engineering LLC
Project: Davis A Federal #1

Sample ID **LCS-29082**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **29082**	RunNo: **39269**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1230208** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.1	62.6	124			
Surr: DNOP	4.7		5.000		93.7	70	130			

Sample ID **MB-29082**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **29082**	RunNo: **39269**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1230209** 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	10		10.00		100	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#: **1612403**

12-Dec-16

Client: Rule Engineering LLC

Project: Davis A Federal #1

Sample ID **MB-29078**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **29078**	RunNo: **39283**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1229674** 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	860		1000		85.7	68.3	144			

Sample ID **LCS-29078**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **29078**	RunNo: **39283**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1229675** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.9	74.6	123			
Surr: BFB	920		1000		92.3	68.3	144			

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#: **1612403**

12-Dec-16

Client: Rule Engineering LLC

Project: Davis A Federal #1

Sample ID **MB-29078**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **29078**	RunNo: **39283**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1229693** 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	0.95		1.000		94.5	80	120			

Sample ID **LCS-29078**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **29078**	RunNo: **39283**
Prep Date: **12/8/2016**	Analysis Date: **12/9/2016**	SeqNo: **1229694** 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	91.9	75.2	115			
Toluene	0.95	0.050	1.000	0	95.1	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	94.6	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	95.4	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.5	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: RULE ENGINEERING LL Work Order Number: 1612403 RcptNo: 1

Received by/date: LM 12/08/16

Logged By: Andy Jansson 12/8/2016 8:10:00 AM

Completed By: Andy Jansson 12/08/16

Reviewed By: IO 12/08/16

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 ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	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	1.1	Good	Not Present			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

ent: Rule Engineering, LLC

ailing Address: 501 Airport Dr Suite 205

Farmington, NM 87401

ione #: 505 793 9486

nail or Fax#: jvalder@ruleengineering.com

VQC Package:

Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush 3-Day

Project Name: Davis A Federal #1

Project #:

Project Manager: Heather Woods

Sampler: Justin Valder

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612403	BTEX + ~~MTBE~~ + TMBs (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 ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)						Air Bubbles (Y or N)
12/7/16	1020	Soil	SC-2	4oz Glass	Cold	-001	X		X														
	1025		SC-3			-002	X		X														
	1030		SC-4			-003	X		X														
	1035		SC-5			-004	X		X														
	1040		SC-6			-005	X		X														
	1240		SC-7			-006	X		X														
	1255		SC-8			-007	X		X														

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
12/7/16	1822	Justin Valder	[signature]	12/7/16	1822	Direct Bill to Choco Phillips
12/8/16	1911	[signature]	[signature]	12/08/16	0810	

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.

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

December 14, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: David A Federal #1 OrderNo.: 1612428

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/8/2016 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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-10
Project: David A Federal #1
Collection Date: 12/7/2016 3:00:00 PM
Lab ID: 1612428-001
Matrix: SOIL
Received Date: 12/8/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/13/2016 3:23:43 PM	29134
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/13/2016 3:23:43 PM	29134
Surr: DNOP	87.4	70-130		%Rec	1	12/13/2016 3:23:43 PM	29134
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/12/2016 12:11:47 PM	29099
Surr: BFB	89.0	68.3-144		%Rec	1	12/12/2016 12:11:47 PM	29099
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	12/12/2016 12:11:47 PM	29099
Toluene	ND	0.049		mg/Kg	1	12/12/2016 12:11:47 PM	29099
Ethylbenzene	ND	0.049		mg/Kg	1	12/12/2016 12:11:47 PM	29099
Xylenes, Total	ND	0.099		mg/Kg	1	12/12/2016 12:11:47 PM	29099
Surr: 4-Bromofluorobenzene	96.2	80-120		%Rec	1	12/12/2016 12:11:47 PM	29099

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1612428**

14-Dec-16

Client: Rule Engineering LLC

Project: David A Federal #1

Sample ID **1612428-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **SC-10** Batch ID: **29134** RunNo: **39356**

Prep Date: **12/12/2016** Analysis Date: **12/13/2016** SeqNo: **1231855** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.3	46.64	0	92.5	51.6	130			
Surr: DNOP	3.9		4.664		83.5	70	130			

Sample ID **LCS-29134** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **29134** RunNo: **39356**

Prep Date: **12/12/2016** Analysis Date: **12/13/2016** SeqNo: **1231856** 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	89.0	63.8	116			
Surr: DNOP	4.2		5.000		84.4	70	130			

Sample ID **MB-29134** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **29134** RunNo: **39356**

Prep Date: **12/12/2016** Analysis Date: **12/13/2016** SeqNo: **1231857** 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	7.8		10.00		78.0	70	130			

Sample ID **1612428-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **SC-10** Batch ID: **29134** RunNo: **39356**

Prep Date: **12/12/2016** Analysis Date: **12/13/2016** SeqNo: **1232100** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.4	47.17	0	107	51.6	130	15.6	20	
Surr: DNOP	4.5		4.717		95.9	70	130	0	0	

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#: **1612428**

14-Dec-16

Client: Rule Engineering LLC

Project: David A Federal #1

Sample ID **MB-29099**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230865** 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	860		1000		86.2	68.3	144			

Sample ID **LCS-29099**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230866** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.0	74.6	123			
Surr: BFB	940		1000		94.2	68.3	144			

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#: **1612428**

14-Dec-16

Client: Rule Engineering LLC
Project: David A Federal #1

Sample ID **MB-29099**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230878** 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	0.95		1.000		95.4	80	120			

Sample ID **LCS-29099**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230879** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	75.2	115			
Toluene	1.0	0.050	1.000	0	103	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	99.9	78.9	117			
Xylenes, Total	3.0	0.10	3.000	0	99.4	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID **1612428-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-10**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230887** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	0.9843	0	92.0	61.5	138			
Toluene	0.91	0.049	0.9843	0	92.9	71.4	127			
Ethylbenzene	0.91	0.049	0.9843	0	92.6	70.9	132			
Xylenes, Total	2.8	0.098	2.953	0	93.3	76.2	123			
Surr: 4-Bromofluorobenzene	0.98		0.9843		99.5	80	120			

Sample ID **1612428-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SC-10**	Batch ID: **29099**	RunNo: **39314**
Prep Date: **12/9/2016**	Analysis Date: **12/12/2016**	SeqNo: **1230896** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.023	0.9225	0	99.5	61.5	138	1.34	20	
Toluene	0.88	0.046	0.9225	0	95.5	71.4	127	3.72	20	
Ethylbenzene	0.86	0.046	0.9225	0	92.8	70.9	132	6.33	20	
Xylenes, Total	2.6	0.092	2.768	0	92.6	76.2	123	7.21	20	
Surr: 4-Bromofluorobenzene	0.92		0.9225		100	80	120	0	0	

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: RULE ENGINEERING LL Work Order Number: 1612428 RcptNo: 1

Received by/date: LM 12/08/16

Logged By: Andy Jansson 12/8/2016 8:10:00 AM

Completed By: Andy Jansson 12/08/16

Reviewed By: 12/09/16

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 ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	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
2	1.1	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Dr. Suite 205 Farmington N'M 87401

Phone #: 505 793 9486

email or Fax#: jvalder@ruleengineering.com

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

Accreditation: ☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush

Project Name: David A Federal #1

Project #:

Project Manager: Heather Woods

Sampler: Justin Valdez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612428	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,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/7/16	1500	Soil	SC-10	4oz Glass	Cold	-001	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/7/16	1822	Justin Valdez	Jennifer Watt	12/7/16	1822
12/7/16	1910	Jennifer Watt		12/08/16	0810

Remarks: Direct Bill to Conoco Phillips

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.