

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised April 3, 2017

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

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company Hilcorp Energy Company	Contact Clara Cardoza
Address 382 Rd 3100 Aztec NM 87410	Telephone No. 505-564-0733
Facility Name Hubbell Federal #1M	Facility Type Well

Surface Owner Federal (SF-078716-A)	Mineral Owner Federal	API No. 30-045-32809
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LOCATION OF RELEASE

Unit Letter P	Section 07	Township 29N	Range 10W	Feet from the 1090	North/South Line South	Feet from the 900	East/West Line East	County San Juan
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Latitude 36.7363281 Longitude -107.9198074 NAD83

NATURE OF RELEASE

Type of Release Hydrocarbon	Volume of Release 15 bbl	Volume Recovered 9 bbls
Source of Release Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 12/20/2017 04:00 pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour AUG 06 2018	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. DISTRICT III	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
During field operator's routine visit to site found the oil dump leaking and immediately shut in the location. A spec truck was called out to transfer remaining contents of the tank to prevent further loss. Also, was able to recover 9 bbls of product that was at the surface. Leak on the dump line was caused by corrosion.

Describe Area Affected and Cleanup Action Taken.*
Hydrocarbon was contained in the bermed area and a truck was called to remove free standing liquid and impacted soil. Confirmation sampling will be scheduled early 2018. **Excavation revealed a historic release on this location. A total of 2,050 cubic yards of impacted soil was removed and taken to the Envirotech landfarm. Attached are confirmation lab results and a final excavation figure. Also included is the email in which NMOCD granting Hilcorp approval to spray SC-23 with potassium permanganate and backfill the excavation.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Clara Cardoza	Approved by Environmental Specialist:	
Title: Environmental Specialist	Approval Date: 8/6/18	Expiration Date:
E-mail Address: ccardoza@hilcorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 08/03/2018	Phone: 505-564-0733	

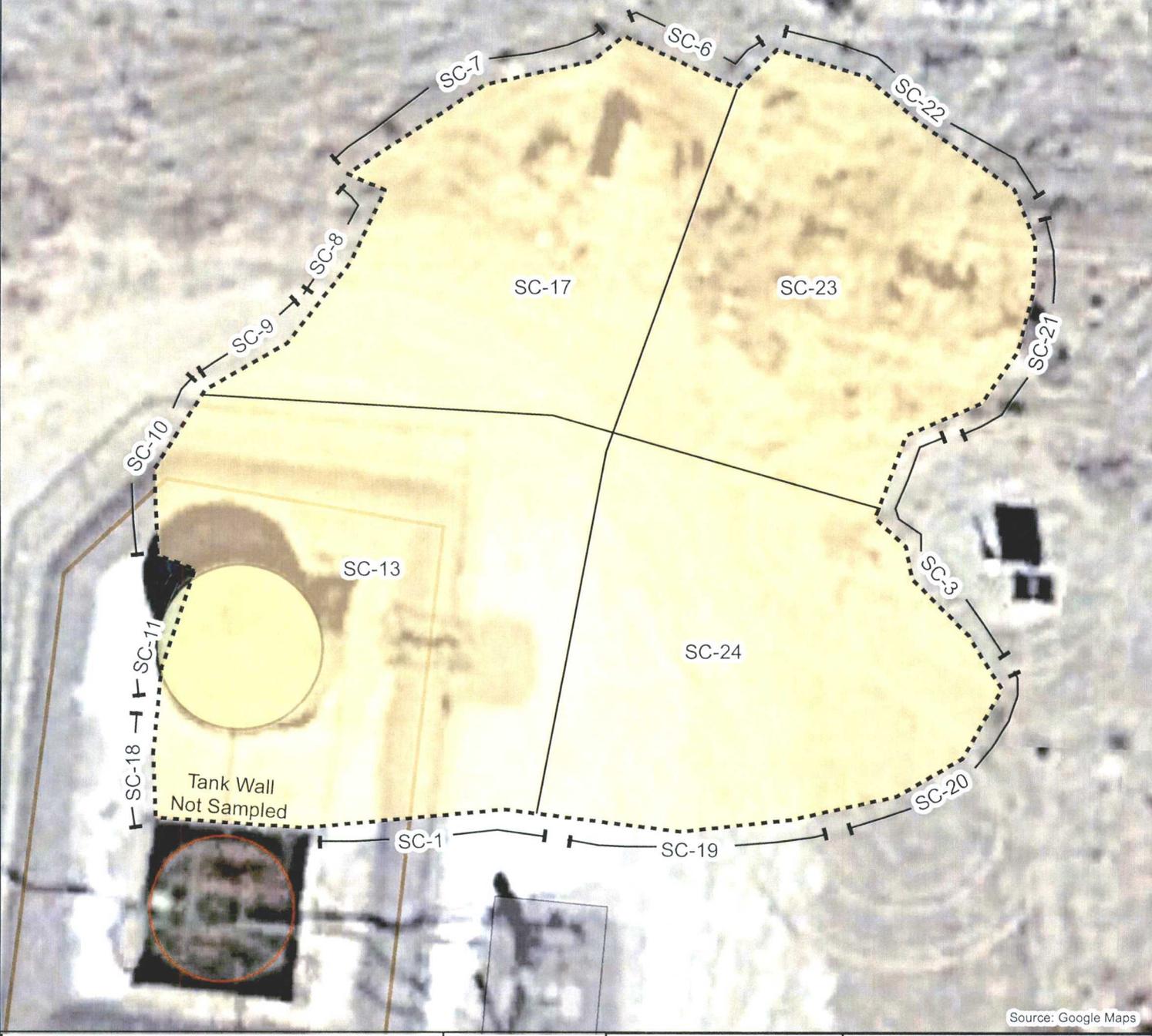
* Attach Additional Sheets If Necessary

NVF1800248261

43

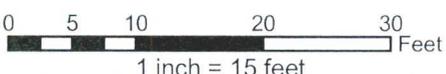
Legend

-  Approximate Inner Wall of Excavation
-  Former Above Ground Storage Tank (AGT)
-  Former Below Grade Tank (BGT)
-  Former Berm
-  Separator



Source: Google Maps

Rule Engineering, LLC
Solutions to Regulations for Industry

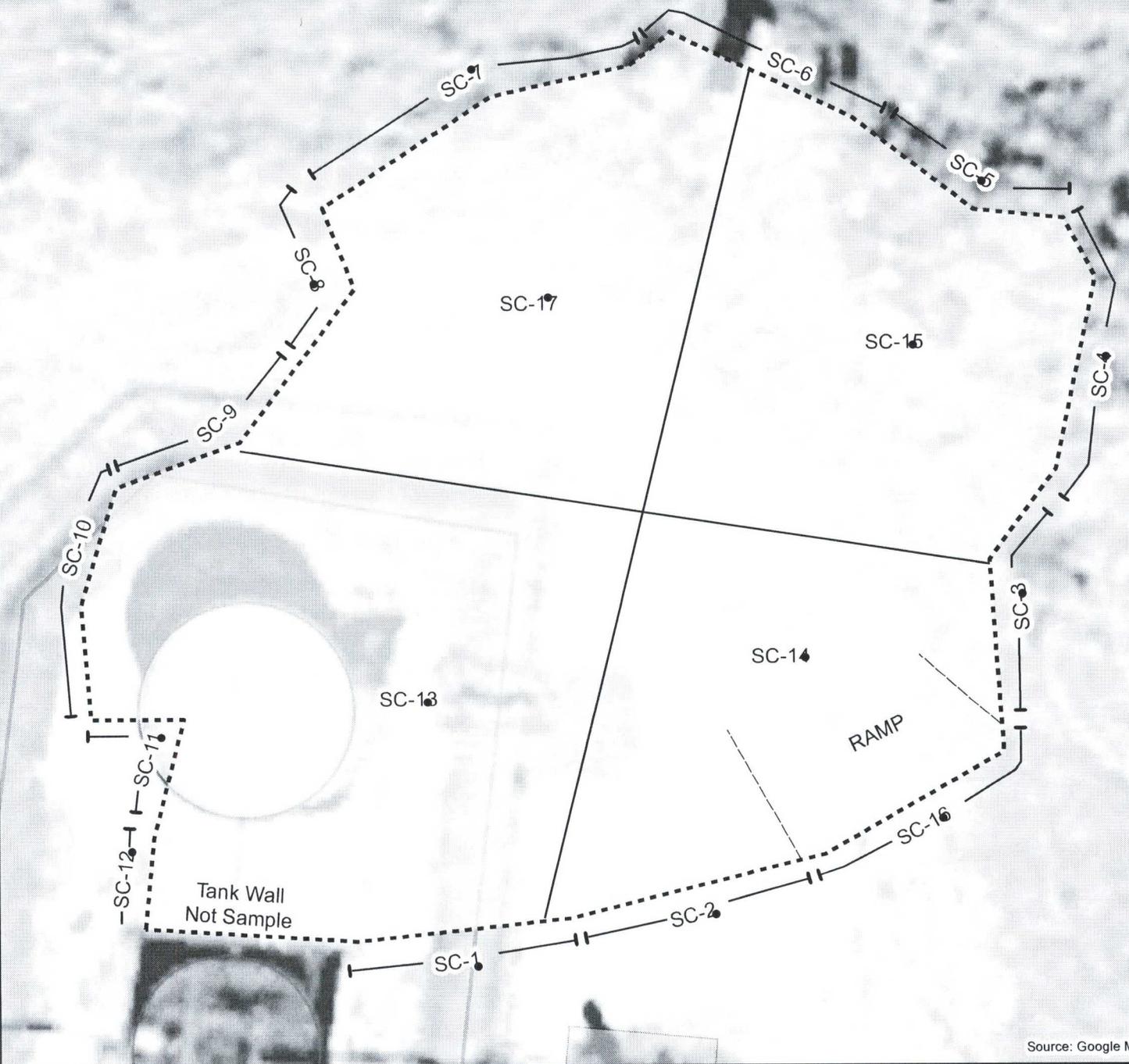



P-S07-T29N-R10W
N36.73633, W107.91981
San Juan County, NM
API: 30-045-32809

Figure A
Site Assessment Map
Hubbell Fed #1M

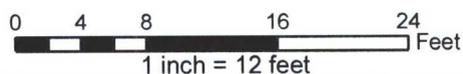
Legend

-  Approximate Inner Wall of Excavation
-  Former Above Ground Storage Tank (AGT)
-  Former Below Grade Tank (BGT)
-  Former Berm
-  Separator



Source: Google Maps

Rule Engineering, LLC
Solutions to Regulations for Industry



P-S07-T29N-R10W
 N36.73633, W107.91981
 San Juan County, NM
 API: 30-045-32809

Figure A
Site Assessment Map
 Hubbell Fed #1M



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

January 30, 2018

Heather Woods

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

RE: Hubbell Fed 1M

OrderNo.: 1801A87

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 17 sample(s) on 1/24/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

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: Hubbell Fed 1M

Collection Date: 1/23/2018 2:40:00 PM

Lab ID: 1801A87-001

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	70	9.5		mg/Kg	1	1/25/2018 10:44:37 AM	36180
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/25/2018 10:44:37 AM	36180
Surr: DNOP	87.1	70-130		%Rec	1	1/25/2018 10:44:37 AM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2018 11:57:41 AM	36169
Surr: BFB	90.4	15-316		%Rec	1	1/25/2018 11:57:41 AM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 11:57:41 AM	36169
Toluene	ND	0.048		mg/Kg	1	1/25/2018 11:57:41 AM	36169
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2018 11:57:41 AM	36169
Xylenes, Total	ND	0.096		mg/Kg	1	1/25/2018 11:57:41 AM	36169
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	1/25/2018 11:57:41 AM	36169

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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-2

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 2:46:00 PM

Lab ID: 1801A87-002

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	140	10		mg/Kg	1	1/25/2018 11:57:57 AM	36180
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2018 11:57:57 AM	36180
Surr: DNOP	95.4	70-130		%Rec	1	1/25/2018 11:57:57 AM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	10	4.9		mg/Kg	1	1/25/2018 1:08:24 PM	36169
Surr: BFB	135	15-316		%Rec	1	1/25/2018 1:08:24 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 1:08:24 PM	36169
Toluene	ND	0.049		mg/Kg	1	1/25/2018 1:08:24 PM	36169
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2018 1:08:24 PM	36169
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2018 1:08:24 PM	36169
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	1/25/2018 1:08:24 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 2:53:00 PM

Lab ID: 1801A87-003

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 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	1/25/2018 12:22:21 PM	36180
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/25/2018 12:22:21 PM	36180
Surr: DNOP	88.8	70-130		%Rec	1	1/25/2018 12:22:21 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2018 2:19:15 PM	36169
Surr: BFB	85.0	15-316		%Rec	1	1/25/2018 2:19:15 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 2:19:15 PM	36169
Toluene	ND	0.049		mg/Kg	1	1/25/2018 2:19:15 PM	36169
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2018 2:19:15 PM	36169
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2018 2:19:15 PM	36169
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	1/25/2018 2:19:15 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:00:00 PM

Lab ID: 1801A87-004

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	490	9.2		mg/Kg	1	1/25/2018 12:46:33 PM	36180
Motor Oil Range Organics (MRO)	120	46		mg/Kg	1	1/25/2018 12:46:33 PM	36180
Surr: DNOP	92.9	70-130		%Rec	1	1/25/2018 12:46:33 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	170	24		mg/Kg	5	1/25/2018 2:42:44 PM	36169
Surr: BFB	210	15-316		%Rec	5	1/25/2018 2:42:44 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	1/25/2018 2:42:44 PM	36169
Toluene	1.4	0.24		mg/Kg	5	1/25/2018 2:42:44 PM	36169
Ethylbenzene	0.90	0.24		mg/Kg	5	1/25/2018 2:42:44 PM	36169
Xylenes, Total	11	0.48		mg/Kg	5	1/25/2018 2:42:44 PM	36169
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	5	1/25/2018 2:42:44 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:02:00 PM

Lab ID: 1801A87-005

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	3100	97		mg/Kg	10	1/25/2018 1:10:59 PM	36180
Motor Oil Range Organics (MRO)	590	490		mg/Kg	10	1/25/2018 1:10:59 PM	36180
Surr: DNOP	0	70-130	S	%Rec	10	1/25/2018 1:10:59 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2100	120		mg/Kg	25	1/25/2018 3:29:56 PM	36169
Surr: BFB	300	15-316		%Rec	25	1/25/2018 3:29:56 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	1.0	0.60		mg/Kg	25	1/25/2018 3:29:56 PM	36169
Toluene	45	1.2		mg/Kg	25	1/25/2018 3:29:56 PM	36169
Ethylbenzene	15	1.2		mg/Kg	25	1/25/2018 3:29:56 PM	36169
Xylenes, Total	180	2.4		mg/Kg	25	1/25/2018 3:29:56 PM	36169
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	25	1/25/2018 3:29:56 PM	36169

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:05:00 PM

Lab ID: 1801A87-006

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/25/2018 1:35:13 PM	36180
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/25/2018 1:35:13 PM	36180
Surr: DNOP	88.9	70-130		%Rec	1	1/25/2018 1:35:13 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/25/2018 4:17:07 PM	36169
Surr: BFB	82.4	15-316		%Rec	1	1/25/2018 4:17:07 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/25/2018 4:17:07 PM	36169
Toluene	ND	0.046		mg/Kg	1	1/25/2018 4:17:07 PM	36169
Ethylbenzene	ND	0.046		mg/Kg	1	1/25/2018 4:17:07 PM	36169
Xylenes, Total	ND	0.093		mg/Kg	1	1/25/2018 4:17:07 PM	36169
Surr: 4-Bromofluorobenzene	88.5	80-120		%Rec	1	1/25/2018 4:17:07 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:10:00 PM

Lab ID: 1801A87-007

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 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	1/25/2018 1:59:37 PM	36180
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2018 1:59:37 PM	36180
Surr: DNOP	93.9	70-130		%Rec	1	1/25/2018 1:59:37 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/25/2018 4:40:37 PM	36169
Surr: BFB	82.4	15-316		%Rec	1	1/25/2018 4:40:37 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 4:40:37 PM	36169
Toluene	ND	0.047		mg/Kg	1	1/25/2018 4:40:37 PM	36169
Ethylbenzene	ND	0.047		mg/Kg	1	1/25/2018 4:40:37 PM	36169
Xylenes, Total	ND	0.094		mg/Kg	1	1/25/2018 4:40:37 PM	36169
Surr: 4-Bromofluorobenzene	87.7	80-120		%Rec	1	1/25/2018 4:40:37 PM	36169

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:13:00 PM

Lab ID: 1801A87-008

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 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	1/25/2018 2:23:56 PM	36180
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2018 2:23:56 PM	36180
Surr: DNOP	88.0	70-130		%Rec	1	1/25/2018 2:23:56 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2018 6:37:39 PM	36169
Surr: BFB	81.5	15-316		%Rec	1	1/25/2018 6:37:39 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 6:37:39 PM	36169
Toluene	ND	0.049		mg/Kg	1	1/25/2018 6:37:39 PM	36169
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2018 6:37:39 PM	36169
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2018 6:37:39 PM	36169
Surr: 4-Bromofluorobenzene	86.7	80-120		%Rec	1	1/25/2018 6:37:39 PM	36169

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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: Hubbell Fed 1M

Collection Date: 1/23/2018 3:16:00 PM

Lab ID: 1801A87-009

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 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	1/25/2018 3:05:50 PM	36180
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/25/2018 3:05:50 PM	36180
Surr: DNOP	87.5	70-130		%Rec	1	1/25/2018 3:05:50 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/25/2018 7:01:05 PM	36169
Surr: BFB	84.7	15-316		%Rec	1	1/25/2018 7:01:05 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/25/2018 7:01:05 PM	36169
Toluene	ND	0.047		mg/Kg	1	1/25/2018 7:01:05 PM	36169
Ethylbenzene	ND	0.047		mg/Kg	1	1/25/2018 7:01:05 PM	36169
Xylenes, Total	ND	0.093		mg/Kg	1	1/25/2018 7:01:05 PM	36169
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	1/25/2018 7:01:05 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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-10

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:20:00 PM

Lab ID: 1801A87-010

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 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	1/25/2018 3:30:05 PM	36180
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/25/2018 3:30:05 PM	36180
Surr: DNOP	84.8	70-130		%Rec	1	1/25/2018 3:30:05 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/25/2018 7:24:28 PM	36169
Surr: BFB	82.8	15-316		%Rec	1	1/25/2018 7:24:28 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/25/2018 7:24:28 PM	36169
Toluene	ND	0.050		mg/Kg	1	1/25/2018 7:24:28 PM	36169
Ethylbenzene	ND	0.050		mg/Kg	1	1/25/2018 7:24:28 PM	36169
Xylenes, Total	ND	0.099		mg/Kg	1	1/25/2018 7:24:28 PM	36169
Surr: 4-Bromofluorobenzene	86.0	80-120		%Rec	1	1/25/2018 7:24:28 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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-11

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:24:00 PM

Lab ID: 1801A87-011

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/25/2018 3:54:25 PM	36180
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/25/2018 3:54:25 PM	36180
Surr: DNOP	91.0	70-130		%Rec	1	1/25/2018 3:54:25 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2018 7:47:50 PM	36169
Surr: BFB	84.1	15-316		%Rec	1	1/25/2018 7:47:50 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/25/2018 7:47:50 PM	36169
Toluene	ND	0.049		mg/Kg	1	1/25/2018 7:47:50 PM	36169
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2018 7:47:50 PM	36169
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2018 7:47:50 PM	36169
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	1/25/2018 7:47:50 PM	36169

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-12

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:28:00 PM

Lab ID: 1801A87-012

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	160	10		mg/Kg	1	1/25/2018 4:18:47 PM	36180
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/25/2018 4:18:47 PM	36180
Surr: DNOP	93.8	70-130		%Rec	1	1/25/2018 4:18:47 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/25/2018 8:11:12 PM	36169
Surr: BFB	85.6	15-316		%Rec	1	1/25/2018 8:11:12 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 8:11:12 PM	36169
Toluene	ND	0.048		mg/Kg	1	1/25/2018 8:11:12 PM	36169
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2018 8:11:12 PM	36169
Xylenes, Total	ND	0.097		mg/Kg	1	1/25/2018 8:11:12 PM	36169
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	1/25/2018 8:11:12 PM	36169

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting 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-13

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:35:00 PM

Lab ID: 1801A87-013

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	36	9.2		mg/Kg	1	1/25/2018 4:43:19 PM	36180
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/25/2018 4:43:19 PM	36180
Surr: DNOP	88.4	70-130		%Rec	1	1/25/2018 4:43:19 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/25/2018 8:34:34 PM	36169
Surr: BFB	86.5	15-316		%Rec	1	1/25/2018 8:34:34 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 8:34:34 PM	36169
Toluene	ND	0.049		mg/Kg	1	1/25/2018 8:34:34 PM	36169
Ethylbenzene	ND	0.049		mg/Kg	1	1/25/2018 8:34:34 PM	36169
Xylenes, Total	ND	0.098		mg/Kg	1	1/25/2018 8:34:34 PM	36169
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	1/25/2018 8:34:34 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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-14

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:40:00 PM

Lab ID: 1801A87-014

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	210	9.2		mg/Kg	1	1/25/2018 5:07:39 PM	36180
Motor Oil Range Organics (MRO)	56	46		mg/Kg	1	1/25/2018 5:07:39 PM	36180
Surr: DNOP	103	70-130		%Rec	1	1/25/2018 5:07:39 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	11	4.8		mg/Kg	1	1/25/2018 11:10:51 AM	36169
Surr: BFB	142	15-316		%Rec	1	1/25/2018 11:10:51 AM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	1/25/2018 11:10:51 AM	36169
Toluene	ND	0.048		mg/Kg	1	1/25/2018 11:10:51 AM	36169
Ethylbenzene	ND	0.048		mg/Kg	1	1/25/2018 11:10:51 AM	36169
Xylenes, Total	ND	0.096		mg/Kg	1	1/25/2018 11:10:51 AM	36169
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	1/25/2018 11:10:51 AM	36169

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-15

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:45:00 PM

Lab ID: 1801A87-015

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	710	9.7		mg/Kg	1	1/25/2018 5:32:04 PM	36180
Motor Oil Range Organics (MRO)	180	48		mg/Kg	1	1/25/2018 5:32:04 PM	36180
Surr: DNOP	103	70-130		%Rec	1	1/25/2018 5:32:04 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	310	5.0		mg/Kg	1	1/25/2018 8:57:55 PM	36169
Surr: BFB	1210	15-316	S	%Rec	1	1/25/2018 8:57:55 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/25/2018 8:57:55 PM	36169
Toluene	1.8	0.050		mg/Kg	1	1/25/2018 8:57:55 PM	36169
Ethylbenzene	2.1	0.050		mg/Kg	1	1/25/2018 8:57:55 PM	36169
Xylenes, Total	28	2.0		mg/Kg	20	1/26/2018 9:42:54 AM	36169
Surr: 4-Bromofluorobenzene	227	80-120	S	%Rec	1	1/25/2018 8:57:55 PM	36169

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-16

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 2:50:00 PM

Lab ID: 1801A87-016

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	360	9.6		mg/Kg	1	1/25/2018 5:56:19 PM	36180
Motor Oil Range Organics (MRO)	97	48		mg/Kg	1	1/25/2018 5:56:19 PM	36180
Surr: DNOP	98.3	70-130		%Rec	1	1/25/2018 5:56:19 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	85	4.6		mg/Kg	1	1/25/2018 9:44:38 PM	36169
Surr: BFB	420	15-316	S	%Rec	1	1/25/2018 9:44:38 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	1/25/2018 9:44:38 PM	36169
Toluene	0.64	0.046		mg/Kg	1	1/25/2018 9:44:38 PM	36169
Ethylbenzene	0.45	0.046		mg/Kg	1	1/25/2018 9:44:38 PM	36169
Xylenes, Total	5.8	0.092		mg/Kg	1	1/25/2018 9:44:38 PM	36169
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	1/25/2018 9:44:38 PM	36169

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-17

Project: Hubbell Fed 1M

Collection Date: 1/23/2018 3:50:00 PM

Lab ID: 1801A87-017

Matrix: SOIL

Received Date: 1/24/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	390	9.0		mg/Kg	1	1/25/2018 6:20:41 PM	36180
Motor Oil Range Organics (MRO)	120	45		mg/Kg	1	1/25/2018 6:20:41 PM	36180
Surr: DNOP	97.3	70-130		%Rec	1	1/25/2018 6:20:41 PM	36180
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	20	5.0		mg/Kg	1	1/25/2018 10:31:22 PM	36169
Surr: BFB	169	15-316		%Rec	1	1/25/2018 10:31:22 PM	36169
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	1/25/2018 10:31:22 PM	36169
Toluene	ND	0.050		mg/Kg	1	1/25/2018 10:31:22 PM	36169
Ethylbenzene	0.072	0.050		mg/Kg	1	1/25/2018 10:31:22 PM	36169
Xylenes, Total	0.99	0.10		mg/Kg	1	1/25/2018 10:31:22 PM	36169
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	1/25/2018 10:31:22 PM	36169

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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#: 1801A87

30-Jan-18

Client: Rule Engineering LLC

Project: Hubbell Fed IM

Sample ID	1801A87-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-1	Batch ID:	36180	RunNo:	48689					
Prep Date:	1/24/2018	Analysis Date:	1/25/2018	SeqNo:	1566349	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.3	46.69	69.73	67.1	55.8	125			
Surr: DNOP	4.0		4.669		85.8	70	130			

Sample ID	1801A87-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-1	Batch ID:	36180	RunNo:	48689					
Prep Date:	1/24/2018	Analysis Date:	1/25/2018	SeqNo:	1566350	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.3	46.38	69.73	70.2	55.8	125	1.23	20	
Surr: DNOP	3.9		4.638		85.0	70	130	0	0	

Sample ID	LCS-36180	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	36180	RunNo:	48689					
Prep Date:	1/24/2018	Analysis Date:	1/25/2018	SeqNo:	1566352	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.4	70	130			
Surr: DNOP	3.9		5.000		78.6	70	130			

Sample ID	MB-36180	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	36180	RunNo:	48689					
Prep Date:	1/24/2018	Analysis Date:	1/25/2018	SeqNo:	1566353	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	9.0		10.00		89.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A87

30-Jan-18

Client: Rule Engineering LLC

Project: Hubbell Fed IM

Sample ID	MB-36169		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	36169		RunNo:	48706				
Prep Date:	1/24/2018		Analysis Date:	1/25/2018		SeqNo:	1566641		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	870		1000		86.6	15	316				

Sample ID	LCS-36169		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	36169		RunNo:	48706				
Prep Date:	1/24/2018		Analysis Date:	1/25/2018		SeqNo:	1566642		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	75.9	131				
Surr: BFB	950		1000		94.8	15	316				

Sample ID	1801A87-002AMS		SampType:	MS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	SC-2		Batch ID:	36169		RunNo:	48706				
Prep Date:	1/24/2018		Analysis Date:	1/25/2018		SeqNo:	1566645		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	34	4.7	23.54	9.971	103	77.8	128				
Surr: BFB	1300		941.6		133	15	316				

Sample ID	1801A87-002AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	SC-2		Batch ID:	36169		RunNo:	48706				
Prep Date:	1/24/2018		Analysis Date:	1/25/2018		SeqNo:	1566646		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	36	4.8	24.25	9.971	106	77.8	128	4.41	20		
Surr: BFB	1400		969.9		141	15	316	0	0		

Sample ID	MB-36205		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	36205		RunNo:	48738				
Prep Date:	1/25/2018		Analysis Date:	1/26/2018		SeqNo:	1567794		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	830		1000		83.1	15	316				

Sample ID	LCS-36205		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	36205		RunNo:	48738				
Prep Date:	1/25/2018		Analysis Date:	1/26/2018		SeqNo:	1567795		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	1000		1000		102	15	316				

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A87

30-Jan-18

Client: Rule Engineering LLC

Project: Hubbell Fed 1M

Sample ID MB-36169	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 36169		RunNo: 48706							
Prep Date: 1/24/2018	Analysis Date: 1/25/2018		SeqNo: 1566667		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	0.93		1.000		93.0	80	120			

Sample ID LCS-36169	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 36169		RunNo: 48706							
Prep Date: 1/24/2018	Analysis Date: 1/25/2018		SeqNo: 1566668		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.9	77.3	128			
Toluene	0.94	0.050	1.000	0	94.4	79.2	125			
Ethylbenzene	0.93	0.050	1.000	0	93.2	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	94.9	81.6	129			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	80	120			

Sample ID 1801A87-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: SC-1	Batch ID: 36169		RunNo: 48706							
Prep Date: 1/24/2018	Analysis Date: 1/25/2018		SeqNo: 1566670		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9443	0	92.0	80.9	132			
Toluene	0.90	0.047	0.9443	0.009885	94.2	79.8	136			
Ethylbenzene	0.87	0.047	0.9443	0.009693	91.1	79.4	140			
Xylenes, Total	2.7	0.094	2.833	0.03580	94.0	78.5	142			
Surr: 4-Bromofluorobenzene	0.88		0.9443		93.6	80	120			

Sample ID 1801A87-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: SC-1	Batch ID: 36169		RunNo: 48706							
Prep Date: 1/24/2018	Analysis Date: 1/25/2018		SeqNo: 1566671		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.023	0.9355	0	93.0	80.9	132	0.0439	20	
Toluene	0.88	0.047	0.9355	0.009885	92.9	79.8	136	2.36	20	
Ethylbenzene	0.87	0.047	0.9355	0.009693	92.3	79.4	140	0.376	20	
Xylenes, Total	2.7	0.094	2.806	0.03580	93.9	78.5	142	1.05	20	
Surr: 4-Bromofluorobenzene	0.82		0.9355		87.4	80	120	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801A87

30-Jan-18

Client: Rule Engineering LLC

Project: Hubbell Fed 1M

Sample ID	MB-36205	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	36205	RunNo:	48738					
Prep Date:	1/25/2018	Analysis Date:	1/26/2018	SeqNo:	1567836	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	80	120			

Sample ID	LCS-36205	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	36205	RunNo:	48738					
Prep Date:	1/25/2018	Analysis Date:	1/26/2018	SeqNo:	1567837	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	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 |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1801A87

RcptNo: 1

Received By: Anne Thorne 1/24/2018 7:00:00 AM
 Completed By: Anne Thorne 1/24/2018 8:10:08 AM
 Reviewed By: JMD 1/24/18

Anne Thorne
Anne Thorne

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____
--

Special Handling (if applicable)

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

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Rue Engineering, LLC

Mailing Address: 501 Airport Drive
Suite 205 Farmington, NM

Phone #: 505 793 9486

email or Fax#: justin.vadoz@rueengineering.com

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush 3-Day

Project Name: Hubbell Fed IM

Project #: _____

Project Manager: Heather Woods

Sampler: Justin Vadoz

On Ice: Yes No

Sample Temperature: 1.0



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.	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)
2/23/18	1440	Soil	SC-1	01402 Jar	Cool	1801A87 201	X	X										
	1446		SC-2			202												
	1453		SC-3			203												
	1500		SC-4			204												
	1502		SC-5			205												
	1505		SC-6			206												
	1510		SC-7			207												
	1513		SC-8			208												
	1516		SC-9			209												
	1520		SC-10			210												
	1524		SC-11			211												
	1528		SC-12			212												

Date: 2/23/18 Time: 1701 Relinquished by: Justin Vadoz

Date: 2/23/18 Time: 1720 Relinquished by: Christina Waels

Received by: Christina Waels Date: 2/23/18 Time: 1701

Received by: [Signature] Date: 01/24/18 Time: 0700

Remarks: Direct Bill to Hallcorp

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.

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Drive

Suite 205 Farmington NM

Phone #: 505 793 9686

email or Fax#: jvaldez@ruleengineering.com

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush 3-Day

Project Name: Hubbell Fed IM

Project #:

Project Manager: Heather Woods

Sampler: Justin Valdez

On Ice: Yes No

Sample Temperature: 6.0



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.	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)
<u>1/23/18</u>	<u>1535</u>	<u>Soil</u>	<u>SC-13</u>	<u>(1) 4oz Jar</u>	<u>Cool</u>	<u>1801A87</u>	<u>+</u>											
	<u>1540</u>		<u>SC-14</u>			<u>014</u>												
	<u>1545</u>		<u>SC-15</u>			<u>015</u>												
	<u>1450</u>		<u>SC-16</u>			<u>016</u>												
	<u>1550</u>		<u>SC-17</u>			<u>017</u>												

Date: 1/23/18 Time: 1701 Relinquished by: [Signature]

Received by: [Signature] Date: 1/23/18 Time: 1761

Remarks: Direct Bill to Hillcorp

Date: 1/23/18 Time: 1920 Relinquished by: [Signature]

Received by: [Signature] Date: 01/24/18 Time: 0700

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

February 05, 2018

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

RE: Hubbell Fed 1M

OrderNo.: 1802001

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/1/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
 Project: Hubbell Fed 1M
 Lab ID: 1802001-001

Matrix: SOIL

Client Sample ID: SC-18
 Collection Date: 1/31/2018 9:42:00 AM
 Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	2/1/2018 11:22:36 AM	M48843
Surr: BFB	107	70-130		%Rec	1	2/1/2018 11:22:36 AM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/1/2018 10:52:12 AM	36295
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/1/2018 10:52:12 AM	36295
Surr: DNOP	103	70-130		%Rec	1	2/1/2018 10:52:12 AM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.021		mg/Kg	1	2/1/2018 11:22:36 AM	S48843
Toluene	ND	0.043		mg/Kg	1	2/1/2018 11:22:36 AM	S48843
Ethylbenzene	ND	0.043		mg/Kg	1	2/1/2018 11:22:36 AM	S48843
Xylenes, Total	ND	0.085		mg/Kg	1	2/1/2018 11:22:36 AM	S48843
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	2/1/2018 11:22:36 AM	S48843
Surr: Toluene-d8	94.0	70-130		%Rec	1	2/1/2018 11:22:36 AM	S48843

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-19

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 9:53:00 AM

Lab ID: 1802001-002

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	2/1/2018 11:45:32 AM	M48843
Surr: BFB	104	70-130		%Rec	1	2/1/2018 11:45:32 AM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	13	9.4		mg/Kg	1	2/1/2018 11:14:19 AM	36295
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/1/2018 11:14:19 AM	36295
Surr: DNOP	103	70-130		%Rec	1	2/1/2018 11:14:19 AM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.020		mg/Kg	1	2/1/2018 11:45:32 AM	S48843
Toluene	ND	0.039		mg/Kg	1	2/1/2018 11:45:32 AM	S48843
Ethylbenzene	ND	0.039		mg/Kg	1	2/1/2018 11:45:32 AM	S48843
Xylenes, Total	ND	0.078		mg/Kg	1	2/1/2018 11:45:32 AM	S48843
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	2/1/2018 11:45:32 AM	S48843
Surr: Toluene-d8	95.7	70-130		%Rec	1	2/1/2018 11:45:32 AM	S48843

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-20

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 10:00:00 AM

Lab ID: 1802001-003

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	2/1/2018 12:08:32 PM	M48843
Surr: BFB	102	70-130		%Rec	5	2/1/2018 12:08:32 PM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/1/2018 11:36:12 AM	36295
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/1/2018 11:36:12 AM	36295
Surr: DNOP	104	70-130		%Rec	1	2/1/2018 11:36:12 AM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.10		mg/Kg	5	2/1/2018 12:08:32 PM	S48843
Toluene	ND	0.20		mg/Kg	5	2/1/2018 12:08:32 PM	S48843
Ethylbenzene	ND	0.20		mg/Kg	5	2/1/2018 12:08:32 PM	S48843
Xylenes, Total	ND	0.41		mg/Kg	5	2/1/2018 12:08:32 PM	S48843
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	5	2/1/2018 12:08:32 PM	S48843
Surr: Toluene-d8	97.4	70-130		%Rec	5	2/1/2018 12:08:32 PM	S48843

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL	Practical Quantitative Limit	RL Reporting 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-21

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 10:07:00 AM

Lab ID: 1802001-004

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	2/1/2018 12:31:31 PM	M48843
Surr: BFB	106	70-130		%Rec	1	2/1/2018 12:31:31 PM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/1/2018 11:58:22 AM	36295
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/1/2018 11:58:22 AM	36295
Surr: DNOP	105	70-130		%Rec	1	2/1/2018 11:58:22 AM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.018		mg/Kg	1	2/1/2018 12:31:31 PM	S48843
Toluene	ND	0.036		mg/Kg	1	2/1/2018 12:31:31 PM	S48843
Ethylbenzene	ND	0.036		mg/Kg	1	2/1/2018 12:31:31 PM	S48843
Xylenes, Total	ND	0.072		mg/Kg	1	2/1/2018 12:31:31 PM	S48843
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	2/1/2018 12:31:31 PM	S48843
Surr: Toluene-d8	93.2	70-130		%Rec	1	2/1/2018 12:31:31 PM	S48843

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-22

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 10:10:00 AM

Lab ID: 1802001-005

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	2/1/2018 12:54:26 PM	M48843
Surr: BFB	108	70-130		%Rec	1	2/1/2018 12:54:26 PM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/1/2018 12:20:23 PM	36295
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	2/1/2018 12:20:23 PM	36295
Surr: DNOP	105	70-130		%Rec	1	2/1/2018 12:20:23 PM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.021		mg/Kg	1	2/1/2018 12:54:26 PM	S48843
Toluene	ND	0.042		mg/Kg	1	2/1/2018 12:54:26 PM	S48843
Ethylbenzene	ND	0.042		mg/Kg	1	2/1/2018 12:54:26 PM	S48843
Xylenes, Total	ND	0.085		mg/Kg	1	2/1/2018 12:54:26 PM	S48843
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	2/1/2018 12:54:26 PM	S48843
Surr: Toluene-d8	94.8	70-130		%Rec	1	2/1/2018 12:54:26 PM	S48843

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting 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-23

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 10:19:00 AM

Lab ID: 1802001-006

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	230	24		mg/Kg	5	2/1/2018 1:17:22 PM	M48843
Surr: BFB	98.1	70-130		%Rec	5	2/1/2018 1:17:22 PM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	410	9.3		mg/Kg	1	2/1/2018 12:42:36 PM	36295
Motor Oil Range Organics (MRO)	100	47		mg/Kg	1	2/1/2018 12:42:36 PM	36295
Surr: DNOP	111	70-130		%Rec	1	2/1/2018 12:42:36 PM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.12		mg/Kg	5	2/1/2018 1:17:22 PM	S48843
Toluene	0.79	0.24		mg/Kg	5	2/1/2018 1:17:22 PM	S48843
Ethylbenzene	0.53	0.24		mg/Kg	5	2/1/2018 1:17:22 PM	S48843
Xylenes, Total	6.8	0.47		mg/Kg	5	2/1/2018 1:17:22 PM	S48843
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	5	2/1/2018 1:17:22 PM	S48843
Surr: Toluene-d8	95.2	70-130		%Rec	5	2/1/2018 1:17:22 PM	S48843

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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-24

Project: Hubbell Fed 1M

Collection Date: 1/31/2018 10:32:00 AM

Lab ID: 1802001-007

Matrix: SOIL

Received Date: 2/1/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	5.2	3.7		mg/Kg	1	2/1/2018 1:40:19 PM	M48843
Surr: BFB	111	70-130		%Rec	1	2/1/2018 1:40:19 PM	M48843
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	41	9.8		mg/Kg	1	2/1/2018 1:04:34 PM	36295
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/1/2018 1:04:34 PM	36295
Surr: DNOP	107	70-130		%Rec	1	2/1/2018 1:04:34 PM	36295
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.018		mg/Kg	1	2/1/2018 1:40:19 PM	S48843
Toluene	ND	0.037		mg/Kg	1	2/1/2018 1:40:19 PM	S48843
Ethylbenzene	ND	0.037		mg/Kg	1	2/1/2018 1:40:19 PM	S48843
Xylenes, Total	ND	0.074		mg/Kg	1	2/1/2018 1:40:19 PM	S48843
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	2/1/2018 1:40:19 PM	S48843
Surr: Toluene-d8	93.7	70-130		%Rec	1	2/1/2018 1:40:19 PM	S48843

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting 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#: 1802001

05-Feb-18

Client: Rule Engineering LLC

Project: Hubbell Fed IM

Sample ID	LCS-36295		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	36295		RunNo:	48827				
Prep Date:	2/1/2018		Analysis Date:	2/1/2018		SeqNo:	1571272		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	49	10	50.00	0	98.7	70	130				
Surr: DNOP	4.6		5.000		91.4	70	130				

Sample ID	MB-36295		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	36295		RunNo:	48827				
Prep Date:	2/1/2018		Analysis Date:	2/1/2018		SeqNo:	1571273		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		102	70	130				

Sample ID	1802001-001AMS		SampType:	MS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SC-18		Batch ID:	36295		RunNo:	48827				
Prep Date:	2/1/2018		Analysis Date:	2/1/2018		SeqNo:	1571811		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	51	9.4	46.95	7.554	91.7	55.8	125				
Surr: DNOP	4.8		4.695		103	70	130				

Sample ID	1802001-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SC-18		Batch ID:	36295		RunNo:	48827				
Prep Date:	2/1/2018		Analysis Date:	2/1/2018		SeqNo:	1571812		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	51	10	49.90	7.554	86.7	55.8	125	0.428	20		
Surr: DNOP	4.9		4.990		98.1	70	130	0	0		

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802001

05-Feb-18

Client: Rule Engineering LLC
Project: Hubbell Fed 1M

Sample ID	100ng lcs		SampType:	LCS4		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	BatchQC		Batch ID:	S48843		RunNo:	48843				
Prep Date:			Analysis Date:	2/1/2018		SeqNo:	1571716	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.89	0.025	1.000	0	89.0	80	120				
Toluene	0.99	0.050	1.000	0	98.7	80	120				
Ethylbenzene	1.0	0.050	1.000	0	101	80	120				
Xylenes, Total	3.0	0.10	3.000	0	99.3	80	120				
Surr: 4-Bromofluorobenzene	0.43		0.5000		86.8	70	130				
Surr: Toluene-d8	0.47		0.5000		94.2	70	130				

Sample ID	rb		SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	PBS		Batch ID:	S48843		RunNo:	48843				
Prep Date:			Analysis Date:	2/1/2018		SeqNo:	1571726	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	0.53		0.5000		107	70	130				
Surr: Toluene-d8	0.48		0.5000		95.7	70	130				

Sample ID	1802001-002ams		SampType:	MS4		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	SC-19		Batch ID:	S48843		RunNo:	48843				
Prep Date:			Analysis Date:	2/1/2018		SeqNo:	1572330	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.68	0.020	0.7849	0	86.5	80	120				
Toluene	0.74	0.039	0.7849	0	94.4	80	120				
Ethylbenzene	0.77	0.039	0.7849	0	97.8	80	120				
Xylenes, Total	2.3	0.078	2.355	0.02933	94.7	80	120				
Surr: 4-Bromofluorobenzene	0.36		0.3924		91.8	70	130				
Surr: Toluene-d8	0.37		0.3924		94.9	70	130				

Sample ID	1802001-002amsd		SampType:	MSD4		TestCode:	EPA Method 8260B: Volatiles Short List				
Client ID:	SC-19		Batch ID:	S48843		RunNo:	48843				
Prep Date:			Analysis Date:	2/1/2018		SeqNo:	1572331	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.64	0.020	0.7849	0	81.8	80	120	5.63	0		
Toluene	0.72	0.039	0.7849	0	91.3	80	120	3.27	0		
Ethylbenzene	0.72	0.039	0.7849	0	92.4	80	120	5.72	0		
Xylenes, Total	2.2	0.078	2.355	0.02933	91.8	80	120	3.09	0		

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802001

05-Feb-18

Client: Rule Engineering LLC

Project: Hubbell Fed 1M

Sample ID	1802001-002amsd	SampType:	MSD4	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	SC-19	Batch ID:	S48843	RunNo:	48843					
Prep Date:		Analysis Date:	2/1/2018	SeqNo:	1572331	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.36		0.3924		92.8	70	130	0	0	
Surr: Toluene-d8	0.37		0.3924		93.8	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802001

05-Feb-18

Client: Rule Engineering LLC

Project: Hubbell Fed 1M

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	M48843	RunNo:	48843					
Prep Date:		Analysis Date:	2/1/2018	SeqNo:	1571713	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	114	70	130			
Surr: BFB	430		500.0		85.8	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	M48843	RunNo:	48843					
Prep Date:		Analysis Date:	2/1/2018	SeqNo:	1571714	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	510		500.0		102	70	130			

Sample ID	1802001-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	SC-18	Batch ID:	M48843	RunNo:	48843					
Prep Date:		Analysis Date:	2/1/2018	SeqNo:	1572140	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.3	21.26	0	95.7	64.7	142			
Surr: BFB	400		425.2		95.3	70	130			

Sample ID	1802001-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	SC-18	Batch ID:	M48843	RunNo:	48843					
Prep Date:		Analysis Date:	2/1/2018	SeqNo:	1572141	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.3	21.26	0	95.2	64.7	142	0.587	20	
Surr: BFB	400		425.2		93.3	70	130	0	0	

Qualifiers:

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



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: 1802001

RcptNo: 1

Received By: Anne Thorne

2/1/2018 7:00:00 AM

Anne Thorne

Completed By: Anne Thorne

2/1/2018 7:22:04 AM

Anne Thorne

Reviewed By: *AT 2/1/2018*

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Drive
Suite 705 Farmington, NM

Phone #: 505 743 9486

email or Fax#: jvaldez@ruleengineering

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

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush Same Day

Project Name: Hubbell Fed #1M

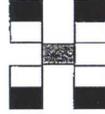
Project #: _____

Project Manager: Heather Woods

Sampler: Justin Valdez

On Ice: Yes No

Sample Temperature: 2.3 C F = 1.0 = 1.3



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	Atollcilis Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + THES (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MIRO)	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)	
1/31/18	942	Soil	SL-18	(1) 4oz Glass	Cold	201	X	X											
	953		SL-19			202	X	X											
	1000		SL-20			203	X	X											
	1007		SL-21			204	X	X											
	1010		SL-22			205	X	X											
	1019		SL-23			206	X	X											
	1032		SC-24			207	X	X											

Date: 1/31/18 Time: 1705 Relinquished by: [Signature]

Date: 1/31/18 Time: 1847 Relinquished by: [Signature]

Received by: [Signature] Date: 1/31/18 Time: 1705

Received by: [Signature] Date: 02/01/18 Time: 0700

Remarks: Direct Bill to Hillcorp

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 noted on the analytical report.

Clara Cardoza

From: Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Sent: Friday, February 2, 2018 3:46 PM
To: Clara Cardoza; Smith, Cory, EMNRD; whitney thomas (l1thomas@blm.gov); 'Adeloye, Abiodun'
Subject: RE: Hubbell Fed #1M Preliminary Sample Results

Good afternoon Clara,

Per our phone conversation today the OCD grants approval to spray potassium permanganate on the base of the excavation and backfill.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Clara Cardoza [mailto:ccardoza@hilcorp.com]
Sent: Friday, February 2, 2018 7:37 AM
To: Fields, Vanessa, EMNRD ; Smith, Cory, EMNRD ; whitney thomas (l1thomas@blm.gov) ; 'Adeloye, Abiodun'
Subject: FW: Hubbell Fed #1M Preliminary Sample Results

Attached please find the lab results from the confirmation re-sampling done at the Hubbell Fed 1M on Wednesday January 31st. Also attached for your convenience are the sample location maps after the first sample event and the updated map depicting the 2nd sample even from Wednesday. Although the TPH level remains above the closure standard for SC-23 base, BTEX is low and as demonstrated during sampling the base is terminated at a hard competent sandstone.. Hilcorp requests a variance on SC-23, to spray with potassium permanganate and be allowed to backfill this excavation as we believe the contaminates do not pose a present or foreseeable threat or an environmental risk to water, humans or animals.

Thank you for your consideration.

Respectfully submitted,

Clara M Cardoza
Environmental Specialist
505-564-0733 (O)
505-793-2784 (C)

 Please consider the environment before printing this e-mail