

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: BP	Contact: Steve Moskal	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497	
Facility Name: Gallegos Canyon Unit 216	Facility Type: Natural gas well	
Surface Owner: Federal/Tribal	Mineral Owner: Federal	API No. 3004511621

### LOCATION OF RELEASE

Unit Letter N	Section 14	Township 28N	Range 12W	Feet from the 1,550	North/South Line South	Feet from the 1,850	East/West Line West	County: San Juan
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Latitude 36.65816° Longitude -108.08331°

### NATURE OF RELEASE


Type of Release: Below Grade Tank/Former Earthen Pit	Volume of Release: unknown	Volume Recovered: none
Source of Release: Earthen pit discovered during removal of below grade tank – 95 bbl (A)	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: February 11, 2016
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Sampling of the soil beneath the BGT was done during removal. Soil analysis resulted for BTEX and chloride below BGT closure standards. TPH analysis indicated a release had occurred. An extensive remediation ensued where soil was excavated and treated on site via soil shredding, per the approve remediation plan submitted on May 9, 2016. The attached report and laboratory results document the activities on location.

Describe Area Affected and Cleanup Action Taken.\* Approximately 40,000 cubic yards of soil was excavated and treated via soil shredding. The site was fully remediated as documented in the attached closure report. BP request no further action.

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: 	<b><u>OIL CONSERVATION DIVISION</u></b>		
Printed Name: Steve Moskal	Approved by Environmental Specialist:		
Title: Field Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: steven.moskal@bp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: November 10, 2016	Phone: 505-326-9497		

\* Attach Additional Sheets If Necessary





November 7, 2016

Mr. Steve Moskal  
Field Environmental Coordinator  
BP America – Lower 48  
200 Energy Court  
Farmington, NM 87401

**RE: Remediation Activity Summary and Closure Request  
Gallegos Canyon Unit #216  
API # 30-045-11621  
San Juan County, New Mexico**

Dear Mr. Moskal:

LT Environmental, Inc. (LTE), under the direction of BP America-Lower 48, conducted environmental remediation of petroleum hydrocarbon impacted soil and confirmation soil sampling activities at the Gallegos Canyon Unit (GCU) #216 natural gas production well. The Site is located approximately 0.63 miles south of the intersection of County Road 5500 and United States Highway 64 in San Juan County, New Mexico. The legal site description is the southeast quarter of the southwest quarter of Section 14, Township 28 North, Range 12 West (Figure 1). This correspondence describes successful soil remediation conducted from June 13, 2016 through August 29, 2016 and proposes site closure based on laboratory analytical results from confirmation soil sampling.

## **SITE BACKGROUND**

As part of closure activities for a below-grade tank (BGT), BP collected a soil sample on February 11, 2016, following removal of equipment as required by 19.15.17.13 of the New Mexico Administrative Code (2010 Pit Rule) and regulated by the New Mexico Oil Conservation Division (NMOCD). Laboratory analytical results indicated the concentration of total petroleum hydrocarbons (TPH) in the sample exceeded the regulatory closure standard. BP began excavating impacted soil on April 4, 2016, following the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993. While excavating, BP encountered a second source of impact that was likely a former permitted earthen pit used during former operation of the GCU #216 and co-located GCU #250 production wells. BP investigated the extent of soil impact with test holes. Based on soil sampling results from the open excavation and test holes, BP estimated approximately 15,000 cubic yards (yds<sup>3</sup>) of soil was impacted to an estimated maximum depth of 30 feet.

Based on the extent of the estimated impact, BP proposed *ex-situ* remediation utilizing soil shredding technology in a remediation work plan submitted to the NMOCD, Bureau of Land Management (BLM), and Navajo Nation Environmental Protection Agency (NNEPA) dated May 10, 2016. The remediation scope of work included excavating clean overburden and impacted soil, separating clean soil from impacted soil, mechanically shredding the impacted soil and treating it through oxidation with hydrogen peroxide, then backfilling the excavation with treated soil and original overburden. Based on a NMOCD ranking criteria of greater than 20 for the Site, the remediation action levels were determined to be 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total BTEX, and 100 mg/kg for TPH.





## EXCAVATION

Remediation activities began on June 13, 2016. LTE provided a geologist trained in soil excavation to direct soil removal and segregation to preclude unnecessary soil removal using field screening methods such as a photo-ionization detector (PID) according to NMOCD field headspace techniques and a PetroFlag® field test kit. Excavation activities concluded on August 23, 2016. The extent of the final excavation is depicted on Figure 2. BP excavated a total of approximately 38,633 yds<sup>3</sup> of impacted soil and 11,600 yds<sup>3</sup> of clean overburden.

LTE collected composite soil samples from the sidewalls and the floor of the excavation to confirm closure standards had been met. All confirmation soil samples were collected by LTE in the presence of one or more regulatory agencies. Confirmation soil samples were representative of the excavation, typically spaced at 30-foot centers along the sidewalls. Excavation floor samples were collected approximately one sample per 625 square feet. All sample locations and pertinent excavation information were mapped using a Trimble 6000 Series GPS unit capable of sub-meter accuracy. Composite samples were collected by depositing five aliquots of soil into plastic bags, thoroughly mixing the contents and sampling into four-ounce glass jars. The samples were stored on ice and shipped to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico following strict chain-of-custody procedures. HEAL analyzed the soil samples for benzene, toluene, ethylbenzene and total xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021, as well as TPH-gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) by EPA Method 8015. Results from laboratory analysis are presented on Table 1, and the complete laboratory reports are attached. Sample locations are depicted on Figure 2. Laboratory analytical results indicate all excavation confirmation samples were compliant with NMOCD standards.

## SOIL TREATMENT

Impacted soil removed from the excavation was processed through a shading bucket attached to an excavator to macerate, or “shred,” the soil into a uniform soil size before it was emptied into a grizzly shaker screen to further segregate the soil. A hydrogen peroxide solution ranging from 1 percent (%) to 7% hydrogen peroxide by weight in water was applied to soil on a conveyor belt with multiple spray nozzles. The treated soil was stockpiled on site and left to rest for at least 24 hours to allow the hydrogen peroxide to continue oxidizing the hydrocarbons. The treated soil was stockpiled in 100 yds<sup>3</sup> intervals until successful remediation was proven and documented, and then in 500 yds<sup>3</sup>. The stockpiles of impacted soil were bermed with clean fill to prevent potential impacts from migrating offsite due to stormwater runoff.

LTE collected composite soil samples at a rate of 1 composite sample per 100 yds<sup>3</sup> of treated soil for the first 4,700 yds<sup>3</sup> of treated soil. Based on the performance of the first 4,700 yds<sup>3</sup> of treated material, subsequent composite soil samples were collected every 500 yds<sup>3</sup> of treated soil. The composite soil samples were collected in laboratory provided sample containers, placed on ice, and sent to HEAL under chain-of-custody protocol for analysis of BTEX by EPA Method 8021 and TPH- GRO, DRO, and MRO (as required in the conditions of approval of the remediation work plan) by EPA Method 8015.

As long as soil analytical results indicated treated soil and excavation confirmation soil samples met the applicable remediation action levels stated above, LTE returned the treated soil to the excavation. If treated soil did not meet applicable remediation action levels, it was retreated or allowed more time to oxidize before resampling. Table 2 presents treatment confirmation sampling results for 121 samples. The majority of the treatment confirmation samples were below NMOCD remediation action levels for BTEX and TPH. In 16 samples, variances for the TPH remediation action level were requested by BP and granted by





NMOCD, BLM, and NNEPA. In 10 samples, variances for the MRO component in the TPH concentration were requested by BP and granted by NMOCD, BLM, and NNEPA.

The area beneath where treated soil was stockpiled was sampled upon completion of all remediation activities. The top 0 to 6 inches of the vadose zone beneath any areas where impacted and treated material were stockpiled was segregated into 6 areas, representative of size. Composite soil samples were collected from each representative area. The composite soil samples were sent to HEAL for analysis of BTEX by EPA Method 8021 and TPH-GRO, DRO, and MRO by EPA Method 8015. Results are presented in Table 3 and representative areas are depicted in Figure 3. Laboratory analytical results indicated no BTEX or TPH concentrations were detected in the vadose zone.

## CONCLUSIONS

BP successfully removed and treated soil impacted by petroleum hydrocarbon from a former BGT and historical earthen pit. Approximately 38,633 yds<sup>3</sup> of impacted soil was removed from the excavation and treated via ex-situ mechanical shredding and chemical oxidation. Excavation confirmation soil sampling results indicated all soil impacted above NMOCD recommended remediation action levels was removed for chemical treatment. Laboratory analysis of TPH concentrations in treated soil confirmed oxidation of petroleum hydrocarbons had occurred and subsequently reduced TPH concentrations to below or near the NMOCD action level. Any variances to the TPH remediation action level were approved by the NMOCD, BLM, and NNEPA. The excavation was backfilled to the existing grade using the clean overburden and remediated soil. Based on the results presented in this report, LTE recommends BP request no further action at the Site and final closure status from the applicable regulatory agencies.

LTE appreciates the opportunity to provide environmental services to BP. Please call us at 970-385-1096 if you have any questions or comments regarding this report.

Sincerely,  
LT ENVIRONMENTAL, INC.

Daniel Burns  
Project Manager

Ashley L. Ager, M.S., P.G.  
Senior Geologist

## Attachments:

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3 – Stockpile Vadose Zone Soil Sample Locations

Table 1 – Laboratory Analytical Results - Excavation Confirmation Soil Samples

Table 2 – Laboratory Analytical Results - Treatment Soil Samples

Table 3 – Laboratory Analytical Results - Stockpile Vadose Zone Soil Samples

Attachment 1 – Laboratory Analytical Reports



## FIGURES





# **LEGEND**

 SITE LOCATION

0 2,000 4,000  
Feet



**FIGURE 1**  
**SITE LOCATION MAP**  
**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**



**BP AMERICA - LOWER 48**



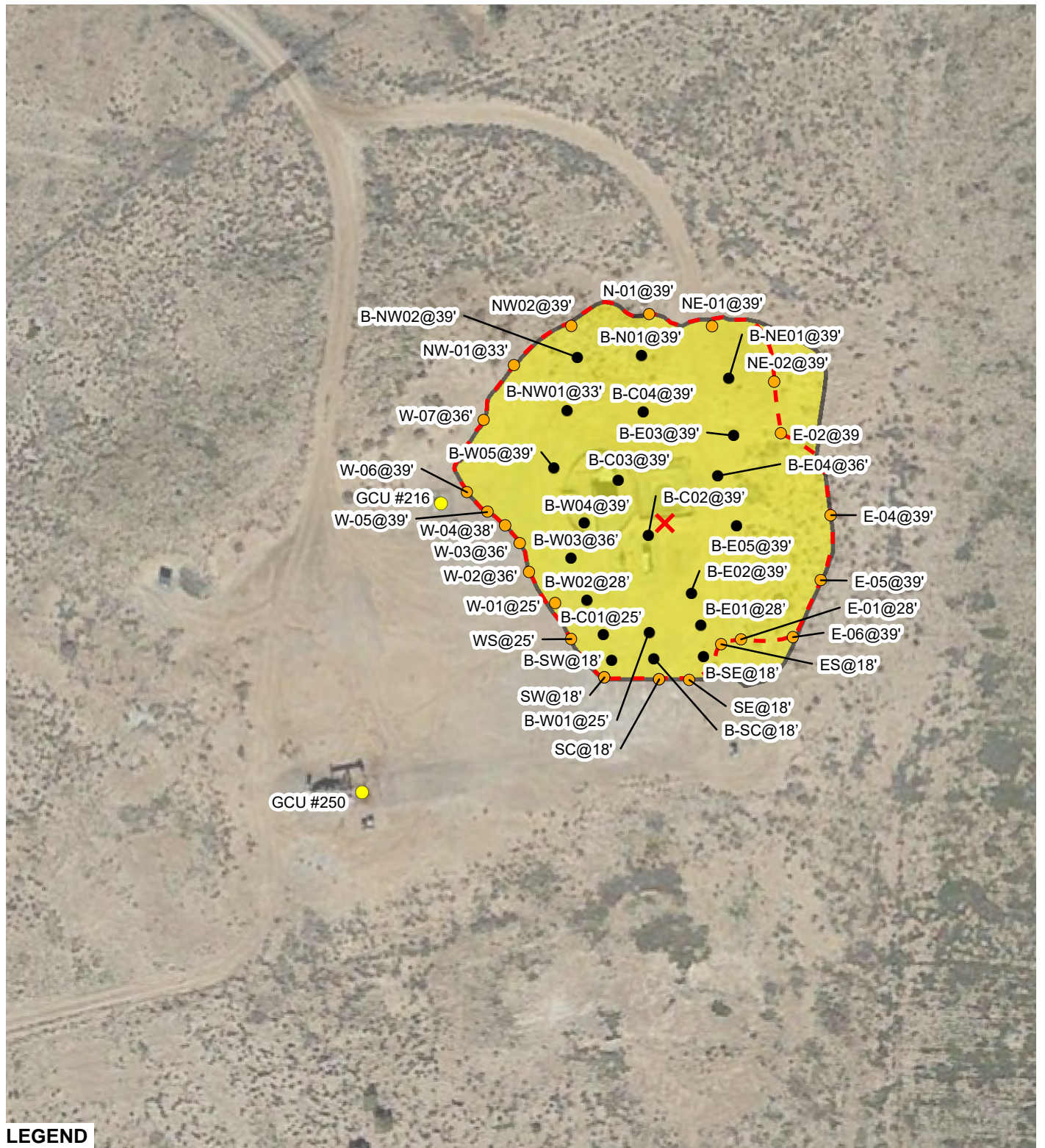


IMAGE COURTESY OF GOOGLE EARTH 2015

# LEGEND

- X APPROXIMATE SOURCE LOCATION
- WELLHEAD
- SIDEWALL SAMPLE LOCATION
- EXCAVATION BASE SAMPLE
- EXCAVATION EXTENT
- AREA OF DISTURBANCE

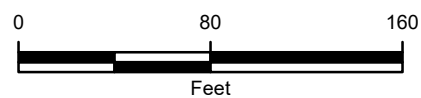
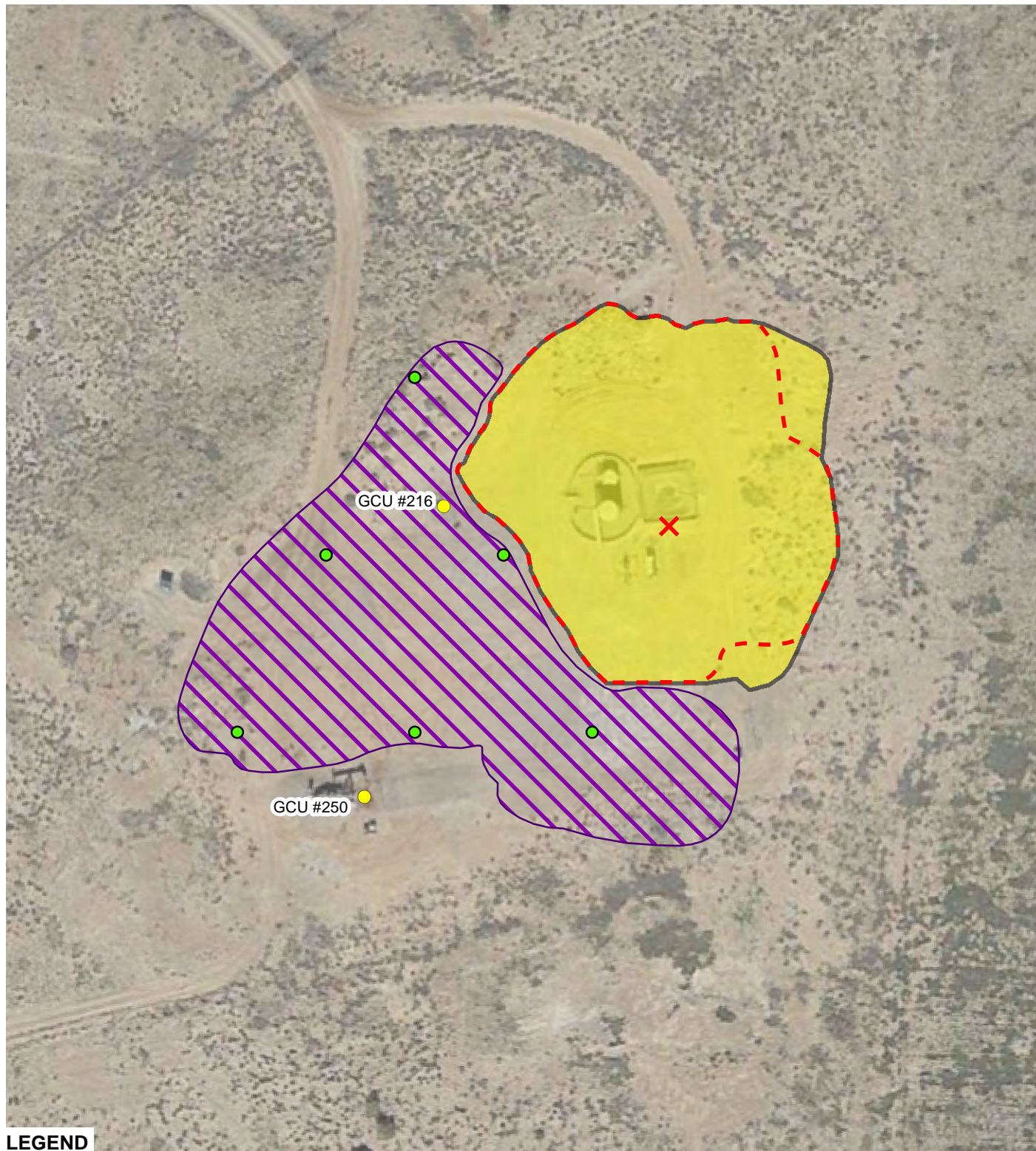


FIGURE 2  
SITE MAP  
GCU #216  
SAN JUAN COUNTY, NEW MEXICO

BP AMERICA - LOWER 48



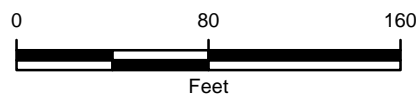




# LEGEND

- 100 FT GRID
- ✕ APPROXIMATE SOURCE LOCATION
- WELLHEAD
- EXCAVATION EXTENT
- AREA OF DISTURBANCE
- TREATED STOCK PILE AREA

IMAGE COURTESY OF GOOGLE EARTH 2015



**FIGURE 3**  
**STOCKPILE VADOSE ZONE**  
**SOIL SAMPLE LOCATIONS**  
**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP AMERICA LOWER 48**





## TABLES



**TABLE 1**  
**LABORATORY ANALYTICAL RESULTS - EXCAVATION CONFIRMATION SOIL SAMPLES**

**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP AMERICA - LOWER 48**

Sample ID	Date	Field Headspace (ppm)	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
SC @ 18'	6/13/2016	0.7	<0.021	<0.041	<0.041	<0.082	<50	<4.1	<9.8	<49	<49
SW @ 18'	6/13/2016	0	<0.018	<0.037	<0.037	<0.073	<50	<3.7	<9.6	<48	<48
B-SW @ 18'	6/13/2016	42.5	<0.019	<0.038	<0.038	<0.076	<50	<3.8	13	<46	13
B-W01 @ 25'	6/14/2016	0	<0.023	<0.045	<0.045	<0.091	<50	<4.5	<10	<50	<50
B-SE @ 18'	6/14/2016	0	<0.020	<0.040	<0.040	<0.080	<50	<4.0	<9.9	<50	<50
B-SC @ 18'	6/14/2016	0	<0.019	<0.038	<0.038	<0.076	<50	<3.8	<9.9	<49	<49
ES @ 18'	6/14/2016	0	<0.021	<0.041	<0.041	<0.082	<50	<4.1	<10	<50	<50
SE @ 18'	6/14/2016	0	<0.020	<0.040	<0.040	<0.079	<50	<4.0	<10	<51	<51
WS @ 25'	6/14/2016	0	<0.019	<0.038	<0.038	<0.077	<50	<3.8	<9.8	<49	<49
B-W02 @ 28'	6/15/2016	48.6	<0.017	0.19	0.061	0.72	0.97	14	18	<47	32
B-C01 @ 25'	6/15/2016	19.1	<0.016	<0.033	<0.033	<0.065	<50	<3.3	<10	<50	<50
B-E01 @ 28'	6/15/2016	12.2	<0.016	<0.033	<0.033	<0.066	<50	<3.3	<9.5	<47	<47
W-01 @ 25'	6/15/2016	0.7	<0.016	<0.032	<0.032	<0.064	<50	<3.2	13	<47	13
E-01 @ 28'	6/15/2016	6.9	<0.016	<0.033	<0.033	<0.065	<50	<3.3	<9.7	<49	<49
B-E02 @ 39'	6/27/2016	147	<0.11	<0.21	<0.21	<0.42	<50	<21	33	<50	33
B-C02 @ 39'	6/27/2016	25.7	<0.017	<0.034	<0.034	<0.068	<50	<3.4	<9.9	<49	<49
B-W03 @ 36'	6/27/2016	94.4	<0.017	<0.035	<0.035	<0.070	<50	<3.5	12	<50	12
W-02 @ 36'	6/27/2016	40.1	<0.020	<0.039	<0.039	<0.078	<50	<3.9	<10	<50	<50
W-03 @ 36'	6/27/2016	3.4	<0.015	<0.031	<0.031	<0.062	<50	<3.1	<10	<51	<51
B-W04 @ 39'	6/30/2016	173.8	<0.020	<0.041	<0.041	<0.082	<50	<4.1	19	<51	19
W-04 @ 38'	6/30/2016	18.8	<0.019	<0.037	<0.037	<0.075	<50	<3.7	<9.9	<50	<50
W-05 @ 39'	7/13/2016	2.1	<0.024	<0.048	<0.048	<0.097	<50	<4.8	<9.8	<49	<49
W-06 @ 39'	7/13/2016	1.4	<0.020	<0.041	<0.041	<0.081	<50	<4.1	<9.9	<49	<49
W-07 @ 36'	7/13/2016	0	<0.022	<0.044	<0.044	<0.087	<50	<4.4	<9.4	<47	<47
B-W05 @ 39'	7/13/2016	1.5	<0.020	<0.040	<0.040	<0.081	<50	<4.0	<10	<51	<51
B-C03 @ 39'	7/13/2016	4.7	<0.020	<0.040	<0.040	<0.081	<50	<4.0	<10	<50	<50
NW-01 @ 33'	7/14/2016	12.3	<0.020	<0.039	<0.039	<0.078	<50	<3.9	<9.7	<48	<48
B-NW01 @ 33	7/14/2016	25.4	<0.020	<0.040	<0.040	<0.079	<50	<4.0	<10	<51	<51
B-NW02 @ 39	7/22/2016	23.5	<0.019	<0.038	<0.038	<0.077	<50	<3.8	<9.9	<50	<50
B-N01 @ 39'	7/22/2016	62.3	<0.020	<0.041	<0.041	<0.082	<50	<4.1	<10	<50	<50
B-NE01 @ 39'	7/22/2016	31.7	<0.019	<0.037	<0.037	<0.074	<50	<3.7	<10	<50	<50
B-E03 @ 39'	7/22/2016	60.6	<0.021	<0.043	<0.043	<0.086	<50	<4.3	<10	<50	<50
NW-02 @ 39'	7/22/2016	0.9	<0.019	<0.039	<0.039	<0.078	<50	<3.9	<10	<50	<50
N-01 @ 39'	7/22/2016	8.5	<0.020	<0.040	<0.040	<0.081	<50	<4.0	<9.8	<49	<49
NE-01 @ 39'	7/22/2016	2.1	<0.018	<0.036	<0.036	<0.071	<50	<3.6	<9.8	<49	<49
NE-02 @ 39'	7/22/2016	2.3	<0.018	<0.036	<0.036	<0.071	<50	<3.6	<9.8	<49	<49
B-C04 @ 39'	7/25/2016	6.5	<0.021	<0.041	<0.041	<0.083	<50	<4.1	<10	<51	<51
B-E04 @ 36'	7/28/2016	343	<0.020	<0.040	<0.040	<0.080	<50	7.0	17	<51	24
E-02 @ 39'	7/28/2016	2.4	<0.022	<0.043	<0.043	<0.087	<50	<4.3	<9.8	<49	<49
B-E05 @ 39'	8/5/2016	261.8	<0.096	<0.19	<0.19	<0.39	<50	<19	27	<48	27
E-04 @ 39'	8/5/2016	301.9	<0.020	<0.040	<0.040	0.11	0.11	7.5	32	<49	39.5
E-05 @ 39'	8/5/2016	13.3	<0.020	<0.039	<0.039	<0.078	<50	<3.9	<9.6	<48	<48
E-06 @ 39'	8/5/2016	7.9	<0.020	<0.040	<0.040	<0.079	<50	<3.9	<9.9	<49	<49
NMOCD Remediation Action Level			10	--	--	--	50	--	--	--	100

**Notes:**

< indicates result is less than the stated laboratory method detection limit

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

ppm - parts per million

TPH - total petroleum hydrocarbons





**TABLE 2**  
**LABORATORY ANALYTICAL RESULTS - FINAL TREATMENT SOIL SAMPLES**

**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP AMERICA - LOWER 48**

Sample ID	Date	Cubic Yards Treated	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (GRO + DRO) (mg/kg)
TSP-01	6/14/2016	0-100	<0.018	0.092	0.064	0.67	0.826	33	100	63*	133*
TSP-02	6/14/2016	100-200	<0.026	<0.053	<0.053	<0.11	<50	5.6	13	<50	18.6
TSP-03	6/14/2016	200-300	<0.019	<0.038	<0.038	<0.076	<50	4.6	13	<49	17.6
TSP-04	6/14/2016	300-400	<0.018	<0.036	<0.036	<0.072	<50	<3.6	11	<49	11
TSP-05	6/14/2016	400-500	<0.019	<0.038	<0.038	0.11	0.11	13	<9.6	<48	13
TSP-06	6/14/2016	500-600	<0.019	<0.038	0.042	0.44	0.482	16	28	<49	44
TSP-07	6/14/2016	600-700	<0.019	<0.038	<0.038	<0.076	<50	<3.8	9.4	<47	9.4
TSP-08	6/17/2016	700-800	0.016	0.14	0.15	1.2	1.506	59	36	<49	95
TSP-09R	6/21/2016	800-900	<0.020	<0.039	<0.039	<0.078	<50	<3.9	63	<49	63
TSP-10R	6/21/2016	900-1,000	0.045	<0.037	0.070	0.44	0.555	27	50	<50	77
TSP-11R	6/21/2016	1,000-1,100	<0.016	0.042	0.080	0.48	0.602	29	52	<51	81
TSP-12R	6/28/2016	1,100-1,200	<0.021	<0.041	<0.041	<0.082	<50	41	68	<49	109*
TSP-13R	6/28/2016	1,200-1,300	<0.020	<0.041	<0.041	<0.081	<50	56	25	<50	81
TSP-14	6/17/2016	1,300-1,400	<0.015	0.11	0.15	1.3	1.56	55	41	<48	96
TSP-15R	6/21/2016	1,400-1,500	0.075	<0.038	0.087	0.61	0.772	34	54	<46	88
TSP-16R	6/28/2016	1,500-1,600	<0.020	<0.039	<0.039	<0.078	<50	49	18	<51	67
TSP-17R	6/28/2016	1,600-1,700	<0.021	<0.041	<0.041	0.22	0.22	63	20	<50	83
TSP-18R	6/28/2016	1,700-1,800	<0.020	<0.040	<0.040	<0.080	<50	39	54	<47	93
TSP-19R	6/28/2016	1,800-1,900	<0.017	<0.035	<0.035	0.44	0.44	61	17	<51	78
TSP-20R	6/23/2016	1,900-2,000	<0.020	<0.039	<0.039	<0.078	<50	12	39	<50	51
TSP-21R	6/23/2016	2,000-2,100	<0.018	<0.036	<0.036	0.076	0.076	19	22	<50	41
TSP-22R	6/23/2016	2,100-2,200	<0.016	<0.033	<0.033	0.082	0.082	19	14	<48	33
TSP-23R	6/23/2016	2,200-2,300	<0.018	<0.036	<0.036	0.18	0.18	33	20	<49	53
TSP-24	6/20/2016	2,300-2,400	<0.014	<0.029	0.097	0.59	0.687	37	44	<50	81
TSP-25	6/22/2016	2,400-2,500	<0.025	<0.050	<0.050	0.36	0.36	24	18	<48	42
TSP-26	6/22/2016	2,500-2,600	<0.025	<0.050	<0.050	0.24	0.24	35	29	<50	64
TSP-27	6/22/2016	2,600-2,700	<0.025	<0.050	<0.050	<0.10	<50	17	23	<49	40
TSP-28	6/22/2016	2,700-2,800	<0.025	<0.050	<0.050	0.13	0.13	26	47	<48	73
TSP-29	6/22/2016	2,800-2,900	<0.025	<0.050	<0.050	0.22	0.22	30	41	<50	71
TSP-30	6/22/2016	2,900-3,000	<0.025	<0.050	<0.050	0.23	0.23	19	25	<48	44
TSP-31	6/22/2016	3,000-3,100	<0.025	<0.050	<0.050	0.28	0.28	25	14	<48	39
TSP-32	6/23/2016	3,100-3,200	<0.018	<0.037	<0.037	<0.074	<50	6.9	12	<51	18.9
TSP-33	6/23/2016	3,200-3,300	<0.023	<0.045	<0.045	0.11	0.11	<4.5	10	<48	10
TSP-34	6/23/2016	3,300-3,400	<0.018	<0.035	0.047	0.45	0.497	15	11	<50	26
TSP-35	6/23/2016	3,400-3,500	<0.020	<0.040	<0.040	<0.080	<50	10	11	<49	21
TSP-36	6/23/2016	3,500-3,600	<0.019	<0.038	<0.038	0.27	0.27	24	38	<49	62
TSP-37,38,39R	7/5/2016	3,600-3,900	<0.020	<0.039	<0.039	<0.079	<50	<3.9	72	54*	72
TSP-40	6/24/2016	3,900-4,000	<0.021	<0.042	<0.042	<0.084	<50	<4.2	12	<50	12
TSP-41	6/24/2016	4,000-4,100	<0.022	<0.043	<0.043	<0.087	<50	20	48	<50	68
TSP-42	6/24/2016	4,100-4,200	<0.019	<0.039	<0.039	<0.077	<50	5.5	12	<51	17.5
TSP-43	6/24/2016	4,200-4,300	<0.018	<0.037	0.056	0.49	0.546	37	20	<50	57
TSP-44	6/27/2016	4,300-4,400	<0.017	<0.034	<0.034	0.12	0.12	18	56	<50	74
TSP-45	6/27/2016	4,400-4,500	<0.019	<0.038	0.052	0.45	0.502	26	64	<51	90
TSP-46	6/27/2016	4,500-4,600	<0.019	<0.038	<0.038	<0.076	<50	12	100	54*	112*
TSP-47	6/27/2016	4,600-4,700	<0.020	<0.040	<0.040	0.16	0.16	25	61	<51	86
TSP-48 (500)	6/29/2016	4,700-5,200	<0.038	<0.075	<0.075	<0.15	<50	8.8	100	65*	108.8*
TSP-49 (200)	6/29/2016	5,200-5,400	<0.020	<0.039	<0.039	<0.078	<50	<3.9	85	62*	85
TSP-50	6/30/2016	5,400-5,900	<0.023	<0.046	0.049	0.2	0.249	21	66	<48	87
TSP-51R	7/5/2016	5,900-6,400	<0.019	<0.037	<0.037	<0.075	<50	<3.7	91	64*	91
TSP-52	6/30/2016	6,400-6,900	<0.020	<0.039	<0.039	<0.079	<50	7.5	84	52*	91.5
TSP-53	6/30/2016	6,900-7,400	<0.021	0.130	0.140	1.5	1.77	53	49	<50	102*
TSP-54	7/5/2016	7,400-7,900	<0.019	<0.038	<0.038	<0.076	<50	<3.8	41	<49	41
TSP-55	7/8/2016	7,900-8,400	<0.019	<0.038	<0.038	<0.075	<50	<3.8	78	54*	78
TSP-56	7/8/2016	8,400-8,900	<0.019	<0.039	<0.039	0.15	0.15	10	97	62*	107*
TSP-57	7/8/2016	8,900-9,400	<0.020	<0.040	<0.040	<0.081	<50	6.3	95	60*	101.3*
TSP-58	7/8/2016	9,400-9,900	<0.022	<0.044	<0.044	<0.089	<50	<4.4	38	<47	38
TSP-59	7/11/2106	9,900-10,400	<0.022	<0.044	<0.044	<0.088	<50	<4.4	44	<50	44





**TABLE 2**  
**LABORATORY ANALYTICAL RESULTS - FINAL TREATMENT SOIL SAMPLES**

**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP AMERICA - LOWER 48**

Sample ID	Date	Cubic Yards Treated	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (GRO + DRO) (mg/kg)
TSP-60	7/11/2106	10,400-10,900	<0.019	<0.038	<0.038	<0.075	<50	<3.8	61	<50	61
TSP-61	7/11/2016	10,900-11,400	<0.022	<0.043	<0.043	<0.087	<50	11	50	<49	61
TSP-62	7/11/2016	11,400-11,900	<0.021	<0.041	<0.041	<0.082	<50	<4.1	63	<49	63
TSP-63	7/11/2016	11,900-12,400	<0.019	<0.037	<0.037	<0.075	<50	<3.7	52	<50	52
TSP-64	7/11/2016	12,400-12,900	<0.019	<0.038	<0.038	0.16	0.16	9.6	48	<50	57.6
TSP-65	7/11/2016	12,900-13,400	<0.019	<0.037	<0.037	<0.075	<50	4.1	42	<49	46.1
TSP-66	7/13/2016	13,400-13,900	<0.022	<0.044	<0.044	<0.088	<50	<4.4	20	<49	20
TSP-67	7/13/2016	13,900-14,400	<0.023	<0.046	<0.046	<0.092	<50	5.3	33	<49	38.3
TSP-68	7/13/2016	14,400-14,900	<0.021	<0.042	<0.042	<0.084	<50	<4.2	22	<49	22
TSP-69	7/13/2016	14,900-15,400	<0.020	<0.041	<0.041	<0.082	<50	<4.1	28	<49	28
TSP-70	7/13/2016	15,400-15,900	<0.021	<0.043	<0.043	<0.086	<50	<4.3	29	<48	29
TSP-71	7/13/2016	15,900-16,400	<0.021	<0.043	<0.043	<0.086	<50	<4.3	28	<47	28
TSP-72	7/18/2016	16,400-16,900	<0.021	<0.043	<0.043	<0.086	<50	<4.3	<10	<50	<50
TSP-73	7/18/2016	16,900-17,400	<0.021	<0.042	<0.042	<0.085	<50	<4.2	<10	<51	<51
TSP-74	7/18/2016	17,400-17,900	<0.019	<0.038	<0.038	<0.075	<50	<3.8	20	<51	<51
TSP-75	7/18/2016	17,900-18,400	<0.020	<0.040	<0.040	<0.079	<50	<4.0	<10	<50	<50
TSP-76	7/18/2016	18,400-18,900	<0.019	<0.039	<0.039	<0.077	<50	<3.9	11	<48	<48
TSP-77	7/18/2016	18,900-19,400	<0.020	<0.039	<0.039	<0.079	<50	<3.9	<9.9	<49	<49
TSP-78	7/20/2016	19,400-19,900	<0.019	<0.038	<0.038	<0.076	<50	<3.8	<9.9	<50	<50
TSP-79	7/20/2016	19,900-20,400	0.36	0.33	0.43	4.5	5.62	120	<9.9	<50	<b>120*</b>
TSP-80	7/20/2016	20,400-20,900	<0.020	<0.040	<0.040	<0.079	<50	<4.0	<10	<50	<50
TSP-81R	7/26/2016	20,900-21,400	<0.020	<0.041	<0.041	<0.082	<50	7.6	49	<48	56.6
TSP-82	7/22/2016	21,400-21,900	<0.12	<0.25	<0.25	0.64	0.64	<25	21	<48	21
TSP-83	7/26/2016	21,900-22,400	<0.021	<0.042	<0.042	0.097	0.097	9.4	89	<50	98.4
TSP-84	7/26/2016	22,400-22,900	<0.020	<0.039	0.045	0.46	0.505	18	17	<47	35
TSP-85	7/26/2016	22,900-23,400	<0.020	<0.041	<0.041	<0.082	<50	10	31	<47	41
TSP-86	7/26/2016	23,400-23,900	<0.11	<0.22	<0.22	<0.43	<50	<22	52	<49	52
TSP-87	7/26/2016	23,900-24,400	<0.021	<0.042	<0.042	<0.085	<50	4.9	45	<50	49.9
TSP-88	7/26/2016	24,400-24,900	<0.095	<0.19	<0.19	<0.38	<50	<19	32	<48	32
TSP-89	7/25/2016	24,900-25,400	<0.020	<0.041	<0.041	0.089	0.089	6.8	48	<49	54.8
TSP-90	7/25/2016	25,400-25,900	<0.020	<0.040	<0.040	0.13	0.13	4.8	23	<48	27.8
TSP-91	7/25/2016	25,900-26,400	<0.096	<0.19	<0.19	<0.38	<50	<19	31	<50	31
TSP-92	7/25/2016	26,400-26,900	<0.10	<0.20	<0.20	<0.40	<50	<20	36	<49	36
TSP-93	7/25/2016	26,900-27,400	<0.021	<0.042	<0.042	0.095	0.095	7.8	34	<50	41.8
TSP-94	7/25/2016	27,400-27,900	<0.021	<0.041	<0.041	0.11	0.11	12	32	<49	44
TSP-95R	8/1/2016	27,900-28,400	<0.10	<0.20	<0.20	<0.41	<50	<20	58	<47	58
TSP-96	7/28/2016	28,400-28,900	<0.020	0.14	0.11	1.2	1.45	46	68	<48	<b>114*</b>
TSP-97	7/28/2016	28,900-29,400	<0.020	<0.039	<0.039	0.52	0.52	55	39	<48	94
TSP-98	7/28/2016	29,400-29,900	<0.021	<0.042	<0.042	0.16	0.16	31	78	<49	<b>109*</b>
TSP-99	8/1/2016	29,900-30,400	<0.022	<0.044	<0.044	0.27	0.27	29	47	<48	76
TSP-100	8/1/2016	30,400-30,900	<0.11	<0.21	<0.21	<0.43	<50	<21	55	<49	55
TSP-101	8/1/2016	30,900-31,400	<0.021	<0.042	<0.042	<0.085	<50	<4.2	36	<47	36
TSP-102	8/1/2016	31,400-31,900	<0.021	<0.041	<0.041	0.46	0.46	48	85	<50	<b>133*</b>
TSP-103	8/1/2016	31,900-32,400	<0.020	<0.040	<0.040	<0.080	<50	<4.0	67	<49	67
TSP-104R	8/5/2016	32,400-32,900	<0.018	<0.037	<0.037	0.25	0.25	33	39	<49	72
TSP-105R	8/5/2016	32,900-33,400	<0.021	<0.043	<0.043	0.21	0.21	36	90	<46	<b>126*</b>
TSP-107	8/5/2016	33,900-34,400	<0.024	<0.048	<0.048	0.098	0.098	18	82	<49	100
TSP-106RT2	8/23/2016	33,400-33,900	<0.024	<0.047	<0.047	<0.094	<50	29	28	<47	57
TSP-108	8/5/2016	34,400-34,900	<0.020	<0.040	<0.040	<0.081	<50	17	66	<50	83
TSP-109	8/9/2016	34,900-35,400	<0.018	<0.037	<0.037	<0.074	<50	20	43	<50	63
TSP-110	8/9/2016	35,400-35,900	<0.021	<0.042	<0.042	<0.085	<50	7.6	68	<51	75.6
TSP-111RT2	8/23/2016	35,900-36,330	<0.019	<0.039	<0.039	<0.077	<50	<3.9	30	<49	30
TSP-112RT	8/23/2016	36,330-36,830	<0.021	<0.042	<0.042	<0.083	<50	18	56	<48	74
TSP-113RT	8/23/2016	36,830-37,230	<0.019	<0.038	<0.038	<0.076	<50	23	45	<49	68
TSP-114R	8/18/2016	37,230-37,730	<0.019	<0.037	<0.037	<0.074	<50	12	45	<48	57
TSP-115R	8/18/2016	37,730-38,230	<0.022	<0.044	<0.044	0.29	0.29	54	46	<49	100
TSP-116R	8/18/2016	38,230-38,730	<0.024	<0.048	<0.048	<0.095	<50	27	48	<50	75





**TABLE 2**  
**LABORATORY ANALYTICAL RESULTS - FINAL TREATMENT SOIL SAMPLES**

**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP AMERICA - LOWER 48**

Sample ID	Date	Cubic Yards Treated	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (GRO + DRO) (mg/kg)
TSP-117	8/12/2016	38,730-39,230	<0.11	<0.11	<0.11	<0.22	<50	28	130	<48	<b>158*</b>
TSP-118R	8/18/2016	39,230-39,730	<0.024	<0.047	<0.047	<0.094	<50	15	36	<50	51
TSP-119	8/12/2016	39,730-40,230	<0.10	<0.10	<0.10	0.29	0.29	26	98	51*	<b>124*</b>
TSP-120	8/12/2016	40,230-40,730	<0.022	<0.043	<0.043	0.12	0.12	19	99	<48	<b>118*</b>
TSP-121	8/12/2016	40,730-41,230	<0.020	<0.039	<0.039	<0.079	<50	12	37	<50	49
TSP-122R	8/18/2016	41,230-41,640	<0.022	<0.043	<0.043	<0.087	<50	33	42	<48	75
NMOCD Remediation Action Level			10	--	--	--	50	--	--	--	100

**Notes:**

< indicates result is less than the stated laboratory method detection limit

**Bold** - indicates values exceeding NMOCD standards

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

\*- variance approved by NMOCD for MRO concentrations and/or TPH (GRO+DRO) remediation action level



**TABLE 3**  
**LABROATORY ANALYTICAL RESULTS - STOCKPILE VADOSE ZONE SOIL SAMPLES**

**GCU #216**  
**SAN JUAN COUNTY, NEW MEXICO**  
**BP - LOWER 48**

Sample ID	Date	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	TPH (mg/kg)
VZ-01	8/29/2016	<0.024	<0.047	<0.047	<0.094	<0.094	<4.7	<10	<50	<50
VZ-02	8/29/2016	<0.023	<0.047	<0.047	<0.094	<0.094	<4.7	<9.8	<49	<49
VZ-03	8/29/2016	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.8	<49	<49
VZ-04	8/29/2016	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<10	<50	<50
VZ-05	8/29/2016	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	<9.7	<48	<48
VZ-06	8/29/2016	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.8	<49	<49
NMOCD Remediation Action Level		10	--	--	--	50	--	--	--	100

**Notes:**

< indicates result is less than the stated laboratory method detection limit

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons





**ATTACHMENT 1**  
**LABORATORY ANALYTICAL REPORTS**







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

June 16, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606773

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/15/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606773**Date Reported: **6/16/2016****CLIENT:** LTE**Client Sample ID:** TSP-01**Project:** GCU 216**Collection Date:** 6/14/2016 2:35:00 PM**Lab ID:** 1606773-001**Matrix:** MEOH (SOIL)**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	100	10		mg/Kg	1	6/15/2016 10:40:27 AM
Motor Oil Range Organics (MRO)	63	50		mg/Kg	1	6/15/2016 10:40:27 AM
Surr: DNOP	96.5	70-130		%Rec	1	6/15/2016 10:40:27 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	33	3.5		mg/Kg	1	6/15/2016 10:10:23 AM
Surr: BFB	412	80-120	S	%Rec	1	6/15/2016 10:10:23 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	6/15/2016 10:10:23 AM
Toluene	0.092	0.035		mg/Kg	1	6/15/2016 10:10:23 AM
Ethylbenzene	0.064	0.035		mg/Kg	1	6/15/2016 10:10:23 AM
Xylenes, Total	0.67	0.070		mg/Kg	1	6/15/2016 10:10:23 AM
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	1	6/15/2016 10:10:23 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606773**Date Reported: **6/16/2016****CLIENT:** LTE**Client Sample ID:** TSP-02**Project:** GCU 216**Collection Date:** 6/14/2016 2:40:00 PM**Lab ID:** 1606773-002**Matrix:** MEOH (SOIL)**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	13	10		mg/Kg	1	6/15/2016 11:02:18 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/15/2016 11:02:18 AM
Surr: DNOP	96.5	70-130		%Rec	1	6/15/2016 11:02:18 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.6	5.3		mg/Kg	1	6/15/2016 10:33:48 AM
Surr: BFB	151	80-120	S	%Rec	1	6/15/2016 10:33:48 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.026		mg/Kg	1	6/15/2016 10:33:48 AM
Toluene	ND	0.053		mg/Kg	1	6/15/2016 10:33:48 AM
Ethylbenzene	ND	0.053		mg/Kg	1	6/15/2016 10:33:48 AM
Xylenes, Total	ND	0.11		mg/Kg	1	6/15/2016 10:33:48 AM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/15/2016 10:33:48 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606773**

Date Reported: **6/16/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-03

**Project:** GCU 216

**Collection Date:** 6/14/2016 2:45:00 PM

**Lab ID:** 1606773-003

**Matrix:** MEOH (SOIL)

**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	13	9.9		mg/Kg	1	6/15/2016 11:24:04 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2016 11:24:04 AM
Surr: DNOP	97.8	70-130		%Rec	1	6/15/2016 11:24:04 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	4.6	3.8		mg/Kg	1	6/15/2016 10:57:21 AM
Surr: BFB	151	80-120	S	%Rec	1	6/15/2016 10:57:21 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/15/2016 10:57:21 AM
Toluene	ND	0.038		mg/Kg	1	6/15/2016 10:57:21 AM
Ethylbenzene	ND	0.038		mg/Kg	1	6/15/2016 10:57:21 AM
Xylenes, Total	ND	0.076		mg/Kg	1	6/15/2016 10:57:21 AM
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/15/2016 10:57:21 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606773**

Date Reported: **6/16/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-04

**Project:** GCU 216

**Collection Date:** 6/14/2016 2:50:00 PM

**Lab ID:** 1606773-004

**Matrix:** MEOH (SOIL)

**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	11	9.9		mg/Kg	1	6/15/2016 11:45:58 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2016 11:45:58 AM
Surr: DNOP	99.2	70-130		%Rec	1	6/15/2016 11:45:58 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/15/2016 11:20:51 AM
Surr: BFB	125	80-120	S	%Rec	1	6/15/2016 11:20:51 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	6/15/2016 11:20:51 AM
Toluene	ND	0.036		mg/Kg	1	6/15/2016 11:20:51 AM
Ethylbenzene	ND	0.036		mg/Kg	1	6/15/2016 11:20:51 AM
Xylenes, Total	ND	0.072		mg/Kg	1	6/15/2016 11:20:51 AM
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/15/2016 11:20:51 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606773**

Date Reported: **6/16/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-05

**Project:** GCU 216

**Collection Date:** 6/14/2016 2:55:00 PM

**Lab ID:** 1606773-005

**Matrix:** MEOH (SOIL)

**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/15/2016 12:07:40 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/15/2016 12:07:40 PM
Surr: DNOP	98.3	70-130		%Rec	1	6/15/2016 12:07:40 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	13	3.8		mg/Kg	1	6/15/2016 11:44:18 AM
Surr: BFB	176	80-120	S	%Rec	1	6/15/2016 11:44:18 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/15/2016 11:44:18 AM
Toluene	ND	0.038		mg/Kg	1	6/15/2016 11:44:18 AM
Ethylbenzene	ND	0.038		mg/Kg	1	6/15/2016 11:44:18 AM
Xylenes, Total	0.11	0.075		mg/Kg	1	6/15/2016 11:44:18 AM
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	6/15/2016 11:44:18 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606773

Date Reported: 6/16/2016

CLIENT: LTE

Client Sample ID: TSP-06

Project: GCU 216

Collection Date: 6/14/2016 3:00:00 PM

Lab ID: 1606773-006

Matrix: MEOH (SOIL)

Received Date: 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	6/15/2016 12:29:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/15/2016 12:29:33 PM
Surr: DNOP	98.3	70-130		%Rec	1	6/15/2016 12:29:33 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	16	3.8		mg/Kg	1	6/15/2016 12:07:50 PM
Surr: BFB	189	80-120	S	%Rec	1	6/15/2016 12:07:50 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	6/15/2016 12:07:50 PM
Toluene	ND	0.038		mg/Kg	1	6/15/2016 12:07:50 PM
Ethylbenzene	0.042	0.038		mg/Kg	1	6/15/2016 12:07:50 PM
Xylenes, Total	0.44	0.077		mg/Kg	1	6/15/2016 12:07:50 PM
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	6/15/2016 12:07:50 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606773**Date Reported: **6/16/2016****CLIENT:** LTE**Client Sample ID:** TSP-07**Project:** GCU 216**Collection Date:** 6/14/2016 3:05:00 PM**Lab ID:** 1606773-007**Matrix:** MEOH (SOIL)**Received Date:** 6/15/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	9.4	9.4		mg/Kg	1	6/15/2016 12:51:24 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/15/2016 12:51:24 PM
Surr: DNOP	101	70-130		%Rec	1	6/15/2016 12:51:24 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/15/2016 12:31:19 PM
Surr: BFB	135	80-120	S	%Rec	1	6/15/2016 12:31:19 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/15/2016 12:31:19 PM
Toluene	ND	0.038		mg/Kg	1	6/15/2016 12:31:19 PM
Ethylbenzene	ND	0.038		mg/Kg	1	6/15/2016 12:31:19 PM
Xylenes, Total	ND	0.076		mg/Kg	1	6/15/2016 12:31:19 PM
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/15/2016 12:31:19 PM

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

<b>Qualifiers:</b>	*	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#: 1606773

16-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-25831		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25831		RunNo: 34919					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1078596		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.1		5.000		122	70	130			

Sample ID	MB-25831		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 25831		RunNo: 34919					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1078597		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		111	70	130			

Sample ID	MB-25864	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 25864			RunNo: 34919					
Prep Date:	6/15/2016	Analysis Date: 6/15/2016			SeqNo: 1078598		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		99.7	70	130			

Sample ID	LCS-25864		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25864		RunNo: 34919					
Prep Date:	6/15/2016		Analysis Date: 6/15/2016		SeqNo: 1078832		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	96.9	62.6	124			
Surr: DNOP	4.7		5.000		94.7	70	130			

Sample ID	1606773-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-01		Batch ID: 25864		RunNo: 34919					
Prep Date:	6/15/2016		Analysis Date: 6/15/2016		SeqNo: 1079067		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.5	47.26	104.3	39.0	33.9	141			
Surr: DNOP	4.3		4.726		91.0	70	130			

Sample ID	1606773-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-01		Batch ID: 25864		RunNo: 34919					
Prep Date:	6/15/2016		Analysis Date: 6/15/2016		SeqNo: 1079227		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.6	48.22	104.3	99.9	33.9	141	21.6	20	R

### 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#: 1606773

16-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	1606773-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-01	Batch ID:	25864	RunNo:	34919					
Prep Date:	6/15/2016	Analysis Date:	6/15/2016	SeqNo:	1079227	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		4.822		93.9	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#: 1606773

16-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25846		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 25846		RunNo: 34934					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1079435		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	1100		1000		107	80	120			

Sample ID	LCS-25846		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 25846		RunNo: 34934					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1079436		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.1	80	120			
Surr: BFB	1100		1000		114	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#: 1606773

16-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25846		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 25846		RunNo: 34934					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1079465		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	1.0		1.000		104	80	120			

Sample ID	LCS-25846		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 25846		RunNo: 34934					
Prep Date:	6/14/2016		Analysis Date: 6/15/2016		SeqNo: 1079466		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	75.3	123			
Toluene	0.92	0.050	1.000	0	92.0	80	124			
Ethylbenzene	0.92	0.050	1.000	0	92.1	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	92.1	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	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



## Sample Log-In Check List

Client Name: **LTE**

Work Order Number: **1606773**

RcptNo: 1

Received by/date:

Logged By: **Lindsay Mangin**

*06/15/16*  
6/15/2016 7:15:00 AM

Completed By: **Lindsay Mangin**

6/15/2016 7:40:30 AM

Reviewed By:

### 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	1.7	Good	Yes			









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

June 28, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606A35

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/18/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-08

**Project:** GCU 216

**Collection Date:** 6/17/2016 12:40:00 PM

**Lab ID:** 1606A35-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	36	9.8		mg/Kg	1	6/20/2016 10:22:37 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/20/2016 10:22:37 AM
Surr: DNOP	94.3	70-130		%Rec	1	6/20/2016 10:22:37 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	52	2.8		mg/Kg	1	6/24/2016 8:42:24 PM
Surr: BFB	545	80-120	S	%Rec	1	6/24/2016 8:42:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	0.016	0.014		mg/Kg	1	6/24/2016 8:42:24 PM
Toluene	0.15	0.028		mg/Kg	1	6/24/2016 8:42:24 PM
Ethylbenzene	0.14	0.028		mg/Kg	1	6/24/2016 8:42:24 PM
Xylenes, Total	1.2	0.056		mg/Kg	1	6/24/2016 8:42:24 PM
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	1	6/24/2016 8:42:24 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-09

**Project:** GCU 216

**Collection Date:** 6/17/2016 12:45:00 PM

**Lab ID:** 1606A35-002

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	100	10		mg/Kg	1	6/20/2016 10:44:18 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/20/2016 10:44:18 AM
Surr: DNOP	98.5	70-130		%Rec	1	6/20/2016 10:44:18 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	140	2.9		mg/Kg	1	6/24/2016 9:05:50 PM
Surr: BFB	1010	80-120	S	%Rec	1	6/24/2016 9:05:50 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	0.069	0.014		mg/Kg	1	6/24/2016 9:05:50 PM
Toluene	0.89	0.029		mg/Kg	1	6/24/2016 9:05:50 PM
Ethylbenzene	0.60	0.029		mg/Kg	1	6/24/2016 9:05:50 PM
Xylenes, Total	5.2	0.058		mg/Kg	1	6/24/2016 9:05:50 PM
Surr: 4-Bromofluorobenzene	157	80-120	S	%Rec	1	6/24/2016 9:05:50 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-10

**Project:** GCU 216

**Collection Date:** 6/17/2016 12:50:00 PM

**Lab ID:** 1606A35-003

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	53	9.4		mg/Kg	1	6/20/2016 11:06:06 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2016 11:06:06 AM
Surr: DNOP	97.1	70-130		%Rec	1	6/20/2016 11:06:06 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	86	3.0		mg/Kg	1	6/24/2016 9:29:13 PM
Surr: BFB	784	80-120	S	%Rec	1	6/24/2016 9:29:13 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	0.027	0.015		mg/Kg	1	6/24/2016 9:29:13 PM
Toluene	0.37	0.030		mg/Kg	1	6/24/2016 9:29:13 PM
Ethylbenzene	0.34	0.030		mg/Kg	1	6/24/2016 9:29:13 PM
Xylenes, Total	3.1	0.060		mg/Kg	1	6/24/2016 9:29:13 PM
Surr: 4-Bromofluorobenzene	139	80-120	S	%Rec	1	6/24/2016 9:29:13 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-11

**Project:** GCU 216

**Collection Date:** 6/17/2016 12:55:00 PM

**Lab ID:** 1606A35-004

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	34	10		mg/Kg	1	6/20/2016 11:27:45 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/20/2016 11:27:45 AM
Surr: DNOP	97.5	70-130		%Rec	1	6/20/2016 11:27:45 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	59	2.9		mg/Kg	1	6/24/2016 9:52:50 PM
Surr: BFB	498	80-120	S	%Rec	1	6/24/2016 9:52:50 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	0.038	0.014		mg/Kg	1	6/24/2016 9:52:50 PM
Toluene	0.68	0.029		mg/Kg	1	6/24/2016 9:52:50 PM
Ethylbenzene	0.23	0.029		mg/Kg	1	6/24/2016 9:52:50 PM
Xylenes, Total	2.2	0.058		mg/Kg	1	6/24/2016 9:52:50 PM
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	1	6/24/2016 9:52:50 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-12

**Project:** GCU 216

**Collection Date:** 6/17/2016 1:00:00 PM

**Lab ID:** 1606A35-005

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	52	9.5		mg/Kg	1	6/20/2016 11:49:39 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2016 11:49:39 AM
Surr: DNOP	98.2	70-130		%Rec	1	6/20/2016 11:49:39 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	140	2.9		mg/Kg	1	6/24/2016 10:16:23 PM
Surr: BFB	893	80-120	S	%Rec	1	6/24/2016 10:16:23 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	0.11	0.015		mg/Kg	1	6/24/2016 10:16:23 PM
Toluene	1.8	0.029		mg/Kg	1	6/24/2016 10:16:23 PM
Ethylbenzene	0.61	0.029		mg/Kg	1	6/24/2016 10:16:23 PM
Xylenes, Total	5.7	0.059		mg/Kg	1	6/24/2016 10:16:23 PM
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	1	6/24/2016 10:16:23 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-13

**Project:** GCU 216

**Collection Date:** 6/17/2016 1:40:00 PM

**Lab ID:** 1606A35-006

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	97	9.5		mg/Kg	1	6/20/2016 10:23:50 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2016 10:23:50 AM
Surr: DNOP	99.3	70-130		%Rec	1	6/20/2016 10:23:50 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	88	32		mg/Kg	10	6/22/2016 7:28:33 PM
Surr: BFB	142	80-120	S	%Rec	10	6/22/2016 7:28:33 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.16		mg/Kg	10	6/22/2016 7:28:33 PM
Toluene	0.37	0.32		mg/Kg	10	6/22/2016 7:28:33 PM
Ethylbenzene	0.43	0.32		mg/Kg	10	6/22/2016 7:28:33 PM
Xylenes, Total	3.6	0.63		mg/Kg	10	6/22/2016 7:28:33 PM
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	10	6/22/2016 7:28:33 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-14

**Project:** GCU 216

**Collection Date:** 6/17/2016 1:55:00 PM

**Lab ID:** 1606A35-007

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	41	9.6		mg/Kg	1	6/20/2016 10:45:36 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/20/2016 10:45:36 AM
Surr: DNOP	96.5	70-130		%Rec	1	6/20/2016 10:45:36 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	31	3.0		mg/Kg	1	6/22/2016 7:52:58 PM
Surr: BFB	412	80-120	S	%Rec	1	6/22/2016 7:52:58 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.015		mg/Kg	1	6/22/2016 7:52:58 PM
Toluene	0.075	0.030		mg/Kg	1	6/22/2016 7:52:58 PM
Ethylbenzene	0.12	0.030		mg/Kg	1	6/22/2016 7:52:58 PM
Xylenes, Total	0.97	0.061		mg/Kg	1	6/22/2016 7:52:58 PM
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	6/22/2016 7:52:58 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-15

**Project:** GCU 216

**Collection Date:** 6/17/2016 2:05:00 PM

**Lab ID:** 1606A35-008

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	83	9.8		mg/Kg	1	6/20/2016 11:07:39 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/20/2016 11:07:39 AM
Surr: DNOP	95.5	70-130		%Rec	1	6/20/2016 11:07:39 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	140	32		mg/Kg	10	6/22/2016 8:17:20 PM
Surr: BFB	177	80-120	S	%Rec	10	6/22/2016 8:17:20 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	0.18	0.16		mg/Kg	10	6/22/2016 8:17:20 PM
Toluene	1.2	0.32		mg/Kg	10	6/22/2016 8:17:20 PM
Ethylbenzene	0.86	0.32		mg/Kg	10	6/22/2016 8:17:20 PM
Xylenes, Total	7.4	0.64		mg/Kg	10	6/22/2016 8:17:20 PM
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	10	6/22/2016 8:17:20 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-16

**Project:** GCU 216

**Collection Date:** 6/17/2016 2:20:00 PM

**Lab ID:** 1606A35-009

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	130	9.5		mg/Kg	1	6/20/2016 11:29:37 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/20/2016 11:29:37 AM
Surr: DNOP	89.8	70-130		%Rec	1	6/20/2016 11:29:37 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	96	33		mg/Kg	10	6/22/2016 8:41:37 PM
Surr: BFB	149	80-120	S	%Rec	10	6/22/2016 8:41:37 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.17		mg/Kg	10	6/22/2016 8:41:37 PM
Toluene	0.49	0.33		mg/Kg	10	6/22/2016 8:41:37 PM
Ethylbenzene	0.50	0.33		mg/Kg	10	6/22/2016 8:41:37 PM
Xylenes, Total	4.2	0.66		mg/Kg	10	6/22/2016 8:41:37 PM
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	10	6/22/2016 8:41:37 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-17

**Project:** GCU 216

**Collection Date:** 6/17/2016 2:30:00 PM

**Lab ID:** 1606A35-010

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	65	9.3		mg/Kg	1	6/20/2016 11:51:38 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/20/2016 11:51:38 AM
Surr: DNOP	96.8	70-130		%Rec	1	6/20/2016 11:51:38 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	69	31		mg/Kg	10	6/24/2016 9:23:29 PM
Surr: BFB	135	80-120	S	%Rec	10	6/24/2016 9:23:29 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.15		mg/Kg	10	6/22/2016 10:43:15 PM
Toluene	ND	0.31		mg/Kg	10	6/22/2016 10:43:15 PM
Ethylbenzene	0.34	0.31		mg/Kg	10	6/22/2016 10:43:15 PM
Xylenes, Total	2.6	0.62		mg/Kg	10	6/22/2016 10:43:15 PM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	10	6/22/2016 10:43:15 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-18

**Project:** GCU 216

**Collection Date:** 6/17/2016 2:35:00 PM

**Lab ID:** 1606A35-011

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	180	9.2		mg/Kg	1	6/20/2016 11:07:29 AM
Motor Oil Range Organics (MRO)	63	46		mg/Kg	1	6/20/2016 11:07:29 AM
Surr: DNOP	94.9	70-130		%Rec	1	6/20/2016 11:07:29 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	110	27		mg/Kg	10	6/24/2016 9:47:46 PM
Surr: BFB	146	80-120	S	%Rec	10	6/24/2016 9:47:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.13		mg/Kg	10	6/22/2016 11:07:26 PM
Toluene	0.54	0.27		mg/Kg	10	6/22/2016 11:07:26 PM
Ethylbenzene	0.50	0.27		mg/Kg	10	6/22/2016 11:07:26 PM
Xylenes, Total	4.5	0.54		mg/Kg	10	6/22/2016 11:07:26 PM
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	10	6/22/2016 11:07:26 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606A35**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-19

**Project:** GCU 216

**Collection Date:** 6/17/2016 2:45:00 PM

**Lab ID:** 1606A35-012

**Matrix:** MEOH (SOIL)

**Received Date:** 6/18/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>JME</b>
Diesel Range Organics (DRO)	130	9.1		mg/Kg	1	6/20/2016 11:35:27 AM
Motor Oil Range Organics (MRO)	51	46		mg/Kg	1	6/20/2016 11:35:27 AM
Surr: DNOP	96.2	70-130		%Rec	1	6/20/2016 11:35:27 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	110	27		mg/Kg	10	6/24/2016 10:11:58 PM
Surr: BFB	156	80-120	S	%Rec	10	6/24/2016 10:11:58 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.13		mg/Kg	10	6/22/2016 11:31:39 PM
Toluene	0.43	0.27		mg/Kg	10	6/22/2016 11:31:39 PM
Ethylbenzene	0.51	0.27		mg/Kg	10	6/22/2016 11:31:39 PM
Xylenes, Total	4.4	0.53		mg/Kg	10	6/22/2016 11:31:39 PM
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	10	6/22/2016 11:31:39 PM

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

<b>Qualifiers:</b>	*	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#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25933	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	25933		RunNo:	35010				
Prep Date:	6/20/2016	Analysis Date:	6/20/2016		SeqNo:	1082080	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	9.4		10.00		94.4	70	130			

Sample ID	LCS-25933		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25933		RunNo: 35010					
Prep Date:	6/20/2016		Analysis Date: 6/20/2016		SeqNo: 1082094		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.6	62.6	124			
Surr: DNOP	4.4		5.000		88.8	70	130			

Sample ID	MB-25888		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 25888		RunNo: 35005					
Prep Date:	6/16/2016		Analysis Date: 6/20/2016		SeqNo: 1082125		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		90.4	70	130			

Sample ID	LCS-25888			SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	LCSS			Batch ID:	25888		RunNo:	35005			
Prep Date:	6/16/2016			Analysis Date:	6/20/2016		SeqNo:	1082126	Units:	%Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	4.5		5.000		90.3	70	130				

Sample ID	1606A35-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-08		Batch ID: 25933		RunNo: 35010					
Prep Date:	6/20/2016		Analysis Date: 6/20/2016		SeqNo: 1082352		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	91	9.2	45.96	36.14	119	33.9	141			
Surr: DNOP	4.0		4.596		86.3	70	130			

Sample ID	1606A35-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-08		Batch ID:	25933		RunNo:	35010				
Prep Date:	6/20/2016		Analysis Date:	6/20/2016		SeqNo:	1082373		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	89	9.7	48.26	36.14	109	33.9	141	1.96	20		

### 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#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	1606A35-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-08	Batch ID:	25933	RunNo:	35010					
Prep Date:	6/20/2016	Analysis Date:	6/20/2016	SeqNo:	1082373	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		4.826		90.6	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#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085629	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	990		1000		98.6	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085630	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.7	80	120			
Surr: BFB	1000		1000		104	80	120			

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R35158	RunNo:	35158					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1087655	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	970		1000		97.3	80	120			

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1087679	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	890		1000		89.2	80	120			

Sample ID	2.5NG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R35158	RunNo:	35158					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088007	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	99.4	80	120			
Surr: BFB	1100		1000		113	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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  
R RPD outside accepted recovery limits  
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#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	80	120			
Surr: BFB	960		1000		95.6	80	120			

Sample ID	LCS-26055	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	26055	RunNo:	35174					
Prep Date:	6/24/2016	Analysis Date:	6/25/2016	SeqNo:	1088117	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	80	120			

Sample ID	MB-26055	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	26055	RunNo:	35174					
Prep Date:	6/24/2016	Analysis Date:	6/25/2016	SeqNo:	1088118	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		97.4	80	120			

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085641	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	1.1		1.000		105	80	120			

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	A35158	RunNo:	35158					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1087658	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	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	A35158	RunNo:	35158					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088011	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.4	75.3	123			
Toluene	0.85	0.050	1.000	0	85.5	80	124			
Ethylbenzene	0.85	0.050	1.000	0	85.5	82.8	121			
Xylenes, Total	2.5	0.10	3.000	0	84.8	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-26055	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	26055	RunNo:	35174					
Prep Date:	6/24/2016	Analysis Date:	6/25/2016	SeqNo:	1088135	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID	MB-26055	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	26055	RunNo:	35174					
Prep Date:	6/24/2016	Analysis Date:	6/25/2016	SeqNo:	1088136	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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#: 1606A35

28-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-26055		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26055		RunNo: 35174					
Prep Date:	6/24/2016		Analysis Date: 6/25/2016		SeqNo: 1088136		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		94.4	80	120			

## Qualifiers:

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





Hall Environmental Analysis Laboratory  
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: LTE

Work Order Number: 1606A35

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

6/18/2016 8:00:00 AM

Completed By: Lindsay Mangin

6/18/2016 8:37:25 AM

Reviewed By:

### Chain of Custody

1. Custody seals intact on sample bottles?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☐

No ☐

Not Present ☒

Yes ☒

No ☐

Not Present ☐

Courier

### Log In

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

Yes ☒

No ☐

NA ☐

Yes ☒

No ☐

NA ☐

Yes ☒

No ☐

Yes ☒

No ☐

Yes ☒

No ☐

Yes ☐

No ☒

NA ☐

Yes ☒

No ☐

No VOA Vials ☐

Yes ☐

No ☒

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Yes ☒

No ☐

Adjusted?

Yes ☒

No ☐

Yes ☒

No ☐

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			









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

June 24, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606B18

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/21/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606B18**

Date Reported: **6/24/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-20

**Project:** GCU 216

**Collection Date:** 6/20/2016 12:30:00 PM

**Lab ID:** 1606B18-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/21/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	85	10		mg/Kg	1	6/21/2016 10:04:15 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2016 10:04:15 AM
Surr: DNOP	103	70-130		%Rec	1	6/21/2016 10:04:15 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	74	3.3		mg/Kg	1	6/21/2016 10:50:21 AM
Surr: BFB	760	80-120	S	%Rec	1	6/21/2016 10:50:21 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.016		mg/Kg	1	6/21/2016 10:50:21 AM
Toluene	0.11	0.033		mg/Kg	1	6/21/2016 10:50:21 AM
Ethylbenzene	0.25	0.033		mg/Kg	1	6/21/2016 10:50:21 AM
Xylenes, Total	2.2	0.066		mg/Kg	1	6/21/2016 10:50:21 AM
Surr: 4-Bromofluorobenzene	139	80-120	S	%Rec	1	6/21/2016 10:50:21 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606B18**Date Reported: **6/24/2016****CLIENT:** LTE**Client Sample ID:** TSP-21**Project:** GCU 216**Collection Date:** 6/20/2016 12:35:00 PM**Lab ID:** 1606B18-002**Matrix:** MEOH (SOIL)**Received Date:** 6/21/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	79	10		mg/Kg	1	6/21/2016 10:25:51 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/21/2016 10:25:51 AM
Surr: DNOP	107	70-130		%Rec	1	6/21/2016 10:25:51 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	100	2.7		mg/Kg	1	6/21/2016 11:14:47 AM
Surr: BFB	754	80-120	S	%Rec	1	6/21/2016 11:14:47 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	0.074	0.014		mg/Kg	1	6/21/2016 11:14:47 AM
Toluene	0.16	0.027		mg/Kg	1	6/21/2016 11:14:47 AM
Ethylbenzene	0.47	0.027		mg/Kg	1	6/21/2016 11:14:47 AM
Xylenes, Total	4.5	0.054		mg/Kg	1	6/21/2016 11:14:47 AM
Surr: 4-Bromofluorobenzene	148	80-120	S	%Rec	1	6/21/2016 11:14:47 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606B18**

Date Reported: **6/24/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-22

**Project:** GCU 216

**Collection Date:** 6/20/2016 12:40:00 PM

**Lab ID:** 1606B18-003

**Matrix:** MEOH (SOIL)

**Received Date:** 6/21/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	44	9.9		mg/Kg	1	6/21/2016 10:47:50 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2016 10:47:50 AM
Surr: DNOP	110	70-130		%Rec	1	6/21/2016 10:47:50 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	95	2.7		mg/Kg	1	6/21/2016 11:39:13 AM
Surr: BFB	789	80-120	S	%Rec	1	6/21/2016 11:39:13 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.014		mg/Kg	1	6/21/2016 11:39:13 AM
Toluene	0.54	0.027		mg/Kg	1	6/21/2016 11:39:13 AM
Ethylbenzene	0.39	0.027		mg/Kg	1	6/21/2016 11:39:13 AM
Xylenes, Total	3.7	0.054		mg/Kg	1	6/21/2016 11:39:13 AM
Surr: 4-Bromofluorobenzene	153	80-120	S	%Rec	1	6/21/2016 11:39:13 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606B18**

Date Reported: **6/24/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-23

**Project:** GCU 216

**Collection Date:** 6/20/2016 12:45:00 PM

**Lab ID:** 1606B18-004

**Matrix:** MEOH (SOIL)

**Received Date:** 6/21/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	37	9.8		mg/Kg	1	6/21/2016 11:09:26 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2016 11:09:26 AM
Surr: DNOP	105	70-130		%Rec	1	6/21/2016 11:09:26 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	93	2.6		mg/Kg	1	6/21/2016 12:03:36 PM
Surr: BFB	806	80-120	S	%Rec	1	6/21/2016 12:03:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.013		mg/Kg	1	6/21/2016 12:03:36 PM
Toluene	0.080	0.026		mg/Kg	1	6/21/2016 12:03:36 PM
Ethylbenzene	0.31	0.026		mg/Kg	1	6/21/2016 12:03:36 PM
Xylenes, Total	3.9	0.052		mg/Kg	1	6/21/2016 12:03:36 PM
Surr: 4-Bromofluorobenzene	149	80-120	S	%Rec	1	6/21/2016 12:03:36 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606B18**Date Reported: **6/24/2016****CLIENT:** LTE**Client Sample ID:** TSP-24**Project:** GCU 216**Collection Date:** 6/20/2016 12:50:00 PM**Lab ID:** 1606B18-005**Matrix:** MEOH (SOIL)**Received Date:** 6/21/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	44	9.9		mg/Kg	1	6/21/2016 11:31:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2016 11:31:11 AM
Surr: DNOP	105	70-130		%Rec	1	6/21/2016 11:31:11 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	37	2.9		mg/Kg	1	6/21/2016 12:27:59 PM
Surr: BFB	421	80-120	S	%Rec	1	6/21/2016 12:27:59 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.014		mg/Kg	1	6/21/2016 12:27:59 PM
Toluene	ND	0.029		mg/Kg	1	6/21/2016 12:27:59 PM
Ethylbenzene	ND	0.029		mg/Kg	1	6/21/2016 12:27:59 PM
Xylenes, Total	0.59	0.058		mg/Kg	1	6/21/2016 12:27:59 PM
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	1	6/21/2016 12:27:59 PM

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

<b>Qualifiers:</b>	*	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#: 1606B18

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-25964		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25964		RunNo: 35039					
Prep Date:	6/21/2016		Analysis Date: 6/21/2016		SeqNo: 1083460		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	88.2	62.6	124			
Surr: DNOP	4.5		5.000		89.8	70	130			

Sample ID	MB-25964		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 25964		RunNo: 35039					
Prep Date:	6/21/2016		Analysis Date: 6/21/2016		SeqNo: 1083461		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		103	70	130			

Sample ID	1606B18-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-20		Batch ID: 25964		RunNo: 35039					
Prep Date:	6/21/2016		Analysis Date: 6/21/2016		SeqNo: 1083770		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	10	50.05	84.57	29.9	33.9	141			S
Surr: DNOP	4.7		5.005		94.2	70	130			

Sample ID	1606B18-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-20		Batch ID:	25964		RunNo:	35039				
Prep Date:	6/21/2016		Analysis Date:	6/21/2016		SeqNo:	1083771		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	110	10	50.30	84.57	51.7	33.9	141	10.5	20		
Surr: DNOP	4.9		5.030		98.1	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#: 1606B18

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084217	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	1000		1000		101	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084218	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	80	120			
Surr: BFB	1100		1000		106	80	120			

Sample ID	1606B18-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-20	Batch ID:	A35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084219	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	85	3.3	16.39	73.52	70.8	59.3	143			
Surr: BFB	5000		655.7		765	80	120			S

Sample ID	1606B18-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-20	Batch ID:	A35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084221	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	83	3.3	16.39	73.52	58.4	59.3	143	2.40	20	S
Surr: BFB	4900		655.7		754	80	120	0	0	S

Sample ID	MB-25948	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	25948	RunNo:	35050					
Prep Date:	6/20/2016	Analysis Date:	6/21/2016	SeqNo:	1084234	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

Sample ID	LCS-25948 C	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	25948	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084235	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		105	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1606B18

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084230	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	1.1		1.000		109	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084231	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	95.2	75.3	123			
Toluene	0.83	0.050	1.000	0	82.6	80	124			
Ethylbenzene	0.81	0.050	1.000	0	80.6	82.8	121			S
Xylenes, Total	2.4	0.10	3.000	0	81.6	83.9	122			S
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID	1606B18-002AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-21	Batch ID:	B35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084232	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.49	0.014	0.5426	0.07352	76.3	71.5	122			
Toluene	0.55	0.027	0.5426	0.1613	71.8	71.2	123			
Ethylbenzene	0.89	0.027	0.5426	0.4708	77.9	75.2	130			
Xylenes, Total	5.8	0.054	1.628	4.531	80.4	72.4	131			
Surr: 4-Bromofluorobenzene	0.78		0.5426		144	80	120			S

Sample ID	1606B18-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-21	Batch ID:	B35050	RunNo:	35050					
Prep Date:		Analysis Date:	6/21/2016	SeqNo:	1084233	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.48	0.014	0.5426	0.07352	74.6	71.5	122	1.91	20	
Toluene	0.54	0.027	0.5426	0.1613	69.7	71.2	123	2.11	20	S
Ethylbenzene	0.89	0.027	0.5426	0.4708	76.8	75.2	130	0.695	20	
Xylenes, Total	5.8	0.054	1.628	4.531	75.9	72.4	131	1.25	20	
Surr: 4-Bromofluorobenzene	0.78		0.5426		144	80	120	0	0	S

### 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  
R RPD outside accepted recovery limits  
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#: 1606B18

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25948		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 25948		RunNo: 35050					
Prep Date:	6/20/2016		Analysis Date: 6/21/2016		SeqNo: 1084239		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-25948		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 25948		RunNo: 35050					
Prep Date:	6/20/2016		Analysis Date: 6/21/2016		SeqNo: 1084240		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	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  
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: **LTE**

Work Order Number: **1606B18**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

*06/21/16*  
**6/21/2016 8:30:00 AM**

Completed By: **Lindsay Mangin**

**6/21/2016 8:40:03 AM**

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes			









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

June 24, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606C01

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/22/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1606C01

Date Reported: 6/24/2016

CLIENT: LTE

Client Sample ID: BL-TSP-A

Project: GCU 216

Collection Date: 6/21/2016 4:00:00 PM

Lab ID: 1606C01-001

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	31	10		mg/Kg	1	6/22/2016 4:31:29 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/22/2016 4:31:29 PM
Surr: DNOP	96.2	70-130		%Rec	1	6/22/2016 4:31:29 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: DJF
Gasoline Range Organics (GRO)	11	3.6		mg/Kg	1	6/22/2016 1:48:19 PM
Surr: BFB	192	80-120	S	%Rec	1	6/22/2016 1:48:19 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DJF
Benzene	ND	0.018		mg/Kg	1	6/22/2016 1:48:19 PM
Toluene	ND	0.036		mg/Kg	1	6/22/2016 1:48:19 PM
Ethylbenzene	ND	0.036		mg/Kg	1	6/22/2016 1:48:19 PM
Xylenes, Total	ND	0.073		mg/Kg	1	6/22/2016 1:48:19 PM
Surr: 4-Bromofluorobenzene	98.6	80-120		%Rec	1	6/22/2016 1:48:19 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C01

Date Reported: 6/24/2016

CLIENT: LTE

Client Sample ID: BL-PITW@20'

Project: GCU 216

Collection Date: 6/21/2016 4:05:00 PM

Lab ID: 1606C01-002

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	1300	99		mg/Kg	10	6/22/2016 4:53:48 PM
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	6/22/2016 4:53:48 PM
Surr: DNOP	0	70-130	S	%Rec	10	6/22/2016 4:53:48 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	590	18		mg/Kg	5	6/22/2016 2:58:59 PM
Surr: BFB	845	80-120	S	%Rec	5	6/22/2016 2:58:59 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.092		mg/Kg	5	6/22/2016 2:58:59 PM
Toluene	ND	0.18		mg/Kg	5	6/22/2016 2:58:59 PM
Ethylbenzene	3.6	0.18		mg/Kg	5	6/22/2016 2:58:59 PM
Xylenes, Total	24	0.37		mg/Kg	5	6/22/2016 2:58:59 PM
Surr: 4-Bromofluorobenzene	147	80-120	S	%Rec	5	6/22/2016 2:58:59 PM

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

<b>Qualifiers:</b>	*	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#: 1606C01

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25991	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	25991		RunNo:	35092				
Prep Date:	6/22/2016	Analysis Date:	6/22/2016		SeqNo:	1085623	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		94.8	70	130			

Sample ID	LCS-25991		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 25991		RunNo: 35092					
Prep Date:	6/22/2016		Analysis Date: 6/22/2016		SeqNo: 1085624		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	103	62.6	124			
Surr: DNOP	4.9		5.000		97.3	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#: 1606C01

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25976		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	PBS		Batch ID:	25976		RunNo:	35097			
Prep Date:	6/21/2016		Analysis Date:	6/22/2016		SeqNo:	1085943		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	1000		1000		101	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#: 1606C01

24-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25976		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 25976		RunNo: 35097					
Prep Date:	6/21/2016		Analysis Date: 6/22/2016		SeqNo: 1085953		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	0.98		1.000		97.5	80	120			

Sample ID	LCS-25976		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 25976		RunNo: 35097					
Prep Date:	6/21/2016		Analysis Date: 6/22/2016		SeqNo: 1085954		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	94.7	75.3	123			
Toluene	0.98	0.050	1.000	0	97.7	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.4	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	98.2	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	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



# Sample Log-In Check List

Client Name: **LTE**

Work Order Number: **1606C01**

RcptNo: **1**

Received by/date:

Logged By:

**Ashley Gallegos**

6/22/2016 8:10:00 AM

Completed By:

**Ashley Gallegos**

6/22/2016 8:38:52 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ?

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 ☐

(&lt;2 or &gt;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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			



Black	White	Black
White	Black	White
Black	White	Black

[www.hallenvironmental.com](http://www.hallenvironmental.com)

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

## Analysis Request

☒ Rush Same Day

GCU #216

Phone #: 701 576 9727

Stewed Mos Koi @ 1 item cony  
dabuns @ 1 item cony

☐ Level 4 (Full Validation)  
Standard☒ Yes ☐ No

Sample Temperature: 4.3

HEAT NO.

20

221

Date \_\_\_\_\_ Time \_\_\_\_\_

2217

Date Time

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted laboratories 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. 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](http://www.hallenvironmental.com)

June 29, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606C00

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/22/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606C00**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-09R

**Project:** GCU 216

**Collection Date:** 6/21/2016 8:55:00 AM

**Lab ID:** 1606C00-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	63	9.9		mg/Kg	1	6/22/2016 12:06:02 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/22/2016 12:06:02 PM
Surr: DNOP	103	70-130		%Rec	1	6/22/2016 12:06:02 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/22/2016 10:46:19 AM
Surr: BFB	92.4	80-120		%Rec	1	6/22/2016 10:46:19 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	6/22/2016 10:46:19 AM
Toluene	ND	0.039		mg/Kg	1	6/22/2016 10:46:19 AM
Ethylbenzene	ND	0.039		mg/Kg	1	6/22/2016 10:46:19 AM
Xylenes, Total	ND	0.078		mg/Kg	1	6/22/2016 10:46:19 AM
Surr: 4-Bromofluorobenzene	99.5	80-120		%Rec	1	6/22/2016 10:46:19 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-10R

Project: GCU 216

Collection Date: 6/21/2016 9:00:00 AM

Lab ID: 1606C00-002

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	50	10		mg/Kg	1	6/22/2016 12:27:49 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/22/2016 12:27:49 PM
Surr: DNOP	108	70-130		%Rec	1	6/22/2016 12:27:49 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: DJF
Gasoline Range Organics (GRO)	27	3.7		mg/Kg	1	6/22/2016 11:10:43 AM
Surr: BFB	228	80-120	S	%Rec	1	6/22/2016 11:10:43 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DJF
Benzene	ND	0.019		mg/Kg	1	6/22/2016 11:10:43 AM
Toluene	ND	0.037		mg/Kg	1	6/22/2016 11:10:43 AM
Ethylbenzene	0.070	0.037		mg/Kg	1	6/22/2016 11:10:43 AM
Xylenes, Total	0.44	0.075		mg/Kg	1	6/22/2016 11:10:43 AM
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	6/22/2016 11:10:43 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606C00**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-11R

**Project:** GCU 216

**Collection Date:** 6/21/2016 9:05:00 AM

**Lab ID:** 1606C00-003

**Matrix:** MEOH (SOIL)

**Received Date:** 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	52	10		mg/Kg	1	6/22/2016 12:49:43 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/22/2016 12:49:43 PM
Surr: DNOP	104	70-130		%Rec	1	6/22/2016 12:49:43 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	29	3.3		mg/Kg	1	6/22/2016 11:35:07 AM
Surr: BFB	307	80-120	S	%Rec	1	6/22/2016 11:35:07 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.016		mg/Kg	1	6/22/2016 11:35:07 AM
Toluene	ND	0.033		mg/Kg	1	6/22/2016 11:35:07 AM
Ethylbenzene	0.080	0.033		mg/Kg	1	6/22/2016 11:35:07 AM
Xylenes, Total	0.48	0.066		mg/Kg	1	6/22/2016 11:35:07 AM
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	6/22/2016 11:35:07 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-12R

Project: GCU 216

Collection Date: 6/21/2016 9:10:00 AM

Lab ID: 1606C00-004

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	78	10		mg/Kg	1	6/22/2016 1:11:55 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/22/2016 1:11:55 PM
Surr: DNOP	105	70-130		%Rec	1	6/22/2016 1:11:55 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	720	37		mg/Kg	10	6/25/2016 7:39:04 PM
Surr: BFB	251	80-120	S	%Rec	10	6/25/2016 7:39:04 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	0.36	0.18		mg/Kg	10	6/25/2016 7:39:04 PM
Toluene	11	0.37		mg/Kg	10	6/25/2016 7:39:04 PM
Ethylbenzene	2.7	0.37		mg/Kg	10	6/25/2016 7:39:04 PM
Xylenes, Total	29	0.74		mg/Kg	10	6/25/2016 7:39:04 PM
Surr: 4-Bromofluorobenzene	125	80-120	S	%Rec	10	6/25/2016 7:39:04 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-13R

Project: GCU 216

Collection Date: 6/21/2016 9:30:00 AM

Lab ID: 1606C00-005

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	55	9.9		mg/Kg	1	6/22/2016 1:33:41 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/22/2016 1:33:41 PM
Surr: DNOP	94.2	70-130		%Rec	1	6/22/2016 1:33:41 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	83	3.6		mg/Kg	1	6/27/2016 11:38:29 PM
Surr: BFB	487	80-120	S	%Rec	1	6/27/2016 11:38:29 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	0.021	0.018		mg/Kg	1	6/27/2016 11:38:29 PM
Toluene	0.057	0.036		mg/Kg	1	6/27/2016 11:38:29 PM
Ethylbenzene	0.16	0.036		mg/Kg	1	6/27/2016 11:38:29 PM
Xylenes, Total	1.5	0.073		mg/Kg	1	6/27/2016 11:38:29 PM
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	1	6/27/2016 11:38:29 PM

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.

## Analytical Report

Lab Order **1606C00**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-15R

**Project:** GCU 216

**Collection Date:** 6/21/2016 9:35:00 AM

**Lab ID:** 1606C00-006

**Matrix:** MEOH (SOIL)

**Received Date:** 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	54	9.3		mg/Kg	1	6/22/2016 1:55:50 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/22/2016 1:55:50 PM
Surr: DNOP	93.3	70-130		%Rec	1	6/22/2016 1:55:50 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	34	3.8		mg/Kg	1	6/22/2016 12:48:12 PM
Surr: BFB	232	80-120	S	%Rec	1	6/22/2016 12:48:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.019		mg/Kg	1	6/22/2016 12:48:12 PM
Toluene	ND	0.038		mg/Kg	1	6/22/2016 12:48:12 PM
Ethylbenzene	0.087	0.038		mg/Kg	1	6/22/2016 12:48:12 PM
Xylenes, Total	0.61	0.076		mg/Kg	1	6/22/2016 12:48:12 PM
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	6/22/2016 12:48:12 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-16R

Project: GCU 216

Collection Date: 6/21/2016 9:40:00 AM

Lab ID: 1606C00-007

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	110	10		mg/Kg	1	6/22/2016 2:17:57 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/22/2016 2:17:57 PM
Surr: DNOP	94.1	70-130		%Rec	1	6/22/2016 2:17:57 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: DJF
Gasoline Range Organics (GRO)	21	3.7		mg/Kg	1	6/22/2016 1:12:46 PM
Surr: BFB	231	80-120	S	%Rec	1	6/22/2016 1:12:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DJF
Benzene	ND	0.019		mg/Kg	1	6/22/2016 1:12:46 PM
Toluene	ND	0.037		mg/Kg	1	6/22/2016 1:12:46 PM
Ethylbenzene	ND	0.037		mg/Kg	1	6/22/2016 1:12:46 PM
Xylenes, Total	0.23	0.074		mg/Kg	1	6/22/2016 1:12:46 PM
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	6/22/2016 1:12:46 PM

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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-17R

Project: GCU 216

Collection Date: 6/21/2016 9:45:00 AM

Lab ID: 1606C00-008

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	150	10		mg/Kg	1	6/22/2016 3:24:30 PM
Motor Oil Range Organics (MRO)	74	50		mg/Kg	1	6/22/2016 3:24:30 PM
Surr: DNOP	98.2	70-130		%Rec	1	6/22/2016 3:24:30 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: DJF
Gasoline Range Organics (GRO)	22	3.9		mg/Kg	1	6/22/2016 1:37:15 PM
Surr: BFB	221	80-120	S	%Rec	1	6/22/2016 1:37:15 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DJF
Benzene	ND	0.020		mg/Kg	1	6/22/2016 1:37:15 PM
Toluene	ND	0.039		mg/Kg	1	6/22/2016 1:37:15 PM
Ethylbenzene	ND	0.039		mg/Kg	1	6/22/2016 1:37:15 PM
Xylenes, Total	0.20	0.078		mg/Kg	1	6/22/2016 1:37:15 PM
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	6/22/2016 1:37:15 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606C00**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-18R

**Project:** GCU 216

**Collection Date:** 6/21/2016 9:50:00 AM

**Lab ID:** 1606C00-009

**Matrix:** MEOH (SOIL)

**Received Date:** 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	75	9.8		mg/Kg	1	6/22/2016 3:46:43 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/22/2016 3:46:43 PM
Surr: DNOP	94.6	70-130		%Rec	1	6/22/2016 3:46:43 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	40	4.5		mg/Kg	1	6/22/2016 2:01:48 PM
Surr: BFB	319	80-120	S	%Rec	1	6/22/2016 2:01:48 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>DJF</b>
Benzene	ND	0.022		mg/Kg	1	6/22/2016 2:01:48 PM
Toluene	ND	0.045		mg/Kg	1	6/22/2016 2:01:48 PM
Ethylbenzene	ND	0.045		mg/Kg	1	6/22/2016 2:01:48 PM
Xylenes, Total	0.62	0.089		mg/Kg	1	6/22/2016 2:01:48 PM
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	1	6/22/2016 2:01:48 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606C00

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-19R

Project: GCU 216

Collection Date: 6/21/2016 9:55:00 AM

Lab ID: 1606C00-010

Matrix: MEOH (SOIL)

Received Date: 6/22/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	6/22/2016 4:09:07 PM
Motor Oil Range Organics (MRO)	64	50		mg/Kg	1	6/22/2016 4:09:07 PM
Surr: DNOP	97.4	70-130		%Rec	1	6/22/2016 4:09:07 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: DJF
Gasoline Range Organics (GRO)	11	3.6		mg/Kg	1	6/22/2016 2:26:18 PM
Surr: BFB	173	80-120	S	%Rec	1	6/22/2016 2:26:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: DJF
Benzene	ND	0.018		mg/Kg	1	6/22/2016 2:26:18 PM
Toluene	ND	0.036		mg/Kg	1	6/22/2016 2:26:18 PM
Ethylbenzene	ND	0.036		mg/Kg	1	6/22/2016 2:26:18 PM
Xylenes, Total	ND	0.072		mg/Kg	1	6/22/2016 2:26:18 PM
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	6/22/2016 2:26:18 PM

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#: 1606C00

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	1606C00-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-09R	Batch ID:	25991	RunNo:	35083					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1085321	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	82	10	49.80	62.60	38.9	33.9	141			
Surr: DNOP	4.7		4.980		94.9	70	130			

Sample ID	1606C00-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-09R	Batch ID:	25991	RunNo:	35083					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1085322	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	9.6	47.76	62.60	3.17	33.9	141	24.4	20	RS
Surr: DNOP	4.2		4.776		88.5	70	130	0	0	

Sample ID	MB-25991	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	25991	RunNo:	35092					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1085623	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		94.8	70	130			

Sample ID	LCS-25991	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	25991	RunNo:	35092					
Prep Date:	6/22/2016	Analysis Date:	6/22/2016	SeqNo:	1085624	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	103	62.6	124			
Surr: DNOP	4.9		5.000		97.3	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  
R RPD outside accepted recovery limits  
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#: 1606C00

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085629	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	990		1000		98.6	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085630	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.7	80	120			
Surr: BFB	1000		1000		104	80	120			

Sample ID	1606C00-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-10R	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085631	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	44	3.7	18.70	26.51	94.3	59.3	143			
Surr: BFB	2200		747.9		296	80	120			S

Sample ID	1606C00-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-10R	Batch ID:	A35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085632	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	3.7	18.70	26.51	78.7	59.3	143	6.85	20	
Surr: BFB	1900		747.9		256	80	120	0	0	S

Sample ID	MB-26054	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	26054	RunNo:	35243					
Prep Date:	6/24/2016	Analysis Date:	6/27/2016	SeqNo:	1089910	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	980		1000		97.6	80	120			

Sample ID	LCS-26054	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	26054	RunNo:	35243					
Prep Date:	6/24/2016	Analysis Date:	6/27/2016	SeqNo:	1089911	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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#: 1606C00

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26054		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26054		RunNo: 35243					
Prep Date:	6/24/2016		Analysis Date: 6/27/2016		SeqNo: 1089911		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	80	120			
Surr: BFB	1100		1000		109	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#: 1606C00

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085641	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	1.1		1.000		105	80	120			

Sample ID	1606C00-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-09R	Batch ID:	B35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085643	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.020	0.7819	0	89.0	71.5	122			
Toluene	0.52	0.039	0.7819	0.005630	66.0	71.2	123			S
Ethylbenzene	0.64	0.039	0.7819	0	82.4	75.2	130			
Xylenes, Total	2.4	0.078	2.346	0.02080	102	72.4	131			
Surr: 4-Bromofluorobenzene	0.89		0.7819		114	80	120			

Sample ID	1606C00-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-09R	Batch ID:	B35096	RunNo:	35096					
Prep Date:		Analysis Date:	6/22/2016	SeqNo:	1085644	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.020	0.7819	0	90.2	71.5	122	1.33	20	
Toluene	0.53	0.039	0.7819	0.005630	67.1	71.2	123	1.71	20	S
Ethylbenzene	0.66	0.039	0.7819	0	84.7	75.2	130	2.69	20	
Xylenes, Total	2.5	0.078	2.346	0.02080	104	72.4	131	2.37	20	
Surr: 4-Bromofluorobenzene	0.93		0.7819		119	80	120	0	0	

Sample ID	MB-26054	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	26054	RunNo:	35243					
Prep Date:	6/24/2016	Analysis Date:	6/27/2016	SeqNo:	1089938	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	0.94		1.000		94.3	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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1606C00

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26054		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26054		RunNo: 35243					
Prep Date:	6/24/2016		Analysis Date: 6/27/2016		SeqNo: 1089939		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.2	75.3	123			
Toluene	0.99	0.050	1.000	0	99.5	80	124			
Ethylbenzene	1.0	0.050	1.000	0	102	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.7	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	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



# Sample Log-In Check List

Client Name: LTE

Work Order Number: 1606C00

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

8/22/2016 8:10:00 AM

Completed By: Ashley Gallegos

8/22/2016 8:35:02 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

## Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Yes			









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

June 28, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU #216

OrderNo.: 1606D36

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/24/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606D36**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-32

**Project:** GCU #216

**Collection Date:** 6/23/2016 9:05:00 AM

**Lab ID:** 1606D36-001

**Matrix:** SOIL

**Received Date:** 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	6/24/2016 10:00:35 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/24/2016 10:00:35 AM
Surr: DNOP	113	70-130		%Rec	1	6/24/2016 10:00:35 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	6.9	3.7		mg/Kg	1	6/24/2016 12:01:24 PM
Surr: BFB	109	80-120		%Rec	1	6/24/2016 12:01:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.018		mg/Kg	1	6/24/2016 12:01:24 PM
Toluene	ND	0.037		mg/Kg	1	6/24/2016 12:01:24 PM
Ethylbenzene	ND	0.037		mg/Kg	1	6/24/2016 12:01:24 PM
Xylenes, Total	ND	0.074		mg/Kg	1	6/24/2016 12:01:24 PM
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	6/24/2016 12:01:24 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606D36

Date Reported: 6/28/2016

CLIENT: LTE

Client Sample ID: TSP-33

Project: GCU #216

Collection Date: 6/23/2016 9:15:00 AM

Lab ID: 1606D36-002

Matrix: SOIL

Received Date: 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	10	9.7		mg/Kg	1	6/24/2016 10:22:11 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/24/2016 10:22:11 AM
Surr: DNOP	98.4	70-130		%Rec	1	6/24/2016 10:22:11 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/24/2016 12:25:42 PM
Surr: BFB	103	80-120		%Rec	1	6/24/2016 12:25:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.023		mg/Kg	1	6/24/2016 12:25:42 PM
Toluene	ND	0.045		mg/Kg	1	6/24/2016 12:25:42 PM
Ethylbenzene	ND	0.045		mg/Kg	1	6/24/2016 12:25:42 PM
Xylenes, Total	0.11	0.091		mg/Kg	1	6/24/2016 12:25:42 PM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/24/2016 12:25:42 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606D36

Date Reported: 6/28/2016

CLIENT: LTE

Client Sample ID: TSP-34

Project: GCU #216

Collection Date: 6/23/2016 9:25:00 AM

Lab ID: 1606D36-003

Matrix: SOIL

Received Date: 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	11	10		mg/Kg	1	6/24/2016 10:44:04 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/24/2016 10:44:04 AM
Surr: DNOP	97.5	70-130		%Rec	1	6/24/2016 10:44:04 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	15	3.5		mg/Kg	1	6/24/2016 12:50:02 PM
Surr: BFB	155	80-120	S	%Rec	1	6/24/2016 12:50:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.018		mg/Kg	1	6/24/2016 12:50:02 PM
Toluene	ND	0.035		mg/Kg	1	6/24/2016 12:50:02 PM
Ethylbenzene	0.047	0.035		mg/Kg	1	6/24/2016 12:50:02 PM
Xylenes, Total	0.45	0.071		mg/Kg	1	6/24/2016 12:50:02 PM
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	6/24/2016 12:50:02 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606D36**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-35

**Project:** GCU #216

**Collection Date:** 6/23/2016 9:35:00 AM

**Lab ID:** 1606D36-004

**Matrix:** SOIL

**Received Date:** 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	11	9.8		mg/Kg	1	6/24/2016 11:05:46 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/24/2016 11:05:46 AM
Surr: DNOP	101	70-130		%Rec	1	6/24/2016 11:05:46 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	10	4.0		mg/Kg	1	6/24/2016 1:14:21 PM
Surr: BFB	127	80-120	S	%Rec	1	6/24/2016 1:14:21 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	6/24/2016 1:14:21 PM
Toluene	ND	0.040		mg/Kg	1	6/24/2016 1:14:21 PM
Ethylbenzene	ND	0.040		mg/Kg	1	6/24/2016 1:14:21 PM
Xylenes, Total	ND	0.080		mg/Kg	1	6/24/2016 1:14:21 PM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/24/2016 1:14:21 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606D36

Date Reported: 6/28/2016

CLIENT: LTE

Client Sample ID: TSP-36

Project: GCU #216

Collection Date: 6/23/2016 9:45:00 AM

Lab ID: 1606D36-005

Matrix: SOIL

Received Date: 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	38	9.9		mg/Kg	1	6/24/2016 11:27:16 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/24/2016 11:27:16 AM
Surr: DNOP	98.0	70-130		%Rec	1	6/24/2016 11:27:16 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	24	3.8		mg/Kg	1	6/24/2016 1:38:41 PM
Surr: BFB	198	80-120	S	%Rec	1	6/24/2016 1:38:41 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.019		mg/Kg	1	6/24/2016 1:38:41 PM
Toluene	ND	0.038		mg/Kg	1	6/24/2016 1:38:41 PM
Ethylbenzene	ND	0.038		mg/Kg	1	6/24/2016 1:38:41 PM
Xylenes, Total	0.27	0.076		mg/Kg	1	6/24/2016 1:38:41 PM
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	6/24/2016 1:38:41 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606D36**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-20R

**Project:** GCU #216

**Collection Date:** 6/23/2016 10:15:00 AM

**Lab ID:** 1606D36-006

**Matrix:** SOIL

**Received Date:** 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	39	10		mg/Kg	1	6/24/2016 11:49:10 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/24/2016 11:49:10 AM
Surr: DNOP	95.8	70-130		%Rec	1	6/24/2016 11:49:10 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	12	3.9		mg/Kg	1	6/24/2016 2:03:13 PM
Surr: BFB	137	80-120	S	%Rec	1	6/24/2016 2:03:13 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	6/24/2016 2:03:13 PM
Toluene	ND	0.039		mg/Kg	1	6/24/2016 2:03:13 PM
Ethylbenzene	ND	0.039		mg/Kg	1	6/24/2016 2:03:13 PM
Xylenes, Total	ND	0.078		mg/Kg	1	6/24/2016 2:03:13 PM
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/24/2016 2:03:13 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606D36**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-21R

**Project:** GCU #216

**Collection Date:** 6/23/2016 10:25:00 AM

**Lab ID:** 1606D36-007

**Matrix:** SOIL

**Received Date:** 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	22	10		mg/Kg	1	6/24/2016 11:44:31 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/24/2016 11:44:31 AM
Surr: DNOP	92.7	70-130		%Rec	1	6/24/2016 11:44:31 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	19	3.6		mg/Kg	1	6/24/2016 2:27:48 PM
Surr: BFB	178	80-120	S	%Rec	1	6/24/2016 2:27:48 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.018		mg/Kg	1	6/24/2016 2:27:48 PM
Toluene	ND	0.036		mg/Kg	1	6/24/2016 2:27:48 PM
Ethylbenzene	ND	0.036		mg/Kg	1	6/24/2016 2:27:48 PM
Xylenes, Total	0.076	0.073		mg/Kg	1	6/24/2016 2:27:48 PM
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	6/24/2016 2:27:48 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606D36**

Date Reported: **6/28/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-22R

**Project:** GCU #216

**Collection Date:** 6/23/2016 10:35:00 AM

**Lab ID:** 1606D36-008

**Matrix:** SOIL

**Received Date:** 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	14	9.7		mg/Kg	1	6/24/2016 12:06:21 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/24/2016 12:06:21 PM
Surr: DNOP	91.8	70-130		%Rec	1	6/24/2016 12:06:21 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	19	3.3		mg/Kg	1	6/24/2016 2:52:21 PM
Surr: BFB	201	80-120	S	%Rec	1	6/24/2016 2:52:21 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.016		mg/Kg	1	6/24/2016 2:52:21 PM
Toluene	ND	0.033		mg/Kg	1	6/24/2016 2:52:21 PM
Ethylbenzene	ND	0.033		mg/Kg	1	6/24/2016 2:52:21 PM
Xylenes, Total	0.082	0.065		mg/Kg	1	6/24/2016 2:52:21 PM
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	6/24/2016 2:52:21 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606D36

Date Reported: 6/28/2016

CLIENT: LTE

Client Sample ID: TSP-23R

Project: GCU #216

Collection Date: 6/23/2016 10:45:00 AM

Lab ID: 1606D36-009

Matrix: SOIL

Received Date: 6/24/2016 7:47:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	20	9.8		mg/Kg	1	6/24/2016 12:28:11 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/24/2016 12:28:11 PM
Surr: DNOP	94.3	70-130		%Rec	1	6/24/2016 12:28:11 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	33	3.6		mg/Kg	1	6/24/2016 3:16:53 PM
Surr: BFB	284	80-120	S	%Rec	1	6/24/2016 3:16:53 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.018		mg/Kg	1	6/24/2016 3:16:53 PM
Toluene	ND	0.036		mg/Kg	1	6/24/2016 3:16:53 PM
Ethylbenzene	ND	0.036		mg/Kg	1	6/24/2016 3:16:53 PM
Xylenes, Total	0.18	0.073		mg/Kg	1	6/24/2016 3:16:53 PM
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	1	6/24/2016 3:16:53 PM

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

<b>Qualifiers:</b>	*	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#: 1606D36

28-Jun-16

Client: LTE  
Project: GCU #216

Sample ID	LCS-26050		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26050		RunNo: 35139					
Prep Date:	6/24/2016		Analysis Date: 6/24/2016		SeqNo: 1087276		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	77.9	62.6	124			
Surr: DNOP	4.2		5.000		83.2	70	130			

Sample ID	MB-26050		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26050		RunNo: 35139					
Prep Date:	6/24/2016		Analysis Date: 6/24/2016		SeqNo: 1087277		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	8.9		10.00		89.0	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  
R RPD outside accepted recovery limits  
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#: 1606D36

28-Jun-16

Client: LTE  
Project: GCU #216

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1087679	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	890		1000		89.2	80	120			

Sample ID	1606D36-001A MS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-32	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088056	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	3.7	18.46	6.943	119	59.3	143			
Surr: BFB	910		738.6		124	80	120			S

Sample ID	1606D36-001A MSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-32	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088057	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	3.7	18.46	6.943	112	59.3	143	4.64	20	
Surr: BFB	900		738.6		122	80	120	0	0	S

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088058	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	80	120			
Surr: BFB	960		1000		95.6	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1606D36

28-Jun-16

Client: LTE  
Project: GCU #216

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	A35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1087685	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	1.0		1.000		102	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	A35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088064	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	101	75.3	123			
Toluene	1.0	0.050	1.000	0	101	80	124			
Ethylbenzene	0.97	0.050	1.000	0	97.0	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	94.2	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	1606D36-002A MS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-33	Batch ID:	A35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088077	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.023	0.9099	0	105	71.5	122			
Toluene	0.90	0.045	0.9099	0.01119	97.8	71.2	123			
Ethylbenzene	0.88	0.045	0.9099	0.01902	95.0	75.2	130			
Xylenes, Total	2.7	0.091	2.730	0.1141	94.9	72.4	131			
Surr: 4-Bromofluorobenzene	0.94		0.9099		104	80	120			

Sample ID	1606D36-002A MSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-33	Batch ID:	A35159	RunNo:	35159					
Prep Date:		Analysis Date:	6/24/2016	SeqNo:	1088078	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.023	0.9099	0	100	71.5	122	4.60	20	
Toluene	0.85	0.045	0.9099	0.01119	92.3	71.2	123	5.64	20	
Ethylbenzene	0.84	0.045	0.9099	0.01902	89.9	75.2	130	5.38	20	
Xylenes, Total	2.6	0.091	2.730	0.1141	90.5	72.4	131	4.59	20	
Surr: 4-Bromofluorobenzene	0.92		0.9099		101	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  
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: BP AMERICA-Farmington

Work Order Number: 1606D36

RcptNo: 1

Received by/date:

*AK 06/24/16*

Logged By: Anne Thorne

6/24/2016 7:47:00 AM

*Anne Thorne*

Completed By: Anne Thorne

6/24/2016

*Anne Thorne*

Reviewed By:

*[Signature]*

*06/24/16*

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	2.4	Good	Yes			



# Chain-of-Custody Record

Client: BP - Lower 48

Mailing Address:

Phone #: 701-570-4727

Email or Fax#: Steven.Moskal@bp.com

A/QC Package: dburns@ltenv.com

Standard ☒ Level 4 (Full Validation)

Accreditation

☒ NELAP ☐ Other

EDD (Type) pdf

Date	Time	Matrix	Sample Request ID
23	0905	SS	TSP-32
	0915		TSP-33
	0925		TSP-34
	0935		TSP-35
	0945		TSP-36
	1015		TSP-20R
	1025		TSP-21R
	1035		TSP-22R
	1045		TSP-23R

Turn-Around Time: Same day

☐ Standard ☒ Rush

Project Name:

GCU #216

Project #:

Project Manager:

S. Moskal - BP

D. Burns - LTE

Sampler:

Danny Burns

On Ice: ☒ Yes ☐ No

Sample Temperature:

24

Container

Preservative Type

HEAL No.

116016 D56

Type and #

4 oz

None

201

202

203

204

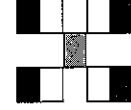
205

206

207

208

209



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	
Air Bubbles (Y or N)	

Remarks:

Relinquished by:	Received by:	Date	Time
23-11-16 10:21	23-11-16 16:21		
23-11-18 18:46	23-11-18 07:47		

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](http://www.hallenvironmental.com)

June 29, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606E51

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/25/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-37

**Project:** GCU 216

**Collection Date:** 6/24/2016 9:00:00 AM

**Lab ID:** 1606E51-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	100	10		mg/Kg	1	6/27/2016 9:57:56 AM
Motor Oil Range Organics (MRO)	58	50		mg/Kg	1	6/27/2016 9:57:56 AM
Surr: DNOP	91.5	70-130		%Rec	1	6/27/2016 9:57:56 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	35	3.8		mg/Kg	1	6/26/2016 3:34:59 PM
Surr: BFB	378	80-120	S	%Rec	1	6/26/2016 3:34:59 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/26/2016 3:34:59 PM
Toluene	ND	0.038		mg/Kg	1	6/26/2016 3:34:59 PM
Ethylbenzene	ND	0.038		mg/Kg	1	6/26/2016 3:34:59 PM
Xylenes, Total	0.27	0.076		mg/Kg	1	6/26/2016 3:34:59 PM
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/26/2016 3:34:59 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-38

**Project:** GCU 216

**Collection Date:** 6/24/2016 9:10:00 AM

**Lab ID:** 1606E51-002

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	140	10		mg/Kg	1	6/27/2016 10:19:46 AM
Motor Oil Range Organics (MRO)	67	50		mg/Kg	1	6/27/2016 10:19:46 AM
Surr: DNOP	94.3	70-130		%Rec	1	6/27/2016 10:19:46 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	71	21		mg/Kg	5	6/26/2016 3:58:27 PM
Surr: BFB	182	80-120	S	%Rec	5	6/26/2016 3:58:27 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	5	6/26/2016 3:58:27 PM
Toluene	ND	0.21		mg/Kg	5	6/26/2016 3:58:27 PM
Ethylbenzene	ND	0.21		mg/Kg	5	6/26/2016 3:58:27 PM
Xylenes, Total	0.53	0.41		mg/Kg	5	6/26/2016 3:58:27 PM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	5	6/26/2016 3:58:27 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-39

**Project:** GCU 216

**Collection Date:** 6/24/2016 9:20:00 AM

**Lab ID:** 1606E51-003

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	76	9.6		mg/Kg	1	6/27/2016 10:41:21 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2016 10:41:21 AM
Surr: DNOP	94.9	70-130		%Rec	1	6/27/2016 10:41:21 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	54	19		mg/Kg	5	6/26/2016 4:21:54 PM
Surr: BFB	173	80-120	S	%Rec	5	6/26/2016 4:21:54 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.096		mg/Kg	5	6/26/2016 4:21:54 PM
Toluene	ND	0.19		mg/Kg	5	6/26/2016 4:21:54 PM
Ethylbenzene	ND	0.19		mg/Kg	5	6/26/2016 4:21:54 PM
Xylenes, Total	0.54	0.39		mg/Kg	5	6/26/2016 4:21:54 PM
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	5	6/26/2016 4:21:54 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-40

**Project:** GCU 216

**Collection Date:** 6/24/2016 9:30:00 AM

**Lab ID:** 1606E51-004

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	9.9		mg/Kg	1	6/27/2016 11:03:02 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2016 11:03:02 AM
Surr: DNOP	96.9	70-130		%Rec	1	6/27/2016 11:03:02 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	6/26/2016 4:45:29 PM
Surr: BFB	122	80-120	S	%Rec	1	6/26/2016 4:45:29 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	6/26/2016 4:45:29 PM
Toluene	ND	0.042		mg/Kg	1	6/26/2016 4:45:29 PM
Ethylbenzene	ND	0.042		mg/Kg	1	6/26/2016 4:45:29 PM
Xylenes, Total	ND	0.084		mg/Kg	1	6/26/2016 4:45:29 PM
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	6/26/2016 4:45:29 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E51

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-41

Project: GCU 216

Collection Date: 6/24/2016 9:40:00 AM

Lab ID: 1606E51-005

Matrix: MEOH (SOIL)

Received Date: 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	48	10		mg/Kg	1	6/27/2016 11:24:37 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2016 11:24:37 AM
Surr: DNOP	97.8	70-130		%Rec	1	6/27/2016 11:24:37 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	20	4.3		mg/Kg	1	6/26/2016 5:09:02 PM
Surr: BFB	230	80-120	S	%Rec	1	6/26/2016 5:09:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	6/26/2016 5:09:02 PM
Toluene	ND	0.043		mg/Kg	1	6/26/2016 5:09:02 PM
Ethylbenzene	ND	0.043		mg/Kg	1	6/26/2016 5:09:02 PM
Xylenes, Total	ND	0.087		mg/Kg	1	6/26/2016 5:09:02 PM
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/26/2016 5:09:02 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-42

**Project:** GCU 216

**Collection Date:** 6/24/2016 9:50:00 AM

**Lab ID:** 1606E51-006

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	6/27/2016 11:46:25 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/27/2016 11:46:25 AM
Surr: DNOP	91.1	70-130		%Rec	1	6/27/2016 11:46:25 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.5	3.9		mg/Kg	1	6/26/2016 5:32:28 PM
Surr: BFB	138	80-120	S	%Rec	1	6/26/2016 5:32:28 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/26/2016 5:32:28 PM
Toluene	ND	0.039		mg/Kg	1	6/26/2016 5:32:28 PM
Ethylbenzene	ND	0.039		mg/Kg	1	6/26/2016 5:32:28 PM
Xylenes, Total	ND	0.077		mg/Kg	1	6/26/2016 5:32:28 PM
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	6/26/2016 5:32:28 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606E51**

Date Reported: **6/29/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-43

**Project:** GCU 216

**Collection Date:** 6/24/2016 10:00:00 AM

**Lab ID:** 1606E51-007

**Matrix:** MEOH (SOIL)

**Received Date:** 6/25/2016 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	20	10		mg/Kg	1	6/27/2016 12:08:00 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2016 12:08:00 PM
Surr: DNOP	90.8	70-130		%Rec	1	6/27/2016 12:08:00 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	37	3.7		mg/Kg	1	6/26/2016 5:55:52 PM
Surr: BFB	249	80-120	S	%Rec	1	6/26/2016 5:55:52 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	6/26/2016 5:55:52 PM
Toluene	ND	0.037		mg/Kg	1	6/26/2016 5:55:52 PM
Ethylbenzene	0.056	0.037		mg/Kg	1	6/26/2016 5:55:52 PM
Xylenes, Total	0.49	0.074		mg/Kg	1	6/26/2016 5:55:52 PM
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/26/2016 5:55:52 PM

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

<b>Qualifiers:</b>	*	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#: 1606E51

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26080		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26080		RunNo: 35220					
Prep Date:	6/27/2016		Analysis Date: 6/27/2016		SeqNo: 1089030		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.9	62.6	124			
Surr: DNOP	4.4		5.000		87.3	70	130			

Sample ID	MB-26080		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26080		RunNo: 35220					
Prep Date:	6/27/2016		Analysis Date: 6/27/2016		SeqNo: 1089031		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	8.5		10.00		85.3	70	130			

Sample ID	1606E51-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-37		Batch ID: 26080		RunNo: 35219					
Prep Date:	6/27/2016		Analysis Date: 6/27/2016		SeqNo: 1089329		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.5	47.66	102.1	98.2	33.9	141			
Surr: DNOP	4.1		4.766		85.5	70	130			

Sample ID	1606E51-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-37		Batch ID:	26080		RunNo:	35219				
Prep Date:	6/27/2016		Analysis Date:	6/27/2016		SeqNo:	1089330		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	160	9.9	49.70	102.1	108	33.9	141	4.66	20		
Surr: DNOP	4.3		4.970		86.2	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#: 1606E51

29-Jun-16

**Client:** LTE  
**Project:** GCU 216

Sample ID <b>5ML-RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R35223</b>		RunNo: <b>35223</b>							
Prep Date:	Analysis Date: <b>6/26/2016</b>		SeqNo: <b>1089062</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	80	120			

Sample ID <b>2.5UG LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R35223</b>		RunNo: <b>35223</b>							
Prep Date:	Analysis Date: <b>6/26/2016</b>		SeqNo: <b>1089063</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	80	120			
Surr: BFB	1100		1000		109	80	120			

Sample ID <b>1606E51-001A MS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>TSP-37</b>	Batch ID: <b>R35223</b>		RunNo: <b>35223</b>							
Prep Date:	Analysis Date: <b>6/26/2016</b>		SeqNo: <b>1089069</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	57	3.8	18.91	35.15	114	59.3	143			
Surr: BFB	3000		756.4		394	80	120			S

Sample ID <b>1606E51-001A MSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>TSP-37</b>	Batch ID: <b>R35223</b>		RunNo: <b>35223</b>							
Prep Date:	Analysis Date: <b>6/26/2016</b>		SeqNo: <b>1089070</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	57	3.8	18.91	35.15	115	59.3	143	0.320	20	
Surr: BFB	3000		756.4		398	80	120	0	0	S

Sample ID <b>MB-25994</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>25994</b>		RunNo: <b>35223</b>							
Prep Date: <b>6/22/2016</b>	Analysis Date: <b>6/27/2016</b>		SeqNo: <b>1089084</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.1	80	120			

Sample ID <b>LCS-25994</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>25994</b>		RunNo: <b>35223</b>							
Prep Date: <b>6/22/2016</b>	Analysis Date: <b>6/27/2016</b>		SeqNo: <b>1089085</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		109	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#: 1606E51

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	5ML-RB		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	R35223		RunNo:	35223			
Prep Date:			Analysis Date:	6/26/2016		SeqNo:	1089109	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		95.3	80	120			

Sample ID	100NG LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	R35223		RunNo:	35223			
Prep Date:			Analysis Date:	6/26/2016		SeqNo:	1089110	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	75.3	123			
Toluene	0.97	0.050	1.000	0	97.0	80	124			
Ethylbenzene	1.0	0.050	1.000	0	101	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	101	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	1606E51-004A MS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	TSP-40		Batch ID:	R35223		RunNo:	35223			
Prep Date:			Analysis Date:	6/26/2016		SeqNo:	1089115	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.021	0.8368	0	88.3	71.5	122			
Toluene	0.77	0.042	0.8368	0.01262	90.9	71.2	123			
Ethylbenzene	0.82	0.042	0.8368	0.01341	96.4	75.2	130			
Xylenes, Total	2.5	0.084	2.510	0.03684	96.9	72.4	131			
Surr: 4-Bromofluorobenzene	0.88		0.8368		105	80	120			

Sample ID	1606E51-004A MSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	TSP-40		Batch ID:	R35223		RunNo:	35223			
Prep Date:			Analysis Date:	6/26/2016		SeqNo:	1089116	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.021	0.8368	0	103	71.5	122	15.0	20	
Toluene	0.87	0.042	0.8368	0.01262	103	71.2	123	12.3	20	
Ethylbenzene	0.89	0.042	0.8368	0.01341	105	75.2	130	7.92	20	
Xylenes, Total	2.6	0.084	2.510	0.03684	104	72.4	131	6.96	20	
Surr: 4-Bromofluorobenzene	0.89		0.8368		106	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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1606E51

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-25994		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 25994		RunNo: 35223					
Prep Date:	6/22/2016		Analysis Date: 6/27/2016		SeqNo: 1089121		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	80	120			

Sample ID	LCS-25994		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 25994		RunNo: 35223					
Prep Date:	6/22/2016		Analysis Date: 6/27/2016		SeqNo: 1089124		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	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  
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: LTE

Work Order Number: 1606E51

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

06/25/16  
6/25/2016 9:45:00 AM

Completed By: Lindsay Mangin

6/25/2016 10:28:57 AM

Reviewed By:

DF 6/26/2016

*[Signature]*  
*[Signature]*

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Yes			



# Chain-of-Custody Record

Client: BP-Lower 48

Mailing Address:

Phone #: 701-540-4727-DB

Email or Fax#: Steven.Moskal@bp.com

A/QC Package: dburns@itemv.com

Standard ☐ Level 4 (Full Validation)

Accreditation

NELAP ☐ Other ☐

EDD (Type) pdf

Date	Time	Matrix	Sample Request ID
12-24	0900	SS	TSP-37
1	0910		TSP-38
	0920		TSP-39
	0930		TSP-40
	0940		TSP-41
	0950		TSP-42
	1000		TSP-43

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

GCU #216

Project #:

Project Manager:

Steve Moskal - BP

Danny Burns - LTE

Sampler: D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 39

Container Type and #

402

Preservative Type

NONE

HEAL No.

1606E61

-001

-002

-003

-004

-005

-006

-007

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

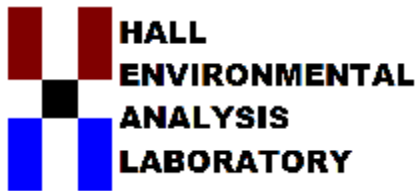
### Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRO/MRO)	<input type="checkbox"/> TPH (Method 418.1)	<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input type="checkbox"/> 8260B (VOA)	<input type="checkbox"/> 8270 (Semi-VOA)	<input type="checkbox"/> Air Bubbles (Y or N)
--	--	---	---	---	--	--	---	---	--------------------------------------	--	---

Remarks:

Relinquished by:	Received by:	Date	Time
<u>D. Burns</u>	<u>Steve Moskal</u>	<u>12/16</u>	<u>1600</u>
Relinquished by:	Received by:	Date	Time
<u>Steve Moskal</u>	<u>D. Burns</u>	<u>12/16</u>	<u>0945</u>





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

June 29, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606E98

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/28/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1606E98

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-44

Project: GCU 216

Collection Date: 6/27/2016 10:30:00 AM

Lab ID: 1606E98-001

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	56	10		mg/Kg	1	6/28/2016 10:26:27 AM	26111
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2016 10:26:27 AM	26111
Surr: DNOP	90.6	70-130		%Rec	1	6/28/2016 10:26:27 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	18	3.4		mg/Kg	1	6/28/2016 9:49:29 AM	26103
Surr: BFB	239	80-120	S	%Rec	1	6/28/2016 9:49:29 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	6/28/2016 9:49:29 AM	26103
Toluene	ND	0.034		mg/Kg	1	6/28/2016 9:49:29 AM	26103
Ethylbenzene	ND	0.034		mg/Kg	1	6/28/2016 9:49:29 AM	26103
Xylenes, Total	0.12	0.067		mg/Kg	1	6/28/2016 9:49:29 AM	26103
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/28/2016 9:49:29 AM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E98

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-45

Project: GCU 216

Collection Date: 6/27/2016 10:40:00 AM

Lab ID: 1606E98-002

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	64	10		mg/Kg	1	6/28/2016 10:48:02 AM	26111
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/28/2016 10:48:02 AM	26111
Surr: DNOP	94.3	70-130		%Rec	1	6/28/2016 10:48:02 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	26	3.8		mg/Kg	1	6/28/2016 10:12:57 AM	26103
Surr: BFB	277	80-120	S	%Rec	1	6/28/2016 10:12:57 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/28/2016 10:12:57 AM	26103
Toluene	ND	0.038		mg/Kg	1	6/28/2016 10:12:57 AM	26103
Ethylbenzene	0.052	0.038		mg/Kg	1	6/28/2016 10:12:57 AM	26103
Xylenes, Total	0.45	0.075		mg/Kg	1	6/28/2016 10:12:57 AM	26103
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	6/28/2016 10:12:57 AM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E98

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-46

Project: GCU 216

Collection Date: 6/27/2016 10:50:00 AM

Lab ID: 1606E98-003

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	100	9.7		mg/Kg	1	6/28/2016 11:09:44 AM	26111
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	6/28/2016 11:09:44 AM	26111
Surr: DNOP	96.5	70-130		%Rec	1	6/28/2016 11:09:44 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12	3.8		mg/Kg	1	6/28/2016 10:36:30 AM	26103
Surr: BFB	210	80-120	S	%Rec	1	6/28/2016 10:36:30 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	6/28/2016 10:36:30 AM	26103
Toluene	ND	0.038		mg/Kg	1	6/28/2016 10:36:30 AM	26103
Ethylbenzene	ND	0.038		mg/Kg	1	6/28/2016 10:36:30 AM	26103
Xylenes, Total	ND	0.076		mg/Kg	1	6/28/2016 10:36:30 AM	26103
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/28/2016 10:36:30 AM	26103

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1606E98

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: TSP-47

Project: GCU 216

Collection Date: 6/27/2016 11:00:00 AM

Lab ID: 1606E98-004

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	61	10		mg/Kg	1	6/28/2016 11:31:37 AM	26111
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/28/2016 11:31:37 AM	26111
Surr: DNOP	94.8	70-130		%Rec	1	6/28/2016 11:31:37 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	25	4.0		mg/Kg	1	6/28/2016 11:00:05 AM	26103
Surr: BFB	271	80-120	S	%Rec	1	6/28/2016 11:00:05 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	6/28/2016 11:00:05 AM	26103
Toluene	ND	0.040		mg/Kg	1	6/28/2016 11:00:05 AM	26103
Ethylbenzene	ND	0.040		mg/Kg	1	6/28/2016 11:00:05 AM	26103
Xylenes, Total	0.16	0.079		mg/Kg	1	6/28/2016 11:00:05 AM	26103
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/28/2016 11:00:05 AM	26103

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

<b>Qualifiers:</b>	*	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#: 1606E98

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26111		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26111		RunNo: 35258					
Prep Date:	6/28/2016		Analysis Date: 6/28/2016		SeqNo: 1090496		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	77.0	62.6	124			
Surr: DNOP	3.8		5.000		75.5	70	130			

Sample ID	MB-26111		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26111		RunNo: 35258					
Prep Date:	6/28/2016		Analysis Date: 6/28/2016		SeqNo: 1090497		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	8.1		10.00		80.5	70	130			

Sample ID	1606E98-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-44		Batch ID: 26111		RunNo: 35259					
Prep Date:	6/28/2016		Analysis Date: 6/28/2016		SeqNo: 1090733		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	9.5	47.26	55.89	113	33.9	141			
Surr: DNOP	4.3		4.726		90.8	70	130			

Sample ID	1606E98-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-44		Batch ID:	26111		RunNo:	35259				
Prep Date:	6/28/2016		Analysis Date:	6/28/2016		SeqNo:	1090819		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	100	9.7	48.73	55.89	91.2	33.9	141	8.76	20		
Surr: DNOP	4.6		4.873		94.0	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#: 1606E98

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-26103		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26103		RunNo: 35271					
Prep Date:	6/27/2016		Analysis Date: 6/28/2016		SeqNo: 1091323		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	970		1000		97.4	80	120			

Sample ID	LCS-26103		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26103		RunNo: 35271					
Prep Date:	6/27/2016		Analysis Date: 6/28/2016		SeqNo: 1091324		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	106	80	120			
Surr: BFB	1100		1000		108	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#: 1606E98

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	<b>MB-26103</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>26103</b>		RunNo:	<b>35271</b>			
Prep Date:	<b>6/27/2016</b>		Analysis Date:	<b>6/28/2016</b>		SeqNo:	<b>1091345</b>	Units:	<b>mg/Kg</b>	
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	0.94		1.000		93.5	80	120			

Sample ID	<b>LCS-26103</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>26103</b>		RunNo:	<b>35271</b>			
Prep Date:	<b>6/27/2016</b>		Analysis Date:	<b>6/28/2016</b>		SeqNo:	<b>1091346</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.1	75.3	123			
Toluene	0.99	0.050	1.000	0	99.1	80	124			
Ethylbenzene	1.0	0.050	1.000	0	101	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.5	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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  
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: **LTE**

Work Order Number: **1606E98**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

**06/28/16**  
6/28/2016 8:00:00 AM

Completed By: **Lindsay Mangin**

6/28/2016 8:04:31 AM

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:   
Adjusted?   
( $<2$  or  $>12$  unless noted)   
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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			



<b>Chain-of-Custody Record</b>		Turn-Around Time: <u>same day TAT</u>
Client: <u>BP-Lower 48</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
		Project Name: <u>GCU #216</u>
Mailing Address:		

Turn-Around Time: Same day TAT

☐ Standard ☒ Rush

Project Name: GCU #216

**Chain-of-Custody Record**

Client:	BP- Lower 48
Mailing Address:	

phone #: 701-570-4727  
mail or Fax#: steven.mostal@bp.com  
A/QC Package: dburns@ltenv.com  
☒ Standard ☐ Level 4 (Full Validation)  
☒ accreditation  
☐ NELAP ☐ Other \_\_\_\_\_  
EDD (Type) \_\_\_\_\_

Project Manager:	BP-Steve Mostakal
	LTE - Danny Burns
Sampler:	D Burns
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Temperature:	1.8

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
11/27	1030	SS	TSP-44	402	None	11006598
↓	1040	↓	TSP-45	↓	↓	-001
↓	1050	↓	TSP-46	↓	↓	-002
↓	1100	↓	TSP-47	↓	↓	-003
						-004

Sample Request ID	TSP-44
	TSP-45
	TSP-46
	TSP-47

Date	Time	Matrix
12/27	1030	SS
↑	1040	↑
	1050	
↑	1100	↑

A hand-drawn graph on a grid. The curve starts at the top, dips to a minimum, and then rises to a maximum. The curve is drawn with a single continuous line.

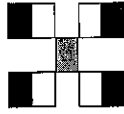
A graph of a function on a coordinate plane. The x-axis is labeled from 0 to 4, and the y-axis is labeled from 0 to 4. The function is a smooth curve that starts at (0, 4), decreases to a minimum at (1, 0), increases to a maximum at (3, 4), and then decreases to (4, 0).

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/27	1715	D. [Signature]	[Signature]	12/27/16	1715
12/27/16	1910	[Signature]	[Signature]	01/28/16	0808

ed by:  ed by: 

Date:	12/27	Time:	1715	Relinquish:	D
Date:	27/11	Time:	1910	Relinquish:	Y

if necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

BTX's + MTBE + TMB's (8021)	X	X	X	X	X	
BTX + MTBE + TPH (Gas only)	X	X	X	X	X	
TPH-8015B (GRO/DRO/MRG)	X	X	X	X	X	
TPH (Method 418.1)						
EDB (Method 504.1)						
PAH's (8310 or 8270 SIMS)						
RCRA 8 Metals						
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )						
8081 Pesticides / 8082 PCB's						
8260B (VOA)						
8270 (Semi-VOA)						
Air Bubbles (Y or N)						

Remarks:

cc: dburns @ Itemv.com

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report. 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](http://www.hallenvironmental.com)

June 29, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606E99

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/28/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1606E99

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: B-E 02 @ 39'

Project: GCU 216

Collection Date: 6/27/2016 9:20:00 AM

Lab ID: 1606E99-001

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	33	10		mg/Kg	1	6/28/2016 10:27:06 AM	26111
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2016 10:27:06 AM	26111
Surr: DNOP	86.6	70-130		%Rec	1	6/28/2016 10:27:06 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	6/28/2016 11:23:44 AM	26103
Surr: BFB	105	80-120		%Rec	5	6/28/2016 11:23:44 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.11		mg/Kg	5	6/28/2016 11:23:44 AM	26103
Toluene	ND	0.21		mg/Kg	5	6/28/2016 11:23:44 AM	26103
Ethylbenzene	ND	0.21		mg/Kg	5	6/28/2016 11:23:44 AM	26103
Xylenes, Total	ND	0.42		mg/Kg	5	6/28/2016 11:23:44 AM	26103
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	5	6/28/2016 11:23:44 AM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E99

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: B-C 02 @ 39'

Project: GCU 216

Collection Date: 6/27/2016 9:30:00 AM

Lab ID: 1606E99-002

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/28/2016 10:49:02 AM	26111
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/28/2016 10:49:02 AM	26111
Surr: DNOP	83.7	70-130		%Rec	1	6/28/2016 10:49:02 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/28/2016 11:47:15 AM	26103
Surr: BFB	98.0	80-120		%Rec	1	6/28/2016 11:47:15 AM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	6/28/2016 11:47:15 AM	26103
Toluene	ND	0.034		mg/Kg	1	6/28/2016 11:47:15 AM	26103
Ethylbenzene	ND	0.034		mg/Kg	1	6/28/2016 11:47:15 AM	26103
Xylenes, Total	ND	0.068		mg/Kg	1	6/28/2016 11:47:15 AM	26103
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	6/28/2016 11:47:15 AM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E99

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: B-W 03 @ 36'

Project: GCU 216

Collection Date: 6/27/2016 9:40:00 AM

Lab ID: 1606E99-003

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	6/28/2016 11:10:48 AM	26111
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2016 11:10:48 AM	26111
Surr: DNOP	82.2	70-130		%Rec	1	6/28/2016 11:10:48 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	6/28/2016 8:47:49 PM	26103
Surr: BFB	106	80-120		%Rec	1	6/28/2016 8:47:49 PM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	6/28/2016 8:47:49 PM	26103
Toluene	ND	0.035		mg/Kg	1	6/28/2016 8:47:49 PM	26103
Ethylbenzene	ND	0.035		mg/Kg	1	6/28/2016 8:47:49 PM	26103
Xylenes, Total	ND	0.070		mg/Kg	1	6/28/2016 8:47:49 PM	26103
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	6/28/2016 8:47:49 PM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E99

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: W-02 @ 36'

Project: GCU 216

Collection Date: 6/27/2016 9:50:00 AM

Lab ID: 1606E99-004

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/28/2016 11:32:34 AM	26111
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2016 11:32:34 AM	26111
Surr: DNOP	83.2	70-130		%Rec	1	6/28/2016 11:32:34 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/28/2016 12:34:25 PM	26103
Surr: BFB	98.6	80-120		%Rec	1	6/28/2016 12:34:25 PM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	6/28/2016 12:34:25 PM	26103
Toluene	ND	0.039		mg/Kg	1	6/28/2016 12:34:25 PM	26103
Ethylbenzene	ND	0.039		mg/Kg	1	6/28/2016 12:34:25 PM	26103
Xylenes, Total	ND	0.078		mg/Kg	1	6/28/2016 12:34:25 PM	26103
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	6/28/2016 12:34:25 PM	26103

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1606E99

Date Reported: 6/29/2016

CLIENT: LTE

Client Sample ID: W-03 @ 36'

Project: GCU 216

Collection Date: 6/27/2016 10:00:00 AM

Lab ID: 1606E99-005

Matrix: MEOH (SOIL)

Received Date: 6/28/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/28/2016 11:54:23 AM	26111
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/28/2016 11:54:23 AM	26111
Surr: DNOP	83.4	70-130		%Rec	1	6/28/2016 11:54:23 AM	26111
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	6/28/2016 12:57:56 PM	26103
Surr: BFB	98.0	80-120		%Rec	1	6/28/2016 12:57:56 PM	26103
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	6/28/2016 12:57:56 PM	26103
Toluene	ND	0.031		mg/Kg	1	6/28/2016 12:57:56 PM	26103
Ethylbenzene	ND	0.031		mg/Kg	1	6/28/2016 12:57:56 PM	26103
Xylenes, Total	ND	0.062		mg/Kg	1	6/28/2016 12:57:56 PM	26103
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	6/28/2016 12:57:56 PM	26103

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

<b>Qualifiers:</b>	*	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#: 1606E99

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26111		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26111		RunNo: 35258					
Prep Date:	6/28/2016		Analysis Date: 6/28/2016		SeqNo: 1090496		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	77.0	62.6	124			
Surr: DNOP	3.8		5.000		75.5	70	130			

Sample ID	MB-26111	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26111			RunNo: 35258					
Prep Date:	6/28/2016	Analysis Date: 6/28/2016			SeqNo: 1090497		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	8.1		10.00		80.5	70	130			

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1606E99

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-26103	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	26103	RunNo:	35271					
Prep Date:	6/27/2016	Analysis Date:	6/28/2016	SeqNo:	1091323	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	970		1000		97.4	80	120			

Sample ID	LCS-26103	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	26103	RunNo:	35271					
Prep Date:	6/27/2016	Analysis Date:	6/28/2016	SeqNo:	1091324	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	106	80	120			
Surr: BFB	1100		1000		108	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#: 1606E99

29-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	MB-26103		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26103		RunNo: 35271					
Prep Date:	6/27/2016		Analysis Date: 6/28/2016		SeqNo: 1091345		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	0.94		1.000		93.5	80	120			

Sample ID	LCS-26103		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26103		RunNo: 35271					
Prep Date:	6/27/2016		Analysis Date: 6/28/2016		SeqNo: 1091346		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.1	75.3	123			
Toluene	0.99	0.050	1.000	0	99.1	80	124			
Ethylbenzene	1.0	0.050	1.000	0	101	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.5	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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  
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: LTE

Work Order Number: 1606E99

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

6/28/2016 8:00:00 AM

Completed By: Lindsay Mangin

6/28/2016 8:10:17 AM

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:   
Adjusted?   
( $<2$  or  $>12$  unless noted)   
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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			









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

June 30, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU 216

OrderNo.: 1606F83

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/29/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606F83**

Date Reported: **6/30/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-12R

**Project:** GCU 216

**Collection Date:** 6/28/2016 8:10:00 AM

**Lab ID:** 1606F83-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	41	4.1		mg/Kg	1	6/29/2016 10:39:34 AM	E35309
Surr: BFB	103	70-130		%Rec	1	6/29/2016 10:39:34 AM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	68	9.8		mg/Kg	1	6/29/2016 10:03:33 AM	26141
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/29/2016 10:03:33 AM	26141
Surr: DNOP	90.2	70-130		%Rec	1	6/29/2016 10:03:33 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.021		mg/Kg	1	6/29/2016 10:39:34 AM	C35309
Toluene	ND	0.041		mg/Kg	1	6/29/2016 10:39:34 AM	C35309
Ethylbenzene	ND	0.041		mg/Kg	1	6/29/2016 10:39:34 AM	C35309
Xylenes, Total	ND	0.082		mg/Kg	1	6/29/2016 10:39:34 AM	C35309
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	6/29/2016 10:39:34 AM	C35309
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	6/29/2016 10:39:34 AM	C35309
Surr: Dibromofluoromethane	91.0	70-130		%Rec	1	6/29/2016 10:39:34 AM	C35309
Surr: Toluene-d8	97.9	70-130		%Rec	1	6/29/2016 10:39:34 AM	C35309

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606F83**Date Reported: **6/30/2016****CLIENT:** LTE**Client Sample ID:** TSP-13R**Project:** GCU 216**Collection Date:** 6/28/2016 8:20:00 AM**Lab ID:** 1606F83-002**Matrix:** MEOH (SOIL)**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	56	4.1		mg/Kg	1	6/29/2016 11:07:54 AM	E35309
Surr: BFB	106	70-130		%Rec	1	6/29/2016 11:07:54 AM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	25	10		mg/Kg	1	6/29/2016 10:25:16 AM	26141
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2016 10:25:16 AM	26141
Surr: DNOP	90.6	70-130		%Rec	1	6/29/2016 10:25:16 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	6/29/2016 11:07:54 AM	C35309
Toluene	ND	0.041		mg/Kg	1	6/29/2016 11:07:54 AM	C35309
Ethylbenzene	ND	0.041		mg/Kg	1	6/29/2016 11:07:54 AM	C35309
Xylenes, Total	ND	0.081		mg/Kg	1	6/29/2016 11:07:54 AM	C35309
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%Rec	1	6/29/2016 11:07:54 AM	C35309
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	6/29/2016 11:07:54 AM	C35309
Surr: Dibromofluoromethane	89.5	70-130		%Rec	1	6/29/2016 11:07:54 AM	C35309
Surr: Toluene-d8	99.8	70-130		%Rec	1	6/29/2016 11:07:54 AM	C35309

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606F83**Date Reported: **6/30/2016****CLIENT:** LTE**Client Sample ID:** TSP-16R**Project:** GCU 216**Collection Date:** 6/28/2016 8:30:00 AM**Lab ID:** 1606F83-003**Matrix:** MEOH (SOIL)**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	49	3.9		mg/Kg	1	6/29/2016 11:36:19 AM	E35309
Surr: BFB	102	70-130		%Rec	1	6/29/2016 11:36:19 AM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	18	10		mg/Kg	1	6/29/2016 10:47:04 AM	26141
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/29/2016 10:47:04 AM	26141
Surr: DNOP	89.1	70-130		%Rec	1	6/29/2016 10:47:04 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	6/29/2016 11:36:19 AM	C35309
Toluene	ND	0.039		mg/Kg	1	6/29/2016 11:36:19 AM	C35309
Ethylbenzene	ND	0.039		mg/Kg	1	6/29/2016 11:36:19 AM	C35309
Xylenes, Total	ND	0.078		mg/Kg	1	6/29/2016 11:36:19 AM	C35309
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	6/29/2016 11:36:19 AM	C35309
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	6/29/2016 11:36:19 AM	C35309
Surr: Dibromofluoromethane	90.8	70-130		%Rec	1	6/29/2016 11:36:19 AM	C35309
Surr: Toluene-d8	98.1	70-130		%Rec	1	6/29/2016 11:36:19 AM	C35309

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606F83**

Date Reported: **6/30/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-17R

**Project:** GCU 216

**Collection Date:** 6/28/2016 8:40:00 AM

**Lab ID:** 1606F83-004

**Matrix:** MEOH (SOIL)

**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	63	4.1		mg/Kg	1	6/29/2016 12:04:40 PM	E35309
Surr: BFB	109	70-130		%Rec	1	6/29/2016 12:04:40 PM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	20	10		mg/Kg	1	6/29/2016 11:08:58 AM	26141
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2016 11:08:58 AM	26141
Surr: DNOP	94.2	70-130		%Rec	1	6/29/2016 11:08:58 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.021		mg/Kg	1	6/29/2016 12:04:40 PM	C35309
Toluene	ND	0.041		mg/Kg	1	6/29/2016 12:04:40 PM	C35309
Ethylbenzene	ND	0.041		mg/Kg	1	6/29/2016 12:04:40 PM	C35309
Xylenes, Total	0.22	0.082		mg/Kg	1	6/29/2016 12:04:40 PM	C35309
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	6/29/2016 12:04:40 PM	C35309
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/29/2016 12:04:40 PM	C35309
Surr: Dibromofluoromethane	88.2	70-130		%Rec	1	6/29/2016 12:04:40 PM	C35309
Surr: Toluene-d8	100	70-130		%Rec	1	6/29/2016 12:04:40 PM	C35309

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606F83**

Date Reported: **6/30/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-18R

**Project:** GCU 216

**Collection Date:** 6/28/2016 8:50:00 AM

**Lab ID:** 1606F83-005

**Matrix:** MEOH (SOIL)

**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	39	4.0		mg/Kg	1	6/29/2016 12:33:03 PM	E35309
Surr: BFB	103	70-130		%Rec	1	6/29/2016 12:33:03 PM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	54	9.5		mg/Kg	1	6/29/2016 11:30:53 AM	26141
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/29/2016 11:30:53 AM	26141
Surr: DNOP	91.2	70-130		%Rec	1	6/29/2016 11:30:53 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	6/29/2016 12:33:03 PM	C35309
Toluene	ND	0.040		mg/Kg	1	6/29/2016 12:33:03 PM	C35309
Ethylbenzene	ND	0.040		mg/Kg	1	6/29/2016 12:33:03 PM	C35309
Xylenes, Total	ND	0.080		mg/Kg	1	6/29/2016 12:33:03 PM	C35309
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	6/29/2016 12:33:03 PM	C35309
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	6/29/2016 12:33:03 PM	C35309
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	6/29/2016 12:33:03 PM	C35309
Surr: Toluene-d8	102	70-130		%Rec	1	6/29/2016 12:33:03 PM	C35309

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606F83**

Date Reported: **6/30/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-19R

**Project:** GCU 216

**Collection Date:** 6/28/2016 9:00:00 AM

**Lab ID:** 1606F83-006

**Matrix:** MEOH (SOIL)

**Received Date:** 6/29/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	61	3.5		mg/Kg	1	6/29/2016 1:01:26 PM	E35309
Surr: BFB	118	70-130		%Rec	1	6/29/2016 1:01:26 PM	E35309
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	17	10		mg/Kg	1	6/29/2016 11:52:40 AM	26141
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/29/2016 11:52:40 AM	26141
Surr: DNOP	91.1	70-130		%Rec	1	6/29/2016 11:52:40 AM	26141
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>DJF</b>
Benzene	ND	0.017		mg/Kg	1	6/29/2016 1:01:26 PM	C35309
Toluene	ND	0.035		mg/Kg	1	6/29/2016 1:01:26 PM	C35309
Ethylbenzene	ND	0.035		mg/Kg	1	6/29/2016 1:01:26 PM	C35309
Xylenes, Total	0.44	0.069		mg/Kg	1	6/29/2016 1:01:26 PM	C35309
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	1	6/29/2016 1:01:26 PM	C35309
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	6/29/2016 1:01:26 PM	C35309
Surr: Dibromofluoromethane	87.9	70-130		%Rec	1	6/29/2016 1:01:26 PM	C35309
Surr: Toluene-d8	101	70-130		%Rec	1	6/29/2016 1:01:26 PM	C35309

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

<b>Qualifiers:</b>	*	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#: 1606F83

30-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	LCS-26141		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26141		RunNo: 35297					
Prep Date:	6/29/2016		Analysis Date: 6/29/2016		SeqNo: 1091683		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	83.1	62.6	124			
Surr: DNOP	4.5		5.000		89.3	70	130			

Sample ID	MB-26141	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26141			RunNo: 35297					
Prep Date:	6/29/2016	Analysis Date: 6/29/2016			SeqNo: 1091684		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	9.3		10.00		93.5	70	130			

Sample ID	LCS-26125		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26125		RunNo: 35299					
Prep Date:	6/28/2016		Analysis Date: 6/29/2016		SeqNo: 1092068		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.3	70	130			

Sample ID	MB-26125		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26125		RunNo: 35299					
Prep Date:	6/28/2016		Analysis Date: 6/29/2016		SeqNo: 1092069		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		82.5	70	130			

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1606F83

30-Jun-16

Client: LTE  
Project: GCU 216

Sample ID <b>rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>C35309</b>		RunNo: <b>35309</b>							
Prep Date:	Analysis Date: <b>6/29/2016</b>		SeqNo: <b>1092884</b>		Units: <b>mg/Kg</b>					
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: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		97.0	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.49		0.5000		97.3	70	130			

Sample ID <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>C35309</b>		RunNo: <b>35309</b>							
Prep Date:	Analysis Date: <b>6/29/2016</b>		SeqNo: <b>1092885</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	70	130			
Toluene	0.87	0.050	1.000	0	87.2	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		102	70	130			
Surr: Toluene-d8	0.47		0.5000		94.1	70	130			

Sample ID <b>1606f83-002ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>TSP-13R</b>	Batch ID: <b>C35309</b>		RunNo: <b>35309</b>							
Prep Date:	Analysis Date: <b>6/29/2016</b>		SeqNo: <b>1092886</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.020	0.8117	0	103	49.2	155			
Toluene	0.82	0.041	0.8117	0	101	52	154			
Surr: 1,2-Dichloroethane-d4	0.40		0.4059		99.1	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.4059		107	70	130			
Surr: Dibromofluoromethane	0.37		0.4059		91.9	70	130			
Surr: Toluene-d8	0.41		0.4059		100	70	130			

Sample ID <b>1606f83-002amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>TSP-13R</b>	Batch ID: <b>C35309</b>		RunNo: <b>35309</b>							
Prep Date:	Analysis Date: <b>6/29/2016</b>		SeqNo: <b>1092887</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.020	0.8117	0	102	49.2	155	1.07	20	
Toluene	0.79	0.041	0.8117	0	97.7	52	154	3.24	20	

### 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#: 1606F83

30-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	1606f83-002amsd	SampType:	MSD	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	TSP-13R	Batch ID:	C35309	RunNo:	35309					
Prep Date:		Analysis Date:	6/29/2016	SeqNo:	1092887	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.41		0.4059		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.45		0.4059		110	70	130	0	0	
Surr: Dibromofluoromethane	0.38		0.4059		92.9	70	130	0	0	
Surr: Toluene-d8	0.40		0.4059		97.9	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#: 1606F83

30-Jun-16

Client: LTE  
Project: GCU 216

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	E35309	RunNo:	35309					
Prep Date:		Analysis Date:	6/29/2016	SeqNo:	1092926	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	480		500.0		95.5	70	130			

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	E35309	RunNo:	35309					
Prep Date:		Analysis Date:	6/29/2016	SeqNo:	1092935	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	106	62.9	123			
Surr: BFB	490		500.0		98.6	70	130			

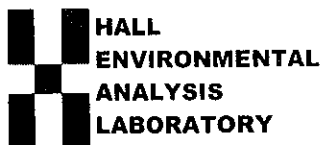
Sample ID	1606f83-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-12R	Batch ID:	E35309	RunNo:	35309					
Prep Date:		Analysis Date:	6/29/2016	SeqNo:	1092944	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	63	4.1	20.51	41.09	107	52.3	132			
Surr: BFB	450		410.2		109	70	130			

Sample ID	1606f83-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-12R	Batch ID:	E35309	RunNo:	35309					
Prep Date:		Analysis Date:	6/29/2016	SeqNo:	1092953	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	65	4.1	20.51	41.09	118	52.3	132	3.67	20	
Surr: BFB	450		410.2		110	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





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: LTE

Work Order Number: 1606F83

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

6/29/2016 7:45:00 AM

Completed By: Lindsay Mangin

6/29/2016 8:07:46 AM

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ?

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?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

(<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?

Yes ☒

No ☐

Checked by:

(If no, notify customer for authorization.)

### 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



# Chain-of-Custody Record

Client: **BP-Lower 48**

Mailing Address:

Phone #: **505-326-9497 / 701-570-4727**

Email or Fax#: **steven.maskal@bp.com**

A/QC Package: **dburns@itenv.com**

Standard ☐ Level 4 (Full Validation)

Accreditation ☐ NELAP ☐ Other

EDD (Type) **PDF**

Date Time Matrix Sample Request ID

12/16 0810 SS TSP-12R

0820 TSP-13R

0830 TSP-16R

0840 TSP-17R

0850 TSP-18R

0900 TSP-19R

Turn-Around Time: **Same day**

☐ Standard ☒ Rush **TAT**

Project Name: **GCU #216**

Project #:

Project Manager: **BP-Steve Maskal**

**CTE - Danny Burns**

Sampler: **D. Burns**

On Ice: ☒ Yes ☐ No

Sample Temperature: **10**

Container Type and #

Preservative Type

HEAL No. **1606F83**

**-001**

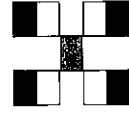
**-002**

**-003**

**-004**

**-005**

**-006**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

TPH 8015B (GRO/DRO/MRO)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

July 06, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU #216

OrderNo.: 1606G67

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/30/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1606G67**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-48 (500)

**Project:** GCU #216

**Collection Date:** 6/29/2016 9:20:00 AM

**Lab ID:** 1606G67-001

**Matrix:** SOIL

**Received Date:** 6/30/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	100	9.8		mg/Kg	1	6/30/2016 11:01:59 AM
Motor Oil Range Organics (MRO)	65	49		mg/Kg	1	6/30/2016 11:01:59 AM
Surr: DNOP	100	70-130		%Rec	1	6/30/2016 11:01:59 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	8.8	7.5		mg/Kg	2	6/30/2016 10:24:05 AM
Surr: BFB	134	80-120	S	%Rec	2	6/30/2016 10:24:05 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.038		mg/Kg	2	6/30/2016 10:24:05 AM
Toluene	ND	0.075		mg/Kg	2	6/30/2016 10:24:05 AM
Ethylbenzene	ND	0.075		mg/Kg	2	6/30/2016 10:24:05 AM
Xylenes, Total	ND	0.15		mg/Kg	2	6/30/2016 10:24:05 AM
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	2	6/30/2016 10:24:05 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1606G67**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-49 (200)

**Project:** GCU #216

**Collection Date:** 6/29/2016 9:30:00 AM

**Lab ID:** 1606G67-002

**Matrix:** SOIL

**Received Date:** 6/30/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	85	9.9		mg/Kg	1	6/30/2016 11:26:07 AM
Motor Oil Range Organics (MRO)	62	50		mg/Kg	1	6/30/2016 11:26:07 AM
Surr: DNOP	97.7	70-130		%Rec	1	6/30/2016 11:26:07 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/30/2016 10:47:38 AM
Surr: BFB	122	80-120	S	%Rec	1	6/30/2016 10:47:38 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	6/30/2016 10:47:38 AM
Toluene	ND	0.039		mg/Kg	1	6/30/2016 10:47:38 AM
Ethylbenzene	ND	0.039		mg/Kg	1	6/30/2016 10:47:38 AM
Xylenes, Total	ND	0.078		mg/Kg	1	6/30/2016 10:47:38 AM
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	6/30/2016 10:47:38 AM

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

<b>Qualifiers:</b>	*	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#: 1606G67

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	LCS-26166		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26166		RunNo: 35333					
Prep Date:	6/30/2016		Analysis Date: 6/30/2016		SeqNo: 1093148		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.6	62.6	124			
Surr: DNOP	4.4		5.000		87.3	70	130			

Sample ID	MB-26166	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26166			RunNo: 35333					
Prep Date:	6/30/2016	Analysis Date: 6/30/2016			SeqNo: 1093149		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	9.7		10.00		97.1	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#: 1606G67

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093812	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	990		1000		99.0	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093813	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	104	80	120			
Surr: BFB	1100		1000		108	80	120			

Sample ID	1606G67-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-48 (500)	Batch ID:	A35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093814	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	46	7.5	37.51	8.807	98.7	59.3	143			
Surr: BFB	2100		1500		141	80	120			S

Sample ID	1606G67-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-48 (500)	Batch ID:	A35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093815	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	46	7.5	37.51	8.807	99.7	59.3	143	0.815	20	
Surr: BFB	2100		1500		140	80	120	0	0	S

### 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  
R RPD outside accepted recovery limits  
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#: 1606G67

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093842	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	0.94		1.000		93.9	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093843	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	104	75.3	123			
Toluene	1.0	0.050	1.000	0	103	80	124			
Ethylbenzene	1.0	0.050	1.000	0	104	82.8	121			
Xylenes, Total	3.1	0.10	3.000	0	102	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1606G67-002AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-49 (200)	Batch ID:	B35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093844	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.78	0.020	0.7831	0	100	71.5	122			
Toluene	0.80	0.039	0.7831	0.01050	100	71.2	123			
Ethylbenzene	0.82	0.039	0.7831	0.01215	104	75.2	130			
Xylenes, Total	2.5	0.078	2.349	0.06591	103	72.4	131			
Surr: 4-Bromofluorobenzene	0.83		0.7831		106	80	120			

Sample ID	1606G67-002AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	TSP-49 (200)	Batch ID:	B35340	RunNo:	35340					
Prep Date:		Analysis Date:	6/30/2016	SeqNo:	1093845	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.020	0.7831	0	94.3	71.5	122	6.11	20	
Toluene	0.76	0.039	0.7831	0.01050	95.5	71.2	123	4.79	20	
Ethylbenzene	0.79	0.039	0.7831	0.01215	99.5	75.2	130	3.91	20	
Xylenes, Total	2.4	0.078	2.349	0.06591	99.8	72.4	131	2.76	20	
Surr: 4-Bromofluorobenzene	0.82		0.7831		104	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  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: BP AMERICA-Farmington

Work Order Number: 1606G67

RcptNo: 1

Received by/date: JA 06/30/16

Logged By: Anne Thorne 6/30/2016 8:05:00 AM *Anne Thorne*

Completed By: Anne Thorne 6/30/2016 *Anne Thorne*

Reviewed By: *[Signature]* *06/30/16*

## 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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			









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

July 06, 2016

Danny Burns

LTE

2243 Main Ave Suite 3

Durango, CO 81301

TEL: (970) 946-1093

FAX

RE: GCU #216

OrderNo.: 1607002

Dear Danny Burns:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/1/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-50

**Project:** GCU #216

**Collection Date:** 6/30/2016 9:10:00 AM

**Lab ID:** 1607002-001

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	66	9.6		mg/Kg	1	7/1/2016 9:26:59 AM	26187
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/1/2016 9:26:59 AM	26187
Surr: DNOP	101	70-130		%Rec	1	7/1/2016 9:26:59 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	21	4.6		mg/Kg	1	7/1/2016 9:43:30 AM	A35389
Surr: BFB	153	80-120	S	%Rec	1	7/1/2016 9:43:30 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	7/1/2016 9:43:30 AM	B35389
Toluene	ND	0.046		mg/Kg	1	7/1/2016 9:43:30 AM	B35389
Ethylbenzene	0.049	0.046		mg/Kg	1	7/1/2016 9:43:30 AM	B35389
Xylenes, Total	0.20	0.093		mg/Kg	1	7/1/2016 9:43:30 AM	B35389
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/1/2016 9:43:30 AM	B35389

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 9
	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.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-51

**Project:** GCU #216

**Collection Date:** 6/30/2016 9:20:00 AM

**Lab ID:** 1607002-002

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	90	10		mg/Kg	1	7/1/2016 9:48:30 AM	26187
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/1/2016 9:48:30 AM	26187
Surr: DNOP	100	70-130		%Rec	1	7/1/2016 9:48:30 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	31	4.2		mg/Kg	1	7/1/2016 10:07:50 AM	A35389
Surr: BFB	215	80-120	S	%Rec	1	7/1/2016 10:07:50 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/1/2016 10:07:50 AM	B35389
Toluene	0.045	0.042		mg/Kg	1	7/1/2016 10:07:50 AM	B35389
Ethylbenzene	0.076	0.042		mg/Kg	1	7/1/2016 10:07:50 AM	B35389
Xylenes, Total	0.70	0.084		mg/Kg	1	7/1/2016 10:07:50 AM	B35389
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	7/1/2016 10:07:50 AM	B35389

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-52

**Project:** GCU #216

**Collection Date:** 6/30/2016 9:30:00 AM

**Lab ID:** 1607002-003

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	84	10		mg/Kg	1	7/1/2016 10:10:11 AM	26187
Motor Oil Range Organics (MRO)	52	51		mg/Kg	1	7/1/2016 10:10:11 AM	26187
Surr: DNOP	102	70-130		%Rec	1	7/1/2016 10:10:11 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	7.5	3.9		mg/Kg	1	7/1/2016 10:32:05 AM	A35389
Surr: BFB	130	80-120	S	%Rec	1	7/1/2016 10:32:05 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/1/2016 10:32:05 AM	B35389
Toluene	ND	0.039		mg/Kg	1	7/1/2016 10:32:05 AM	B35389
Ethylbenzene	ND	0.039		mg/Kg	1	7/1/2016 10:32:05 AM	B35389
Xylenes, Total	ND	0.079		mg/Kg	1	7/1/2016 10:32:05 AM	B35389
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/1/2016 10:32:05 AM	B35389

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** TSP-53

**Project:** GCU #216

**Collection Date:** 6/30/2016 9:40:00 AM

**Lab ID:** 1607002-004

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	49	10		mg/Kg	1	7/1/2016 9:23:25 AM	26187
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/1/2016 9:23:25 AM	26187
Surr: DNOP	93.2	70-130		%Rec	1	7/1/2016 9:23:25 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	53	4.2		mg/Kg	1	7/1/2016 10:56:29 AM	A35389
Surr: BFB	251	80-120	S	%Rec	1	7/1/2016 10:56:29 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/1/2016 10:56:29 AM	B35389
Toluene	0.13	0.042		mg/Kg	1	7/1/2016 10:56:29 AM	B35389
Ethylbenzene	0.14	0.042		mg/Kg	1	7/1/2016 10:56:29 AM	B35389
Xylenes, Total	1.5	0.085		mg/Kg	1	7/1/2016 10:56:29 AM	B35389
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	7/1/2016 10:56:29 AM	B35389

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 9
	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.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** B-W04@39'

**Project:** GCU #216

**Collection Date:** 6/30/2016 10:20:00 AM

**Lab ID:** 1607002-005

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	19	10		mg/Kg	1	7/1/2016 9:44:56 AM	26187
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/1/2016 9:44:56 AM	26187
Surr: DNOP	97.4	70-130		%Rec	1	7/1/2016 9:44:56 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/1/2016 11:20:56 AM	A35389
Surr: BFB	91.3	80-120		%Rec	1	7/1/2016 11:20:56 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/1/2016 11:20:56 AM	B35389
Toluene	ND	0.041		mg/Kg	1	7/1/2016 11:20:56 AM	B35389
Ethylbenzene	ND	0.041		mg/Kg	1	7/1/2016 11:20:56 AM	B35389
Xylenes, Total	ND	0.082		mg/Kg	1	7/1/2016 11:20:56 AM	B35389
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	7/1/2016 11:20:56 AM	B35389

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 9
	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.

## Analytical Report

Lab Order **1607002**

Date Reported: **7/6/2016**

**CLIENT:** LTE

**Client Sample ID:** W-04@39'

**Project:** GCU #216

**Collection Date:** 6/30/2016 10:10:00 AM

**Lab ID:** 1607002-006

**Matrix:** SOIL

**Received Date:** 7/1/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/1/2016 10:06:49 AM	26187
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/1/2016 10:06:49 AM	26187
Surr: DNOP	88.1	70-130		%Rec	1	7/1/2016 10:06:49 AM	26187
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/1/2016 11:45:27 AM	A35389
Surr: BFB	83.8	80-120		%Rec	1	7/1/2016 11:45:27 AM	A35389
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/1/2016 11:45:27 AM	B35389
Toluene	ND	0.037		mg/Kg	1	7/1/2016 11:45:27 AM	B35389
Ethylbenzene	ND	0.037		mg/Kg	1	7/1/2016 11:45:27 AM	B35389
Xylenes, Total	ND	0.075		mg/Kg	1	7/1/2016 11:45:27 AM	B35389
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	7/1/2016 11:45:27 AM	B35389

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 9
	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#: 1607002

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	LCS-26187		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26187		RunNo: 35379					
Prep Date:	7/1/2016		Analysis Date: 7/1/2016		SeqNo: 1094626		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	83.0	62.6	124			
Surr: DNOP	4.5		5.000		89.2	70	130			

Sample ID	MB-26187	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26187			RunNo: 35379					
Prep Date:	7/1/2016	Analysis Date: 7/1/2016			SeqNo: 1094627		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	9.7		10.00		97.4	70	130			

Sample ID	1607002-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-50		Batch ID: 26187		RunNo: 35379					
Prep Date:	7/1/2016		Analysis Date: 7/1/2016		SeqNo: 1094911		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.8	49.16	65.88	105	33.9	141			
Surr: DNOP	4.7		4.916		94.7	70	130			

Sample ID	1607002-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-50		Batch ID:	26187		RunNo:	35379				
Prep Date:	7/1/2016		Analysis Date:	7/1/2016		SeqNo:	1094912		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	130	10	50.00	65.88	119	33.9	141	6.34	20		
Surr: DNOP	4.7		5.000		94.9	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#: 1607002

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095021	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	890		1000		88.8	80	120			

Sample ID	2.5UG GRO LCSB	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095022	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	106	80	120			
Surr: BFB	930		1000		93.3	80	120			

Sample ID	1607002-005AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	B-W04@39'	Batch ID:	A35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095023	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.1	20.46	0	114	59.3	143			
Surr: BFB	760		818.3		92.4	80	120			

Sample ID	1607002-005AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	B-W04@39'	Batch ID:	A35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095024	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.1	20.46	0	123	59.3	143	7.98	20	
Surr: BFB	820		818.3		100	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  
R RPD outside accepted recovery limits  
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#: 1607002

06-Jul-16

Client: LTE  
Project: GCU #216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095111	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	1.0		1.000		100	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B35389	RunNo:	35389					
Prep Date:		Analysis Date:	7/1/2016	SeqNo:	1095112	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	110	75.3	123			
Toluene	1.1	0.050	1.000	0	105	80	124			
Ethylbenzene	1.0	0.050	1.000	0	101	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	98.3	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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: LTE

Work Order Number: 1607002

RcptNo: 1

Received by/date:

AT

07/01/16

Logged By: Lindsay Mangin

7/1/2016 7:45:00 AM

Completed By: Lindsay Mangin

7/1/2016 7:57:19 AM

Reviewed By:

J

07/01/16

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			









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

July 12, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1607405

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/9/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607405**

Date Reported: **7/12/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-55

**Project:** GCU #216

**Collection Date:** 7/8/2016 9:00:00 AM

**Lab ID:** 1607405-001

**Matrix:** SOIL

**Received Date:** 7/9/2016 11:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	78	9.9		mg/Kg	1	7/11/2016 10:23:39 AM
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	7/11/2016 10:23:39 AM
Surr: DNOP	94.0	70-130		%Rec	1	7/11/2016 10:23:39 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/11/2016 10:07:58 AM
Surr: BFB	123	80-120	S	%Rec	1	7/11/2016 10:07:58 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/11/2016 10:07:58 AM
Toluene	ND	0.038		mg/Kg	1	7/11/2016 10:07:58 AM
Ethylbenzene	ND	0.038		mg/Kg	1	7/11/2016 10:07:58 AM
Xylenes, Total	ND	0.075		mg/Kg	1	7/11/2016 10:07:58 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/11/2016 10:07:58 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607405**

Date Reported: **7/12/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-56

**Project:** GCU #216

**Collection Date:** 7/8/2016 9:05:00 AM

**Lab ID:** 1607405-002

**Matrix:** SOIL

**Received Date:** 7/9/2016 11:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	97	9.7		mg/Kg	1	7/11/2016 10:45:29 AM
Motor Oil Range Organics (MRO)	62	48		mg/Kg	1	7/11/2016 10:45:29 AM
Surr: DNOP	94.0	70-130		%Rec	1	7/11/2016 10:45:29 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	10	3.9		mg/Kg	1	7/11/2016 10:34:15 AM
Surr: BFB	160	80-120	S	%Rec	1	7/11/2016 10:34:15 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/11/2016 10:34:15 AM
Toluene	ND	0.039		mg/Kg	1	7/11/2016 10:34:15 AM
Ethylbenzene	ND	0.039		mg/Kg	1	7/11/2016 10:34:15 AM
Xylenes, Total	0.15	0.078		mg/Kg	1	7/11/2016 10:34:15 AM
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/11/2016 10:34:15 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607405**

Date Reported: **7/12/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-57

**Project:** GCU #216

**Collection Date:** 7/8/2016 9:10:00 AM

**Lab ID:** 1607405-003

**Matrix:** SOIL

**Received Date:** 7/9/2016 11:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	95	9.6		mg/Kg	1	7/11/2016 11:07:11 AM
Motor Oil Range Organics (MRO)	60	48		mg/Kg	1	7/11/2016 11:07:11 AM
Surr: DNOP	93.2	70-130		%Rec	1	7/11/2016 11:07:11 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	6.3	4.0		mg/Kg	1	7/11/2016 10:57:51 AM
Surr: BFB	149	80-120	S	%Rec	1	7/11/2016 10:57:51 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/11/2016 10:57:51 AM
Toluene	ND	0.040		mg/Kg	1	7/11/2016 10:57:51 AM
Ethylbenzene	ND	0.040		mg/Kg	1	7/11/2016 10:57:51 AM
Xylenes, Total	ND	0.081		mg/Kg	1	7/11/2016 10:57:51 AM
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	7/11/2016 10:57:51 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607405**

Date Reported: **7/12/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-58

**Project:** GCU #216

**Collection Date:** 7/8/2016 9:15:00 AM

**Lab ID:** 1607405-004

**Matrix:** SOIL

**Received Date:** 7/9/2016 11:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	38	9.4		mg/Kg	1	7/11/2016 11:29:09 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/11/2016 11:29:09 AM
Surr: DNOP	94.4	70-130		%Rec	1	7/11/2016 11:29:09 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	7/11/2016 11:21:24 AM
Surr: BFB	122	80-120	S	%Rec	1	7/11/2016 11:21:24 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/11/2016 11:21:24 AM
Toluene	ND	0.044		mg/Kg	1	7/11/2016 11:21:24 AM
Ethylbenzene	ND	0.044		mg/Kg	1	7/11/2016 11:21:24 AM
Xylenes, Total	ND	0.089		mg/Kg	1	7/11/2016 11:21:24 AM
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	7/11/2016 11:21:24 AM

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

<b>Qualifiers:</b>	*	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#: 1607405

12-Jul-16

Client: BP America

Project: GCU #216

Sample ID	LCS-26317		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26317		RunNo: 35547					
Prep Date:	7/11/2016		Analysis Date: 7/11/2016		SeqNo: 1100746		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.5	62.6	124			
Surr: DNOP	3.9		5.000		78.9	70	130			

Sample ID	MB-26317		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26317		RunNo: 35547					
Prep Date:	7/11/2016		Analysis Date: 7/11/2016		SeqNo: 1100747		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	9.1		10.00		91.2	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  
R RPD outside accepted recovery limits  
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#: 1607405

12-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26304		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26304		RunNo: 35554					
Prep Date:	7/8/2016		Analysis Date: 7/11/2016		SeqNo: 1101250		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	1000		1000		101	80	120			

Sample ID	LCS-26304		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26304		RunNo: 35554					
Prep Date:	7/8/2016		Analysis Date: 7/11/2016		SeqNo: 1101251		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	99.5	80	120			
Surr: BFB	1100		1000		108	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607405

12-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26304		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26304		RunNo: 35554					
Prep Date:	7/8/2016		Analysis Date: 7/11/2016		SeqNo: 1101270		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	0.99		1.000		98.8	80	120			

Sample ID	LCS-26304			SampType:	LCS			TestCode:	EPA Method 8021B: Volatiles						
Client ID:	LCSS			Batch ID:	26304			RunNo:	35554						
Prep Date:	7/8/2016			Analysis Date:	7/11/2016			SeqNo:	1101271			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	94.7	75.3	123								
Toluene	0.96	0.050	1.000	0	95.6	80	124								
Ethylbenzene	1.0	0.050	1.000	0	100	82.8	121								
Xylenes, Total	3.0	0.10	3.000	0	99.1	83.9	122								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120								

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: **LTE**

Work Order Number: **1607405**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

7/9/2016 11:08:00 AM

Completed By: **Lindsay Mangin**

7/9/2016 11:47:23 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by:

## Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			



# Chain-of-Custody Record

Client: BP - Lower 48

Mailing Address:

Phone #: 505-326-9497 / 701-570-4727

Email or Fax#: steven.moskal@bp.com

A/QC Package: dburns@henv.com

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☒ NELAP ☐ Other

SEDD (Type) PDF

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

GCU #216

Project #:

Project Manager: Steve Moskal-BP

LTE-Danny Burns

Sampler:

D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.3

Date Time Matrix Sample Request ID

8/16	0900	SS	TSP-55
↓	0905	↓	TSP-56
↓	0910	↓	TSP-57
↓	0915	↓	TSP-58

Container Type and #

4 oz

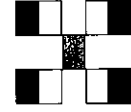
Preservative Type

NA

HEAL No.

11007400

same day



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRO/MRO)	<input checked="" type="checkbox"/> TPH (Method 418.1)	<input checked="" type="checkbox"/> EDB (Method 504.1)	<input checked="" type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input checked="" type="checkbox"/> RCRA 8 Metals	<input checked="" type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input checked="" type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input checked="" type="checkbox"/> 8260B (VOA)	<input checked="" type="checkbox"/> 8270 (Semi-VOA)	<input checked="" type="checkbox"/> Air Bubbles (Y or N)
--	--	---	--	--	---	---	--	--	---	---	--

Remarks:

Received by: [Signature] Date: 7/8/16 Time: 1630

Relinquished by: [Signature] Date: 8/16/16 Time: 1857





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

July 13, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1607484

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/12/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-59

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:05:00 AM

**Lab ID:** 1607484-001

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	44	10		mg/Kg	1	7/12/2016 10:43:28 AM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 10:43:28 AM	26339
Surr: DNOP	87.9	70-130		%Rec	1	7/12/2016 10:43:28 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Surr: BFB	102	80-120		%Rec	1	7/12/2016 10:46:49 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Toluene	ND	0.044		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Ethylbenzene	ND	0.044		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Xylenes, Total	ND	0.088		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	7/12/2016 10:46:49 AM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-60

Project: GCU #216

Collection Date: 7/11/2016 9:10:00 AM

Lab ID: 1607484-002

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	61	10		mg/Kg	1	7/12/2016 11:05:03 AM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 11:05:03 AM	26339
Surr: DNOP	91.4	70-130		%Rec	1	7/12/2016 11:05:03 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Surr: BFB	116	80-120		%Rec	1	7/12/2016 11:10:22 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Toluene	ND	0.038		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Ethylbenzene	ND	0.038		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	7/12/2016 11:10:22 AM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-61

Project: GCU #216

Collection Date: 7/11/2016 9:15:00 AM

Lab ID: 1607484-003

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	50	9.8		mg/Kg	1	7/12/2016 11:26:38 AM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 11:26:38 AM	26339
Surr: DNOP	93.4	70-130		%Rec	1	7/12/2016 11:26:38 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	11	4.3		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Surr: BFB	142	80-120	S	%Rec	1	7/12/2016 11:33:53 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Toluene	ND	0.043		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Ethylbenzene	ND	0.043		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Xylenes, Total	ND	0.087		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	7/12/2016 11:33:53 AM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-62

Project: GCU #216

Collection Date: 7/11/2016 9:30:00 AM

Lab ID: 1607484-004

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	63	9.9		mg/Kg	1	7/12/2016 11:48:36 AM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 11:48:36 AM	26339
Surr: DNOP	90.8	70-130		%Rec	1	7/12/2016 11:48:36 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Surr: BFB	105	80-120		%Rec	1	7/12/2016 11:57:21 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Toluene	ND	0.041		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Ethylbenzene	ND	0.041		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Xylenes, Total	ND	0.082		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	7/12/2016 11:57:21 AM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-63

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:35:00 AM

**Lab ID:** 1607484-005

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	52	9.9		mg/Kg	1	7/12/2016 12:10:09 PM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 12:10:09 PM	26339
Surr: DNOP	92.7	70-130		%Rec	1	7/12/2016 12:10:09 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Surr: BFB	101	80-120		%Rec	1	7/12/2016 12:20:50 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Toluene	ND	0.037		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Ethylbenzene	ND	0.037		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	7/12/2016 12:20:50 PM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-64

Project: GCU #216

Collection Date: 7/11/2016 9:40:00 AM

Lab ID: 1607484-006

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	48	10		mg/Kg	1	7/12/2016 12:32:16 PM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 12:32:16 PM	26339
Surr: DNOP	92.8	70-130		%Rec	1	7/12/2016 12:32:16 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	9.6	3.8		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Surr: BFB	138	80-120	S	%Rec	1	7/12/2016 12:44:20 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Toluene	ND	0.038		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Ethylbenzene	ND	0.038		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Xylenes, Total	0.16	0.076		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	7/12/2016 12:44:20 PM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-65

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:45:00 AM

**Lab ID:** 1607484-007

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	42	9.7		mg/Kg	1	7/12/2016 12:53:56 PM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 12:53:56 PM	26339
Surr: DNOP	91.4	70-130		%Rec	1	7/12/2016 12:53:56 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	4.1	3.7		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Surr: BFB	127	80-120	S	%Rec	1	7/12/2016 1:07:49 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Toluene	ND	0.037		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Ethylbenzene	ND	0.037		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	7/12/2016 1:07:49 PM	26325

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

<b>Qualifiers:</b>	*	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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	LCS-26339		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102200		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	83.6	62.6	124			
Surr: DNOP	4.0		5.000		79.6	70	130			

Sample ID	MB-26339		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102201		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	8.8		10.00		88.1	70	130			

Sample ID	1607484-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-59		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102271		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	49.90	44.07	123	33.9	141			
Surr: DNOP	4.4		4.990		88.2	70	130			

Sample ID	1607484-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-59		Batch ID:	26339		RunNo:	35609				
Prep Date:	7/12/2016		Analysis Date:	7/12/2016		SeqNo:	1102272		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	88	10	50.40	44.07	88.2	33.9	141	17.7	20		
Surr: DNOP	4.5		5.040		90.0	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  
R RPD outside accepted recovery limits  
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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26325		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102390		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	950		1000		94.7	80	120			

Sample ID	LCS-26325		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102391		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	103	80	120			
Surr: BFB	1000		1000		105	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26325		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102416		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID	LCS-26325		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102417		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	75.3	123			
Toluene	0.95	0.050	1.000	0	95.5	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.3	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.1	83.9	122			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



## Sample Log-In Check List

**Client Name: BP AMERICA-Farmington**

**Work Order Number: 1607484**

RcptNo: 1

Received by/date: AT 07/12/16

Logged By: Anne Thorne 7/12/2016 7:50:00 AM

Completed By: **Anne Thorne** **7/12/2016**

Reviewed By: JA 07/12/16

## 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 <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | NA <input type="checkbox"/>                      |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to $6.0^{\circ}\text{C}$ | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | NA <input type="checkbox"/>                      |
| 6. Sample(s) in proper container(s)?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 7. Sufficient sample volume for indicated test(s)?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 8. Are samples (except VOA and ONG) properly preserved?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 9. Was preservative added to bottles?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/>                      |
| 10. VOA vials have zero headspace?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | No VOA Vials <input checked="" type="checkbox"/> |
| 11. Were any sample containers received broken?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> |  |
| 12. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 13. Are matrices correctly identified on Chain of Custody?                                     | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 14. Is it clear what analyses were requested?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| 15. Were all holding times able to be met?<br>(If no, notify customer for authorization.)      | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
- # of preserved bottles checked for pH: \_\_\_\_\_

( $<2$ )

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

# 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: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.0	Good	Yes			









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

July 15, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1607628

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/14/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-66

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:05:00 PM

**Lab ID:** 1607628-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	7/14/2016 12:19:38 PM	26392
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2016 12:19:38 PM	26392
Surr: DNOP	94.4	70-130		%Rec	1	7/14/2016 12:19:38 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	7/14/2016 11:32:10 AM	A35699
Surr: BFB	95.6	80-120		%Rec	1	7/14/2016 11:32:10 AM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/14/2016 11:32:10 AM	B35699
Toluene	ND	0.044		mg/Kg	1	7/14/2016 11:32:10 AM	B35699
Ethylbenzene	ND	0.044		mg/Kg	1	7/14/2016 11:32:10 AM	B35699
Xylenes, Total	ND	0.088		mg/Kg	1	7/14/2016 11:32:10 AM	B35699
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	7/14/2016 11:32:10 AM	B35699

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-67

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:10:00 PM

**Lab ID:** 1607628-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	33	9.8		mg/Kg	1	7/14/2016 12:41:15 PM	26392
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2016 12:41:15 PM	26392
Surr: DNOP	96.9	70-130		%Rec	1	7/14/2016 12:41:15 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.3	4.6		mg/Kg	1	7/14/2016 11:56:31 AM	A35699
Surr: BFB	105	80-120		%Rec	1	7/14/2016 11:56:31 AM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	7/14/2016 11:56:31 AM	B35699
Toluene	ND	0.046		mg/Kg	1	7/14/2016 11:56:31 AM	B35699
Ethylbenzene	ND	0.046		mg/Kg	1	7/14/2016 11:56:31 AM	B35699
Xylenes, Total	ND	0.092		mg/Kg	1	7/14/2016 11:56:31 AM	B35699
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	7/14/2016 11:56:31 AM	B35699

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 2 of 9
	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.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-68

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:15:00 PM

**Lab ID:** 1607628-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	22	9.9		mg/Kg	1	7/14/2016 1:03:05 PM	26392
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2016 1:03:05 PM	26392
Surr: DNOP	99.5	70-130		%Rec	1	7/14/2016 1:03:05 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	7/14/2016 12:20:49 PM	A35699
Surr: BFB	88.1	80-120		%Rec	1	7/14/2016 12:20:49 PM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/14/2016 12:20:49 PM	B35699
Toluene	ND	0.042		mg/Kg	1	7/14/2016 12:20:49 PM	B35699
Ethylbenzene	ND	0.042		mg/Kg	1	7/14/2016 12:20:49 PM	B35699
Xylenes, Total	ND	0.084		mg/Kg	1	7/14/2016 12:20:49 PM	B35699
Surr: 4-Bromofluorobenzene	89.9	80-120		%Rec	1	7/14/2016 12:20:49 PM	B35699

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 9
	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.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-69

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:20:00 PM

**Lab ID:** 1607628-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	7/14/2016 1:25:04 PM	26392
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/14/2016 1:25:04 PM	26392
Surr: DNOP	90.7	70-130		%Rec	1	7/14/2016 1:25:04 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/14/2016 12:45:06 PM	A35699
Surr: BFB	101	80-120		%Rec	1	7/14/2016 12:45:06 PM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/14/2016 12:45:06 PM	B35699
Toluene	ND	0.041		mg/Kg	1	7/14/2016 12:45:06 PM	B35699
Ethylbenzene	ND	0.041		mg/Kg	1	7/14/2016 12:45:06 PM	B35699
Xylenes, Total	ND	0.082		mg/Kg	1	7/14/2016 12:45:06 PM	B35699
Surr: 4-Bromofluorobenzene	98.4	80-120		%Rec	1	7/14/2016 12:45:06 PM	B35699

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-70

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:25:00 PM

**Lab ID:** 1607628-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	29	9.7		mg/Kg	1	7/14/2016 2:10:48 PM	26392
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/14/2016 2:10:48 PM	26392
Surr: DNOP	92.6	70-130		%Rec	1	7/14/2016 2:10:48 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	7/14/2016 1:09:27 PM	A35699
Surr: BFB	91.3	80-120		%Rec	1	7/14/2016 1:09:27 PM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/14/2016 1:09:27 PM	B35699
Toluene	ND	0.043		mg/Kg	1	7/14/2016 1:09:27 PM	B35699
Ethylbenzene	ND	0.043		mg/Kg	1	7/14/2016 1:09:27 PM	B35699
Xylenes, Total	ND	0.086		mg/Kg	1	7/14/2016 1:09:27 PM	B35699
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	7/14/2016 1:09:27 PM	B35699

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607628**

Date Reported: **7/15/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-71

**Project:** GCU #216

**Collection Date:** 7/13/2016 1:30:00 PM

**Lab ID:** 1607628-006

**Matrix:** MEOH (SOIL)

**Received Date:** 7/14/2016 8:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	28	9.4		mg/Kg	1	7/14/2016 2:32:40 PM	26392
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/14/2016 2:32:40 PM	26392
Surr: DNOP	92.8	70-130		%Rec	1	7/14/2016 2:32:40 PM	26392
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	7/14/2016 1:33:46 PM	A35699
Surr: BFB	91.1	80-120		%Rec	1	7/14/2016 1:33:46 PM	A35699
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/14/2016 1:33:46 PM	B35699
Toluene	ND	0.043		mg/Kg	1	7/14/2016 1:33:46 PM	B35699
Ethylbenzene	ND	0.043		mg/Kg	1	7/14/2016 1:33:46 PM	B35699
Xylenes, Total	ND	0.086		mg/Kg	1	7/14/2016 1:33:46 PM	B35699
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	7/14/2016 1:33:46 PM	B35699

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 6 of 9
	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#: 1607628

15-Jul-16

Client: BP America

Project: GCU #216

Sample ID	<b>LCS-26392</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>26392</b>		RunNo: <b>35684</b>					
Prep Date:	<b>7/14/2016</b>		Analysis Date: <b>7/14/2016</b>		SeqNo: <b>1104052</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.2	62.6	124			
Surr: DNOP	4.0		5.000		79.9	70	130			

Sample ID	<b>MB-26392</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>26392</b>		RunNo: <b>35684</b>					
Prep Date:	<b>7/14/2016</b>		Analysis Date: <b>7/14/2016</b>		SeqNo: <b>1104053</b>		Units: <b>mg/Kg</b>			
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	8.4		10.00		84.5	70	130			

Sample ID	<b>LCS-26389</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>26389</b>		RunNo: <b>35685</b>					
Prep Date:	<b>7/14/2016</b>		Analysis Date: <b>7/14/2016</b>		SeqNo: <b>1104054</b>		Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		97.3	70	130			

Sample ID	<b>MB-26389</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>26389</b>		RunNo: <b>35685</b>					
Prep Date:	<b>7/14/2016</b>		Analysis Date: <b>7/14/2016</b>		SeqNo: <b>1104055</b>		Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.5	70	130			

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1607628

15-Jul-16

Client: BP America

Project: GCU #216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35699	RunNo:	35699					
Prep Date:		Analysis Date:	7/14/2016	SeqNo:	1105050	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		86.5	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35699	RunNo:	35699					
Prep Date:		Analysis Date:	7/14/2016	SeqNo:	1105051	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	99.2	80	120			
Surr: BFB	870		1000		87.2	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607628

15-Jul-16

Client: BP America

Project: GCU #216

Sample ID	5ML RB		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: B35699		RunNo: 35699					
Prep Date:			Analysis Date: 7/14/2016		SeqNo: 1105056		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		96.2	80	120			

Sample ID	100NG BTEX LCS		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: B35699		RunNo: 35699					
Prep Date:			Analysis Date: 7/14/2016		SeqNo: 1105057		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	101	75.3	123			
Toluene	0.92	0.050	1.000	0	92.2	80	124			
Ethylbenzene	0.90	0.050	1.000	0	90.4	82.8	121			
Xylenes, Total	2.7	0.10	3.000	0	89.8	83.9	122			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: LTE

Work Order Number: 1607628

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

7/14/2016 8:15:00 AM

Completed By: Lindsay Mangin

7/14/2016 8:37:31 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			



# Chain-of-Custody Record

Client: BP - Lower 48

Billing Address:

Phone #: 505 326 9497 (761-570-4727)

Email or Fax#: stevan.moskal@bp.com

A/QC Package: dburns@henv.com

Standard ☐ Level 4 (Full Validation)

Accreditation

NELAP ☐ Other

EDD (Type) PDF

Date	Time	Matrix	Sample Request ID
1/13	1305	SS	TSP-66
1/13	1310	↓	TSP-67
1/13	1315	↓	TSP-68
1/13	1320	↓	TSP-69
1/13	1325	↓	TSP-70
1/13	1330	↓	TSP-71

Turn-Around Time: same day

☐ Standard ☒ Rush

Project Name:

GC #216

Project #:

Project Manager:

Steve Moskal  
Danny Burns

Sampler: DB

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.9

Container Type and #

4oz

Preservative Type

NA

HEAL No.

11607-628

-001

-002

-003

-004

-005

-006

Relinquished by:

Time: 1600

Received by:

Date: 7/13/14

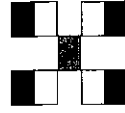
Relinquished by:

Time: 1904

Received by:

Date: 07/14/14

Remarks:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (8021)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRD) (MRD)	<input type="checkbox"/> TPH (Method 418.1)	<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input type="checkbox"/> 8081 Pesticides / 8082 PCBs	<input type="checkbox"/> 8260B (VOA)	<input type="checkbox"/> 8270 (Semi-VOA)	<input type="checkbox"/> Air Bubbles (Y or N)
--	--	---	---	---	--	--	---	--	--------------------------------------	--	---





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

July 18, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607690

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/15/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607690**

Date Reported: **7/18/2016**

**CLIENT:** BP America

**Client Sample ID:** NW-01@33'

**Project:** GCU 216

**Collection Date:** 7/14/2016 10:10:00 AM

**Lab ID:** 1607690-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/15/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/15/2016 10:25:17 AM	26416
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/15/2016 10:25:17 AM	26416
Surr: DNOP	91.5	70-130		%Rec	1	7/15/2016 10:25:17 AM	26416
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/15/2016 11:56:16 AM	A35730
Surr: BFB	87.2	80-120		%Rec	1	7/15/2016 11:56:16 AM	A35730
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/15/2016 11:56:16 AM	B35730
Toluene	ND	0.039		mg/Kg	1	7/16/2016 2:11:13 PM	A35745
Ethylbenzene	ND	0.039		mg/Kg	1	7/15/2016 11:56:16 AM	B35730
Xylenes, Total	ND	0.078		mg/Kg	1	7/15/2016 11:56:16 AM	B35730
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	7/15/2016 11:56:16 AM	B35730

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607690**

Date Reported: **7/18/2016**

**CLIENT:** BP America

**Client Sample ID:** B-NW01@33'

**Project:** GCU 216

**Collection Date:** 7/14/2016 10:15:00 AM

**Lab ID:** 1607690-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/15/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/15/2016 10:46:57 AM	26416
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/15/2016 10:46:57 AM	26416
Surr: DNOP	87.7	70-130		%Rec	1	7/15/2016 10:46:57 AM	26416
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/15/2016 12:20:39 PM	A35730
Surr: BFB	88.5	80-120		%Rec	1	7/15/2016 12:20:39 PM	A35730
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/15/2016 12:20:39 PM	B35730
Toluene	ND	0.040		mg/Kg	1	7/16/2016 2:34:43 PM	A35745
Ethylbenzene	ND	0.040		mg/Kg	1	7/15/2016 12:20:39 PM	B35730
Xylenes, Total	ND	0.079		mg/Kg	1	7/15/2016 12:20:39 PM	B35730
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	7/15/2016 12:20:39 PM	B35730

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

<b>Qualifiers:</b>	*	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#: 1607690

18-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26416		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26416		RunNo: 35729					
Prep Date:	7/15/2016		Analysis Date: 7/15/2016		SeqNo: 1105693		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.5	62.6	124			
Surr: DNOP	4.0		5.000		79.1	70	130			

Sample ID	MB-26416	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26416			RunNo: 35729					
Prep Date:	7/15/2016	Analysis Date: 7/15/2016			SeqNo: 1105694		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	8.8		10.00		88.1	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  
R RPD outside accepted recovery limits  
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#: 1607690

18-Jul-16

Client: BP America

Project: GCU 216

Sample ID	2.5UG GRO LCS		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: A35730		RunNo: 35730					
Prep Date:			Analysis Date: 7/15/2016		SeqNo: 1105921		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	105	80	120			
Surr: BFB	930		1000		92.8	80	120			

Sample ID	MB-26404		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26404		RunNo: 35730					
Prep Date:	7/14/2016		Analysis Date: 7/15/2016		SeqNo: 1105939		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.5	80	120			

Sample ID	LCS-26404		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26404		RunNo: 35730					
Prep Date:	7/14/2016		Analysis Date: 7/15/2016		SeqNo: 1105940		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		95.8	80	120			

Sample ID	B32		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: A35730		RunNo: 35730					
Prep Date:			Analysis Date: 7/15/2016		SeqNo: 1106031		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	890		1000		89.4	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607690

18-Jul-16

Client: BP America

Project: GCU 216

Sample ID	5ML RB		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	B35730		RunNo:	35730			
Prep Date:			Analysis Date:	7/15/2016		SeqNo:	1105946	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.83		1.000		83.5	80	120			

Sample ID	100NG BTEX LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	B35730		RunNo:	35730			
Prep Date:			Analysis Date:	7/15/2016		SeqNo:	1105947	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	105	75.3	123			
Ethylbenzene	0.95	0.050	1.000	0	94.8	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	95.0	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID	5ML RB		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	A35745		RunNo:	35745			
Prep Date:			Analysis Date:	7/16/2016		SeqNo:	1106018	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	0.050								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.3	80	120			

Sample ID	100NG BTEX LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	A35745		RunNo:	35745			
Prep Date:			Analysis Date:	7/16/2016		SeqNo:	1106019	Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.97	0.050	1.000	0	97.1	80	124			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: BP AMERICA-Farmington

Work Order Number: 1607690

RcptNo: 1

Received by/date

Logged By: Lindsay Mangin

7/15/2016 7:50:00 AM

Completed By: Lindsay Mangin

7/15/2016 8:06:59 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;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	1.4	Good	Yes			



# Chain-of-Custody Record

Ident: BP Lower 48

Mailing Address:

Phone #: 701 570 4727 SS 326 9497  
 Email or Fax#: stevan.mastal@bp.com  
 A/QC Package: dburns@stennv.com  
 Standard ☐ Level 4 (Full Validation)

Accreditation  
 NELAP ☐ Other \_\_\_\_\_

EDD (Type) PDF

Date	Time	Matrix	Sample Request ID
14/16	1010	SS	NW-01@33'
14/16	1015	SS	B-NW01@33'

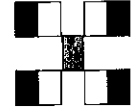
Turn-Around Time: same day  
☐ Standard ☒ Rush  
 Project Name: GCU #216

Project #:

Project Manager: Steve Mastal - BP  
Danny Burns - LTE

Sampler:  
 On Ice: ☒ Yes ☐ No  
 Sample Temperature: 1.2

Container Type and #	Preservative Type	HEAL No.
402	—	11074690
402	—	-001
		-002



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/>	TPH 8015B (GRO/PRO/MRO)	<input checked="" type="checkbox"/>	TPH (Method 418.1)		PAH's (8310 or 8270 SIMS)		RCRA 8 Metals		Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )		8081 Pesticides / 8082 PCB's		8260B (VOA)		8270 (Semi-VOA)		Air Bubbles (Y or N)	
BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/>	TPH 8015B (GRO/PRO/MRO)	<input checked="" type="checkbox"/>	TPH (Method 418.1)		PAH's (8310 or 8270 SIMS)		RCRA 8 Metals		Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )		8081 Pesticides / 8082 PCB's		8260B (VOA)		8270 (Semi-VOA)		Air Bubbles (Y or N)	

Remarks:

Requisitioned by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: <u>7/14/16</u>	Time: <u>1700</u>
Requisitioned by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: <u>07/15/16</u>	Time: <u>0750</u>





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

July 22, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607858

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/19/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-72

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:00:00 PM

**Lab ID:** 1607858-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2016 10:28:44 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2016 10:28:44 AM
Surr: DNOP	100	70-130		%Rec	1	7/19/2016 10:28:44 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	7/19/2016 10:00:13 AM
Surr: BFB	99.0	80-120		%Rec	1	7/19/2016 10:00:13 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/19/2016 10:00:13 AM
Toluene	ND	0.043		mg/Kg	1	7/19/2016 10:00:13 AM
Ethylbenzene	ND	0.043		mg/Kg	1	7/19/2016 10:00:13 AM
Xylenes, Total	ND	0.086		mg/Kg	1	7/19/2016 10:00:13 AM
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	7/19/2016 10:00:13 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-73

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:05:00 PM

**Lab ID:** 1607858-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2016 10:50:27 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/19/2016 10:50:27 AM
Surr: DNOP	103	70-130		%Rec	1	7/19/2016 10:50:27 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	7/19/2016 10:23:35 AM
Surr: BFB	97.7	80-120		%Rec	1	7/19/2016 10:23:35 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/19/2016 10:23:35 AM
Toluene	ND	0.042		mg/Kg	1	7/19/2016 10:23:35 AM
Ethylbenzene	ND	0.042		mg/Kg	1	7/19/2016 10:23:35 AM
Xylenes, Total	ND	0.085		mg/Kg	1	7/19/2016 10:23:35 AM
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	7/19/2016 10:23:35 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-74

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:10:00 PM

**Lab ID:** 1607858-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	20	10		mg/Kg	1	7/19/2016 11:12:17 AM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/19/2016 11:12:17 AM
Surr: DNOP	103	70-130		%Rec	1	7/19/2016 11:12:17 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/19/2016 10:47:07 AM
Surr: BFB	106	80-120		%Rec	1	7/19/2016 10:47:07 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/19/2016 10:47:07 AM
Toluene	ND	0.038		mg/Kg	1	7/19/2016 10:47:07 AM
Ethylbenzene	ND	0.038		mg/Kg	1	7/19/2016 10:47:07 AM
Xylenes, Total	ND	0.075		mg/Kg	1	7/19/2016 10:47:07 AM
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	7/19/2016 10:47:07 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-75

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:15:00 PM

**Lab ID:** 1607858-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2016 11:33:55 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2016 11:33:55 AM
Surr: DNOP	106	70-130		%Rec	1	7/19/2016 11:33:55 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/19/2016 11:10:40 AM
Surr: BFB	104	80-120		%Rec	1	7/19/2016 11:10:40 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/19/2016 11:10:40 AM
Toluene	ND	0.040		mg/Kg	1	7/19/2016 11:10:40 AM
Ethylbenzene	ND	0.040		mg/Kg	1	7/19/2016 11:10:40 AM
Xylenes, Total	ND	0.079		mg/Kg	1	7/19/2016 11:10:40 AM
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	7/19/2016 11:10:40 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-76

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:20:00 PM

**Lab ID:** 1607858-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	7/19/2016 11:55:40 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/19/2016 11:55:40 AM
Surr: DNOP	102	70-130		%Rec	1	7/19/2016 11:55:40 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/19/2016 11:34:09 AM
Surr: BFB	100	80-120		%Rec	1	7/19/2016 11:34:09 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/19/2016 11:34:09 AM
Toluene	ND	0.039		mg/Kg	1	7/19/2016 11:34:09 AM
Ethylbenzene	ND	0.039		mg/Kg	1	7/19/2016 11:34:09 AM
Xylenes, Total	ND	0.077		mg/Kg	1	7/19/2016 11:34:09 AM
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	7/19/2016 11:34:09 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607858**

Date Reported: **7/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-77

**Project:** GCU 216

**Collection Date:** 7/18/2016 12:25:00 PM

**Lab ID:** 1607858-006

**Matrix:** MEOH (SOIL)

**Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/19/2016 12:17:19 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2016 12:17:19 PM
Surr: DNOP	107	70-130		%Rec	1	7/19/2016 12:17:19 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/19/2016 11:57:40 AM
Surr: BFB	102	80-120		%Rec	1	7/19/2016 11:57:40 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/19/2016 11:57:40 AM
Toluene	ND	0.039		mg/Kg	1	7/19/2016 11:57:40 AM
Ethylbenzene	ND	0.039		mg/Kg	1	7/19/2016 11:57:40 AM
Xylenes, Total	ND	0.079		mg/Kg	1	7/19/2016 11:57:40 AM
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	7/19/2016 11:57:40 AM

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

<b>Qualifiers:</b>	*	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#: 1607858

22-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26469		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26469		RunNo: 35794					
Prep Date:	7/19/2016		Analysis Date: 7/19/2016		SeqNo: 1107946		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	105	62.6	124			
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID	MB-26469	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26469			RunNo: 35794					
Prep Date:	7/19/2016	Analysis Date: 7/19/2016			SeqNo: 1107947		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	9.3		10.00		93.0	70	130			

Sample ID	1607858-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-72		Batch ID: 26469		RunNo: 35794					
Prep Date:	7/19/2016		Analysis Date: 7/19/2016		SeqNo: 1108007		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.6	48.22	7.854	103	33.9	141			
Surr: DNOP	5.3		4.822		110	70	130			

Sample ID	1607858-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-72		Batch ID:	26469		RunNo:	35794				
Prep Date:	7/19/2016		Analysis Date:	7/19/2016		SeqNo:	1108008		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	62	9.7	48.64	7.854	110	33.9	141	6.70	20		
Surr: DNOP	5.5		4.864		113	70	130	0	0		

Sample ID	LCS-26455		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26455		RunNo: 35794					
Prep Date:	7/18/2016		Analysis Date: 7/20/2016		SeqNo: 1108851		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.7	70	130			

Sample ID	MB-26455		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26455		RunNo: 35794					
Prep Date:	7/18/2016		Analysis Date: 7/20/2016		SeqNo: 1108853		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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#: 1607858

22-Jul-16

Client: BP America

Project: GCU 216

Sample ID	<b>MB-26455</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>26455</b>		RunNo: <b>35794</b>					
Prep Date:	<b>7/18/2016</b>		Analysis Date: <b>7/20/2016</b>		SeqNo: <b>1108853</b>		Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	70	130			

Sample ID	<b>LCS-26464</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>26464</b>		RunNo: <b>35794</b>					
Prep Date:	<b>7/19/2016</b>		Analysis Date: <b>7/20/2016</b>		SeqNo: <b>1109636</b>		Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.9		5.000		118	70	130			

Sample ID	<b>MB-26464</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>26464</b>		RunNo: <b>35794</b>					
Prep Date:	<b>7/19/2016</b>		Analysis Date: <b>7/20/2016</b>		SeqNo: <b>1109637</b>		Units: <b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		107	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  
R RPD outside accepted recovery limits  
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#: 1607858

22-Jul-16

Client: BP America

Project: GCU 216

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	A35795	RunNo:	35795					
Prep Date:		Analysis Date:	7/19/2016	SeqNo:	1108339	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	1000		1000		101	80	120			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	A35795	RunNo:	35795					
Prep Date:		Analysis Date:	7/19/2016	SeqNo:	1108342	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	99.9	80	120			
Surr: BFB	1100		1000		110	80	120			

Sample ID	1607858-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-72	Batch ID:	A35795	RunNo:	35795					
Prep Date:		Analysis Date:	7/19/2016	SeqNo:	1108343	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.3	21.42	0	108	59.3	143			
Surr: BFB	1000		856.9		119	80	120			

Sample ID	MB-26450	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	26450	RunNo:	35795					
Prep Date:	7/18/2016	Analysis Date:	7/19/2016	SeqNo:	1108349	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	80	120			

Sample ID	LCS-26450	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	26450	RunNo:	35795					
Prep Date:	7/18/2016	Analysis Date:	7/19/2016	SeqNo:	1108351	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		111	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607858

22-Jul-16

Client: BP America

Project: GCU 216

Sample ID	<b>5ML RB</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>B35795</b>		RunNo:	<b>35795</b>			
Prep Date:			Analysis Date:	<b>7/19/2016</b>		SeqNo:	<b>1108400</b>	Units:	<b>mg/Kg</b>	
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	0.98		1.000		98.3	80	120			

Sample ID	<b>100NG BTEX LCS</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>B35795</b>		RunNo:	<b>35795</b>			
Prep Date:			Analysis Date:	<b>7/19/2016</b>		SeqNo:	<b>1108412</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	75.3	123			
Toluene	1.0	0.050	1.000	0	102	80	124			
Ethylbenzene	1.0	0.050	1.000	0	104	82.8	121			
Xylenes, Total	3.1	0.10	3.000	0	103	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	<b>1607858-002AMS</b>		SampType:	<b>MS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>TSP-73</b>		Batch ID:	<b>B35795</b>		RunNo:	<b>35795</b>			
Prep Date:			Analysis Date:	<b>7/19/2016</b>		SeqNo:	<b>1108417</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.021	0.8482	0	94.7	71.5	122			
Toluene	0.79	0.042	0.8482	0	93.3	71.2	123			
Ethylbenzene	0.81	0.042	0.8482	0	95.4	75.2	130			
Xylenes, Total	2.4	0.085	2.545	0	94.4	72.4	131			
Surr: 4-Bromofluorobenzene	0.85		0.8482		100	80	120			

Sample ID	<b>MB-26450</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>26450</b>		RunNo:	<b>35795</b>			
Prep Date:	<b>7/18/2016</b>			Analysis Date:	<b>7/19/2016</b>	SeqNo:	<b>1108424</b>	Units:	<b>%Rec</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	<b>LCS-26450</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>26450</b>		RunNo:	<b>35795</b>			
Prep Date:	<b>7/18/2016</b>			Analysis Date:	<b>7/19/2016</b>	SeqNo:	<b>1108425</b>	Units:	<b>%Rec</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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#: 1607858

22-Jul-16

Client: BP America

Project: GCU 216

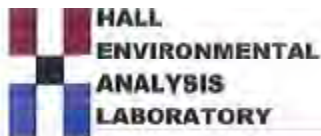
Sample ID	LCS-26450		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26450		RunNo: 35795					
Prep Date:	7/18/2016		Analysis Date: 7/19/2016		SeqNo: 1108425		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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: BP AMERICA-Farmington

Work Order Number: 1607B58

RecptNo: 1

Received by/date:

SA

07/19/16

Logged By: Lindsay Mangin

7/19/2016 8:45:00 AM

*Lindsay Mangin*

Completed By: Lindsay Mangin

7/19/2016 8:53:41 AM

*Lindsay Mangin*

Reviewed By:

AS

07/19/16

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			



# Chain-of-Custody Record

Client: BP Lower 48

Mailing Address:

Phone #: 505-326-9497 / 701-570-4727

Email or Fax #: steven.moskal@bp.com

A/QC Package: dburns@ltenv.com

Standard ☐ Level 4 (Full Validation)

Accreditation ☐ Other

NELAP ☐ Other

Method (Type) PDF

Date	Time	Matrix	Sample Request ID
1/18	1200	SS	TSP-72
1/18	1205		TSP-73
1/18	1210		TSP-74
1/18	1215		TSP-75
1/18	1220		TSP-76
1/18	1225		TSP-77

Turn-Around Time:

Same

☐ Standard

☒ Rush day TAT

Project Name:

GCU #216

Project #:

Project Manager:

BP-Steve Moskal

LTE-Danny Burns

Sampler: D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.1

Container Type and #

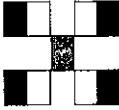
4oz

Preservative Type

NA

HEAL No.

1607358



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRO/MRO)	<input checked="" type="checkbox"/> TPH (Method 418.1)	<input checked="" type="checkbox"/> EDB (Method 504.1)	<input checked="" type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input checked="" type="checkbox"/> RCRA 8 Metals	<input checked="" type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input checked="" type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input checked="" type="checkbox"/> 8260B (VOA)	<input checked="" type="checkbox"/> 8270 (Semi-VOA)	<input checked="" type="checkbox"/> Air Bubbles (Y or N)
--	--	---	--	--	---	---	--	--	---	---	--

Remarks:

Received by:

Date

Time

Christopher Wale

7/18/16

1105

Received by:

Date

Time

Chris Cat

07/19/16

0845

Relinquished by:

D. Burns

Time

1/18/16

1605

Relinquished by:

Christopher Wale

Time

1/18/16

1821





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

July 25, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607A46

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/21/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607A46**

Date Reported: **7/25/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-78

**Project:** GCU 216

**Collection Date:** 7/20/2016 9:15:00 AM

**Lab ID:** 1607A46-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/21/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/21/2016 10:28:25 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/21/2016 10:28:25 AM
Surr: DNOP	100	70-130		%Rec	1	7/21/2016 10:28:25 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/21/2016 7:15:30 PM
Surr: BFB	102	80-120		%Rec	1	7/21/2016 7:15:30 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/21/2016 7:15:30 PM
Toluene	ND	0.038		mg/Kg	1	7/21/2016 7:15:30 PM
Ethylbenzene	ND	0.038		mg/Kg	1	7/21/2016 7:15:30 PM
Xylenes, Total	ND	0.076		mg/Kg	1	7/21/2016 7:15:30 PM
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	7/21/2016 7:15:30 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607A46**

Date Reported: **7/25/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-79

**Project:** GCU 216

**Collection Date:** 7/20/2016 9:20:00 AM

**Lab ID:** 1607A46-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/21/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/21/2016 10:49:58 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/21/2016 10:49:58 AM
Surr: DNOP	103	70-130		%Rec	1	7/21/2016 10:49:58 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	150	4.3		mg/Kg	1	7/21/2016 7:39:03 PM
Surr: BFB	371	80-120	S	%Rec	1	7/21/2016 7:39:03 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	0.058	0.022		mg/Kg	1	7/21/2016 7:39:03 PM
Toluene	0.51	0.043		mg/Kg	1	7/21/2016 7:39:03 PM
Ethylbenzene	0.55	0.043		mg/Kg	1	7/21/2016 7:39:03 PM
Xylenes, Total	5.0	0.087		mg/Kg	1	7/21/2016 7:39:03 PM
Surr: 4-Bromofluorobenzene	123	80-120	S	%Rec	1	7/21/2016 7:39:03 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607A46**

Date Reported: **7/25/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-80

**Project:** GCU 216

**Collection Date:** 7/20/2016 9:25:00 AM

**Lab ID:** 1607A46-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/21/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/21/2016 11:11:39 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/21/2016 11:11:39 AM
Surr: DNOP	105	70-130		%Rec	1	7/21/2016 11:11:39 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/21/2016 8:02:32 PM
Surr: BFB	112	80-120		%Rec	1	7/21/2016 8:02:32 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/21/2016 8:02:32 PM
Toluene	ND	0.040		mg/Kg	1	7/21/2016 8:02:32 PM
Ethylbenzene	ND	0.040		mg/Kg	1	7/21/2016 8:02:32 PM
Xylenes, Total	ND	0.079		mg/Kg	1	7/21/2016 8:02:32 PM
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	7/21/2016 8:02:32 PM

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

<b>Qualifiers:</b>	*	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#: 1607A46

25-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26522		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26522		RunNo: 35868					
Prep Date:	7/21/2016		Analysis Date: 7/21/2016		SeqNo: 1110402		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.1	62.6	124			
Surr: DNOP	4.3		5.000		85.7	70	130			

Sample ID	MB-26522		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26522		RunNo: 35868					
Prep Date:	7/21/2016		Analysis Date: 7/21/2016		SeqNo: 1110403		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	8.9		10.00		89.0	70	130			

Sample ID	LCS-26500		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26500		RunNo: 35868					
Prep Date:	7/20/2016		Analysis Date: 7/21/2016		SeqNo: 1111810		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID	MB-26500		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26500		RunNo: 35868					
Prep Date:	7/20/2016		Analysis Date: 7/21/2016		SeqNo: 1111811		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.5		10.00		94.8	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  
R RPD outside accepted recovery limits  
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#: 1607A46

25-Jul-16

Client: BP America

Project: GCU 216

Sample ID	5ML RB		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: A35871		RunNo: 35871					
Prep Date:			Analysis Date: 7/21/2016		SeqNo: 1110807		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	1000		1000		102	80	120			

Sample ID	2.5UG GRO LCS		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: A35871		RunNo: 35871					
Prep Date:			Analysis Date: 7/21/2016		SeqNo: 1110808		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	97.9	80	120			
Surr: BFB	1100		1000		111	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607A46

25-Jul-16

Client: BP America

Project: GCU 216

Sample ID	5ML RB		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: C35871		RunNo: 35871					
Prep Date:			Analysis Date: 7/21/2016		SeqNo: 1110878		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	0.98		1.000		97.9	80	120			

Sample ID	100NG BTEX LCS		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: C35871		RunNo: 35871					
Prep Date:			Analysis Date: 7/21/2016		SeqNo: 1110883		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	1.0	0.050	1.000	0	100	80	124			
Ethylbenzene	1.0	0.050	1.000	0	103	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.7	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: **BP AMERICA-Farmington**

Work Order Number: **1607A46**

RcptNo: **1**

Received by/date:	<i>AT</i>	<i>07/21/14</i>
Logged By:	<b>Lindsay Mangin</b>	7/21/2016 7:45:00 AM <i>[Signature]</i>
Completed By:	<b>Lindsay Mangin</b>	7/21/2016 7:58:16 AM <i>[Signature]</i>
Reviewed By:	<i>[Signature]</i>	<i>07/21/14</i>

## Chain of Custody

- Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
- Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
- How was the sample delivered? Courier

## Log In

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

- 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:	_____		

- Additional remarks:

## 18. Cooler Information

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



Chain-of-Custody Record		Turn-Around Time: <u>same</u>
Client: <u>BP</u>	<u>Lower 48</u>	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush
		Project Name: _____

Turn-Around Time: same  
☐ Standard ☒ Rush day  
 Project Name: \_\_\_\_\_

Client:	BP Lower 48
---------	-------------

Mailing Address: \_\_\_\_\_

Project #:

Phone #: 505-326-9497 701-570-4727

email or Fax#: steven.moskal@cap.com Project Manager:

QA/QC Package: dburns@itenvi.com

<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)	LE-Janny Burns
--	--	----------------

Accreditation ☐ NEAP ☐ Other ☐

Sampler: J. Burns

On loc: ☒ Yes ☐ No

<input checked="" type="checkbox"/> EDD (Type)	PDF	Oil Ice. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Sample Temperature $\rightarrow 3.1 F - 1 A = 13$

[illegible]

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
------	------	--------	-------------------	----------------------	-------------------	----------

type	type and #		
1607A-L6			

7/21/16	0915	SS	TSP-78	402	NA	—
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1	0920	1	TSP-79	1	1
					—
					—
					—

0925	↓	TSP-80	↓	002
			↓	002

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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A blank sheet of graph paper with a grid pattern. The grid consists of horizontal and vertical lines forming squares. There are 10 columns and 20 rows visible. A small circle is drawn at the top left corner, and a small cross is drawn at the bottom right corner.

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Date:	Time:	Relinquished by:	Received by:	Date	Time

9/07/16  
6001

D.B.

Cost Paid \$1420.00 [100%]

Date:	Time:	Relinquished by:	Received by:	Date	Time

28/11/82	1957	John Wab	1072116	1745
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this

## Analysis Request

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

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

Remarks:

Received by: A	Date	Time
----------------	------	------

Date:	Time:	Relinquished by:

Received by:	Date	Time

Date:	Time:	Relinquished by:
11/11/11	11:11	11/11/11

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](http://www.hallenvironmental.com)

July 27, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607C95

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/26/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-89

**Project:** GCU 216

**Collection Date:** 7/25/2016 9:35:00 AM

**Lab ID:** 1607C95-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	48	9.8		mg/Kg	1	7/26/2016 10:07:43 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2016 10:07:43 AM
Surr: DNOP	91.8	70-130		%Rec	1	7/26/2016 10:07:43 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	6.8	4.1		mg/Kg	1	7/26/2016 10:50:23 AM
Surr: BFB	146	80-120	S	%Rec	1	7/26/2016 10:50:23 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	7/26/2016 10:50:23 AM
Toluene	ND	0.041		mg/Kg	1	7/26/2016 10:50:23 AM
Ethylbenzene	ND	0.041		mg/Kg	1	7/26/2016 10:50:23 AM
Xylenes, Total	0.089	0.082		mg/Kg	1	7/26/2016 10:50:23 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/26/2016 10:50:23 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-90

**Project:** GCU 216

**Collection Date:** 7/25/2016 9:40:00 AM

**Lab ID:** 1607C95-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	23	9.5		mg/Kg	1	7/26/2016 10:29:47 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/26/2016 10:29:47 AM
Surr: DNOP	91.4	70-130		%Rec	1	7/26/2016 10:29:47 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	4.8	4.0		mg/Kg	1	7/26/2016 11:13:50 AM
Surr: BFB	125	80-120	S	%Rec	1	7/26/2016 11:13:50 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	7/26/2016 11:13:50 AM
Toluene	ND	0.040		mg/Kg	1	7/26/2016 11:13:50 AM
Ethylbenzene	ND	0.040		mg/Kg	1	7/26/2016 11:13:50 AM
Xylenes, Total	0.13	0.080		mg/Kg	1	7/26/2016 11:13:50 AM
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	7/26/2016 11:13:50 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-91

**Project:** GCU 216

**Collection Date:** 7/25/2016 9:45:00 AM

**Lab ID:** 1607C95-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	31	10		mg/Kg	1	7/26/2016 10:51:52 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/26/2016 10:51:52 AM
Surr: DNOP	91.1	70-130		%Rec	1	7/26/2016 10:51:52 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	7/26/2016 11:37:21 AM
Surr: BFB	112	80-120		%Rec	5	7/26/2016 11:37:21 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.096		mg/Kg	5	7/26/2016 11:37:21 AM
Toluene	ND	0.19		mg/Kg	5	7/26/2016 11:37:21 AM
Ethylbenzene	ND	0.19		mg/Kg	5	7/26/2016 11:37:21 AM
Xylenes, Total	ND	0.38		mg/Kg	5	7/26/2016 11:37:21 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	5	7/26/2016 11:37:21 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-92

**Project:** GCU 216

**Collection Date:** 7/25/2016 9:50:00 AM

**Lab ID:** 1607C95-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	36	9.9		mg/Kg	1	7/26/2016 11:13:53 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2016 11:13:53 AM
Surr: DNOP	98.7	70-130		%Rec	1	7/26/2016 11:13:53 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	7/26/2016 12:00:53 PM
Surr: BFB	113	80-120		%Rec	5	7/26/2016 12:00:53 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.10		mg/Kg	5	7/26/2016 12:00:53 PM
Toluene	ND	0.20		mg/Kg	5	7/26/2016 12:00:53 PM
Ethylbenzene	ND	0.20		mg/Kg	5	7/26/2016 12:00:53 PM
Xylenes, Total	ND	0.40		mg/Kg	5	7/26/2016 12:00:53 PM
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	5	7/26/2016 12:00:53 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-93

**Project:** GCU 216

**Collection Date:** 7/25/2016 9:55:00 AM

**Lab ID:** 1607C95-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	34	10		mg/Kg	1	7/26/2016 11:35:53 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/26/2016 11:35:53 AM
Surr: DNOP	97.2	70-130		%Rec	1	7/26/2016 11:35:53 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	7.8	4.2		mg/Kg	1	7/26/2016 12:24:19 PM
Surr: BFB	159	80-120	S	%Rec	1	7/26/2016 12:24:19 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	7/26/2016 12:24:19 PM
Toluene	ND	0.042		mg/Kg	1	7/26/2016 12:24:19 PM
Ethylbenzene	ND	0.042		mg/Kg	1	7/26/2016 12:24:19 PM
Xylenes, Total	0.095	0.083		mg/Kg	1	7/26/2016 12:24:19 PM
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	7/26/2016 12:24:19 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-94

**Project:** GCU 216

**Collection Date:** 7/25/2016 10:00:00 AM

**Lab ID:** 1607C95-006

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	31	9.9		mg/Kg	1	7/26/2016 11:57:50 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2016 11:57:50 AM
Surr: DNOP	95.8	70-130		%Rec	1	7/26/2016 11:57:50 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	12	4.1		mg/Kg	1	7/26/2016 12:47:56 PM
Surr: BFB	171	80-120	S	%Rec	1	7/26/2016 12:47:56 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	7/26/2016 12:47:56 PM
Toluene	ND	0.041		mg/Kg	1	7/26/2016 12:47:56 PM
Ethylbenzene	ND	0.041		mg/Kg	1	7/26/2016 12:47:56 PM
Xylenes, Total	0.11	0.083		mg/Kg	1	7/26/2016 12:47:56 PM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/26/2016 12:47:56 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607C95**

Date Reported: **7/27/2016**

**CLIENT:** BP America

**Client Sample ID:** B-C04@39'

**Project:** GCU 216

**Collection Date:** 7/25/2016 10:25:00 AM

**Lab ID:** 1607C95-007

**Matrix:** MEOH (SOIL)

**Received Date:** 7/26/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/26/2016 12:19:57 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/26/2016 12:19:57 PM
Surr: DNOP	93.1	70-130		%Rec	1	7/26/2016 12:19:57 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/26/2016 1:11:36 PM
Surr: BFB	105	80-120		%Rec	1	7/26/2016 1:11:36 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	7/26/2016 1:11:36 PM
Toluene	ND	0.041		mg/Kg	1	7/26/2016 1:11:36 PM
Ethylbenzene	ND	0.041		mg/Kg	1	7/26/2016 1:11:36 PM
Xylenes, Total	ND	0.083		mg/Kg	1	7/26/2016 1:11:36 PM
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	7/26/2016 1:11:36 PM

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

<b>Qualifiers:</b>	*	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#: 1607C95

27-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26602		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26602		RunNo: 35982					
Prep Date:	7/26/2016		Analysis Date: 7/26/2016		SeqNo: 1114066		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	78.0	62.6	124			
Surr: DNOP	4.3		5.000		85.3	70	130			

Sample ID	MB-26602		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26602		RunNo: 35982					
Prep Date:	7/26/2016		Analysis Date: 7/26/2016		SeqNo: 1114067		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	8.7		10.00		87.5	70	130			

Sample ID	1607C95-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-89		Batch ID: 26602		RunNo: 35982					
Prep Date:	7/26/2016		Analysis Date: 7/26/2016		SeqNo: 1114158		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	82	10	50.40	47.98	68.3	33.9	141			
Surr: DNOP	4.5		5.040		89.5	70	130			

Sample ID	1607C95-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-89		Batch ID:	26602		RunNo:	35982				
Prep Date:	7/26/2016		Analysis Date:	7/26/2016		SeqNo:	1114276		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	84	9.6	48.08	47.98	74.1	33.9	141	1.41	20		
Surr: DNOP	4.4		4.808		91.8	70	130	0	0		

Sample ID	LCS-26595		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26595		RunNo: 35982					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115124		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.3	70	130			

Sample ID	MB-26595		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	26595		RunNo:	35982				
Prep Date:	7/25/2016		Analysis Date:	7/26/2016		SeqNo:	1115125		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

### 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#: 1607C95

27-Jul-16

Client: BP America

Project: GCU 216

Sample ID	MB-26595		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26595		RunNo: 35982					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115125		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	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  
R RPD outside accepted recovery limits  
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#: 1607C95

27-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26581		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26581		RunNo: 35988					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115366		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	95.8	80	120			
Surr: BFB	1100		1000		114	80	120			

Sample ID	MB-26581		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26581		RunNo: 35988					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115368		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	1000		1000		102	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607C95

27-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26581		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26581		RunNo: 35988					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115489		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	101	75.3	123			
Toluene	0.98	0.050	1.000	0	98.1	80	124			
Ethylbenzene	1.0	0.050	1.000	0	100	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.9	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	MB-26581		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26581		RunNo: 35988					
Prep Date:	7/25/2016		Analysis Date: 7/26/2016		SeqNo: 1115490		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	0.97		1.000		97.5	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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




# Sample Log-In Check List

Client Name: **BP AMERICA-Farmington**

Work Order Number: **1607C95**

RcptNo: 1

Received by/date:

 07/26/16

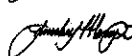
Logged By: **Lindsay Mangin**

7/26/2016 7:50:00 AM




Completed By: **Lindsay Mangin**

7/26/2016 7:56:54 AM



Reviewed By:

 07/26/16

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;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:

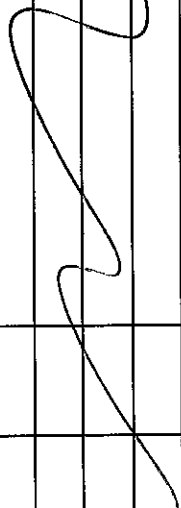
17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			




# Chain-of-Custody Record

Client:	BP - Lower 48		
Mailing Address:			
Phone #:	505-326-9497 / 701-570-4727		
Email or Fax#:	Steven.Moskal@bp.com		
QC Package:	dburns@lhw.com		
Standard	<input type="checkbox"/> Level 4 (Full Validation)		
Creditation	<input type="checkbox"/> Other		
NELAP	<input type="checkbox"/> Other		
EDD (Type)	PDF		
Date	Time	Matrix	Sample Request ID
12/16	0935	SS	TSP-89
12/16	0940		TSP-90
12/16	0945		TSP-91
12/16	0950		TSP-92
12/16	0955		TSP-93
12/16	1000		TSP-94
12/16	1025	↓	B-C04@39'
			
Relinquished by:	Time:	Relinquished by:	Time:
DAJB	12/16 1700	DAJB	12/16 1700
Relinquished by:	Time:	Relinquished by:	Time:
DAJB	12/16 1852	DAJB	12/16 1852

Turn-Around Time:	Same day
<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush	
Project Name:	GCU #216
Project #:	

Project Manager:	BP-Steve Moskal LTE-Danny Burns
Sampler:	D. Burns
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Temperature:	22.7

Container Type and #	Preservative Type	HEAL No.
4 oz	NA	1607295
		-001
		-002
		-003
		-004
		-005
		-006
		-007



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request											
BTEX + MTBE + TMB's (8021)	X										
BTEX + MTBE + TMB's (8021)	X										
TPH 8015B (GRO / DRO / AMRO)	X										
TPH (Method 418.1)											
EDB (Method 504.1)											
PAH's (8310 or 8270 SIMS)											
RCRA 8 Metals											
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )											
8081 Pesticides / 8082 PCB's											
8260B (VOA)											
8270 (Semi-VOA)											
Air Bubbles (Y or N)											

Received by: Amos White Date: 7/25/16 Time: 1700  
 Received by: [Signature] Date: 07/26/16 Time: 0750

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.





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

July 28, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607D69

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/27/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607D69**

Date Reported: 7/28/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-81R

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:30:00 AM

**Lab ID:** 1607D69-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	49	9.7		mg/Kg	1	7/27/2016 10:53:44 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2016 10:53:44 AM
Surr: DNOP	84.4	70-130		%Rec	1	7/27/2016 10:53:44 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	7.6	4.1		mg/Kg	1	7/27/2016 10:01:02 AM
Surr: BFB	119	80-120		%Rec	1	7/27/2016 10:01:02 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	7/27/2016 10:01:02 AM
Toluene	ND	0.041		mg/Kg	1	7/27/2016 10:01:02 AM
Ethylbenzene	ND	0.041		mg/Kg	1	7/27/2016 10:01:02 AM
Xylenes, Total	ND	0.082		mg/Kg	1	7/27/2016 10:01:02 AM
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	7/27/2016 10:01:02 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: **7/28/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-83

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:35:00 AM

**Lab ID:** 1607D69-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	89	10		mg/Kg	1	7/27/2016 11:21:48 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/27/2016 11:21:48 AM
Surr: DNOP	87.2	70-130		%Rec	1	7/27/2016 11:21:48 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	9.4	4.2		mg/Kg	1	7/27/2016 10:25:16 AM
Surr: BFB	138	80-120	S	%Rec	1	7/27/2016 10:25:16 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	7/27/2016 10:25:16 AM
Toluene	ND	0.042		mg/Kg	1	7/27/2016 10:25:16 AM
Ethylbenzene	ND	0.042		mg/Kg	1	7/27/2016 10:25:16 AM
Xylenes, Total	0.097	0.084		mg/Kg	1	7/27/2016 10:25:16 AM
Surr: 4-Bromofluorobenzene	113	80-120		%Rec	1	7/27/2016 10:25:16 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: **7/28/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-84

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:40:00 AM

**Lab ID:** 1607D69-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	17	9.4		mg/Kg	1	7/27/2016 11:28:29 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2016 11:28:29 AM
Surr: DNOP	103	70-130		%Rec	1	7/27/2016 11:28:29 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	18	3.9		mg/Kg	1	7/27/2016 10:49:30 AM
Surr: BFB	142	80-120	S	%Rec	1	7/27/2016 10:49:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	7/27/2016 10:49:30 AM
Toluene	ND	0.039		mg/Kg	1	7/27/2016 10:49:30 AM
Ethylbenzene	0.045	0.039		mg/Kg	1	7/27/2016 10:49:30 AM
Xylenes, Total	0.46	0.079		mg/Kg	1	7/27/2016 10:49:30 AM
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	7/27/2016 10:49:30 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: **7/28/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-85

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:45:00 AM

**Lab ID:** 1607D69-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	31	9.5		mg/Kg	1	7/27/2016 11:50:05 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/27/2016 11:50:05 AM
Surr: DNOP	103	70-130		%Rec	1	7/27/2016 11:50:05 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	10	4.1		mg/Kg	1	7/27/2016 11:13:47 AM
Surr: BFB	129	80-120	S	%Rec	1	7/27/2016 11:13:47 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	7/27/2016 11:13:47 AM
Toluene	ND	0.041		mg/Kg	1	7/27/2016 11:13:47 AM
Ethylbenzene	ND	0.041		mg/Kg	1	7/27/2016 11:13:47 AM
Xylenes, Total	ND	0.082		mg/Kg	1	7/27/2016 11:13:47 AM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	7/27/2016 11:13:47 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: 7/28/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-86

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:50:00 AM

**Lab ID:** 1607D69-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	52	9.8		mg/Kg	1	7/27/2016 12:11:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/27/2016 12:11:51 PM
Surr: DNOP	102	70-130		%Rec	1	7/27/2016 12:11:51 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	7/27/2016 11:38:04 AM
Surr: BFB	94.4	80-120		%Rec	5	7/27/2016 11:38:04 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.11		mg/Kg	5	7/27/2016 11:38:04 AM
Toluene	ND	0.22		mg/Kg	5	7/27/2016 11:38:04 AM
Ethylbenzene	ND	0.22		mg/Kg	5	7/27/2016 11:38:04 AM
Xylenes, Total	ND	0.43		mg/Kg	5	7/27/2016 11:38:04 AM
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	5	7/27/2016 11:38:04 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: **7/28/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-87

**Project:** GCU 216

**Collection Date:** 7/26/2016 9:55:00 AM

**Lab ID:** 1607D69-006

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	45	10		mg/Kg	1	7/27/2016 12:33:25 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/27/2016 12:33:25 PM
Surr: DNOP	101	70-130		%Rec	1	7/27/2016 12:33:25 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	4.9	4.2		mg/Kg	1	7/27/2016 12:02:31 PM
Surr: BFB	131	80-120	S	%Rec	1	7/27/2016 12:02:31 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	7/27/2016 12:02:31 PM
Toluene	ND	0.042		mg/Kg	1	7/27/2016 12:02:31 PM
Ethylbenzene	ND	0.042		mg/Kg	1	7/27/2016 12:02:31 PM
Xylenes, Total	ND	0.085		mg/Kg	1	7/27/2016 12:02:31 PM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	7/27/2016 12:02:31 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607D69**

Date Reported: **7/28/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-88

**Project:** GCU 216

**Collection Date:** 7/26/2016 10:00:00 AM

**Lab ID:** 1607D69-007

**Matrix:** MEOH (SOIL)

**Received Date:** 7/27/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	32	9.6		mg/Kg	1	7/27/2016 12:55:08 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/27/2016 12:55:08 PM
Surr: DNOP	102	70-130		%Rec	1	7/27/2016 12:55:08 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	7/27/2016 12:26:59 PM
Surr: BFB	97.7	80-120		%Rec	5	7/27/2016 12:26:59 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.095		mg/Kg	5	7/27/2016 12:26:59 PM
Toluene	ND	0.19		mg/Kg	5	7/27/2016 12:26:59 PM
Ethylbenzene	ND	0.19		mg/Kg	5	7/27/2016 12:26:59 PM
Xylenes, Total	ND	0.38		mg/Kg	5	7/27/2016 12:26:59 PM
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	5	7/27/2016 12:26:59 PM

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

<b>Qualifiers:</b>	*	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#: 1607D69

28-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26633		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26633		RunNo: 36010					
Prep Date:	7/27/2016		Analysis Date: 7/27/2016		SeqNo: 1115262		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	95.2	62.6	124			
Surr: DNOP	4.5		5.000		90.0	70	130			

Sample ID	MB-26633		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26633		RunNo: 36010					
Prep Date:	7/27/2016		Analysis Date: 7/27/2016		SeqNo: 1115263		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	8.1		10.00		81.1	70	130			

Sample ID	1607D69-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-81R		Batch ID: 26633		RunNo: 36010					
Prep Date:	7/27/2016		Analysis Date: 7/27/2016		SeqNo: 1115519		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	9.9	49.36	48.98	114	33.9	141			
Surr: DNOP	4.6		4.936		93.4	70	130			

Sample ID	1607D69-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-81R		Batch ID: 26633		RunNo: 36010					
Prep Date:	7/27/2016		Analysis Date: 7/27/2016		SeqNo: 1115520		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	80	9.2	46.17	48.98	67.4	33.9	141	27.2	20	R
Surr: DNOP	4.2		4.617		91.9	70	130	0	0	

Sample ID	MB-26603		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26603		RunNo: 36010					
Prep Date:	7/26/2016		Analysis Date: 7/27/2016		SeqNo: 1115521		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.0		10.00		80.5	70	130			

Sample ID	LCS-26603		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	26603		RunNo:	36010				
Prep Date:	7/26/2016		Analysis Date:	7/27/2016		SeqNo:	1115716		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

### 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  
R RPD outside accepted recovery limits  
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#: 1607D69

28-Jul-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26603		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26603		RunNo: 36010					
Prep Date:	7/26/2016		Analysis Date: 7/27/2016		SeqNo: 1115716		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.9	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#: 1607D69

28-Jul-16

Client: BP America

Project: GCU 216

Sample ID	1607D69-001A MS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-81R	Batch ID:	R36014	RunNo:	36014					
Prep Date:		Analysis Date:	7/27/2016	SeqNo:	1115692	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.1	20.49	7.623	102	59.3	143			
Surr: BFB	1000		819.7		126	80	120			S

Sample ID	1607D69-001A MSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	TSP-81R	Batch ID:	R36014	RunNo:	36014					
Prep Date:		Analysis Date:	7/27/2016	SeqNo:	1115693	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.1	20.49	7.623	91.9	59.3	143	7.37	20	
Surr: BFB	1100		819.7		134	80	120	0	0	S

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R36014	RunNo:	36014					
Prep Date:		Analysis Date:	7/27/2016	SeqNo:	1115694	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	96.0	80	120			
Surr: BFB	910		1000		90.6	80	120			

Sample ID	5ML-RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R36014	RunNo:	36014					
Prep Date:		Analysis Date:	7/27/2016	SeqNo:	1115695	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	810		1000		80.7	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607D69

28-Jul-16

**Client:** BP America

**Project:** GCU 216

Sample ID <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>A36014</b>		RunNo: <b>36014</b>							
Prep Date:	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115765</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.0	75.3	123			
Toluene	0.98	0.050	1.000	0	97.6	80	124			
Ethylbenzene	0.94	0.050	1.000	0	94.0	82.8	121			
Xylenes, Total	2.7	0.10	3.000	0	90.9	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID <b>1607D69-002A MS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>TSP-83</b>	Batch ID: <b>A36014</b>		RunNo: <b>36014</b>							
Prep Date:	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115767</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.021	0.8389	0	94.9	71.5	122			
Toluene	0.74	0.042	0.8389	0	87.7	71.2	123			
Ethylbenzene	0.76	0.042	0.8389	0	90.5	75.2	130			
Xylenes, Total	2.4	0.084	2.517	0.09673	91.4	72.4	131			
Surr: 4-Bromofluorobenzene	0.92		0.8389		110	80	120			

Sample ID <b>1607D69-002A MSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>TSP-83</b>	Batch ID: <b>A36014</b>		RunNo: <b>36014</b>							
Prep Date:	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115768</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.78	0.021	0.8389	0	92.5	71.5	122	2.53	20	
Toluene	0.70	0.042	0.8389	0	83.9	71.2	123	4.48	20	
Ethylbenzene	0.76	0.042	0.8389	0	90.2	75.2	130	0.321	20	
Xylenes, Total	2.4	0.084	2.517	0.09673	91.8	72.4	131	0.426	20	
Surr: 4-Bromofluorobenzene	0.99		0.8389		118	80	120	0	0	

Sample ID <b>5ML-RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>A36014</b>		RunNo: <b>36014</b>							
Prep Date:	Analysis Date: <b>7/27/2016</b>		SeqNo: <b>1115769</b>		Units: <b>mg/Kg</b>					
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		96.0	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 |



# Sample Log-In Check List

Client Name: **BP AMERICA-Farmington**

Work Order Number: **1607D69**

RcptNo: **1**

Received by/date:



07/27/16

Logged By: **Joe Archuleta**

7/27/2016 8:00:00 AM



Completed By: **Joe Archuleta**

7/27/2016 8:16:24 AM



Reviewed By:



07/27/16

## 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  $\geq 0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

(&lt;2 or &gt;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	5.3	Good	Yes			









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

August 01, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1607F21

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/29/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607F21**Date Reported: **8/1/2016****CLIENT:** BP America**Client Sample ID:** TSP-95**Project:** GCU 216**Collection Date:** 7/28/2016 8:40:00 AM**Lab ID:** 1607F21-001**Matrix:** MEOH (SOIL)**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	75	10		mg/Kg	1	7/29/2016 12:30:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/29/2016 12:30:13 PM
Surr: DNOP	109	70-130		%Rec	1	7/29/2016 12:30:13 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.019		mg/Kg	1	7/29/2016 11:01:15 AM
Toluene	0.68	0.038		mg/Kg	1	7/29/2016 11:01:15 AM
Ethylbenzene	0.22	0.038		mg/Kg	1	7/29/2016 11:01:15 AM
Xylenes, Total	2.6	0.077		mg/Kg	1	7/29/2016 11:01:15 AM
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%Rec	1	7/29/2016 11:01:15 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	7/29/2016 11:01:15 AM
Surr: Dibromofluoromethane	84.9	70-130		%Rec	1	7/29/2016 11:01:15 AM
Surr: Toluene-d8	100	70-130		%Rec	1	7/29/2016 11:01:15 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	66	3.8		mg/Kg	1	7/29/2016 11:01:15 AM
Surr: BFB	83.2	70-130		%Rec	1	7/29/2016 11:01:15 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-96

**Project:** GCU 216

**Collection Date:** 7/28/2016 8:45:00 AM

**Lab ID:** 1607F21-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	68	9.6		mg/Kg	1	7/29/2016 12:52:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/29/2016 12:52:00 PM
Surr: DNOP	107	70-130		%Rec	1	7/29/2016 12:52:00 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	7/29/2016 11:29:55 AM
Toluene	0.14	0.039		mg/Kg	1	7/29/2016 11:29:55 AM
Ethylbenzene	0.11	0.039		mg/Kg	1	7/29/2016 11:29:55 AM
Xylenes, Total	1.2	0.079		mg/Kg	1	7/29/2016 11:29:55 AM
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	7/29/2016 11:29:55 AM
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	7/29/2016 11:29:55 AM
Surr: Dibromofluoromethane	91.3	70-130		%Rec	1	7/29/2016 11:29:55 AM
Surr: Toluene-d8	96.2	70-130		%Rec	1	7/29/2016 11:29:55 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	46	3.9		mg/Kg	1	7/29/2016 11:29:55 AM
Surr: BFB	86.8	70-130		%Rec	1	7/29/2016 11:29:55 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-97

**Project:** GCU 216

**Collection Date:** 7/28/2016 8:50:00 AM

**Lab ID:** 1607F21-003

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	39	9.6		mg/Kg	1	7/29/2016 1:13:48 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/29/2016 1:13:48 PM
Surr: DNOP	108	70-130		%Rec	1	7/29/2016 1:13:48 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	7/29/2016 11:58:42 AM
Toluene	ND	0.039		mg/Kg	1	7/29/2016 11:58:42 AM
Ethylbenzene	ND	0.039		mg/Kg	1	7/29/2016 11:58:42 AM
Xylenes, Total	0.52	0.078		mg/Kg	1	7/29/2016 11:58:42 AM
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%Rec	1	7/29/2016 11:58:42 AM
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	7/29/2016 11:58:42 AM
Surr: Dibromofluoromethane	90.3	70-130		%Rec	1	7/29/2016 11:58:42 AM
Surr: Toluene-d8	101	70-130		%Rec	1	7/29/2016 11:58:42 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	55	3.9		mg/Kg	1	7/29/2016 11:58:42 AM
Surr: BFB	90.8	70-130		%Rec	1	7/29/2016 11:58:42 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-98

**Project:** GCU 216

**Collection Date:** 7/28/2016 8:55:00 AM

**Lab ID:** 1607F21-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	78	9.8		mg/Kg	1	7/29/2016 1:35:22 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/29/2016 1:35:22 PM
Surr: DNOP	109	70-130		%Rec	1	7/29/2016 1:35:22 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.021		mg/Kg	1	7/29/2016 12:27:23 PM
Toluene	ND	0.042		mg/Kg	1	7/29/2016 12:27:23 PM
Ethylbenzene	ND	0.042		mg/Kg	1	7/29/2016 12:27:23 PM
Xylenes, Total	0.16	0.085		mg/Kg	1	7/29/2016 12:27:23 PM
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	1	7/29/2016 12:27:23 PM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	7/29/2016 12:27:23 PM
Surr: Dibromofluoromethane	99.6	70-130		%Rec	1	7/29/2016 12:27:23 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	7/29/2016 12:27:23 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	31	4.2		mg/Kg	1	7/29/2016 12:27:23 PM
Surr: BFB	84.8	70-130		%Rec	1	7/29/2016 12:27:23 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** B-E04@36'

**Project:** GCU 216

**Collection Date:** 7/28/2016 10:00:00 AM

**Lab ID:** 1607F21-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	17	10		mg/Kg	1	7/29/2016 1:57:05 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/29/2016 1:57:05 PM
Surr: DNOP	111	70-130		%Rec	1	7/29/2016 1:57:05 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.020		mg/Kg	1	7/29/2016 12:56:10 PM
Toluene	ND	0.040		mg/Kg	1	7/29/2016 12:56:10 PM
Ethylbenzene	ND	0.040		mg/Kg	1	7/29/2016 12:56:10 PM
Xylenes, Total	ND	0.080		mg/Kg	1	7/29/2016 12:56:10 PM
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%Rec	1	7/29/2016 12:56:10 PM
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	7/29/2016 12:56:10 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	1	7/29/2016 12:56:10 PM
Surr: Toluene-d8	96.0	70-130		%Rec	1	7/29/2016 12:56:10 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	7.0	4.0		mg/Kg	1	7/29/2016 12:56:10 PM
Surr: BFB	75.9	70-130		%Rec	1	7/29/2016 12:56:10 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** E-02@39'

**Project:** GCU 216

**Collection Date:** 7/28/2016 10:05:00 AM

**Lab ID:** 1607F21-006

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/29/2016 2:18:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/29/2016 2:18:44 PM
Surr: DNOP	111	70-130		%Rec	1	7/29/2016 2:18:44 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	ND	0.022		mg/Kg	1	7/29/2016 1:24:55 PM
Toluene	ND	0.043		mg/Kg	1	7/29/2016 1:24:55 PM
Ethylbenzene	ND	0.043		mg/Kg	1	7/29/2016 1:24:55 PM
Xylenes, Total	ND	0.087		mg/Kg	1	7/29/2016 1:24:55 PM
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	7/29/2016 1:24:55 PM
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	7/29/2016 1:24:55 PM
Surr: Dibromofluoromethane	107	70-130		%Rec	1	7/29/2016 1:24:55 PM
Surr: Toluene-d8	96.8	70-130		%Rec	1	7/29/2016 1:24:55 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	7/29/2016 1:24:55 PM
Surr: BFB	75.7	70-130		%Rec	1	7/29/2016 1:24:55 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607F21**

Date Reported: **8/1/2016**

**CLIENT:** BP America

**Client Sample ID:** E-03@36'

**Project:** GCU 216

**Collection Date:** 7/28/2016 10:10:00 AM

**Lab ID:** 1607F21-007

**Matrix:** MEOH (SOIL)

**Received Date:** 7/29/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	350	97		mg/Kg	10	7/29/2016 3:24:15 PM
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	7/29/2016 3:24:15 PM
Surr: DNOP	0	70-130	S	%Rec	10	7/29/2016 3:24:15 PM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>DJF</b>
Benzene	0.15	0.017		mg/Kg	1	7/29/2016 1:53:42 PM
Toluene	2.0	0.034		mg/Kg	1	7/29/2016 1:53:42 PM
Ethylbenzene	0.96	0.034		mg/Kg	1	7/29/2016 1:53:42 PM
Xylenes, Total	11	0.69		mg/Kg	10	7/29/2016 2:51:26 PM
Surr: 1,2-Dichloroethane-d4	69.2	70-130	S	%Rec	1	7/29/2016 1:53:42 PM
Surr: 4-Bromofluorobenzene	159	70-130	S	%Rec	1	7/29/2016 1:53:42 PM
Surr: Dibromofluoromethane	70.6	70-130		%Rec	1	7/29/2016 1:53:42 PM
Surr: Toluene-d8	105	70-130		%Rec	1	7/29/2016 1:53:42 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>DJF</b>
Gasoline Range Organics (GRO)	330	34		mg/Kg	10	7/29/2016 2:51:26 PM
Surr: BFB	85.6	70-130		%Rec	10	7/29/2016 2:51:26 PM

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

<b>Qualifiers:</b>	*	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#: 1607F21

01-Aug-16

Client: BP America

Project: GCU 216

Sample ID	MB-26674		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26674		RunNo: 36082					
Prep Date:	7/28/2016		Analysis Date: 7/29/2016		SeqNo: 1117403		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.2		10.00		91.7	70	130			

Sample ID	LCS-26683		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26683		RunNo: 36083					
Prep Date:	7/29/2016		Analysis Date: 7/29/2016		SeqNo: 1117593		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	71.7	62.6	124			
Surr: DNOP	4.5		5.000		89.7	70	130			

Sample ID	MB-26683	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26683			RunNo: 36083					
Prep Date:	7/29/2016	Analysis Date: 7/29/2016			SeqNo: 1117594		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.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607F21

01-Aug-16

Client: BP America

Project: GCU 216

Sample ID	mb-26581		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS		Batch ID: 26581		RunNo: 36100					
Prep Date:	7/25/2016		Analysis Date: 7/29/2016		SeqNo: 1118409		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: 1,2-Dichloroethane-d4	0.48		0.5000		96.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.9	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.47		0.5000		94.8	70	130			

Sample ID	lcs-26581		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS		Batch ID: 26581		RunNo: 36100					
Prep Date:	7/25/2016		Analysis Date: 7/29/2016		SeqNo: 1118410		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	102	70	130			
Toluene	0.96	0.050	1.000	0	95.8	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.9	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.51		0.5000		102	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#: 1607F21

01-Aug-16

Client: BP America

Project: GCU 216

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	G36100	RunNo:	36100					
Prep Date:		Analysis Date:	7/29/2016	SeqNo:	1118413	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	400		500.0		80.1	70	130			

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	G36100	RunNo:	36100					
Prep Date:		Analysis Date:	7/29/2016	SeqNo:	1118415	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.8	62.9	123			
Surr: BFB	380		500.0		75.2	70	130			

Sample ID	1607f21-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-95	Batch ID:	G36100	RunNo:	36100					
Prep Date:		Analysis Date:	7/29/2016	SeqNo:	1118417	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	90	3.8	19.23	65.70	126	52.3	132			
Surr: BFB	350		384.6		90.4	70	130			

Sample ID	1607f21-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-95	Batch ID:	G36100	RunNo:	36100					
Prep Date:		Analysis Date:	7/29/2016	SeqNo:	1118418	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	85	3.8	19.23	65.70	100	52.3	132	5.76	20	
Surr: BFB	350		384.6		91.0	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  
R RPD outside accepted recovery limits  
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: BP AMERICA-Farmington

Work Order Number: 1607F21

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

7/29/2016 7:30:00 AM

Completed By: Lindsay Mangin

7/29/2016 7:53:22 AM

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.2	Good	Yes			



# Chain-of-Custody Record

ient: BP-Lower 48

ailing Address:

hone #: 505-326-2497 701-570-4727

nail or Fax#: steven.moskal@bp.com

QC Package: aburns@itenv.com

'Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other

EDD (Type) PDF

Date Time Matrix Sample Request ID

28/16 0840 SS TSP-95

0845 TSP-96

0850 TSP-97

0855 TSP-98

1006 B-E04 @36'

1005 E-02 @39'

1010 E-03 @36'

Turn-Around Time:

same

☐ Standard

☒ Rush

day

Project Name:

GCU #216

Project #:

Project Manager:

BP-Steve Moskal

LTE-Danny Burns

Sampler: D Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.2-1.0 C = 3.2

Container Type and #

402

Preservative Type

NA

HEAL No.

1607F21

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

TPH 8015B (GRO/DRO/MRO)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

August 03, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1608068

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/2/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-95R

Project: GCU 216

Collection Date: 8/1/2016 9:00:00 AM

Lab ID: 1608068-001

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	58	9.4		mg/Kg	1	8/2/2016 10:32:49 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/2/2016 10:32:49 AM
Surr: DNOP	99.2	70-130		%Rec	1	8/2/2016 10:32:49 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	8/2/2016 9:34:38 AM
Surr: BFB	102	49.4-163		%Rec	5	8/2/2016 9:34:38 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.10		mg/Kg	5	8/2/2016 9:34:38 AM
Toluene	ND	0.20		mg/Kg	5	8/2/2016 9:34:38 AM
Ethylbenzene	ND	0.20		mg/Kg	5	8/2/2016 9:34:38 AM
Xylenes, Total	ND	0.41		mg/Kg	5	8/2/2016 9:34:38 AM
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	5	8/2/2016 9:34:38 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-99

Project: GCU 216

Collection Date: 8/1/2016 9:05:00 AM

Lab ID: 1608068-002

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	47	9.7		mg/Kg	1	8/2/2016 10:54:27 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/2/2016 10:54:27 AM
Surr: DNOP	97.4	70-130		%Rec	1	8/2/2016 10:54:27 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	29	4.4		mg/Kg	1	8/2/2016 9:58:05 AM
Surr: BFB	225	49.4-163	S	%Rec	1	8/2/2016 9:58:05 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	8/2/2016 9:58:05 AM
Toluene	ND	0.044		mg/Kg	1	8/2/2016 9:58:05 AM
Ethylbenzene	ND	0.044		mg/Kg	1	8/2/2016 9:58:05 AM
Xylenes, Total	0.27	0.088		mg/Kg	1	8/2/2016 9:58:05 AM
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	8/2/2016 9:58:05 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608068**

Date Reported: **8/3/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-100

**Project:** GCU 216

**Collection Date:** 8/1/2016 9:10:00 AM

**Lab ID:** 1608068-003

**Matrix:** MEOH (SOIL)

**Received Date:** 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	55	9.8		mg/Kg	1	8/2/2016 11:21:17 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/2/2016 11:21:17 AM
Surr: DNOP	96.8	70-130		%Rec	1	8/2/2016 11:21:17 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	8/2/2016 10:21:30 AM
Surr: BFB	118	49.4-163		%Rec	5	8/2/2016 10:21:30 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.11		mg/Kg	5	8/2/2016 10:21:30 AM
Toluene	ND	0.21		mg/Kg	5	8/2/2016 10:21:30 AM
Ethylbenzene	ND	0.21		mg/Kg	5	8/2/2016 10:21:30 AM
Xylenes, Total	ND	0.43		mg/Kg	5	8/2/2016 10:21:30 AM
Surr: 4-Bromofluorobenzene	97.4	80-120		%Rec	5	8/2/2016 10:21:30 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-101

Project: GCU 216

Collection Date: 8/1/2016 9:15:00 AM

Lab ID: 1608068-004

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	36	9.4		mg/Kg	1	8/2/2016 11:43:01 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/2/2016 11:43:01 AM
Surr: DNOP	97.6	70-130		%Rec	1	8/2/2016 11:43:01 AM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	8/2/2016 10:45:06 AM
Surr: BFB	109	49.4-163		%Rec	1	8/2/2016 10:45:06 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	8/2/2016 10:45:06 AM
Toluene	ND	0.042		mg/Kg	1	8/2/2016 10:45:06 AM
Ethylbenzene	ND	0.042		mg/Kg	1	8/2/2016 10:45:06 AM
Xylenes, Total	ND	0.085		mg/Kg	1	8/2/2016 10:45:06 AM
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	8/2/2016 10:45:06 AM

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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-102

Project: GCU 216

Collection Date: 8/1/2016 9:20:00 AM

Lab ID: 1608068-005

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	85	9.9		mg/Kg	1	8/2/2016 12:04:41 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/2/2016 12:04:41 PM
Surr: DNOP	98.7	70-130		%Rec	1	8/2/2016 12:04:41 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	48	4.1		mg/Kg	1	8/2/2016 11:08:41 AM
Surr: BFB	355	49.4-163	S	%Rec	1	8/2/2016 11:08:41 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	8/2/2016 11:08:41 AM
Toluene	ND	0.041		mg/Kg	1	8/2/2016 11:08:41 AM
Ethylbenzene	ND	0.041		mg/Kg	1	8/2/2016 11:08:41 AM
Xylenes, Total	0.46	0.082		mg/Kg	1	8/2/2016 11:08:41 AM
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	8/2/2016 11:08:41 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-103

Project: GCU 216

Collection Date: 8/1/2016 9:25:00 AM

Lab ID: 1608068-006

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	67	9.8		mg/Kg	1	8/2/2016 12:26:26 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/2/2016 12:26:26 PM
Surr: DNOP	96.9	70-130		%Rec	1	8/2/2016 12:26:26 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/2/2016 11:32:17 AM
Surr: BFB	113	49.4-163		%Rec	1	8/2/2016 11:32:17 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	8/2/2016 11:32:17 AM
Toluene	ND	0.040		mg/Kg	1	8/2/2016 11:32:17 AM
Ethylbenzene	ND	0.040		mg/Kg	1	8/2/2016 11:32:17 AM
Xylenes, Total	ND	0.080		mg/Kg	1	8/2/2016 11:32:17 AM
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	8/2/2016 11:32:17 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-104

Project: GCU 216

Collection Date: 8/1/2016 9:30:00 AM

Lab ID: 1608068-007

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	120	10		mg/Kg	1	8/2/2016 12:48:06 PM
Motor Oil Range Organics (MRO)	63	50		mg/Kg	1	8/2/2016 12:48:06 PM
Surr: DNOP	97.1	70-130		%Rec	1	8/2/2016 12:48:06 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	7.9	3.7		mg/Kg	1	8/2/2016 11:55:48 AM
Surr: BFB	156	49.4-163		%Rec	1	8/2/2016 11:55:48 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	8/2/2016 11:55:48 AM
Toluene	ND	0.037		mg/Kg	1	8/2/2016 11:55:48 AM
Ethylbenzene	ND	0.037		mg/Kg	1	8/2/2016 11:55:48 AM
Xylenes, Total	ND	0.074		mg/Kg	1	8/2/2016 11:55:48 AM
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	8/2/2016 11:55:48 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608068**

Date Reported: **8/3/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-105

**Project:** GCU 216

**Collection Date:** 8/1/2016 9:35:00 AM

**Lab ID:** 1608068-008

**Matrix:** MEOH (SOIL)

**Received Date:** 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	120	9.7		mg/Kg	1	8/2/2016 1:09:49 PM
Motor Oil Range Organics (MRO)	62	49		mg/Kg	1	8/2/2016 1:09:49 PM
Surr: DNOP	98.7	70-130		%Rec	1	8/2/2016 1:09:49 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	55	4.4		mg/Kg	1	8/2/2016 10:27:56 AM
Surr: BFB	296	49.4-163	S	%Rec	1	8/2/2016 10:27:56 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	8/2/2016 10:27:56 AM
Toluene	ND	0.044		mg/Kg	1	8/2/2016 10:27:56 AM
Ethylbenzene	0.16	0.044		mg/Kg	1	8/2/2016 10:27:56 AM
Xylenes, Total	0.97	0.087		mg/Kg	1	8/2/2016 10:27:56 AM
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	1	8/2/2016 10:27:56 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608068

Date Reported: 8/3/2016

CLIENT: BP America

Client Sample ID: TSP-106

Project: GCU 216

Collection Date: 8/1/2016 9:40:00 AM

Lab ID: 1608068-009

Matrix: MEOH (SOIL)

Received Date: 8/2/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: KJH
Diesel Range Organics (DRO)	160	9.6		mg/Kg	1	8/2/2016 1:31:31 PM
Motor Oil Range Organics (MRO)	78	48		mg/Kg	1	8/2/2016 1:31:31 PM
Surr: DNOP	98.9	70-130		%Rec	1	8/2/2016 1:31:31 PM
<b>EPA METHOD 8015D: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	8.5	4.1		mg/Kg	1	8/2/2016 10:52:21 AM
Surr: BFB	139	49.4-163		%Rec	1	8/2/2016 10:52:21 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	8/2/2016 10:52:21 AM
Toluene	ND	0.041		mg/Kg	1	8/2/2016 10:52:21 AM
Ethylbenzene	ND	0.041		mg/Kg	1	8/2/2016 10:52:21 AM
Xylenes, Total	ND	0.082		mg/Kg	1	8/2/2016 10:52:21 AM
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	8/2/2016 10:52:21 AM

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

<b>Qualifiers:</b>	*	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#: 1608068

03-Aug-16

Client: BP America

Project: GCU 216

Sample ID	LCS-26738		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26738		RunNo: 36150					
Prep Date:	8/2/2016		Analysis Date: 8/2/2016		SeqNo: 1119608		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	74.6	62.6	124			
Surr: DNOP	4.7		5.000		94.4	70	130			

Sample ID	MB-26738		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26738		RunNo: 36150					
Prep Date:	8/2/2016		Analysis Date: 8/2/2016		SeqNo: 1119609		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	9.1		10.00		91.3	70	130			

Sample ID	1608068-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-95R		Batch ID: 26738		RunNo: 36151					
Prep Date:	8/2/2016		Analysis Date: 8/2/2016		SeqNo: 1120054		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.1	45.75	57.89	96.3	33.9	141			
Surr: DNOP	4.4		4.575		95.3	70	130			

Sample ID	1608068-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-95R		Batch ID:	26738		RunNo:	36151				
Prep Date:	8/2/2016		Analysis Date:	8/2/2016		SeqNo:	1120055		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	99	9.5	47.62	57.89	86.9	33.9	141	2.67	20		
Surr: DNOP	4.6		4.762		97.6	70	130	0	0		

Sample ID	LCS-26722		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26722		RunNo: 36150					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120062		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	70	130			

Sample ID	MB-26722		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26722		RunNo: 36150					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120065		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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  
R RPD outside accepted recovery limits  
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#: 1608068

03-Aug-16

Client: BP America

Project: GCU 216

Sample ID	MB-26722		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26722		RunNo: 36150					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120065		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.2	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  
R RPD outside accepted recovery limits  
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#: 1608068

03-Aug-16

Client: BP America

Project: GCU 216

Sample ID	MB-26719		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26719		RunNo: 36163					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120116		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	920		1000		92.0	49.4	163			

Sample ID	LCS-26719		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26719		RunNo: 36163					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120117		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	95.9	80	120			
Surr: BFB	920		1000		91.8	49.4	163			

Sample ID	MB-26718		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26718		RunNo: 36162					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120148		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	960		1000		95.9	49.4	163			

Sample ID	LCS-26718		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26718		RunNo: 36162					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120149		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	104	80	120			
Surr: BFB	1100		1000		106	49.4	163			

### 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  
R RPD outside accepted recovery limits  
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#: 1608068

03-Aug-16

Client: BP America

Project: GCU 216

Sample ID	MB-26719		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26719		RunNo: 36163					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120136		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	1.2		1.000		119	80	120			

Sample ID	LCS-26719			SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS			Batch ID:	26719		RunNo:	36163			
Prep Date:	8/1/2016			Analysis Date:	8/2/2016		SeqNo:	1120137		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.98	0.025	1.000	0	98.1	75.3	123				
Toluene	0.95	0.050	1.000	0	94.8	80	124				
Ethylbenzene	0.97	0.050	1.000	0	97.3	82.8	121				
Xylenes, Total	2.8	0.10	3.000	0	94.1	83.9	122				
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120				

Sample ID	MB-26718		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26718		RunNo: 36162					
Prep Date:	8/1/2016		Analysis Date: 8/2/2016		SeqNo: 1120176		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	0.90		1.000		90.2	80	120			

Sample ID	LCS-26718			SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS			Batch ID:	26718		RunNo:	36162			
Prep Date:	8/1/2016			Analysis Date:	8/2/2016		SeqNo:	1120177		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	95.4	75.3	123				
Toluene	0.96	0.050	1.000	0	95.7	80	124				
Ethylbenzene	1.0	0.050	1.000	0	99.9	82.8	121				
Xylenes, Total	2.9	0.10	3.000	0	97.6	83.9	122				
Surr: 4-Bromofluorobenzene	0.96		1.000		95.9	80	120				

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: BP AMERICA-Farmington

Work Order Number: 1608068

RcptNo: 1

Received by/date:

Logged By:

Lindsay Mangin

8/2/2016 7:00:00 AM

Completed By:

Lindsay Mangin

8/2/2016 7:46:18 AM

Reviewed By:

AS

08/02/16

## 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:

(&lt;2 or &gt;12 unless noted)

Adjusted?

Checked by:

## Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			









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

August 09, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1608400

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/6/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1608400**

Date Reported: **8/9/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-104R

**Project:** GCU #216

**Collection Date:** 8/5/2016 9:00:00 AM

**Lab ID:** 1608400-001

**Matrix:** MEOH (SOIL)

**Received Date:** 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	39	9.8		mg/Kg	1	8/8/2016 10:01:22 AM	26824
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2016 10:01:22 AM	26824
Surr: DNOP	109	70-130		%Rec	1	8/8/2016 10:01:22 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	33	3.7		mg/Kg	1	8/8/2016 11:32:25 AM	26818
Surr: BFB	331	49.4-163	S	%Rec	1	8/8/2016 11:32:25 AM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	8/8/2016 11:32:25 AM	26818
Toluene	ND	0.037		mg/Kg	1	8/8/2016 11:32:25 AM	26818
Ethylbenzene	ND	0.037		mg/Kg	1	8/8/2016 11:32:25 AM	26818
Xylenes, Total	0.25	0.073		mg/Kg	1	8/8/2016 11:32:25 AM	26818
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	8/8/2016 11:32:25 AM	26818

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: TSP-105R

Project: GCU #216

Collection Date: 8/5/2016 9:05:00 AM

Lab ID: 1608400-002

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	90	9.3		mg/Kg	1	8/8/2016 10:23:08 AM	26824
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2016 10:23:08 AM	26824
Surr: DNOP	104	70-130		%Rec	1	8/8/2016 10:23:08 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	36	4.3		mg/Kg	1	8/8/2016 11:56:08 AM	26818
Surr: BFB	316	49.4-163	S	%Rec	1	8/8/2016 11:56:08 AM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	8/8/2016 11:56:08 AM	26818
Toluene	ND	0.043		mg/Kg	1	8/8/2016 11:56:08 AM	26818
Ethylbenzene	ND	0.043		mg/Kg	1	8/8/2016 11:56:08 AM	26818
Xylenes, Total	0.21	0.086		mg/Kg	1	8/8/2016 11:56:08 AM	26818
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	1	8/8/2016 11:56:08 AM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608400**

Date Reported: **8/9/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-106R

**Project:** GCU #216

**Collection Date:** 8/5/2016 9:10:00 AM

**Lab ID:** 1608400-003

**Matrix:** MEOH (SOIL)

**Received Date:** 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	100	9.2		mg/Kg	1	8/8/2016 10:44:53 AM	26824
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2016 10:44:53 AM	26824
Surr: DNOP	109	70-130		%Rec	1	8/8/2016 10:44:53 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	68	4.2		mg/Kg	1	8/8/2016 12:19:41 PM	26818
Surr: BFB	471	49.4-163	S	%Rec	1	8/8/2016 12:19:41 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	8/8/2016 12:19:41 PM	26818
Toluene	ND	0.042		mg/Kg	1	8/8/2016 12:19:41 PM	26818
Ethylbenzene	ND	0.042		mg/Kg	1	8/8/2016 12:19:41 PM	26818
Xylenes, Total	0.47	0.084		mg/Kg	1	8/8/2016 12:19:41 PM	26818
Surr: 4-Bromofluorobenzene	125	80-120	S	%Rec	1	8/8/2016 12:19:41 PM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: TSP-107

Project: GCU #216

Collection Date: 8/5/2016 9:15:00 AM

Lab ID: 1608400-004

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	82	9.8		mg/Kg	1	8/8/2016 11:07:00 AM	26824
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2016 11:07:00 AM	26824
Surr: DNOP	105	70-130		%Rec	1	8/8/2016 11:07:00 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	18	4.8		mg/Kg	1	8/8/2016 12:43:14 PM	26818
Surr: BFB	221	49.4-163	S	%Rec	1	8/8/2016 12:43:14 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/8/2016 12:43:14 PM	26818
Toluene	ND	0.048		mg/Kg	1	8/8/2016 12:43:14 PM	26818
Ethylbenzene	ND	0.048		mg/Kg	1	8/8/2016 12:43:14 PM	26818
Xylenes, Total	0.098	0.097		mg/Kg	1	8/8/2016 12:43:14 PM	26818
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	8/8/2016 12:43:14 PM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-108

**Project:** GCU #216

**Collection Date:** 8/5/2016 9:20:00 AM

**Lab ID:** 1608400-005

**Matrix:** MEOH (SOIL)

**Received Date:** 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	66	9.9		mg/Kg	1	8/8/2016 11:27:50 AM	26824
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2016 11:27:50 AM	26824
Surr: DNOP	92.3	70-130		%Rec	1	8/8/2016 11:27:50 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	17	4.0		mg/Kg	1	8/8/2016 1:06:51 PM	26818
Surr: BFB	223	49.4-163	S	%Rec	1	8/8/2016 1:06:51 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	8/8/2016 1:06:51 PM	26818
Toluene	ND	0.040		mg/Kg	1	8/8/2016 1:06:51 PM	26818
Ethylbenzene	ND	0.040		mg/Kg	1	8/8/2016 1:06:51 PM	26818
Xylenes, Total	ND	0.081		mg/Kg	1	8/8/2016 1:06:51 PM	26818
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	8/8/2016 1:06:51 PM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: B-E05@39'

Project: GCU #216

Collection Date: 8/5/2016 10:00:00 AM

Lab ID: 1608400-006

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	27	9.7		mg/Kg	1	8/8/2016 11:49:39 AM	26824
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2016 11:49:39 AM	26824
Surr: DNOP	90.9	70-130		%Rec	1	8/8/2016 11:49:39 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	8/8/2016 10:45:32 AM	26818
Surr: BFB	127	49.4-163		%Rec	5	8/8/2016 10:45:32 AM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.096		mg/Kg	5	8/8/2016 10:45:32 AM	26818
Toluene	ND	0.19		mg/Kg	5	8/8/2016 10:45:32 AM	26818
Ethylbenzene	ND	0.19		mg/Kg	5	8/8/2016 10:45:32 AM	26818
Xylenes, Total	ND	0.39		mg/Kg	5	8/8/2016 10:45:32 AM	26818
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	5	8/8/2016 10:45:32 AM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: B-C05@39'

Project: GCU #216

Collection Date: 8/5/2016 10:05:00 AM

Lab ID: 1608400-007

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	74	9.3		mg/Kg	1	8/8/2016 12:11:17 PM	26824
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2016 12:11:17 PM	26824
Surr: DNOP	93.2	70-130		%Rec	1	8/8/2016 12:11:17 PM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	36	20		mg/Kg	5	8/8/2016 11:08:58 AM	26818
Surr: BFB	157	49.4-163		%Rec	5	8/8/2016 11:08:58 AM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.098		mg/Kg	5	8/8/2016 11:08:58 AM	26818
Toluene	ND	0.20		mg/Kg	5	8/8/2016 11:08:58 AM	26818
Ethylbenzene	ND	0.20		mg/Kg	5	8/8/2016 11:08:58 AM	26818
Xylenes, Total	ND	0.39		mg/Kg	5	8/8/2016 11:08:58 AM	26818
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	5	8/8/2016 11:08:58 AM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: E-04@39'

Project: GCU #216

Collection Date: 8/5/2016 10:10:00 AM

Lab ID: 1608400-008

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	32	9.7		mg/Kg	1	8/8/2016 11:28:59 AM	26824
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2016 11:28:59 AM	26824
Surr: DNOP	108	70-130		%Rec	1	8/8/2016 11:28:59 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	7.5	4.0		mg/Kg	1	8/8/2016 1:30:26 PM	26818
Surr: BFB	164	49.4-163	S	%Rec	1	8/8/2016 1:30:26 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	8/8/2016 1:30:26 PM	26818
Toluene	ND	0.040		mg/Kg	1	8/8/2016 1:30:26 PM	26818
Ethylbenzene	ND	0.040		mg/Kg	1	8/8/2016 1:30:26 PM	26818
Xylenes, Total	0.11	0.079		mg/Kg	1	8/8/2016 1:30:26 PM	26818
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	8/8/2016 1:30:26 PM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

CLIENT: BP America

Client Sample ID: E-05@39'

Project: GCU #216

Collection Date: 8/5/2016 10:15:00 AM

Lab ID: 1608400-009

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/8/2016 11:50:54 AM	26824
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2016 11:50:54 AM	26824
Surr: DNOP	105	70-130		%Rec	1	8/8/2016 11:50:54 AM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/8/2016 1:54:00 PM	26818
Surr: BFB	110	49.4-163		%Rec	1	8/8/2016 1:54:00 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	8/8/2016 1:54:00 PM	26818
Toluene	ND	0.039		mg/Kg	1	8/8/2016 1:54:00 PM	26818
Ethylbenzene	ND	0.039		mg/Kg	1	8/8/2016 1:54:00 PM	26818
Xylenes, Total	ND	0.078		mg/Kg	1	8/8/2016 1:54:00 PM	26818
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	8/8/2016 1:54:00 PM	26818

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608400

Date Reported: 8/9/2016

**CLIENT:** BP America

**Client Sample ID:** E-06@39'

**Project:** GCU #216

**Collection Date:** 8/5/2016 10:20:00 AM

**Lab ID:** 1608400-010

**Matrix:** MEOH (SOIL)

**Received Date:** 8/6/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/8/2016 12:12:41 PM	26824
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2016 12:12:41 PM	26824
Surr: DNOP	106	70-130		%Rec	1	8/8/2016 12:12:41 PM	26824
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/8/2016 2:17:31 PM	26818
Surr: BFB	110	49.4-163		%Rec	1	8/8/2016 2:17:31 PM	26818
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	8/8/2016 2:17:31 PM	26818
Toluene	ND	0.039		mg/Kg	1	8/8/2016 2:17:31 PM	26818
Ethylbenzene	ND	0.039		mg/Kg	1	8/8/2016 2:17:31 PM	26818
Xylenes, Total	ND	0.079		mg/Kg	1	8/8/2016 2:17:31 PM	26818
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	8/8/2016 2:17:31 PM	26818

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

<b>Qualifiers:</b>	*	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#: 1608400

09-Aug-16

Client: BP America

Project: GCU #216

Sample ID	MB-26824	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 26824			RunNo: 36290					
Prep Date:	8/8/2016	Analysis Date: 8/8/2016			SeqNo: 1124202		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	8.7		10.00		86.6	70	130			

Sample ID	LCS-26824		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26824		RunNo: 36290					
Prep Date:	8/8/2016		Analysis Date: 8/8/2016		SeqNo: 1124203		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.6	62.6	124			
Surr: DNOP	4.1		5.000		81.9	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  
R RPD outside accepted recovery limits  
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#: 1608400

09-Aug-16

Client: BP America

Project: GCU #216

Sample ID	MB-26818		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	26818		RunNo:	36301				
Prep Date:	8/5/2016		Analysis Date:	8/8/2016		SeqNo:	1124720		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	1100		1000		105	49.4	163				

Sample ID	LCS-26818		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26818		RunNo: 36301					
Prep Date:	8/5/2016		Analysis Date: 8/8/2016		SeqNo: 1124721		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	80	120			
Surr: BFB	1200		1000		119	49.4	163			

### 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  
R RPD outside accepted recovery limits  
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#: 1608400

09-Aug-16

Client: BP America

Project: GCU #216

Sample ID	MB-26818		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26818		RunNo: 36301					
Prep Date:	8/5/2016		Analysis Date: 8/8/2016		SeqNo: 1124736		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	1.0		1.000		99.5	80	120			

Sample ID	LCS-26818			SampType:	LCS			TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS			Batch ID:	26818			RunNo:	36301					
Prep Date:	8/5/2016			Analysis Date:	8/8/2016			SeqNo:	1124737			Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	0.96	0.025	1.000	0	96.2	75.3	123							
Toluene	1.0	0.050	1.000	0	102	80	124							
Ethylbenzene	1.1	0.050	1.000	0	109	82.8	121							
Xylenes, Total	3.2	0.10	3.000	0	106	83.9	122							
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120							

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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: BP AMERICA-Farmington

Work Order Number: 1608400

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

8/6/2016 7:45:00 AM

Completed By: Lindsay Mangin

8/6/2016 12:16:12 PM

Reviewed By: AS 08/08/16

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			









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

August 16, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1608806

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 13 sample(s) on 8/13/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1608806**Date Reported: **8/16/2016****CLIENT:** BP America**Client Sample ID:** TSP-112**Project:** GCU #216**Collection Date:** 8/12/2016 9:15:00 AM**Lab ID:** 1608806-001**Matrix:** MEOH (SOIL)**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	140	10		mg/Kg	1	8/15/2016 10:05:13 AM
Motor Oil Range Organics (MRO)	62	50		mg/Kg	1	8/15/2016 10:05:13 AM
Surr: DNOP	95.2	70-130		%Rec	1	8/15/2016 10:05:13 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.10		mg/Kg	5	8/13/2016 6:41:12 PM
Toluene	ND	0.10		mg/Kg	5	8/13/2016 6:41:12 PM
Ethylbenzene	ND	0.10		mg/Kg	5	8/13/2016 6:41:12 PM
Xylenes, Total	ND	0.20		mg/Kg	5	8/13/2016 6:41:12 PM
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	5	8/13/2016 6:41:12 PM
Surr: 4-Bromofluorobenzene	82.9	70-130		%Rec	5	8/13/2016 6:41:12 PM
Surr: Dibromofluoromethane	95.8	70-130		%Rec	5	8/13/2016 6:41:12 PM
Surr: Toluene-d8	99.8	70-130		%Rec	5	8/13/2016 6:41:12 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	8/13/2016 6:41:12 PM
Surr: BFB	98.4	70-130		%Rec	5	8/13/2016 6:41:12 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608806

Date Reported: 8/16/2016

CLIENT: BP America

Client Sample ID: TSP-113

Project: GCU #216

Collection Date: 8/12/2016 9:20:00 AM

Lab ID: 1608806-002

Matrix: MEOH (SOIL)

Received Date: 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: TOM
Diesel Range Organics (DRO)	130	9.9		mg/Kg	1	8/15/2016 10:26:51 AM
Motor Oil Range Organics (MRO)	64	50		mg/Kg	1	8/15/2016 10:26:51 AM
Surr: DNOP	91.6	70-130		%Rec	1	8/15/2016 10:26:51 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: RAA
Benzene	ND	0.097		mg/Kg	5	8/13/2016 7:09:56 PM
Toluene	ND	0.097		mg/Kg	5	8/13/2016 7:09:56 PM
Ethylbenzene	ND	0.097		mg/Kg	5	8/13/2016 7:09:56 PM
Xylenes, Total	ND	0.19		mg/Kg	5	8/13/2016 7:09:56 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	5	8/13/2016 7:09:56 PM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	5	8/13/2016 7:09:56 PM
Surr: Dibromofluoromethane	101	70-130		%Rec	5	8/13/2016 7:09:56 PM
Surr: Toluene-d8	98.6	70-130		%Rec	5	8/13/2016 7:09:56 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	8/13/2016 7:09:56 PM
Surr: BFB	100	70-130		%Rec	5	8/13/2016 7:09:56 PM

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.

## Analytical Report

Lab Order **1608806**Date Reported: **8/16/2016****CLIENT:** BP America**Client Sample ID:** TSP-114**Project:** GCU #216**Collection Date:** 8/12/2016 9:25:00 AM**Lab ID:** 1608806-003**Matrix:** MEOH (SOIL)**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	160	9.4		mg/Kg	1	8/15/2016 10:48:31 AM
Motor Oil Range Organics (MRO)	67	47		mg/Kg	1	8/15/2016 10:48:31 AM
Surr: DNOP	94.0	70-130		%Rec	1	8/15/2016 10:48:31 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.11		mg/Kg	5	8/14/2016 2:27:13 PM
Toluene	ND	0.11		mg/Kg	5	8/14/2016 2:27:13 PM
Ethylbenzene	ND	0.11		mg/Kg	5	8/14/2016 2:27:13 PM
Xylenes, Total	ND	0.22		mg/Kg	5	8/14/2016 2:27:13 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	5	8/14/2016 2:27:13 PM
Surr: 4-Bromofluorobenzene	88.3	70-130		%Rec	5	8/14/2016 2:27:13 PM
Surr: Dibromofluoromethane	98.2	70-130		%Rec	5	8/14/2016 2:27:13 PM
Surr: Toluene-d8	98.2	70-130		%Rec	5	8/14/2016 2:27:13 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	55	22		mg/Kg	5	8/14/2016 2:27:13 PM
Surr: BFB	100	70-130		%Rec	5	8/14/2016 2:27:13 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-115

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:30:00 AM

**Lab ID:** 1608806-004

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	150	10		mg/Kg	1	8/15/2016 9:29:58 AM
Motor Oil Range Organics (MRO)	51	50		mg/Kg	1	8/15/2016 9:29:58 AM
Surr: DNOP	86.5	70-130		%Rec	1	8/15/2016 9:29:58 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.099		mg/Kg	5	8/14/2016 2:56:00 PM
Toluene	ND	0.099		mg/Kg	5	8/14/2016 2:56:00 PM
Ethylbenzene	ND	0.099		mg/Kg	5	8/14/2016 2:56:00 PM
Xylenes, Total	0.87	0.20		mg/Kg	5	8/14/2016 2:56:00 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	5	8/14/2016 2:56:00 PM
Surr: 4-Bromofluorobenzene	80.6	70-130		%Rec	5	8/14/2016 2:56:00 PM
Surr: Dibromofluoromethane	99.0	70-130		%Rec	5	8/14/2016 2:56:00 PM
Surr: Toluene-d8	98.6	70-130		%Rec	5	8/14/2016 2:56:00 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	75	20		mg/Kg	5	8/14/2016 2:56:00 PM
Surr: BFB	99.8	70-130		%Rec	5	8/14/2016 2:56:00 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-116

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:35:00 AM

**Lab ID:** 1608806-005

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	140	9.8		mg/Kg	1	8/15/2016 9:51:49 AM
Motor Oil Range Organics (MRO)	52	49		mg/Kg	1	8/15/2016 9:51:49 AM
Surr: DNOP	89.3	70-130		%Rec	1	8/15/2016 9:51:49 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.10		mg/Kg	5	8/13/2016 8:36:15 PM
Toluene	ND	0.10		mg/Kg	5	8/13/2016 8:36:15 PM
Ethylbenzene	ND	0.10		mg/Kg	5	8/13/2016 8:36:15 PM
Xylenes, Total	0.26	0.21		mg/Kg	5	8/13/2016 8:36:15 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	5	8/13/2016 8:36:15 PM
Surr: 4-Bromofluorobenzene	82.8	70-130		%Rec	5	8/13/2016 8:36:15 PM
Surr: Dibromofluoromethane	96.3	70-130		%Rec	5	8/13/2016 8:36:15 PM
Surr: Toluene-d8	99.3	70-130		%Rec	5	8/13/2016 8:36:15 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	56	21		mg/Kg	5	8/13/2016 8:36:15 PM
Surr: BFB	102	70-130		%Rec	5	8/13/2016 8:36:15 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-117

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:40:00 AM

**Lab ID:** 1608806-006

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	130	9.7		mg/Kg	1	8/15/2016 10:13:48 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2016 10:13:48 AM
Surr: DNOP	89.5	70-130		%Rec	1	8/15/2016 10:13:48 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.11		mg/Kg	5	8/13/2016 9:04:55 PM
Toluene	ND	0.11		mg/Kg	5	8/13/2016 9:04:55 PM
Ethylbenzene	ND	0.11		mg/Kg	5	8/13/2016 9:04:55 PM
Xylenes, Total	ND	0.22		mg/Kg	5	8/13/2016 9:04:55 PM
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	5	8/13/2016 9:04:55 PM
Surr: 4-Bromofluorobenzene	82.7	70-130		%Rec	5	8/13/2016 9:04:55 PM
Surr: Dibromofluoromethane	97.1	70-130		%Rec	5	8/13/2016 9:04:55 PM
Surr: Toluene-d8	100	70-130		%Rec	5	8/13/2016 9:04:55 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	28	22		mg/Kg	5	8/13/2016 9:04:55 PM
Surr: BFB	101	70-130		%Rec	5	8/13/2016 9:04:55 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-118

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:45:00 AM

**Lab ID:** 1608806-007

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	160	9.8		mg/Kg	1	8/15/2016 10:35:37 AM
Motor Oil Range Organics (MRO)	60	49		mg/Kg	1	8/15/2016 10:35:37 AM
Surr: DNOP	88.3	70-130		%Rec	1	8/15/2016 10:35:37 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.040		mg/Kg	2	8/13/2016 10:02:34 PM
Toluene	ND	0.040		mg/Kg	2	8/13/2016 10:02:34 PM
Ethylbenzene	ND	0.040		mg/Kg	2	8/13/2016 10:02:34 PM
Xylenes, Total	ND	0.080		mg/Kg	2	8/13/2016 10:02:34 PM
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	2	8/13/2016 10:02:34 PM
Surr: 4-Bromofluorobenzene	79.2	70-130		%Rec	2	8/13/2016 10:02:34 PM
Surr: Dibromofluoromethane	98.7	70-130		%Rec	2	8/13/2016 10:02:34 PM
Surr: Toluene-d8	98.0	70-130		%Rec	2	8/13/2016 10:02:34 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	21	8.0		mg/Kg	2	8/13/2016 10:02:34 PM
Surr: BFB	102	70-130		%Rec	2	8/13/2016 10:02:34 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-119

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:50:00 AM

**Lab ID:** 1608806-008

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	98	10		mg/Kg	1	8/15/2016 10:57:28 AM
Motor Oil Range Organics (MRO)	51	50		mg/Kg	1	8/15/2016 10:57:28 AM
Surr: DNOP	92.5	70-130		%Rec	1	8/15/2016 10:57:28 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.10		mg/Kg	5	8/13/2016 10:31:18 PM
Toluene	ND	0.10		mg/Kg	5	8/13/2016 10:31:18 PM
Ethylbenzene	ND	0.10		mg/Kg	5	8/13/2016 10:31:18 PM
Xylenes, Total	0.29	0.21		mg/Kg	5	8/13/2016 10:31:18 PM
Surr: 1,2-Dichloroethane-d4	95.5	70-130		%Rec	5	8/13/2016 10:31:18 PM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	5	8/13/2016 10:31:18 PM
Surr: Dibromofluoromethane	92.7	70-130		%Rec	5	8/13/2016 10:31:18 PM
Surr: Toluene-d8	100	70-130		%Rec	5	8/13/2016 10:31:18 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	26	21		mg/Kg	5	8/13/2016 10:31:18 PM
Surr: BFB	102	70-130		%Rec	5	8/13/2016 10:31:18 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-120

**Project:** GCU #216

**Collection Date:** 8/12/2016 9:55:00 AM

**Lab ID:** 1608806-009

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	99	9.5		mg/Kg	1	8/15/2016 11:19:12 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/15/2016 11:19:12 AM
Surr: DNOP	85.6	70-130		%Rec	1	8/15/2016 11:19:12 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.022		mg/Kg	1	8/13/2016 10:59:59 PM
Toluene	ND	0.043		mg/Kg	1	8/13/2016 10:59:59 PM
Ethylbenzene	ND	0.043		mg/Kg	1	8/13/2016 10:59:59 PM
Xylenes, Total	0.12	0.087		mg/Kg	1	8/13/2016 10:59:59 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/13/2016 10:59:59 PM
Surr: 4-Bromofluorobenzene	78.9	70-130		%Rec	1	8/13/2016 10:59:59 PM
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/13/2016 10:59:59 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/13/2016 10:59:59 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	19	4.3		mg/Kg	1	8/13/2016 10:59:59 PM
Surr: BFB	102	70-130		%Rec	1	8/13/2016 10:59:59 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-121

**Project:** GCU #216

**Collection Date:** 8/12/2016 10:00:00 AM

**Lab ID:** 1608806-010

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	95	10		mg/Kg	1	8/15/2016 11:21:40 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/15/2016 11:21:40 AM
Surr: DNOP	89.4	70-130		%Rec	1	8/15/2016 11:21:40 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.020		mg/Kg	1	8/13/2016 11:28:43 PM
Toluene	ND	0.039		mg/Kg	1	8/13/2016 11:28:43 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/13/2016 11:28:43 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/13/2016 11:28:43 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/13/2016 11:28:43 PM
Surr: 4-Bromofluorobenzene	80.7	70-130		%Rec	1	8/13/2016 11:28:43 PM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/13/2016 11:28:43 PM
Surr: Toluene-d8	95.0	70-130		%Rec	1	8/13/2016 11:28:43 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	12	3.9		mg/Kg	1	8/13/2016 11:28:43 PM
Surr: BFB	103	70-130		%Rec	1	8/13/2016 11:28:43 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-122

**Project:** GCU #216

**Collection Date:** 8/12/2016 10:05:00 AM

**Lab ID:** 1608806-011

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	130	9.6		mg/Kg	1	8/15/2016 10:54:10 AM
Motor Oil Range Organics (MRO)	70	48		mg/Kg	1	8/15/2016 10:54:10 AM
Surr: DNOP	92.0	70-130		%Rec	1	8/15/2016 10:54:10 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.019		mg/Kg	1	8/13/2016 11:57:31 PM
Toluene	ND	0.037		mg/Kg	1	8/13/2016 11:57:31 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/13/2016 11:57:31 PM
Xylenes, Total	ND	0.074		mg/Kg	1	8/13/2016 11:57:31 PM
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	8/13/2016 11:57:31 PM
Surr: 4-Bromofluorobenzene	86.7	70-130		%Rec	1	8/13/2016 11:57:31 PM
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	8/13/2016 11:57:31 PM
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/13/2016 11:57:31 PM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/13/2016 11:57:31 PM
Surr: BFB	108	70-130		%Rec	1	8/13/2016 11:57:31 PM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-111RT

**Project:** GCU #216

**Collection Date:** 8/12/2016 10:10:00 AM

**Lab ID:** 1608806-012

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	130	10		mg/Kg	1	8/15/2016 10:26:43 AM
Motor Oil Range Organics (MRO)	69	50		mg/Kg	1	8/15/2016 10:26:43 AM
Surr: DNOP	91.4	70-130		%Rec	1	8/15/2016 10:26:43 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	8/14/2016 12:26:21 AM
Toluene	ND	0.046		mg/Kg	1	8/14/2016 12:26:21 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/14/2016 12:26:21 AM
Xylenes, Total	ND	0.092		mg/Kg	1	8/14/2016 12:26:21 AM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/14/2016 12:26:21 AM
Surr: 4-Bromofluorobenzene	77.8	70-130		%Rec	1	8/14/2016 12:26:21 AM
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/14/2016 12:26:21 AM
Surr: Toluene-d8	96.7	70-130		%Rec	1	8/14/2016 12:26:21 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	11	4.6		mg/Kg	1	8/14/2016 12:26:21 AM
Surr: BFB	101	70-130		%Rec	1	8/14/2016 12:26:21 AM

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608806**

Date Reported: **8/16/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-106RT

**Project:** GCU #216

**Collection Date:** 8/12/2016 10:15:00 AM

**Lab ID:** 1608806-013

**Matrix:** MEOH (SOIL)

**Received Date:** 8/13/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>						Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	130	9.7		mg/Kg	1	8/15/2016 9:58:58 AM
Motor Oil Range Organics (MRO)	67	49		mg/Kg	1	8/15/2016 9:58:58 AM
Surr: DNOP	92.1	70-130		%Rec	1	8/15/2016 9:58:58 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: <b>RAA</b>
Benzene	ND	0.021		mg/Kg	1	8/14/2016 12:55:03 AM
Toluene	ND	0.043		mg/Kg	1	8/14/2016 12:55:03 AM
Ethylbenzene	ND	0.043		mg/Kg	1	8/14/2016 12:55:03 AM
Xylenes, Total	0.33	0.086		mg/Kg	1	8/14/2016 12:55:03 AM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/14/2016 12:55:03 AM
Surr: 4-Bromofluorobenzene	73.4	70-130		%Rec	1	8/14/2016 12:55:03 AM
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/14/2016 12:55:03 AM
Surr: Toluene-d8	97.7	70-130		%Rec	1	8/14/2016 12:55:03 AM
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	72	4.3		mg/Kg	1	8/14/2016 12:55:03 AM
Surr: BFB	115	70-130		%Rec	1	8/14/2016 12:55:03 AM

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

<b>Qualifiers:</b>	*	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#: 1608806

16-Aug-16

Client: BP America

Project: GCU #216

Sample ID	1608806-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-112	Batch ID:	26973	RunNo:	36497					
Prep Date:	8/15/2016	Analysis Date:	8/15/2016	SeqNo:	1130202	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	160	9.8	48.97	139.2	50.2	33.9	141			
Surr: DNOP	4.5		4.897		92.6	70	130			

Sample ID	1608806-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-112	Batch ID:	26973	RunNo:	36497					
Prep Date:	8/15/2016	Analysis Date:	8/15/2016	SeqNo:	1130203	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	9.4	46.86	139.2	69.6	33.9	141	4.79	20	
Surr: DNOP	4.2		4.686		88.7	70	130	0	0	

Sample ID	LCS-26973	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26973	RunNo:	36497					
Prep Date:	8/15/2016	Analysis Date:	8/15/2016	SeqNo:	1130206	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	83.1	62.6	124			
Surr: DNOP	4.2		5.000		83.4	70	130			

Sample ID	MB-26973	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26973	RunNo:	36497					
Prep Date:	8/15/2016	Analysis Date:	8/15/2016	SeqNo:	1130207	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		89.9	70	130			

Sample ID	LCS-26952	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	26952	RunNo:	36499					
Prep Date:	8/12/2016	Analysis Date:	8/16/2016	SeqNo:	1131127	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.7	70	130			

Sample ID	MB-26952	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	26952	RunNo:	36499					
Prep Date:	8/12/2016	Analysis Date:	8/16/2016	SeqNo:	1131128	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

### 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  
R RPD outside accepted recovery limits  
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#: 1608806

16-Aug-16

Client: BP America

Project: GCU #216

Sample ID	MB-26952		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26952		RunNo: 36499					
Prep Date:	8/12/2016		Analysis Date: 8/16/2016		SeqNo: 1131128		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5		10.00		85.3	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#: 1608806

16-Aug-16

Client: BP America

Project: GCU #216

Sample ID	100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS		Batch ID: R36480		RunNo: 36480					
Prep Date:			Analysis Date: 8/13/2016		SeqNo: 1129725		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	70	130			
Toluene	1.0	0.050	1.000	0	99.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.7	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.3	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.1	70	130			
Surr: Toluene-d8	0.48		0.5000		95.5	70	130			

Sample ID	1608806-012a ms		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	TSP-111RT		Batch ID: R36480		RunNo: 36480					
Prep Date:			Analysis Date: 8/14/2016		SeqNo: 1129738		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.023	0.9158	0	93.1	49.2	155			
Toluene	0.86	0.046	0.9158	0	93.6	52	154			
Surr: 1,2-Dichloroethane-d4	0.47		0.4579		102	70	130			
Surr: 4-Bromofluorobenzene	0.37		0.4579		80.0	70	130			
Surr: Dibromofluoromethane	0.46		0.4579		101	70	130			
Surr: Toluene-d8	0.43		0.4579		94.8	70	130			

Sample ID	1608806-012a msd			SampType:	MSD		TestCode:	EPA Method 8260B: Volatiles Short List			
Client ID:	TSP-111RT			Batch ID:	R36480		RunNo:	36480			
Prep Date:				Analysis Date:	8/14/2016		SeqNo:	1129739		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.83	0.023	0.9158	0	90.2	49.2	155	3.15	20		
Toluene	0.84	0.046	0.9158	0	91.6	52	154	2.20	20		
Surr: 1,2-Dichloroethane-d4	0.45		0.4579		98.0	70	130	0	0		
Surr: 4-Bromofluorobenzene	0.36		0.4579		79.4	70	130	0	0		
Surr: Dibromofluoromethane	0.46		0.4579		99.5	70	130	0	0		
Surr: Toluene-d8	0.42		0.4579		92.8	70	130	0	0		

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID: R36480			RunNo: 36480					
Prep Date:		Analysis Date: 8/13/2016			SeqNo: 1129741		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								

### 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#: 1608806

16-Aug-16

Client: BP America

Project: GCU #216

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	R36480	RunNo:	36480					
Prep Date:		Analysis Date:	8/13/2016	SeqNo:	1129741	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.4	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.6	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.3	70	130			
Surr: Toluene-d8	0.50		0.5000		100	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  
R RPD outside accepted recovery limits  
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#: 1608806

16-Aug-16

Client: BP America

Project: GCU #216

Sample ID	1608806-013a ms	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-106RT	Batch ID:	G36480	RunNo:	36480					
Prep Date:		Analysis Date:	8/14/2016	SeqNo:	1129707	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	100	4.3	21.41	72.16	134	52.3	132			S
Surr: BFB	430		428.1		100	70	130			

Sample ID	1608806-013a msd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-106RT	Batch ID:	G36480	RunNo:	36480					
Prep Date:		Analysis Date:	8/14/2016	SeqNo:	1129708	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	100	4.3	21.41	72.16	145	52.3	132	2.31	20	S
Surr: BFB	440		428.1		103	70	130	0	0	

Sample ID	2.5ug lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	G36480	RunNo:	36480					
Prep Date:		Analysis Date:	8/13/2016	SeqNo:	1129709	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.6	62.9	123			
Surr: BFB	490		500.0		98.7	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	G36480	RunNo:	36480					
Prep Date:		Analysis Date:	8/13/2016	SeqNo:	1129710	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	480		500.0		96.8	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  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: **BP AMERICA-Farmington**

Work Order Number: **1608806**

RcptNo: **1**

Received by/date:

Logged By: **Lindsay Mangin**

**08/13/16**  
**8/13/2016 7:15:00 AM**

Completed By: **Lindsay Mangin**

**8/13/2016 7:49:27 AM**

Reviewed By:

## 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	1.2	Good	Yes			



# Chain-of-Custody Record

Client: BP - Lower 48

Mailing Address:

Phone #: 701 570-4727 / 505 326 9497

email or Fax#: steven.moskal@bp.com

QA/QC Package: dburns@henv.com

☒ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ NELAP ☐ Other

☒ EDD (Type) PDF

Date Time Matrix Sample Request ID

8/12/16 0915 SS TSP-112

0920 TSP-113

0925 TSP-114

0930 TSP-115

0935 TSP-116

0940 TSP-117

0945 TSP-118

0950 TSP-119

0955 TSP-120

1000 TSP-121

1005 TSP-122

Relinquished by: [Signature]

Date: 8/12/16 1420

Relinquished by: [Signature]

Date: 8/12/16 2105

Turn-Around Time: Same day

☐ Standard ☒ Rush

Project Name: GCU #216

Project #: 1108806

Project Manager: BP-Steve Moskal

LTE-Danny Burns

Sampler: D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 17

Container Type and #

Preservative Type

HEAL No.

402 NA

-001

-002

-003

-004

-005

-006

-007

-008

-009

-010

-011

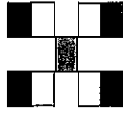
Remarks:

Received by: [Signature]

Date: 8/12/16 0915

Received by: [Signature]

Date: 8/12/16 0915



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/>	BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/>
BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/>	BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/>
TPH 8015B (GRO/DRO/MRO)	<input checked="" type="checkbox"/>	TPH 8015B (GRO/DRO/MRO)	<input checked="" type="checkbox"/>
TPH (Method 418.1)		TPH (Method 418.1)	
EDB (Method 504.1)		EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)		PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals		RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )		Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCBs		8081 Pesticides / 8082 PCBs	
8260B (VOA)		8260B (VOA)	
8270 (Semi-VOA)		8270 (Semi-VOA)	
Air Bubbles (Y or N)		Air Bubbles (Y or N)	





day

If necessary, samples submitted to Half 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](http://www.hallenvironmental.com)

July 13, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1607484

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/12/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-59

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:05:00 AM

**Lab ID:** 1607484-001

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	44	10		mg/Kg	1	7/12/2016 10:43:28 AM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 10:43:28 AM	26339
Surr: DNOP	87.9	70-130		%Rec	1	7/12/2016 10:43:28 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Surr: BFB	102	80-120		%Rec	1	7/12/2016 10:46:49 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Toluene	ND	0.044		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Ethylbenzene	ND	0.044		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Xylenes, Total	ND	0.088		mg/Kg	1	7/12/2016 10:46:49 AM	26325
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	7/12/2016 10:46:49 AM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-60

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:10:00 AM

**Lab ID:** 1607484-002

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	61	10		mg/Kg	1	7/12/2016 11:05:03 AM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 11:05:03 AM	26339
Surr: DNOP	91.4	70-130		%Rec	1	7/12/2016 11:05:03 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Surr: BFB	116	80-120		%Rec	1	7/12/2016 11:10:22 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Toluene	ND	0.038		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Ethylbenzene	ND	0.038		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 11:10:22 AM	26325
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	7/12/2016 11:10:22 AM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-61

Project: GCU #216

Collection Date: 7/11/2016 9:15:00 AM

Lab ID: 1607484-003

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	50	9.8		mg/Kg	1	7/12/2016 11:26:38 AM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 11:26:38 AM	26339
Surr: DNOP	93.4	70-130		%Rec	1	7/12/2016 11:26:38 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	11	4.3		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Surr: BFB	142	80-120	S	%Rec	1	7/12/2016 11:33:53 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.022		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Toluene	ND	0.043		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Ethylbenzene	ND	0.043		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Xylenes, Total	ND	0.087		mg/Kg	1	7/12/2016 11:33:53 AM	26325
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	7/12/2016 11:33:53 AM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-62

Project: GCU #216

Collection Date: 7/11/2016 9:30:00 AM

Lab ID: 1607484-004

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	63	9.9		mg/Kg	1	7/12/2016 11:48:36 AM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 11:48:36 AM	26339
Surr: DNOP	90.8	70-130		%Rec	1	7/12/2016 11:48:36 AM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Surr: BFB	105	80-120		%Rec	1	7/12/2016 11:57:21 AM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Toluene	ND	0.041		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Ethylbenzene	ND	0.041		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Xylenes, Total	ND	0.082		mg/Kg	1	7/12/2016 11:57:21 AM	26325
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	7/12/2016 11:57:21 AM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-63

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:35:00 AM

**Lab ID:** 1607484-005

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	52	9.9		mg/Kg	1	7/12/2016 12:10:09 PM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 12:10:09 PM	26339
Surr: DNOP	92.7	70-130		%Rec	1	7/12/2016 12:10:09 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Surr: BFB	101	80-120		%Rec	1	7/12/2016 12:20:50 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Toluene	ND	0.037		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Ethylbenzene	ND	0.037		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 12:20:50 PM	26325
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	7/12/2016 12:20:50 PM	26325

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607484**

Date Reported: 7/13/2016

**CLIENT:** BP America

**Client Sample ID:** TSP-64

**Project:** GCU #216

**Collection Date:** 7/11/2016 9:40:00 AM

**Lab ID:** 1607484-006

**Matrix:** SOIL

**Received Date:** 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	48	10		mg/Kg	1	7/12/2016 12:32:16 PM	26339
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/12/2016 12:32:16 PM	26339
Surr: DNOP	92.8	70-130		%Rec	1	7/12/2016 12:32:16 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	9.6	3.8		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Surr: BFB	138	80-120	S	%Rec	1	7/12/2016 12:44:20 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Toluene	ND	0.038		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Ethylbenzene	ND	0.038		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Xylenes, Total	0.16	0.076		mg/Kg	1	7/12/2016 12:44:20 PM	26325
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	7/12/2016 12:44:20 PM	26325

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

<b>Qualifiers:</b>	*	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.

Analytical Report

Lab Order 1607484

Date Reported: 7/13/2016

CLIENT: BP America

Client Sample ID: TSP-65

Project: GCU #216

Collection Date: 7/11/2016 9:45:00 AM

Lab ID: 1607484-007

Matrix: SOIL

Received Date: 7/12/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	42	9.7		mg/Kg	1	7/12/2016 12:53:56 PM	26339
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/12/2016 12:53:56 PM	26339
Surr: DNOP	91.4	70-130		%Rec	1	7/12/2016 12:53:56 PM	26339
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	4.1	3.7		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Surr: BFB	127	80-120	S	%Rec	1	7/12/2016 1:07:49 PM	26325
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Toluene	ND	0.037		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Ethylbenzene	ND	0.037		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Xylenes, Total	ND	0.075		mg/Kg	1	7/12/2016 1:07:49 PM	26325
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	7/12/2016 1:07:49 PM	26325

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

<b>Qualifiers:</b>	*	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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	LCS-26339		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102200		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	83.6	62.6	124			
Surr: DNOP	4.0		5.000		79.6	70	130			

Sample ID	MB-26339		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102201		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	8.8		10.00		88.1	70	130			

Sample ID	1607484-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-59		Batch ID: 26339		RunNo: 35609					
Prep Date:	7/12/2016		Analysis Date: 7/12/2016		SeqNo: 1102271		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110	10	49.90	44.07	123	33.9	141			
Surr: DNOP	4.4		4.990		88.2	70	130			

Sample ID	1607484-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-59		Batch ID:	26339		RunNo:	35609				
Prep Date:	7/12/2016		Analysis Date:	7/12/2016		SeqNo:	1102272		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	88	10	50.40	44.07	88.2	33.9	141	17.7	20		
Surr: DNOP	4.5		5.040		90.0	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  
R RPD outside accepted recovery limits  
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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26325		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	26325		RunNo:	35619				
Prep Date:	7/11/2016		Analysis Date:	7/12/2016		SeqNo:	1102390		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	950		1000		94.7	80	120				

Sample ID	LCS-26325		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102391		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	103	80	120			
Surr: BFB	1000		1000		105	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607484

13-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26325		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102416		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		91.2	80	120			

Sample ID	LCS-26325		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26325		RunNo: 35619					
Prep Date:	7/11/2016		Analysis Date: 7/12/2016		SeqNo: 1102417		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	75.3	123			
Toluene	0.95	0.050	1.000	0	95.5	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.3	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.1	83.9	122			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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



# Sample Log-In Check List

Client Name: BP AMERICA-Farmington

Work Order Number: 1607484

RcptNo: 1

Received by/date: AT 07/12/16

Logged By: Anne Thorne 7/12/2016 7:50:00 AM



Completed By: Anne Thorne 7/12/2016



Reviewed By:



07/12/16

## 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:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			









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

July 07, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU #216

OrderNo.: 1607131

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/6/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1607131**Date Reported: **7/7/2016****CLIENT:** BP America**Client Sample ID:** TSP-51R**Project:** GCU #216**Collection Date:** 7/5/2016 9:00:00 AM**Lab ID:** 1607131-001**Matrix:** SOIL**Received Date:** 7/6/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	91	9.9		mg/Kg	1	7/6/2016 11:00:24 AM	26242
Motor Oil Range Organics (MRO)	64	49		mg/Kg	1	7/6/2016 11:00:24 AM	26242
Surr: DNOP	97.1	70-130		%Rec	1	7/6/2016 11:00:24 AM	26242
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/6/2016 10:19:42 AM	26229
Surr: BFB	101	80-120		%Rec	1	7/6/2016 10:19:42 AM	26229
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/6/2016 10:19:42 AM	26229
Toluene	ND	0.037		mg/Kg	1	7/6/2016 10:19:42 AM	26229
Ethylbenzene	ND	0.037		mg/Kg	1	7/6/2016 10:19:42 AM	26229
Xylenes, Total	ND	0.075		mg/Kg	1	7/6/2016 10:19:42 AM	26229
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	7/6/2016 10:19:42 AM	26229

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607131**Date Reported: **7/7/2016****CLIENT:** BP America**Client Sample ID:** TSP-37,38,39R**Project:** GCU #216**Collection Date:** 7/5/2016 9:15:00 AM**Lab ID:** 1607131-002**Matrix:** SOIL**Received Date:** 7/6/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	72	10		mg/Kg	1	7/6/2016 11:22:01 AM	26242
Motor Oil Range Organics (MRO)	54	50		mg/Kg	1	7/6/2016 11:22:01 AM	26242
Surr: DNOP	96.1	70-130		%Rec	1	7/6/2016 11:22:01 AM	26242
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/6/2016 10:43:15 AM	26229
Surr: BFB	119	80-120		%Rec	1	7/6/2016 10:43:15 AM	26229
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.020		mg/Kg	1	7/6/2016 10:43:15 AM	26229
Toluene	ND	0.039		mg/Kg	1	7/6/2016 10:43:15 AM	26229
Ethylbenzene	ND	0.039		mg/Kg	1	7/6/2016 10:43:15 AM	26229
Xylenes, Total	ND	0.079		mg/Kg	1	7/6/2016 10:43:15 AM	26229
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	7/6/2016 10:43:15 AM	26229

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1607131**Date Reported: **7/7/2016****CLIENT:** BP America**Client Sample ID:** TSP-54**Project:** GCU #216**Collection Date:** 7/5/2016 9:30:00 AM**Lab ID:** 1607131-003**Matrix:** SOIL**Received Date:** 7/6/2016 7:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	41	9.7		mg/Kg	1	7/6/2016 11:43:47 AM	26242
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/6/2016 11:43:47 AM	26242
Surr: DNOP	98.7	70-130		%Rec	1	7/6/2016 11:43:47 AM	26242
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/6/2016 11:06:45 AM	26229
Surr: BFB	115	80-120		%Rec	1	7/6/2016 11:06:45 AM	26229
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.019		mg/Kg	1	7/6/2016 11:06:45 AM	26229
Toluene	ND	0.038		mg/Kg	1	7/6/2016 11:06:45 AM	26229
Ethylbenzene	ND	0.038		mg/Kg	1	7/6/2016 11:06:45 AM	26229
Xylenes, Total	ND	0.076		mg/Kg	1	7/6/2016 11:06:45 AM	26229
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	7/6/2016 11:06:45 AM	26229

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

<b>Qualifiers:</b>	*	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#: 1607131

07-Jul-16

Client: BP America

Project: GCU #216

Sample ID	LCS-26242		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 26242		RunNo: 35436					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1096556		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	84.1	62.6	124			
Surr: DNOP	4.4		5.000		87.7	70	130			

Sample ID	MB-26242		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26242		RunNo: 35436					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1096557		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		95.4	70	130			

Sample ID	MB-26224		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 26224		RunNo: 35437					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1096560		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.5		10.00		94.6	70	130			

Sample ID	LCS-26224			SampType:	LCS			TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS			Batch ID:	26224			RunNo:	35437					
Prep Date:	7/5/2016			Analysis Date:	7/6/2016			SeqNo:	1096561			Units:	%Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Surr: DNOP	4.1		5.000		82.6	70	130							

Sample ID	1607131-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-51R		Batch ID: 26242		RunNo: 35436					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1096829		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.9	49.55	90.51	66.8	33.9	141			
Surr: DNOP	4.5		4.955		90.5	70	130			

Sample ID	1607131-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-51R		Batch ID: 26242		RunNo: 35436					
Prep Date:	7/6/2016		Analysis Date: 7/6/2016		SeqNo: 1096985		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.8	49.02	90.51	65.6	33.9	141	0.763	20	

### 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#: 1607131

07-Jul-16

Client: BP America

Project: GCU #216

Sample ID	1607131-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-51R	Batch ID:	26242	RunNo:	35436					
Prep Date:	7/6/2016	Analysis Date:	7/6/2016	SeqNo:	1096985	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		4.902		92.8	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  
R RPD outside accepted recovery limits  
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#: 1607131

07-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26229		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 26229		RunNo: 35443					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097615		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	960		1000		95.5	80	120			

Sample ID	LCS-26229		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 26229		RunNo: 35443					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097616		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	105	80	120			
Surr: BFB	1100		1000		108	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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#: 1607131

07-Jul-16

Client: BP America

Project: GCU #216

Sample ID	MB-26229		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 26229		RunNo: 35443					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097633		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		92.8	80	120			

Sample ID	LCS-26229		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 26229		RunNo: 35443					
Prep Date:	7/5/2016		Analysis Date: 7/6/2016		SeqNo: 1097635		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.8	75.3	123			
Toluene	0.97	0.050	1.000	0	96.9	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.4	82.8	121			
Xylenes, Total	3.0	0.10	3.000	0	99.2	83.9	122			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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: BP AMERICA-Farmington

Work Order Number: 1607131

RcptNo: 1

Received by/date:

AT 07/06/16

Logged By: Anne Thorne

7/6/2016 7:35:00 AM

Anne Thorne

Completed By: Anne Thorne

7/6/2016

Anne Thorne

Reviewed By:

AT

07/06/16

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:

By Whom:

Regarding:

Client Instructions:

Date:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



# Chain-of-Custody Record

Client: BP-Lower 48

Mailing Address:

Phone #: 505-326-9447/701-570-4727

Email or Fax #: steven.moskal@bp.com

A/QC Package: dburns@itemv.com

Standard ☐ Level 4 (Full Validation)

Accreditation ☐ NELAP ☐ Other \_\_\_\_\_

EDD (Type) PDF

Date	Time	Matrix	Sample Request ID
5/16	0900	SS	TSP-51 R
↓	0915	↓	TSP-37,38,39 R
↓	0930	↓	TSP-54

Relinquished by: [Signature] Date: 5/16/16 Time: 1645

Relinquished by: [Signature] Date: 5/14/18 Time: 1841

Turn-Around Time: same day TAT

☐ Standard ☒ Rush

Project Name: GCU #216

Project #:

Project Manager: BP-Steve Moskal  
LTE-Dummy Burns

Sampler: D. Burns

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

Container Type and #	Preservative Type	HEAL No.
402	None	1607131
↓	↓	202
↓	↓	203

Received by: [Signature] Date: 7/5/16 Time: 1645

Received by: [Signature] Date: 7/27/16 Time: 0735



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/> BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRO/MRO)	<input checked="" type="checkbox"/> TPH (Method 418.1)	<input checked="" type="checkbox"/> EDB (Method 504.1)	<input checked="" type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input checked="" type="checkbox"/> RCRA 8 Metals	<input checked="" type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input checked="" type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input checked="" type="checkbox"/> 8260B (VOA)	<input checked="" type="checkbox"/> 8270 (Semi-VOA)	<input checked="" type="checkbox"/> Air Bubbles (Y or N)
--	--	---	--	--	---	---	--	--	---	---	--

Remarks:





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

August 22, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU 216

OrderNo.: 1608B44

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/19/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-106RT

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:00:00 PM

**Lab ID:** 1608B44-001

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	25	4.1		mg/Kg	1	8/19/2016 10:34:15 AM	G36634
Surr: BFB	102	70-130		%Rec	1	8/19/2016 10:34:15 AM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	8/19/2016 2:13:13 PM	27071
Motor Oil Range Organics (MRO)	54	49		mg/Kg	1	8/19/2016 2:13:13 PM	27071
Surr: DNOP	92.1	70-130		%Rec	1	8/19/2016 2:13:13 PM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.020		mg/Kg	1	8/19/2016 10:34:15 AM	R36634
Toluene	ND	0.041		mg/Kg	1	8/19/2016 10:34:15 AM	R36634
Ethylbenzene	ND	0.041		mg/Kg	1	8/19/2016 10:34:15 AM	R36634
Xylenes, Total	ND	0.082		mg/Kg	1	8/19/2016 10:34:15 AM	R36634
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	8/19/2016 10:34:15 AM	R36634
Surr: 4-Bromofluorobenzene	72.0	70-130		%Rec	1	8/19/2016 10:34:15 AM	R36634
Surr: Dibromofluoromethane	95.6	70-130		%Rec	1	8/19/2016 10:34:15 AM	R36634
Surr: Toluene-d8	95.3	70-130		%Rec	1	8/19/2016 10:34:15 AM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-111RT

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:05:00 PM

**Lab ID:** 1608B44-002

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	32	3.9		mg/Kg	1	8/19/2016 11:02:59 AM	G36634
Surr: BFB	105	70-130		%Rec	1	8/19/2016 11:02:59 AM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	89	9.6		mg/Kg	1	8/19/2016 2:56:40 PM	27071
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/19/2016 2:56:40 PM	27071
Surr: DNOP	92.0	70-130		%Rec	1	8/19/2016 2:56:40 PM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.020		mg/Kg	1	8/19/2016 11:02:59 AM	R36634
Toluene	ND	0.039		mg/Kg	1	8/19/2016 11:02:59 AM	R36634
Ethylbenzene	ND	0.039		mg/Kg	1	8/19/2016 11:02:59 AM	R36634
Xylenes, Total	ND	0.078		mg/Kg	1	8/19/2016 11:02:59 AM	R36634
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/19/2016 11:02:59 AM	R36634
Surr: 4-Bromofluorobenzene	73.8	70-130		%Rec	1	8/19/2016 11:02:59 AM	R36634
Surr: Dibromofluoromethane	96.3	70-130		%Rec	1	8/19/2016 11:02:59 AM	R36634
Surr: Toluene-d8	96.2	70-130		%Rec	1	8/19/2016 11:02:59 AM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-112R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:10:00 PM

**Lab ID:** 1608B44-003

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	69	4.5		mg/Kg	1	8/19/2016 11:31:45 AM	G36634
Surr: BFB	115	70-130		%Rec	1	8/19/2016 11:31:45 AM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	94	9.8		mg/Kg	1	8/19/2016 3:18:29 PM	27071
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/19/2016 3:18:29 PM	27071
Surr: DNOP	95.2	70-130		%Rec	1	8/19/2016 3:18:29 PM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.023		mg/Kg	1	8/19/2016 11:31:45 AM	R36634
Toluene	ND	0.045		mg/Kg	1	8/19/2016 11:31:45 AM	R36634
Ethylbenzene	ND	0.045		mg/Kg	1	8/19/2016 11:31:45 AM	R36634
Xylenes, Total	ND	0.091		mg/Kg	1	8/19/2016 11:31:45 AM	R36634
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/19/2016 11:31:45 AM	R36634
Surr: 4-Bromofluorobenzene	71.8	70-130		%Rec	1	8/19/2016 11:31:45 AM	R36634
Surr: Dibromofluoromethane	103	70-130		%Rec	1	8/19/2016 11:31:45 AM	R36634
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/19/2016 11:31:45 AM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-113R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:15:00 PM

**Lab ID:** 1608B44-004

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	80	4.1		mg/Kg	1	8/19/2016 12:00:31 PM	G36634
Surr: BFB	106	70-130		%Rec	1	8/19/2016 12:00:31 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	110	10		mg/Kg	1	8/19/2016 3:40:05 PM	27071
Motor Oil Range Organics (MRO)	51	50		mg/Kg	1	8/19/2016 3:40:05 PM	27071
Surr: DNOP	93.5	70-130		%Rec	1	8/19/2016 3:40:05 PM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.020		mg/Kg	1	8/19/2016 12:00:31 PM	R36634
Toluene	ND	0.041		mg/Kg	1	8/19/2016 12:00:31 PM	R36634
Ethylbenzene	0.070	0.041		mg/Kg	1	8/19/2016 12:00:31 PM	R36634
Xylenes, Total	0.93	0.082		mg/Kg	1	8/19/2016 12:00:31 PM	R36634
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/19/2016 12:00:31 PM	R36634
Surr: 4-Bromofluorobenzene	74.1	70-130		%Rec	1	8/19/2016 12:00:31 PM	R36634
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	8/19/2016 12:00:31 PM	R36634
Surr: Toluene-d8	98.3	70-130		%Rec	1	8/19/2016 12:00:31 PM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-114R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:20:00 PM

**Lab ID:** 1608B44-005

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	12	3.7		mg/Kg	1	8/19/2016 12:29:22 PM	G36634
Surr: BFB	98.7	70-130		%Rec	1	8/19/2016 12:29:22 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	45	9.6		mg/Kg	1	8/19/2016 10:08:02 AM	27071
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/19/2016 10:08:02 AM	27071
Surr: DNOP	85.4	70-130		%Rec	1	8/19/2016 10:08:02 AM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.019		mg/Kg	1	8/19/2016 12:29:22 PM	R36634
Toluene	ND	0.037		mg/Kg	1	8/19/2016 12:29:22 PM	R36634
Ethylbenzene	ND	0.037		mg/Kg	1	8/19/2016 12:29:22 PM	R36634
Xylenes, Total	ND	0.074		mg/Kg	1	8/19/2016 12:29:22 PM	R36634
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	1	8/19/2016 12:29:22 PM	R36634
Surr: 4-Bromofluorobenzene	76.5	70-130		%Rec	1	8/19/2016 12:29:22 PM	R36634
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	8/19/2016 12:29:22 PM	R36634
Surr: Toluene-d8	96.0	70-130		%Rec	1	8/19/2016 12:29:22 PM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-115R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:25:00 PM

**Lab ID:** 1608B44-006

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	54	4.4		mg/Kg	1	8/19/2016 12:58:08 PM	G36634
Surr: BFB	104	70-130		%Rec	1	8/19/2016 12:58:08 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	46	9.8		mg/Kg	1	8/19/2016 10:29:55 AM	27071
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/19/2016 10:29:55 AM	27071
Surr: DNOP	83.9	70-130		%Rec	1	8/19/2016 10:29:55 AM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.022		mg/Kg	1	8/19/2016 12:58:08 PM	R36634
Toluene	ND	0.044		mg/Kg	1	8/19/2016 12:58:08 PM	R36634
Ethylbenzene	ND	0.044		mg/Kg	1	8/19/2016 12:58:08 PM	R36634
Xylenes, Total	0.29	0.088		mg/Kg	1	8/19/2016 12:58:08 PM	R36634
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/19/2016 12:58:08 PM	R36634
Surr: 4-Bromofluorobenzene	75.1	70-130		%Rec	1	8/19/2016 12:58:08 PM	R36634
Surr: Dibromofluoromethane	103	70-130		%Rec	1	8/19/2016 12:58:08 PM	R36634
Surr: Toluene-d8	93.4	70-130		%Rec	1	8/19/2016 12:58:08 PM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-116R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:30:00 PM

**Lab ID:** 1608B44-007

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	27	4.8		mg/Kg	1	8/19/2016 1:26:54 PM	G36634
Surr: BFB	102	70-130		%Rec	1	8/19/2016 1:26:54 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	48	10		mg/Kg	1	8/19/2016 10:51:42 AM	27071
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/19/2016 10:51:42 AM	27071
Surr: DNOP	86.4	70-130		%Rec	1	8/19/2016 10:51:42 AM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.024		mg/Kg	1	8/19/2016 1:26:54 PM	R36634
Toluene	ND	0.048		mg/Kg	1	8/19/2016 1:26:54 PM	R36634
Ethylbenzene	ND	0.048		mg/Kg	1	8/19/2016 1:26:54 PM	R36634
Xylenes, Total	ND	0.095		mg/Kg	1	8/19/2016 1:26:54 PM	R36634
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/19/2016 1:26:54 PM	R36634
Surr: 4-Bromofluorobenzene	73.8	70-130		%Rec	1	8/19/2016 1:26:54 PM	R36634
Surr: Dibromofluoromethane	99.4	70-130		%Rec	1	8/19/2016 1:26:54 PM	R36634
Surr: Toluene-d8	96.6	70-130		%Rec	1	8/19/2016 1:26:54 PM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-118R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:35:00 PM

**Lab ID:** 1608B44-008

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	15	4.7		mg/Kg	1	8/19/2016 1:55:41 PM	G36634
Surr: BFB	103	70-130		%Rec	1	8/19/2016 1:55:41 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	36	10		mg/Kg	1	8/19/2016 11:13:41 AM	27071
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/19/2016 11:13:41 AM	27071
Surr: DNOP	87.3	70-130		%Rec	1	8/19/2016 11:13:41 AM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.024		mg/Kg	1	8/19/2016 1:55:41 PM	R36634
Toluene	ND	0.047		mg/Kg	1	8/19/2016 1:55:41 PM	R36634
Ethylbenzene	ND	0.047		mg/Kg	1	8/19/2016 1:55:41 PM	R36634
Xylenes, Total	ND	0.094		mg/Kg	1	8/19/2016 1:55:41 PM	R36634
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/19/2016 1:55:41 PM	R36634
Surr: 4-Bromofluorobenzene	77.6	70-130		%Rec	1	8/19/2016 1:55:41 PM	R36634
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/19/2016 1:55:41 PM	R36634
Surr: Toluene-d8	92.7	70-130		%Rec	1	8/19/2016 1:55:41 PM	R36634

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order **1608B44**

Date Reported: **8/22/2016**

**CLIENT:** BP America

**Client Sample ID:** TSP-122R

**Project:** GCU 216

**Collection Date:** 8/18/2016 2:40:00 PM

**Lab ID:** 1608B44-009

**Matrix:** MEOH (SOIL)

**Received Date:** 8/19/2016 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>AG</b>
Gasoline Range Organics (GRO)	33	4.3		mg/Kg	1	8/19/2016 2:24:30 PM	G36634
Surr: BFB	101	70-130		%Rec	1	8/19/2016 2:24:30 PM	G36634
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	42	9.6		mg/Kg	1	8/19/2016 11:35:34 AM	27071
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/19/2016 11:35:34 AM	27071
Surr: DNOP	87.5	70-130		%Rec	1	8/19/2016 11:35:34 AM	27071
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.022		mg/Kg	1	8/19/2016 2:24:30 PM	R36634
Toluene	ND	0.043		mg/Kg	1	8/19/2016 2:24:30 PM	R36634
Ethylbenzene	ND	0.043		mg/Kg	1	8/19/2016 2:24:30 PM	R36634
Xylenes, Total	ND	0.087		mg/Kg	1	8/19/2016 2:24:30 PM	R36634
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/19/2016 2:24:30 PM	R36634
Surr: 4-Bromofluorobenzene	74.9	70-130		%Rec	1	8/19/2016 2:24:30 PM	R36634
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	8/19/2016 2:24:30 PM	R36634
Surr: Toluene-d8	97.0	70-130		%Rec	1	8/19/2016 2:24:30 PM	R36634

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

<b>Qualifiers:</b>	*	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#: 1608B44

22-Aug-16

Client: BP America

Project: GCU 216

Sample ID	LCS-27071		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27071		RunNo: 36619					
Prep Date:	8/19/2016		Analysis Date: 8/19/2016		SeqNo: 1134501		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.6	62.6	124			
Surr: DNOP	4.1		5.000		81.2	70	130			

Sample ID	MB-27071	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 27071			RunNo: 36619					
Prep Date:	8/19/2016	Analysis Date: 8/19/2016			SeqNo: 1134502		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	8.6		10.00		85.8	70	130			

Sample ID	1608B44-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	TSP-106RT		Batch ID: 27071		RunNo: 36621					
Prep Date:	8/19/2016		Analysis Date: 8/19/2016		SeqNo: 1134949		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.5	47.30	112.2	77.3	33.9	141			
Surr: DNOP	4.7		4.730		99.9	70	130			

Sample ID	1608B44-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	TSP-106RT		Batch ID:	27071		RunNo:	36621				
Prep Date:	8/19/2016		Analysis Date:	8/19/2016		SeqNo:	1134962		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	180	10	50.05	112.2	135	33.9	141	19.0	20		
Surr: DNOP	5.3		5.005		106	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#: 1608B44

22-Aug-16

Client: BP America

Project: GCU 216

Sample ID	100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS		Batch ID: R36634		RunNo: 36634					
Prep Date:			Analysis Date: 8/19/2016		SeqNo: 1135325		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	95.3	70	130			
Toluene	0.97	0.050	1.000	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.1	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.2	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		97.2	70	130			
Surr: Toluene-d8	0.48		0.5000		96.4	70	130			

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID: R36634			RunNo: 36634					
Prep Date:		Analysis Date: 8/19/2016			SeqNo: 1135327		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: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.3	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.5	70	130			
Surr: Toluene-d8	0.51		0.5000		101	70	130			

Sample ID	1608b44-001ams		SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	TSP-106RT		Batch ID: R36634		RunNo: 36634					
Prep Date:			Analysis Date: 8/19/2016		SeqNo: 1135385		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.020	0.8150	0	97.4	49.2	155			
Toluene	0.78	0.041	0.8150	0	95.6	52	154			
Surr: 1,2-Dichloroethane-d4	0.42		0.4075		104	70	130			
Surr: 4-Bromofluorobenzene	0.31		0.4075		76.9	70	130			
Surr: Dibromofluoromethane	0.40		0.4075		97.6	70	130			
Surr: Toluene-d8	0.37		0.4075		91.0	70	130			

Sample ID	1608b44-001amsd			SampType:	MSD		TestCode:	EPA Method 8260B: Volatiles Short List			
Client ID:	TSP-106RT			Batch ID:	R36634		RunNo:	36634			
Prep Date:				Analysis Date:	8/19/2016		SeqNo:	1135386		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.73	0.020	0.8150	0	89.0	49.2	155	9.00	20		
Toluene	0.74	0.041	0.8150	0	90.3	52	154	5.73	20		

### 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#: 1608B44

22-Aug-16

Client: BP America

Project: GCU 216

Sample ID	1608b44-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	TSP-106RT	Batch ID:	R36634	RunNo:	36634					
Prep Date:		Analysis Date:	8/19/2016	SeqNo:	1135386	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.44		0.4075		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.32		0.4075		78.8	70	130	0	0	
Surr: Dibromofluoromethane	0.41		0.4075		100	70	130	0	0	
Surr: Toluene-d8	0.37		0.4075		91.9	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  
R RPD outside accepted recovery limits  
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#: 1608B44

22-Aug-16

Client: BP America

Project: GCU 216

Sample ID	2.5ug lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	G36634	RunNo:	36634					
Prep Date:		Analysis Date:	8/19/2016	SeqNo:	1135359	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.8	62.9	123			
Surr: BFB	490		500.0		98.9	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	G36634	RunNo:	36634					
Prep Date:		Analysis Date:	8/19/2016	SeqNo:	1135360	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	500		500.0		101	70	130			

Sample ID	1608B44-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-106RT	Batch ID:	G36634	RunNo:	36634					
Prep Date:		Analysis Date:	8/19/2016	SeqNo:	1135361	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	4.1	20.38	25.13	76.4	52.3	132	3.64	20	
Surr: BFB	420		407.5		104	70	130	0	0	

Sample ID	1608B44-001AMS	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	TSP-106RT	Batch ID:	G36634	RunNo:	36634					
Prep Date:		Analysis Date:	8/19/2016	SeqNo:	1135362	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	42	4.1	20.38	25.13	83.8	52.3	132			
Surr: BFB	410		407.5		102	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  
R RPD outside accepted recovery limits  
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: BP AMERICA-Farmington

Work Order Number: 1608B44

RcptNo: 1

Received by/date:

Logged By:

Ashley Gallegos

8/19/2016 7:30:00 AM

Completed By:

Ashley Gallegos

8/19/2016 8:05:30 AM

Reviewed By:

AS

08/19/16

AS

AS

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$

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?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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?

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)

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	2.1	Good	Yes			



# Chain-of-Custody Record

Ident: BP Lower 48

Mailing Address:

Phone #: 701-570-4727

E-mail or Fax#: Steven.Moskal@bp.com

A/QC Package: dburns@henv.com

Standard ☐ Level 4 (Full Validation)

Credentiation

NELAP ☐ Other

-EDD (Type)

Date	Time	Matrix	Sample Request ID
8/16	1400	SS	TSP-106 RT
1405			TSP-111 RT
1410			TSP-112 R
1415			TSP-113 R
1420			TSP-114 R
1425			TSP-115 R
1430			TSP-116 R
1435			TSP-118 R
1440			TSP-122 R

Turn-Around Time:

☐ Standard ☒ Rush

Project Name:

GCU #216

Project #:

Project Manager:

BP-Steve Moskal  
LTE-Danny Burns

Sampler:

DB

On Ice: ☒ Yes ☐ No

Sample Temperature: 21

Container Type and #	Preservative Type	HEAL No.
<u>U02</u>	<u>NA</u>	<u>1008B44</u>

# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

<input checked="" type="checkbox"/> BTEX + MTBE + TMBs (8021)	<input checked="" type="checkbox"/> TPH 8015B (GRO/DRO/MRO)	<input type="checkbox"/> TPH (Method 418.1)	<input type="checkbox"/> EDB (Method 504.1)	<input type="checkbox"/> PAH's (8310 or 8270 SIMS)	<input type="checkbox"/> RCRA 8 Metals	<input type="checkbox"/> Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	<input type="checkbox"/> 8081 Pesticides / 8082 PCB's	<input type="checkbox"/> 8260B (VOA)	<input type="checkbox"/> 8270 (Semi-VOA)	<input type="checkbox"/> Air Bubbles (Y or N)
---	---	---	---	--	--	---	---	--------------------------------------	--	---

Remarks:

Date	Time	Received by:
8/16/16	15:15	<u>[Signature]</u>
Date	Time	Received by:
8/18/16	0730	<u>[Signature]</u>





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

September 08, 2016

Steve Moskal

BP America

200 Energy Court

Farmington, NM 87401

TEL: (505) 326-9457

FAX

RE: GCU # 216

OrderNo.: 1608G72

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/30/2016 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](http://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 horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ01

Project: GCU # 216

Collection Date: 8/29/2016 9:00:00 AM

Lab ID: 1608G72-001

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/1/2016 1:58:03 PM	27281
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2016 1:58:03 PM	27281
Surr: DNOP	85.4	70-130		%Rec	1	9/1/2016 1:58:03 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/31/2016 3:14:18 PM	27243
Surr: BFB	84.1	68.3-144		%Rec	1	8/31/2016 3:14:18 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/31/2016 3:14:18 PM	27243
Toluene	ND	0.047		mg/Kg	1	8/31/2016 3:14:18 PM	27243
Ethylbenzene	ND	0.047		mg/Kg	1	8/31/2016 3:14:18 PM	27243
Xylenes, Total	ND	0.094		mg/Kg	1	8/31/2016 3:14:18 PM	27243
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	8/31/2016 3:14:18 PM	27243

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ02

Project: GCU # 216

Collection Date: 8/29/2016 9:05:00 AM

Lab ID: 1608G72-002

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2016 2:20:08 PM	27281
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2016 2:20:08 PM	27281
Surr: DNOP	59.5	70-130	S	%Rec	1	9/1/2016 2:20:08 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/31/2016 3:37:49 PM	27243
Surr: BFB	84.6	68.3-144		%Rec	1	8/31/2016 3:37:49 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	8/31/2016 3:37:49 PM	27243
Toluene	ND	0.047		mg/Kg	1	8/31/2016 3:37:49 PM	27243
Ethylbenzene	ND	0.047		mg/Kg	1	8/31/2016 3:37:49 PM	27243
Xylenes, Total	ND	0.094		mg/Kg	1	8/31/2016 3:37:49 PM	27243
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	8/31/2016 3:37:49 PM	27243

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ03

Project: GCU # 216

Collection Date: 8/29/2016 9:10:00 AM

Lab ID: 1608G72-003

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2016 2:42:02 PM	27281
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2016 2:42:02 PM	27281
Surr: DNOP	84.1	70-130		%Rec	1	9/1/2016 2:42:02 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/31/2016 4:01:18 PM	27243
Surr: BFB	86.0	68.3-144		%Rec	1	8/31/2016 4:01:18 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	8/31/2016 4:01:18 PM	27243
Toluene	ND	0.046		mg/Kg	1	8/31/2016 4:01:18 PM	27243
Ethylbenzene	ND	0.046		mg/Kg	1	8/31/2016 4:01:18 PM	27243
Xylenes, Total	ND	0.093		mg/Kg	1	8/31/2016 4:01:18 PM	27243
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	8/31/2016 4:01:18 PM	27243

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ04

Project: GCU # 216

Collection Date: 8/29/2016 9:15:00 AM

Lab ID: 1608G72-004

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/1/2016 3:04:07 PM	27281
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2016 3:04:07 PM	27281
Surr: DNOP	82.1	70-130		%Rec	1	9/1/2016 3:04:07 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/31/2016 4:24:44 PM	27243
Surr: BFB	86.0	68.3-144		%Rec	1	8/31/2016 4:24:44 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/31/2016 4:24:44 PM	27243
Toluene	ND	0.048		mg/Kg	1	8/31/2016 4:24:44 PM	27243
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2016 4:24:44 PM	27243
Xylenes, Total	ND	0.096		mg/Kg	1	8/31/2016 4:24:44 PM	27243
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	8/31/2016 4:24:44 PM	27243

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ05

Project: GCU # 216

Collection Date: 8/29/2016 9:20:00 AM

Lab ID: 1608G72-005

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/1/2016 3:48:19 PM	27281
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2016 3:48:19 PM	27281
Surr: DNOP	90.8	70-130		%Rec	1	9/1/2016 3:48:19 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/31/2016 8:19:16 PM	27243
Surr: BFB	87.0	68.3-144		%Rec	1	8/31/2016 8:19:16 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/31/2016 8:19:16 PM	27243
Toluene	ND	0.048		mg/Kg	1	8/31/2016 8:19:16 PM	27243
Ethylbenzene	ND	0.048		mg/Kg	1	8/31/2016 8:19:16 PM	27243
Xylenes, Total	ND	0.096		mg/Kg	1	8/31/2016 8:19:16 PM	27243
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	8/31/2016 8:19:16 PM	27243

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

<b>Qualifiers:</b>	*	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.

## Analytical Report

Lab Order 1608G72

Date Reported: 9/8/2016

CLIENT: BP America

Client Sample ID: VZ06

Project: GCU # 216

Collection Date: 8/26/2016 9:25:00 AM

Lab ID: 1608G72-006

Matrix: SOIL

Received Date: 8/30/2016 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/1/2016 4:10:23 PM	27281
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2016 4:10:23 PM	27281
Surr: DNOP	86.4	70-130		%Rec	1	9/1/2016 4:10:23 PM	27281
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/31/2016 8:42:39 PM	27243
Surr: BFB	85.5	68.3-144		%Rec	1	8/31/2016 8:42:39 PM	27243
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	8/31/2016 8:42:39 PM	27243
Toluene	ND	0.047		mg/Kg	1	8/31/2016 8:42:39 PM	27243
Ethylbenzene	ND	0.047		mg/Kg	1	8/31/2016 8:42:39 PM	27243
Xylenes, Total	ND	0.095		mg/Kg	1	8/31/2016 8:42:39 PM	27243
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	8/31/2016 8:42:39 PM	27243

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

<b>Qualifiers:</b>	*	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#: 1608G72

08-Sep-16

Client: BP America

Project: GCU # 216

Sample ID	LCS-27281		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27281		RunNo: 36922					
Prep Date:	8/31/2016		Analysis Date: 9/1/2016		SeqNo: 1144520		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.4	62.6	124			
Surr: DNOP	3.9		5.000		77.1	70	130			

Sample ID	MB-27281	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 27281			RunNo: 36922					
Prep Date:	8/31/2016	Analysis Date: 9/1/2016			SeqNo: 1144521		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	8.2		10.00		82.1	70	130			

Sample ID	LCS-27347		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27347		RunNo: 37025					
Prep Date:	9/6/2016		Analysis Date: 9/7/2016		SeqNo: 1147694		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.1	70	130			

Sample ID	MB-27347		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 27347		RunNo: 37025					
Prep Date:	9/6/2016		Analysis Date: 9/7/2016		SeqNo: 1147695		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.2	70	130			

Sample ID	LCS-27351		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27351		RunNo: 37025					
Prep Date:	9/6/2016		Analysis Date: 9/7/2016		SeqNo: 1148382		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.3	70	130			

Sample ID	MB-27351		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 27351		RunNo: 37025					
Prep Date:	9/6/2016		Analysis Date: 9/7/2016		SeqNo: 1148383		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.3		10.00		82.7	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

R RPD outside accepted recovery limits

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#: 1608G72

08-Sep-16

Client: BP America

Project: GCU # 216

Sample ID	MB-27243		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 27243		RunNo: 36893					
Prep Date:	8/30/2016		Analysis Date: 8/31/2016		SeqNo: 1143738		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		84.6	68.3	144			

Sample ID	LCS-27243		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 27243		RunNo: 36893					
Prep Date:	8/30/2016		Analysis Date: 8/31/2016		SeqNo: 1143739		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	97.3	80	120			
Surr: BFB	930		1000		93.0	68.3	144			

### 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  
R RPD outside accepted recovery limits  
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#: 1608G72

08-Sep-16

Client: BP America

Project: GCU # 216

Sample ID	MB-27243		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 27243		RunNo: 36893					
Prep Date:	8/30/2016		Analysis Date: 8/31/2016		SeqNo: 1143786		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	1.0		1.000		101	80	120			

Sample ID	LCS-27243		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 27243		RunNo: 36893					
Prep Date:	8/30/2016		Analysis Date: 8/31/2016		SeqNo: 1143787		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.6	75.3	123			
Toluene	0.90	0.050	1.000	0	90.3	80	124			
Ethylbenzene	0.92	0.050	1.000	0	92.0	82.8	121			
Xylenes, Total	2.8	0.10	3.000	0	92.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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: **BP AMERICA-Farmington**

Work Order Number: **1608G72**

RcptNo: 1

Received by/date:

Logged By: **Lindsay Mangin**

**08/30/16**  
8/30/2016 8:30:00 AM

Completed By: **Lindsay Mangin**

8/30/2016 9:22:26 AM

Reviewed By:

**Jc 08/30/16**

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:   
Adjusted?   
( $<2$  or  $>12$  unless noted)   
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	1.8	Good	Yes			



# Chain-of-Custody Record

Client: BP Lower 48

Mailing Address: \_\_\_\_\_

Phone #: 701 570 4727

email or Fax#: stevan.mostal@bp.com

QA/QC Package: dburns@itenv.com

☒ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ NELAP ☐ Other \_\_\_\_\_

☒ EDD (Type) PDF

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

GCU #216

Project #:

Project Manager:

BP - Steve Mostal  
LTE - Jimmy Burns

Sampler:

DB

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

8/29/16	0900	SS	VZ 01	402	NA	-001	1608672
	0905		VZ 02			-002	
	0910		VZ 03			-003	
	0915		VZ 04			-004	
	0920		VZ 05			-005	
	0925		VZ 06			-006	

## Analysis Request

BTEX + MTBE + TPH (Gas only)	BTEX + MTBE + TMB's (8021)	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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Date: 8/29/16 Time: 1215 Received by: [Signature] Date: 8/29/16 Time: 1215

Date: 8/29/16 Time: 1840 Relinquished by: [Signature] Date: 08/30/16 Time: 0830

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

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