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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NVF1812137578
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co.	OGRID: 778	Final
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # *(assigned by OCD)*	
Contact mailing address: 1199 Main Street, Suite 101, Durango CO, 81301		

Location of Release Source

Latitude: 36.60215° Longitude: 108.15885
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gallegos Canyon Unit 089E	Site Type: Natural Gas Production Well Pad
Date Release Discovered: February 27, 2018	API#: 30-045-26187

Unit Letter	Section	Township	Range	County
L	6	T27N	R12W	San Juan

Surface Owner: ☐ State ☐ Federal ☒ Tribal ☐ Private

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): Unknown; historic	Volume Recovered (bbls):
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): Unknown; historic	Volume Recovered (bbls): 0 bbls
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Impacts were identified at the location on February 27, 2018 following a BGT closure at the production well site. The source of the impacts appeared historic, either being a former earthen pit or caused from pit overflow events prior to automation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Steve Moskal Title: Environmental Coordinator

Signature:  Date: December 17, 2019

email: steven.moskal@bpx.com Telephone: (505) 330-9179

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

BP America
GCU 089E
(L) Sec 6 – T27N – R12W
San Juan County, New Mexico
API: 30-045-26187

Summary Record of Impact Remediation

February 22, 2018 Conduct closure sampling for a 95 barrel below grade tank (BGT) that was being taken out of service. Soils with visual evidence of hydrocarbon impacts were encountered.

February 27, 2018 Receive final laboratory analytical results from BGT sampling. Test results indicate that the soils fail the site ranking. Site closure standard determined at 100 ppm TPH, 50 ppm total BTEX (with 10 ppm benzene) and 600 ppm Chlorides based on:

Horizontal Distance to Dry Water Course < 200 feet
Distance to Nearest Water Well > 1,000 feet
Depth to Groundwater >100 feet

April 3, 2018 BP submits remediation plan (NMOCD Form C-141, BLM Sundry Notice) with intent to remediate soils on-site via soil shredding.

April 19, 2018 BP submits BGT closure report (NMOCD Form C-144).

May 9, 2018 NMOCD approves remediation plan.

May 14, 2018 NMOCD approves BGT closure report.

May 24, 2018 BLM approves remediation plan.

June 4, 2018 Initiate removal of impacts via excavation and on-site soil shredding.

June 5, 2018 Conduct excavation closure sampling.

June 6, 2018 Receive rush laboratory results. All excavation closure samples fail on total petroleum hydrocarbons (TPH). Conduct treated soil pile (TSP) sampling. Continue with remedial excavation/shredding.

June 7, 2018 Conduct excavation closure sampling. Continue with remedial excavation/shredding.

June 8, 2018 Conduct TSP closure sampling.

June 11, 2018 Conduct excavation and TSP closure sampling. Continue with remedial excavation/shredding.

June 12, 2018 Conduct excavation closure sampling. Continue with remedial excavation/shredding.

June 14, 2018 Conduct TSP closure sampling. Continue with remedial excavation/shredding.

June 18, 2018 Conduct excavation and TSP closure sampling. Continue with remedial excavation/shredding.

June 20, 2018 Conduct excavation closure sampling. Continue with remedial excavation/shredding.

June 25, 2018 Conduct excavation and TSP closure sampling. Continue with remedial excavation/shredding.

June 26, 2018 Conduct excavation closure sampling. Continue with remedial excavation/shredding.

June 27, 2018 Conduct excavation and TSP closure sampling. Continue with remedial excavation/shredding.

June 29, 2018 Conduct TSP closure sampling. Continue with remedial excavation/shredding.

July 2, 2018 Conduct TSP closure sampling. Evaluate TSP effectiveness and determine that the site is not a candidate for soil shredding. Postpone additional excavation, begin removal of all treated soil piles and vadose zones and transport soils to Envirotech commercial landfarm.

July 17, 2018 Resume remedial excavation and transportation of impacted soils to landfarm.

July 18, 2018 Conduct excavation closure sampling. Continue with remedial excavation.

July 23, 2018 Conduct excavation closure sampling. Continue with remedial excavation.

July 25, 2018 Conduct excavation closure sampling. Continue with remedial excavation.

July 27, 2018 Conduct excavation closure sampling. Postpone additional remedial work pending approval to extend excavation off-site.

May 28, 2019 Receive Navajo Nation Heritage and Historic Preservation Department approval to extend remedial excavation off-site.

August 5, 2019 Continue with remedial excavation and transportation of impacted soils to Envirotech landfarm.

August 7, 2019 Conduct excavation closure sampling. Continue with remedial excavation.

August 13, 2019 Conduct excavation closure sampling.

August 14, 2019 Receive rush laboratory reports. All samples pass site closure standard.

August 17, 2019 Complete backfilling remedial excavation with clean imported soils. Reclamation is not necessary at this timeas the excavation area is on the active well pad and will be reclaimed at final abandonment.

BP America - GCU 89E

(L) Sec 6 – T27N – R12W
San Juan County, New Mexico
API: 30-045-26187

Excavation Closure Test Results

Updated: August 13, 2019

Map ID	Date Sampled	Description	Field OVM (ppm)	BTEX (mg/Kg)	Chloride (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH MRO (mg/Kg)	TPH Total (mg/Kg)
	6/5/2018	East Sidewall 5-pt (5'-13')	4,854	14.3	65.5	166	864	ND	1,030
	6/5/2018	North Sidewall 5-pt (5'-13')	5,484	20.9	44.2	231	684	ND	915
3	6/5/2018	West Sidewall 5-pt (5'-13')	5,365	25.8	44.6	273	1,330	112	1,715
	6/5/2018	South Sidewall 5-pt (5'-13')	720	1.03	42.2	21.4	153	ND	174.4
	6/5/2018	North Base 5-pt @ 15'	5,235	29.5	50.2	325	1,060	149	1,534
	6/5/2018	South Base 5-pt @ 15'	5,258	38.9	72.7	371	1,750	309	2,430
7	6/7/2018	Base 5-pt @ 20'	0.9	ND	ND	ND	ND	ND	ND
8	6/11/2018	North Base 5-pt @ 20'	1.3	ND	24.3	ND	ND	ND	ND
9	6/11/2018	Extended North Wall 5-pt (5'-18')	0.5	ND	41.2	ND	ND	ND	ND
10	6/12/2018	South Base 5-pt @ 20'	0.6	ND	ND	ND	ND	ND	ND
11	6/12/2018	Extended South Wall 5-pt (5'-18')	1.6	ND	28.1	ND	ND	ND	ND
12	6/18/2018	West Wall, South Half 5-pt (6'-18')	3,073	--	--	1,200	1,700	550	3,450
13	6/18/2018	East Wall, South Third 5-pt (6'-18')	4,190	--	--	1,400	650	220	2,270
14	6/20/2018	South Base, East Extension, 5-pt @ 19'	1.1	ND	34	ND	ND	ND	ND
15	6/25/2018	Northeast Base 6-pt (18'-22')	9.8	ND	41	ND	ND	ND	ND
16	6/25/2018	North Wall (East 1) 5-pt (6'-16')	2.3	ND	ND	ND	ND	ND	ND
	6/25/2018	East Wall (North 1) 5-pt (6'-18')	2.0	ND	ND	ND	ND	ND	ND
18	6/26/2018	Northeast Base #2 (19')	81.1	ND	ND	ND	ND	ND	ND
19	6/26/2018	North Wall (East 2) 5-pt (6'-16')	4.5	ND	ND	ND	ND	ND	ND
20	6/27/2018	Center Base (East 1) 5-pt @ 20'	43.7	ND	ND	ND	ND	ND	ND
21	6/27/2018	Center Base (East 2) 5-pt @ 20'	1.8	ND	ND	ND	ND	ND	ND
22	7/18/2018	Northeast Base #3 (18')	2.4	ND	41	ND	ND	ND	ND
23	7/18/2018	North Wall (East 3) 5-pt (6'-16')	0.8	ND	ND	ND	ND	ND	ND
24	7/23/2018	Northeast Base #4 (18')	1.8	ND	ND	ND	ND	ND	ND
25	7/23/2018	South Base #4 (20')	3,135	72.5	ND	2,100	970	280	3,350
26	7/25/2018	Southeast Corner (SEC) Base @ 20' (4-pt.)	5.5	ND	ND	ND	ND	ND	ND
27	7/25/2018	East Base @ 20' (3-pt.)	3.2	ND	ND	ND	ND	ND	ND
28	7/25/2018	S/SEC -SW @ 5'-18' (6-pt.)	0.7	ND	270	ND	ND	ND	ND
29	7/25/2018	E/SEC -SW @ 5'-18' (5-pt.)	0.0	ND	64	ND	ND	ND	ND
30	7/25/2018	East-SW @ 6'-18' (5-pt.)	0.5	ND	38	ND	ND	ND	ND
31	7/25/2018	N/NEC -SW @ 5'-17' (3-pt.)	0.0	ND	ND	ND	ND	ND	ND
32	7/25/2018	E/NEC -SW @ 5'-17' (3-pt.)	440	ND	ND	98	37	ND	135
25A	7/27/2018	South Base #4 (2) @ 29' (5-pt.)	4.1	ND	ND	ND	ND	ND	ND
25A	7/27/2018	South Base #4 ESW (23'-27') (6-pt.)	3.8	ND	ND	ND	ND	ND	ND
25A	7/27/2018	South Base #4 WSW (23'-27') (6-pt.)	1.6	ND	ND	ND	ND	ND	ND
32A	7/27/2018	E/NEC -SW @ 5'-17' (3-pt.) (2)	0.7	ND	38	ND	ND	ND	ND

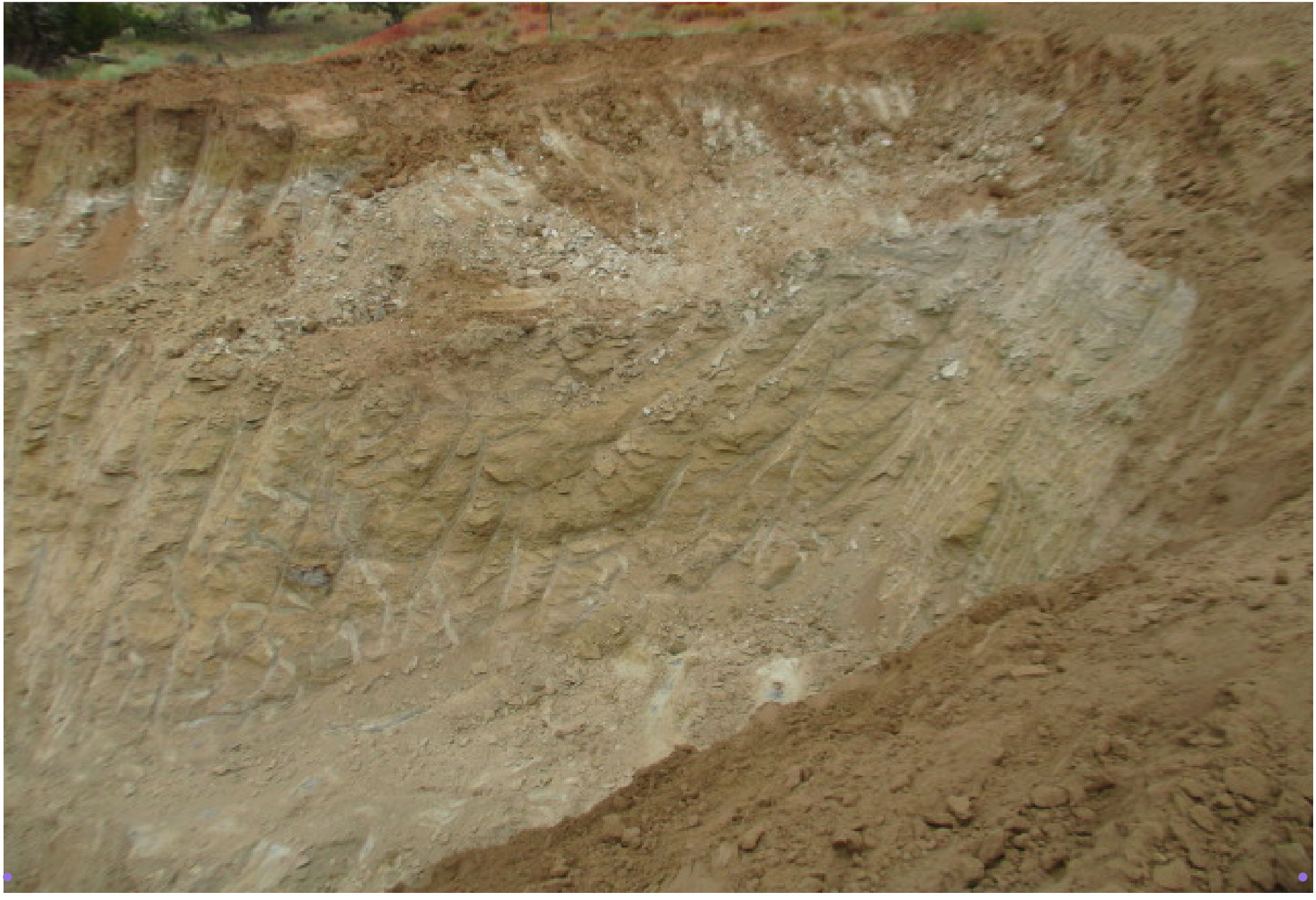
Continuation with Offsite Excavation Activities – August, 2019

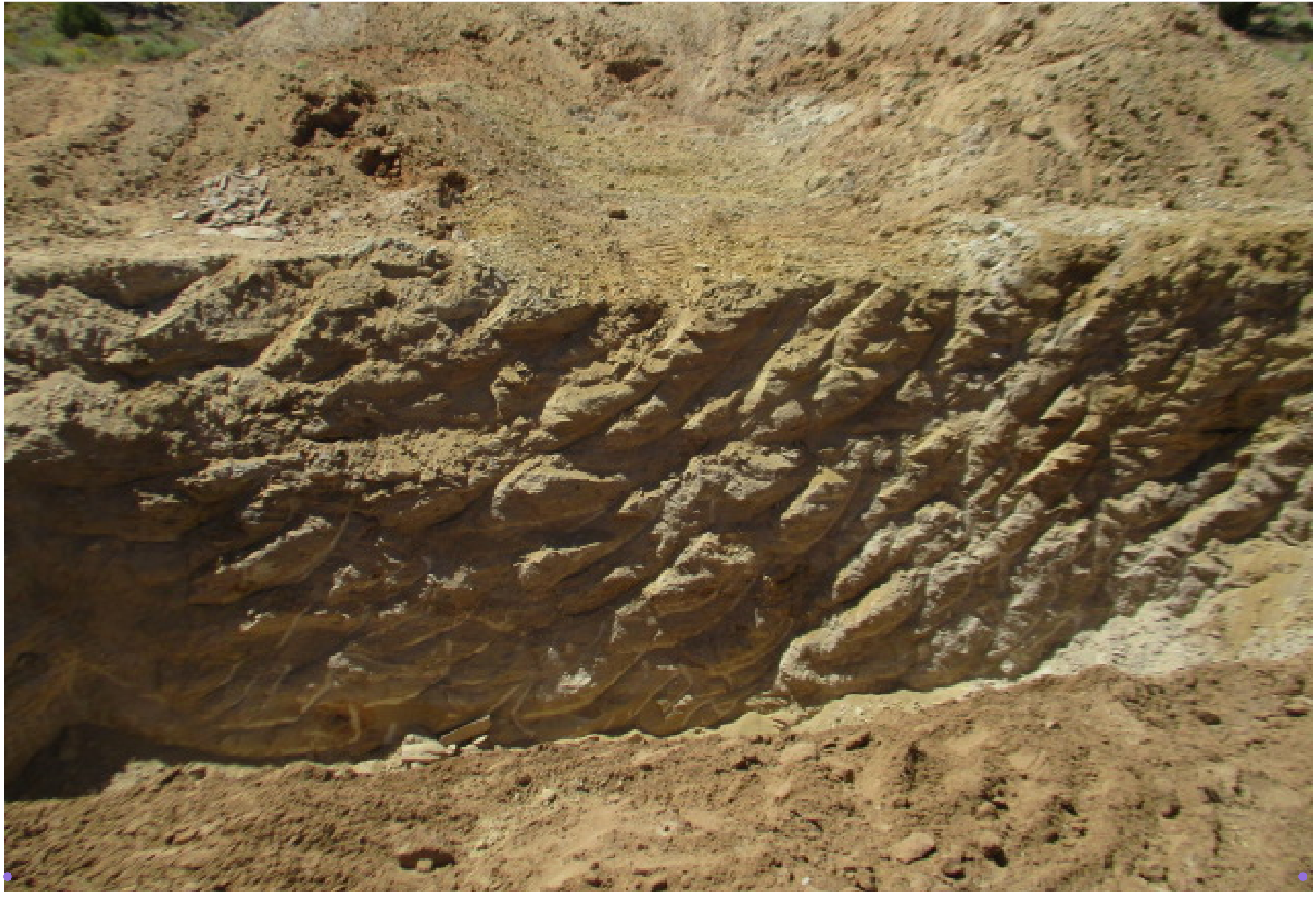
Map ID	Date Sampled	Description	Field OVM (ppm)	BTEX (mg/Kg)	Chloride (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH MRO (mg/Kg)	TPH Total (mg/Kg)
33	8/7/2019	West Wall (II)-West Wall North Side (0'-9')	5.6	ND	204	ND	ND	ND	ND
34	8/7/2019	West Wall (II)-West Wall South Side (0'-9')	3.9	ND	121	ND	ND	ND	ND
35	8/7/2019	West Wall (II)-North Face (3'-18')	2.6	ND	105	ND	ND	ND	ND
36	8/7/2019	West Wall (II)-North Base @ 20'	1.4	ND	25.3	ND	ND	ND	ND
37	8/7/2019	West Wall (II)-South Base @ 24'	2.6	ND	21.5	ND	ND	ND	ND
38	8/7/2019	West Wall (II)-West Wall North Side (10'-18')	1.0	ND	73.7	ND	ND	ND	ND
39	8/7/2019	West Wall (II)-West Wall South Side (10'-20')	0.7	ND	97.5	ND	ND	ND	ND
40	8/13/2019	South Wall (II)-East Base (27')	5.5	ND	ND	ND	ND	ND	ND
41	8/13/2019	South Wall (II)-SE Corner Wall (4'-25')	2.4	ND	199	ND	ND	ND	ND
42	8/13/2019	South Wall (II)-South Mid Wall (4'-25')	3.0	ND	97.8	ND	ND	ND	ND
43	8/13/2019	South Wall (II)-West Base (24')	2.5	ND	ND	ND	ND	ND	ND
44	8/13/2019	South Wall (II)-SW Corner Wall (4'-22')	3.6	ND	142	ND	ND	ND	ND

Site Closure Standard = 100 ppm total TPH, 50 ppm BTEX, 600 ppm Chloride

xxxx All laboratory test result highlighted in yellow failed the site closure standard. These sample zones were further excavated and re-sampled to demonstrate closure.


GCU 089E
N
100 ft
Google earth






A

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number:
Samples Received: 6/5/2018 12:53:00PM
Job Number: 03143-0424
Work Order: P806006
Project Name/Location: GCU 89E

Report Reviewed By: Date: 6/6/18

Walter Hinchman, Laboratory Director

Date: 6/6/18

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
East Wall 5-pt (5'-13')	P806006-01A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.
North Wall 5-pt (5'-13')	P806006-02A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.
West Wall 5-pt (5'-13')	P806006-03A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.
South Wall 5-pt (5'-13')	P806006-04A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.
North Base 5-pt @ 15'	P806006-05A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.
South Base 5-pt @ 15'	P806006-06A	Soil	06/05/18	06/05/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

East Wall 5-pt (5'-13')
P806006-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	**1610**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	**1260**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**9100**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**2300**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**11400**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**14300**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**166**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**864**	250	mg/kg	10	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	500	mg/kg	10	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*110 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*292 %*		*50-200*	*1823008*	*06/05/18*	*06/05/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	**65.5**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

North Wall 5-pt (5'-13')
P806006-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	**2380**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	**1840**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**13300**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**3410**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**16700**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**20900**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**231**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**684**	125	mg/kg	5	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	250	mg/kg	5	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*118 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*222 %*		*50-200*	*1823008*	*06/05/18*	*06/05/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	**44.2**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

West Wall 5-pt (5'-13')
P806006-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	**2530**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	**2080**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**17000**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**4230**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**21200**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**25800**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*100 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**273**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**1330**	25.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**112**	50.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*119 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*235 %*		*50-200*	*1823008*	*06/05/18*	*06/06/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	**44.6**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

South Wall 5-pt (5'-13')
P806006-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**834**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**200**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**1030**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**1030**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**21.4**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**153**	25.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*101 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*132 %*		*50-200*	*1823008*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**42.2**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

North Base 5-pt @ 15'
P806006-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**198**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	**4840**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	**2450**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**17800**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**4230**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**22000**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**29500**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.4 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**325**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**1060**	25.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**149**	50.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*118 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*194 %*		*50-200*	*1823008*	*06/05/18*	*06/06/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**50.2**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

South Base 5-pt @ 15'
P806006-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**173**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Toluene	**7060**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Ethylbenzene	**3070**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
p,m-Xylene	**22900**	200	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
o-Xylene	**5660**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total Xylenes	**28600**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Total BTEX	**38900**	100	ug/kg	1	1823004	06/05/18	06/05/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**371**	20.0	mg/kg	1	1823004	06/05/18	06/05/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**1750**	25.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Oil Range Organics (C28-C40+)	**309**	50.0	mg/kg	1	1823008	06/05/18	06/05/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*125 %*		*50-150*	*1823004*	*06/05/18*	*06/05/18*	*EPA 8015D*	
Surrogate: n-Nonane		*258 %*		*50-200*	*1823008*	*06/05/18*	*06/06/18*	*EPA 8015D*	*Surr2*
Anions by 300.0/9056A									
Chloride	**72.7**	20.0	mg/kg	1	1823009	06/05/18	06/05/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823004 - Purge and Trap EPA 5030A										
Blank (1823004-BLK1)				Prepared & Analyzed: 05-Jun-18						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*7820*		*"*	*8000*		*97.7*	*50-150*			
LCS (1823004-BS1)				Prepared & Analyzed: 05-Jun-18						
Benzene	4860	100	ug/kg	5000		97.3	70-130			
Toluene	4800	100	"	5000		96.0	70-130			
Ethylbenzene	4810	100	"	5000		96.2	70-130			
p,m-Xylene	9650	200	"	10000		96.5	70-130			
o-Xylene	4710	100	"	5000		94.3	70-130			
Total Xylenes	14400	100	"	15000		95.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8040*		*"*	*8000*		*100*	*50-150*			
Matrix Spike (1823004-MS1)		**Source: P806001-01**		Prepared & Analyzed: 05-Jun-18						
Benzene	4320	100	ug/kg	5000	ND	86.4	54.3-133			
Toluene	4270	100	"	5000	ND	85.5	61.4-130			
Ethylbenzene	4280	100	"	5000	ND	85.6	61.4-133			
p,m-Xylene	8600	200	"	10000	ND	86.1	63.3-131			
o-Xylene	4280	100	"	5000	ND	85.7	63.3-131			
Total Xylenes	12900	100	"	15000	ND	85.9	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8120*		*"*	*8000*		*102*	*50-150*			
Matrix Spike Dup (1823004-MSD1)		**Source: P806001-01**		Prepared & Analyzed: 05-Jun-18						
Benzene	4710	100	ug/kg	5000	ND	94.2	54.3-133	8.61	20	
Toluene	4640	100	"	5000	ND	92.8	61.4-130	8.23	20	
Ethylbenzene	4660	100	"	5000	ND	93.3	61.4-133	8.57	20	
p,m-Xylene	9350	200	"	10000	ND	93.5	63.3-131	8.28	20	
o-Xylene	4620	100	"	5000	ND	92.5	63.3-131	7.66	20	
Total Xylenes	14000	100	"	15000	ND	93.2	63.3-131	8.07	20	
Surrogate: 4-Bromochlorobenzene-PID	*8160*		*"*	*8000*		*102*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823004 - Purge and Trap EPA 5030A										
Blank (1823004-BLK1)				Prepared & Analyzed: 05-Jun-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.86*		"	*8.00*		*98.3*	*50-150*			
LCS (1823004-BS2)				Prepared & Analyzed: 05-Jun-18						
Gasoline Range Organics (C6-C10)	47.3	20.0	mg/kg	50.0		94.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.27*		"	*8.00*		*103*	*50-150*			
Matrix Spike (1823004-MS2)		**Source: P806001-01**		Prepared: 05-Jun-18 Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	45.9	20.0	mg/kg	50.0	ND	91.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.17*		"	*8.00*		*102*	*50-150*			
Matrix Spike Dup (1823004-MSD2)		**Source: P806001-01**		Prepared: 05-Jun-18 Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	47.6	20.0	mg/kg	50.0	ND	95.3	70-130	3.73	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.13*		"	*8.00*		*102*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823008 - DRO Extraction EPA 3570										
Blank (1823008-BLK1)				Prepared & Analyzed: 05-Jun-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*59.4*		*"*	*50.0*		*119*	*50-200*			
LCS (1823008-BS1)				Prepared & Analyzed: 05-Jun-18						
Diesel Range Organics (C10-C28)	484	25.0	mg/kg	500		96.8	38-132			
Surrogate: n-Nonane	*58.1*		*"*	*50.0*		*116*	*50-200*			
Matrix Spike (1823008-MS1)		**Source: P806005-01**		Prepared & Analyzed: 05-Jun-18						
Diesel Range Organics (C10-C28)	463	25.0	mg/kg	500	ND	92.6	38-132			
Surrogate: n-Nonane	*56.3*		*"*	*50.0*		*113*	*50-200*			
Matrix Spike Dup (1823008-MSD1)		**Source: P806005-01**		Prepared & Analyzed: 05-Jun-18						
Diesel Range Organics (C10-C28)	466	25.0	mg/kg	500	ND	93.1	38-132	0.531	20	
Surrogate: n-Nonane	*56.9*		*"*	*50.0*		*114*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823009 - Anion Extraction EPA 300.0/9056A										
Blank (1823009-BLK1)				Prepared & Analyzed: 05-Jun-18						
Chloride	ND	20.0	mg/kg							
LCS (1823009-BS1)				Prepared & Analyzed: 05-Jun-18						
Chloride	261	20.0	mg/kg	250		104	90-110			
Matrix Spike (1823009-MS1)		**Source: P806006-01**		Prepared & Analyzed: 05-Jun-18						
Chloride	320	20.0	mg/kg	250	65.5	102	80-120			
Matrix Spike Dup (1823009-MSD1)		**Source: P806006-01**		Prepared & Analyzed: 05-Jun-18						
Chloride	320	20.0	mg/kg	250	65.5	102	80-120	0.00937	20	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	06-Jun-18 15:58

Notes and Definitions

Surr2	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

1D RUSH!!

Page 1 of 1

Client:	BP America
Project:	GCU 89E
Project Manager:	STEVE MOSKAL
Address:	+ JEFF BLAGG
City, State, Zip	
Phone:	505-320-1183
Email:	jeffcblagg@AOL.com and

Report Attention

Report due by:	RUSH: JUNE 6
Attention:	Steve Moskal
Address:	
City, State, Zip	
Phone:	
~~Email:~~ →	steven.moskal@bp.com

Lab Use Only

Lab WO#	Job Number
P806006	03143-0424

TAT: 1D X | 3D

EPA Program: RCRA | CWA | SDWA

State: NM | CO | UT | AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
1115	6/5/2018	SOIL	1	EAST WALL 5-pt (5'-13')	1	X	X	X			X		
1122			1	NORTH WALL 5-pt (5'-13')	2								
1130			1	WEST WALL 5-pt (5'-13')	3								
1145			1	SOUTH WALL 5-pt (5'-13')	4								
1124			1	NORTH BASE 5-pt @ 15'	5								
1140			1	SOUTH BASE 5-pt @ 15'	6								

Additional Instructions:

VIS ice in cooler

BILLING CODES: WBS Element: L1-001CT-E:GCV89E
VID: VHIXONEVRM

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	6/5/2018	1252		6/5/18	12:53
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: (Y) / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ____

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, **v** - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number:
Samples Received: 6/6/2018 1:57:00PM
Job Number: 03143-0424
Work Order: P806010
Project Name/Location: GCU 89E

Report Reviewed By: Date: 6/7/18

Walter Hinchman, Laboratory Director

Date: 6/7/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
South Base Grab @20'	P806010-01A	Soil	06/06/18	06/06/18	Glass Jar, 4 oz.
North Base Grab @20'	P806010-02A	Soil	06/06/18	06/06/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

South Base Grab @20'
P806010-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*98.4 %*		*50-150*	*1823013*	*06/06/18*	*06/06/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1823013	06/06/18	06/06/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1823012	06/06/18	06/06/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1823012	06/06/18	06/06/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*100 %*		*50-150*	*1823013*	*06/06/18*	*06/06/18*	*EPA 8015D*	
Surrogate: n-Nonane		*148 %*		*50-200*	*1823012*	*06/06/18*	*06/06/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1823014	06/06/18	06/07/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

North Base Grab @20'
P806010-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1823013	06/06/18	06/06/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*97.9 %*		*50-150*	*1823013*	*06/06/18*	*06/06/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1823013	06/06/18	06/06/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1823012	06/06/18	06/06/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1823012	06/06/18	06/06/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*102 %*		*50-150*	*1823013*	*06/06/18*	*06/06/18*	*EPA 8015D*	
Surrogate: n-Nonane		*122 %*		*50-200*	*1823012*	*06/06/18*	*06/06/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1823014	06/06/18	06/07/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823013 - Purge and Trap EPA 5030A										
Blank (1823013-BLK1)				Prepared: 06-Jun-18 Analyzed: 07-Jun-18						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8090*		*"*	*8000*		*101*	*50-150*			
LCS (1823013-BS1)				Prepared & Analyzed: 06-Jun-18						
Benzene	4990	100	ug/kg	5000		99.9	70-130			
Toluene	4940	100	"	5000		98.8	70-130			
Ethylbenzene	4980	100	"	5000		99.6	70-130			
p,m-Xylene	9990	200	"	10000		99.9	70-130			
o-Xylene	4870	100	"	5000		97.5	70-130			
Total Xylenes	14900	100	"	15000		99.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7850*		*"*	*8000*		*98.1*	*50-150*			
Matrix Spike (1823013-MS1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Benzene	4240	100	ug/kg	5000	ND	84.9	54.3-133			
Toluene	4200	100	"	5000	ND	84.0	61.4-130			
Ethylbenzene	4220	100	"	5000	ND	84.4	61.4-133			
p,m-Xylene	8470	200	"	10000	ND	84.8	63.3-131			
o-Xylene	4170	100	"	5000	ND	83.5	63.3-131			
Total Xylenes	12600	100	"	15000	ND	84.3	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*7890*		*"*	*8000*		*98.6*	*50-150*			
Matrix Spike Dup (1823013-MSD1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Benzene	4370	100	ug/kg	5000	ND	87.4	54.3-133	2.91	20	
Toluene	4310	100	"	5000	ND	86.3	61.4-130	2.71	20	
Ethylbenzene	4340	100	"	5000	ND	86.9	61.4-133	2.94	20	
p,m-Xylene	8720	200	"	10000	ND	87.2	63.3-131	2.87	20	
o-Xylene	4290	100	"	5000	ND	85.8	63.3-131	2.75	20	
Total Xylenes	13000	100	"	15000	ND	86.8	63.3-131	2.83	20	
Surrogate: 4-Bromochlorobenzene-PID	*7920*		*"*	*8000*		*99.0*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823012 - DRO Extraction EPA 3570										
Blank (1823012-BLK1)				Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*54.4*		*"*	*50.0*		*109*	*50-200*			
LCS (1823012-BS1)				Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	443	25.0	mg/kg				38-132			
Surrogate: n-Nonane	*55.9*		*"*	*50.0*		*112*	*50-200*			
Matrix Spike (1823012-MS1)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	485	25.0	mg/kg		ND		38-132			
Surrogate: n-Nonane	*62.3*		*"*	*50.0*		*125*	*50-200*			
Matrix Spike Dup (1823012-MSD1)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	469	25.0	mg/kg		ND		38-132	3.38	20	
Surrogate: n-Nonane	*59.5*		*"*	*50.0*		*119*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823013 - Purge and Trap EPA 5030A										
Blank (1823013-BLK1)				Prepared: 06-Jun-18 Analyzed: 07-Jun-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.21*		"	*8.00*		*103*	*50-150*			
LCS (1823013-BS2)				Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	49.8	20.0	mg/kg	50.0		99.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.20*		"	*8.00*		*103*	*50-150*			
Matrix Spike (1823013-MS2)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	47.0	20.0	mg/kg	50.0	ND	94.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.22*		"	*8.00*		*103*	*50-150*			
Matrix Spike Dup (1823013-MSD2)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	50.5	20.0	mg/kg	50.0	ND	101	70-130	7.26	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.09*		"	*8.00*		*101*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823014 - Anion Extraction EPA 300.0/9056A										
Blank (1823014-BLK1)				Prepared & Analyzed: 06-Jun-18						
Chloride	ND	20.0	mg/kg							
LCS (1823014-BS1)				Prepared & Analyzed: 06-Jun-18						
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1823014-MS1)		**Source: P806005-01**		Prepared & Analyzed: 06-Jun-18						
Chloride	309	20.0	mg/kg	250	46.5	105	80-120			
Matrix Spike Dup (1823014-MSD1)		**Source: P806005-01**		Prepared & Analyzed: 06-Jun-18						
Chloride	311	20.0	mg/kg	250	46.5	106	80-120	0.365	20	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07-Jun-18 15:16

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information | Chain of Custody | Page 1 of 1

Client: BP AMERICA
Project: GCU 89E
Project Manager: STEVE MOSKAL
Address:
City, State, Zip
Phone: 505-320-1183
Email: JeffBlagg@AOL.com ; steve.moskal@BP.com

Report Attention
Report due by: 6/7/2018
Attention: Steve Moskal
Address:
City, State, Zip
Phone:
Email:

Lab Use Only
Lab WO# P806010
Job Number 03143-0424

TAT: 1D X | 3D

EPA Program: RCRA | CWA | SDWA

State: NM X | CO | UT | AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	CHLORIDE	Remarks
1248	6/6/2018	SOIL	1	SOUTH BASE GRAB @ 20'	1	X	X	X					X	
1258	"	SOIL	1	NORTH BASE GRAB @ 20'	2	X	X	X					X	

Additional Instructions: BILL BP. VID = VHIXONEVRM WBS Element = 21-001CT-E:GCU89E
vis. ice in cooler - mj

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: JH Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
JH Blagg	6/6/18	1356	Irene Zazzi	6-6-18	13:57
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number:
Samples Received: 6/7/2018 12:50:00PM
Job Number: 03143-0424
Work Order: P806014
Project Name/Location: GCU 89E

Report Reviewed By: Date: 6/8/18

Walter Hinchman, Laboratory Director

Date: 6/8/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Base 5-pt @ 20'	P806014-01A	Soil	06/07/18	06/07/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Base 5-pt @ 20'
P806014-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1823013	06/07/18	06/07/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*98.3 %*		*50-150*	*1823013*	*06/07/18*	*06/07/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1823013	06/07/18	06/07/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1823012	06/07/18	06/07/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1823012	06/07/18	06/07/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*99.2 %*		*50-150*	*1823013*	*06/07/18*	*06/07/18*	*EPA 8015D*	
Surrogate: n-Nonane		*125 %*		*50-200*	*1823012*	*06/07/18*	*06/07/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1823019	06/07/18	06/08/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823013 - Purge and Trap EPA 5030A										
Blank (1823013-BLK1)				Prepared: 06-Jun-18 Analyzed: 07-Jun-18						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8090*		*"*	*8000*		*101*	*50-150*			
LCS (1823013-BS1)				Prepared & Analyzed: 06-Jun-18						
Benzene	4990	100	ug/kg	5000		99.9	70-130			
Toluene	4940	100	"	5000		98.8	70-130			
Ethylbenzene	4980	100	"	5000		99.6	70-130			
p,m-Xylene	9990	200	"	10000		99.9	70-130			
o-Xylene	4870	100	"	5000		97.5	70-130			
Total Xylenes	14900	100	"	15000		99.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7850*		*"*	*8000*		*98.1*	*50-150*			
Matrix Spike (1823013-MS1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Benzene	4240	100	ug/kg	5000	ND	84.9	54.3-133			
Toluene	4200	100	"	5000	ND	84.0	61.4-130			
Ethylbenzene	4220	100	"	5000	ND	84.4	61.4-133			
p,m-Xylene	8470	200	"	10000	ND	84.8	63.3-131			
o-Xylene	4170	100	"	5000	ND	83.5	63.3-131			
Total Xylenes	12600	100	"	15000	ND	84.3	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*7890*		*"*	*8000*		*98.6*	*50-150*			
Matrix Spike Dup (1823013-MSD1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Benzene	4370	100	ug/kg	5000	ND	87.4	54.3-133	2.91	20	
Toluene	4310	100	"	5000	ND	86.3	61.4-130	2.71	20	
Ethylbenzene	4340	100	"	5000	ND	86.9	61.4-133	2.94	20	
p,m-Xylene	8720	200	"	10000	ND	87.2	63.3-131	2.87	20	
o-Xylene	4290	100	"	5000	ND	85.8	63.3-131	2.75	20	
Total Xylenes	13000	100	"	15000	ND	86.8	63.3-131	2.83	20	
Surrogate: 4-Bromochlorobenzene-PID	*7920*		*"*	*8000*		*99.0*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823012 - DRO Extraction EPA 3570										
Blank (1823012-BLK1)				Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*54.4*		*"*	*50.0*		*109*	*50-200*			
LCS (1823012-BS1)				Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	443	25.0	mg/kg				38-132			
Surrogate: n-Nonane	*55.9*		*"*	*50.0*		*112*	*50-200*			
Matrix Spike (1823012-MS1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	485	25.0	mg/kg		ND		38-132			
Surrogate: n-Nonane	*62.3*		*"*	*50.0*		*125*	*50-200*			
Matrix Spike Dup (1823012-MSD1)		**Source: P806010-01**		Prepared & Analyzed: 06-Jun-18						
Diesel Range Organics (C10-C28)	469	25.0	mg/kg		ND		38-132	3.38	20	
Surrogate: n-Nonane	*59.5*		*"*	*50.0*		*119*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823013 - Purge and Trap EPA 5030A										
Blank (1823013-BLK1)				Prepared: 06-Jun-18 Analyzed: 07-Jun-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.21*		"	*8.00*		*103*	*50-150*			
LCS (1823013-BS2)				Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	49.8	20.0	mg/kg	50.0		99.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.20*		"	*8.00*		*103*	*50-150*			
Matrix Spike (1823013-MS2)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	47.0	20.0	mg/kg	50.0	ND	94.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.22*		"	*8.00*		*103*	*50-150*			
Matrix Spike Dup (1823013-MSD2)	**Source: P806010-01**			Prepared & Analyzed: 06-Jun-18						
Gasoline Range Organics (C6-C10)	50.5	20.0	mg/kg	50.0	ND	101	70-130	7.26	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.09*		"	*8.00*		*101*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1823019 - Anion Extraction EPA 300.0/9056A										
Blank (1823019-BLK1)				Prepared & Analyzed: 07-Jun-18						
Chloride	ND	20.0	mg/kg							
LCS (1823019-BS1)				Prepared: 07-Jun-18 Analyzed: 08-Jun-18						
Chloride	255	20.0	mg/kg	250		102	90-110			
Matrix Spike (1823019-MS1)	**Source: P806014-01**			Prepared: 07-Jun-18 Analyzed: 08-Jun-18						
Chloride	269	20.0	mg/kg	250	ND	108	80-120			
Matrix Spike Dup (1823019-MSD1)	**Source: P806014-01**			Prepared: 07-Jun-18 Analyzed: 08-Jun-18						
Chloride	268	20.0	mg/kg	250	ND	107	80-120	0.238	20	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08-Jun-18 11:33

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page _____ of _____

Client:	BP America
Project:	GCU 89E
Project Manager:	Steve Moskal
Address:	
City, State, Zip	
Phone:	505-320-1183
Email:	jeffblagg@AOL.com * steve.moskal@BP.com

Report Attention

Report due by:	6/8/2018
Attention:	Steve Moskal
Address:	
City, State, Zip	
Phone:	505-330-9179
Email:	

Lab Use Only

Lab WO#: P806014

Job Number: 03143-04224

TAT: 1D X, 3D

EPA Program: RCRA, CWA, SDW

State: NM X, CO, UT, A

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
1110	6/1/2018	SOIL	1	BASE 5-pt @ 20'	1	X	X	X			X		

Additional Instructions: BILLING: VID = VHIXONEVRM
WBS ELEMENT = L1-001CT-E: GCU 89E

vis ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: JH Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
JH Blagg	6/7/2018	1250		6/7/18	1250
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: Y / N

T1 _____ T2 _____ T3 _____

AVG Temp °C 4.0

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other _____

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, **v** - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com

laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number:
Samples Received: 6/11/2018 2:36:00PM
Job Number: 03143-0424
Work Order: P806027
Project Name/Location: GCU 89E

Report Reviewed By: Date: 6/12/18

Walter Hinchman, Laboratory Director

Date: 6/12/18

Tim Cain, Project Manager

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
North Base 5-pt. @20'	P806027-01A	Soil	06/11/18	06/11/18	Glass Jar, 4 oz.
Extended North Wall 5-pt (5'-18')	P806027-02A	Soil	06/11/18	06/11/18	Glass Jar, 4 oz.
TSP-7R	P806027-03A	Soil	06/11/18	06/11/18	Glass Jar, 4 oz.
TSP-8R	P806027-04A	Soil	06/11/18	06/11/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

North Base 5-pt. @20'
P806027-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1824008	06/11/18	06/11/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*102 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Surrogate: n-Nonane		*117 %*		*50-200*	*1824006*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**24.3**	20.0	mg/kg	1	1824007	06/11/18	06/11/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Extended North Wall 5-pt (5'-18')

P806027-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1824008	06/11/18	06/11/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1824008	06/11/18	06/11/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*104 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Surrogate: n-Nonane		*114 %*		*50-200*	*1824006*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**41.2**	20.0	mg/kg	1	1824007	06/11/18	06/12/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

TSP-7R

P806027-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1824008	06/11/18	06/11/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**396**	25.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*106 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Surrogate: n-Nonane		*118 %*		*50-200*	*1824006*	*06/11/18*	*06/11/18*	*EPA 8015D*	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

TSP-8R

P806027-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**27.1**	20.0	mg/kg	1	1824008	06/11/18	06/11/18	EPA 8015D	
Diesel Range Organics (C10-C28)	**393**	25.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824006	06/11/18	06/11/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*109 %*		*50-150*	*1824008*	*06/11/18*	*06/11/18*	*EPA 8015D*	
Surrogate: n-Nonane		*136 %*		*50-200*	*1824006*	*06/11/18*	*06/11/18*	*EPA 8015D*	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824008 - Purge and Trap EPA 5030A										
Blank (1824008-BLK1)				Prepared & Analyzed: 11-Jun-18						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*7470*		*"*	*8000*		*93.4*	*50-150*			
LCS (1824008-BS1)				Prepared & Analyzed: 11-Jun-18						
Benzene	4840	100	ug/kg	5000		96.9	70-130			
Toluene	4810	100	"	5000		96.3	70-130			
Ethylbenzene	4840	100	"	5000		96.9	70-130			
p,m-Xylene	9730	200	"	10000		97.4	70-130			
o-Xylene	4780	100	"	5000		95.6	70-130			
Total Xylenes	14500	100	"	15000		96.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7960*		*"*	*8000*		*99.6*	*50-150*			
Matrix Spike (1824008-MS1)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Benzene	3870	100	ug/kg	5000	ND	77.3	54.3-133			
Toluene	3830	100	"	5000	ND	76.5	61.4-130			
Ethylbenzene	3820	100	"	5000	ND	76.5	61.4-133			
p,m-Xylene	7700	200	"	10000	ND	77.1	63.3-131			
o-Xylene	3860	100	"	5000	ND	77.2	63.3-131			
Total Xylenes	11600	100	"	15000	ND	77.1	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8150*		*"*	*8000*		*102*	*50-150*			
Matrix Spike Dup (1824008-MSD1)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Benzene	4300	100	ug/kg	5000	ND	86.1	54.3-133	10.7	20	
Toluene	4270	100	"	5000	ND	85.5	61.4-130	11.0	20	
Ethylbenzene	4300	100	"	5000	ND	86.0	61.4-133	11.6	20	
p,m-Xylene	8640	200	"	10000	ND	86.5	63.3-131	11.5	20	
o-Xylene	4300	100	"	5000	ND	86.1	63.3-131	10.9	20	
Total Xylenes	12900	100	"	15000	ND	86.3	63.3-131	11.3	20	
Surrogate: 4-Bromochlorobenzene-PID	*8170*		*"*	*8000*		*102*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824006 - DRO Extraction EPA 3570										
Blank (1824006-BLK1)				Prepared & Analyzed: 11-Jun-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*64.7*		*"*	*50.0*		*129*	*50-200*			
LCS (1824006-BS1)				Prepared & Analyzed: 11-Jun-18						
Diesel Range Organics (C10-C28)	475	25.0	mg/kg	500		94.9	38-132			
Surrogate: n-Nonane	*61.4*		*"*	*50.0*		*123*	*50-200*			
Matrix Spike (1824006-MS1)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Diesel Range Organics (C10-C28)	456	25.0	mg/kg	500	ND	91.2	38-132			
Surrogate: n-Nonane	*58.8*		*"*	*50.0*		*118*	*50-200*			
Matrix Spike Dup (1824006-MSD1)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Diesel Range Organics (C10-C28)	457	25.0	mg/kg	500	ND	91.4	38-132	0.215	20	
Surrogate: n-Nonane	*57.5*		*"*	*50.0*		*115*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824008 - Purge and Trap EPA 5030A										
Blank (1824008-BLK1)				Prepared & Analyzed: 11-Jun-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.73*		"	*8.00*		*109*	*50-150*			
LCS (1824008-BS2)				Prepared & Analyzed: 11-Jun-18						
Gasoline Range Organics (C6-C10)	42.5	20.0	mg/kg	50.0		85.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.16*		"	*8.00*		*102*	*50-150*			
Matrix Spike (1824008-MS2)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Gasoline Range Organics (C6-C10)	55.7	20.0	mg/kg	50.0	ND	111	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.36*		"	*8.00*		*105*	*50-150*			
Matrix Spike Dup (1824008-MSD2)		**Source: P806027-01**		Prepared & Analyzed: 11-Jun-18						
Gasoline Range Organics (C6-C10)	52.9	20.0	mg/kg	50.0	ND	106	70-130	5.03	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.39*		"	*8.00*		*105*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824007 - Anion Extraction EPA 300.0/9056A										
Blank (1824007-BLK1)				Prepared & Analyzed: 11-Jun-18						
Chloride	ND	20.0	mg/kg							
LCS (1824007-BS1)				Prepared & Analyzed: 11-Jun-18						
Chloride	256	20.0	mg/kg	250		103	90-110			
Matrix Spike (1824007-MS1)		**Source: P806027-01**		Prepared: 11-Jun-18 Analyzed: 12-Jun-18						
Chloride	284	20.0	mg/kg	250	24.3	104	80-120			
Matrix Spike Dup (1824007-MSD1)		**Source: P806027-01**		Prepared: 11-Jun-18 Analyzed: 12-Jun-18						
Chloride	282	20.0	mg/kg	250	24.3	103	80-120	0.672	20	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	12-Jun-18 14:24

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 1

Client:	BP America
Project:	GCU 89F
Project Manager:	Steve Moskal
Address:	
City, State, Zip	
Phone:	505-320-1183
Email:	jeffcblagg@aol.com

Report Attention

Report due by:	Jun 12, 2018
Attention:	Steve Moskal
Address:	
City, State, Zip	
Phone:	
Email:	Steven.Moskal@BPX.com

Lab Use Only

Lab WO#	Job Number
P806027	03143-0424

TAT

1D	3D
X	

EPA Program

RCRA	CWA	SDWA

State

NM	CO	UT	AZ
X			

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
1317	6/11/18	Soil	1	North Base 5-pt. @ 20'	1	X	X	X			X		1-4oz jar
1326	"	"	1	Extended North Wall 5-pt (5'-18')	2	X	X	X			X		
1343	"	"	1	TSP-7R	3	X	X	X JCS					
1346	"	"	1	TSP-8R	4	X	X	X JCS					

Additional Instructions: Billing Info: VHIXONEVRM
L1-001CT-E: GCU 89E

vis. ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	6/11/2018	1434	[signature]	6-11-18	14:36
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: (Y) N

T1 T2 T3

AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com

laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number:
Samples Received: 6/12/2018 3:24:00PM
Job Number: 03143-0424
Work Order: P806028
Project Name/Location: GCU 89E

Report Reviewed By: Date: 6/14/18

Walter Hinchman, Laboratory Director

Date: 6/14/18

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Extended South Wall 5-pt (6'-18')	P806028-01A	Solid	06/12/18	06/12/18	Glass Jar, 4 oz.
South Base 5-pt @ 20'	P806028-02A	Solid	06/12/18	06/12/18	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Extended South Wall 5-pt (6'-18')

P806028-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1824016	06/12/18	06/12/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*	*50-150*		*1824016*	*06/12/18*	*06/12/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1824016	06/12/18	06/12/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1824015	06/12/18	06/12/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824015	06/12/18	06/12/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.2 %*	*50-150*		*1824016*	*06/12/18*	*06/12/18*	*EPA 8015D*	
Surrogate: n-Nonane		*119 %*	*50-200*		*1824015*	*06/12/18*	*06/12/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**28.1**	20.0	mg/kg	1	1824017	06/13/18	06/14/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

South Base 5-pt @ 20'
P806028-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1824016	06/12/18	06/13/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*		*50-150*	*1824016*	*06/12/18*	*06/13/18*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1824016	06/12/18	06/13/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1824015	06/12/18	06/13/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1824015	06/12/18	06/13/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*102 %*		*50-150*	*1824016*	*06/12/18*	*06/13/18*	*EPA 8015D*	
Surrogate: n-Nonane		*127 %*		*50-200*	*1824015*	*06/12/18*	*06/13/18*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1824017	06/13/18	06/14/18	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824016 - Purge and Trap EPA 5030A										
Blank (1824016-BLK1)				Prepared & Analyzed: 12-Jun-18						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	*8400*		*"*	*8000*		*105*	*50-150*			
LCS (1824016-BS1)				Prepared & Analyzed: 12-Jun-18						
Benzene	4500	100	ug/kg	5000		90.0	70-130			
Toluene	4460	100	"	5000		89.2	70-130			
Ethylbenzene	4490	100	"	5000		89.8	70-130			
p,m-Xylene	9000	200	"	10000		90.1	70-130			
o-Xylene	4460	100	"	5000		89.1	70-130			
Total Xylenes	13500	100	"	15000		89.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8480*		*"*	*8000*		*106*	*50-150*			
Matrix Spike (1824016-MS1)		**Source: P806028-01**		Prepared & Analyzed: 12-Jun-18						
Benzene	4680	100	ug/kg	5000	ND	93.6	54.3-133			
Toluene	4630	100	"	5000	ND	92.7	61.4-130			
Ethylbenzene	4650	100	"	5000	ND	93.0	61.4-133			
p,m-Xylene	9300	200	"	10000	ND	93.0	63.3-131			
o-Xylene	4580	100	"	5000	ND	91.6	63.3-131			
Total Xylenes	13900	100	"	15000	ND	92.5	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8580*		*"*	*8000*		*107*	*50-150*			
Matrix Spike Dup (1824016-MSD1)		**Source: P806028-01**		Prepared: 12-Jun-18 Analyzed: 13-Jun-18						
Benzene	4810	100	ug/kg	5000	ND	96.3	54.3-133	2.78	20	
Toluene	4760	100	"	5000	ND	95.3	61.4-130	2.78	20	
Ethylbenzene	4800	100	"	5000	ND	96.0	61.4-133	3.19	20	
p,m-Xylene	9590	200	"	10000	ND	95.9	63.3-131	3.12	20	
o-Xylene	4730	100	"	5000	ND	94.7	63.3-131	3.28	20	
Total Xylenes	14300	100	"	15000	ND	95.5	63.3-131	3.17	20	
Surrogate: 4-Bromochlorobenzene-PID	*8570*		*"*	*8000*		*107*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824015 - DRO Extraction EPA 3570										
Blank (1824015-BLK1)				Prepared & Analyzed: 12-Jun-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	*58.7*		*"*	*50.0*		*117*	*50-200*			
LCS (1824015-BS1)				Prepared & Analyzed: 12-Jun-18						
Diesel Range Organics (C10-C28)	537	25.0	mg/kg	500		107	38-132			
Surrogate: n-Nonane	*63.8*		*"*	*50.0*		*128*	*50-200*			
Matrix Spike (1824015-MS1)		**Source: P806028-01**		Prepared & Analyzed: 12-Jun-18						
Diesel Range Organics (C10-C28)	485	25.0	mg/kg	500	ND	97.0	38-132			
Surrogate: n-Nonane	*56.7*		*"*	*50.0*		*113*	*50-200*			
Matrix Spike Dup (1824015-MSD1)		**Source: P806028-01**		Prepared & Analyzed: 12-Jun-18						
Diesel Range Organics (C10-C28)	520	25.0	mg/kg	500	ND	104	38-132	7.01	20	
Surrogate: n-Nonane	*60.7*		*"*	*50.0*		*121*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824016 - Purge and Trap EPA 5030A										
Blank (1824016-BLK1)				Prepared & Analyzed: 12-Jun-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.27*		"	*8.00*		*103*	*50-150*			
LCS (1824016-BS2)				Prepared & Analyzed: 12-Jun-18						
Gasoline Range Organics (C6-C10)	45.9	20.0	mg/kg	50.0		91.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.06*		"	*8.00*		*101*	*50-150*			
Matrix Spike (1824016-MS2)		**Source: P806028-01**		Prepared: 12-Jun-18 Analyzed: 13-Jun-18						
Gasoline Range Organics (C6-C10)	46.8	20.0	mg/kg	50.0	ND	93.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.38*		"	*8.00*		*105*	*50-150*			
Matrix Spike Dup (1824016-MSD2)		**Source: P806028-01**		Prepared: 12-Jun-18 Analyzed: 13-Jun-18						
Gasoline Range Organics (C6-C10)	49.4	20.0	mg/kg	50.0	ND	98.9	70-130	5.42	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.23*		"	*8.00*		*103*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1824017 - Anion Extraction EPA 300.0/9056A										
Blank (1824017-BLK1)				Prepared: 13-Jun-18 Analyzed: 14-Jun-18						
Chloride	ND	20.0	mg/kg							
LCS (1824017-BS1)				Prepared: 13-Jun-18 Analyzed: 14-Jun-18						
Chloride	253	20.0	mg/kg	250		101	90-110			
Matrix Spike (1824017-MS1)	**Source: P806028-01**			Prepared: 13-Jun-18 Analyzed: 14-Jun-18						
Chloride	290	20.0	mg/kg	250	28.1	105	80-120			
Matrix Spike Dup (1824017-MSD1)	**Source: P806028-01**			Prepared: 13-Jun-18 Analyzed: 14-Jun-18						
Chloride	286	20.0	mg/kg	250	28.1	103	80-120	1.11	20	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	14-Jun-18 16:13

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 1

Page 10 of 10

Client: BP America
Project: GCU 89E
Project Manager: Steve Moskal
Address:
City, State, Zip
Phone: 505-320-1183
Email: jeffblagg@AOL.com

Report Attention
Report due by: 6/13/2018
Attention: Steve Moskal
Address:
City, State, Zip
Phone:
Email: steven.moskal@BPX.com

Lab Use Only
Lab WO# P806028
Job Number 03143-0424

TAT: 1D X, 3D

EPA Program: RCRA, CWA, SDWA

State: NM X, CO, UT, AZ

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
1407	6/12/18	Soil	1	Extended South Wall 5-pt (6'-18')	1	X	X	X			X		1- 4oz JAR
1418	"	"	1	South Base 5-pt @ 20'	2	X	X	X			X		"

Additional Instructions: Billing Info: VHIXONEVRM
L1-001CT-E:GCU89E
VIS ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	6/12/2018	1522	[signature]	6/12/18	15:24

Lab Use Only
Received on ice: Y / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above boratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301
Ph (505) 632-0615 Fx (505) 632-1865
Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 20, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806A94

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/19/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806A94**
Date Reported: **6/20/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: West Wall South Half (6-18)
Project: GCU 89E
Collection Date: 6/18/2018 9:22:00 AM
Lab ID: 1806A94-001
Matrix: MEOH (SOIL)
Received Date: 6/19/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	1200	38		mg/Kg	10	6/19/2018 12:51:48 PM	C52084
Surr: BFB	104	70-130		%Rec	10	6/19/2018 12:51:48 PM	C52084
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	1700	97		mg/Kg	10	6/19/2018 9:25:13 AM	38750
Motor Oil Range Organics (MRO)	550	490		mg/Kg	10	6/19/2018 9:25:13 AM	38750
Surr: DNOP	0	70-130	S	%Rec	10	6/19/2018 9:25:13 AM	38750

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

Qualifiers:

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

Analytical Report
Lab Order **1806A94**
Date Reported: **6/20/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: East Wall South Third (6-18)
Project: GCU 89E
Collection Date: 6/18/2018 9:33:00 AM
Lab ID: 1806A94-002
Matrix: MEOH (SOIL)
Received Date: 6/19/2018 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	1400	41		mg/Kg	10	6/19/2018 1:14:48 PM	C52084
Surr: BFB	104	70-130		%Rec	10	6/19/2018 1:14:48 PM	C52084
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	650	9.5		mg/Kg	1	6/19/2018 11:27:47 AM	38750
Motor Oil Range Organics (MRO)	220	47		mg/Kg	1	6/19/2018 11:27:47 AM	38750
Surr: DNOP	123	70-130		%Rec	1	6/19/2018 11:27:47 AM	38750

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A94**

20-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **LCS-38750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38750**	RunNo: **52071**
Prep Date: **6/19/2018**	Analysis Date: **6/19/2018**	SeqNo: **1703957** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.6	70	130			
Surr: DNOP	4.9		5.000		97.7	70	130			

Sample ID **MB-38750**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38750**	RunNo: **52071**
Prep Date: **6/19/2018**	Analysis Date: **6/19/2018**	SeqNo: **1703958** 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	11		10.00		106	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806A94**

20-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **C52084**	RunNo: **52084**
Prep Date:	Analysis Date: **6/19/2018**	SeqNo: **1704338** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	70	130			
Surr: BFB	500		500.0		100	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **C52084**	RunNo: **52084**
Prep Date:	Analysis Date: **6/19/2018**	SeqNo: **1704339** 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	560		500.0		112	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806A94 RcptNo: 1

Received By: Isaiah Ortiz 6/19/2018 7:20:00 AM I
Completed By: Isaiah Ortiz 6/19/2018 7:46:36 AM I
Reviewed By: ENM 6/19/18 Lb: JB 06/19/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by JB 06/19/18

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: BP America
Blagg Engineering Inc.
Mailing Address:
Phone #: 505-320-1183
email or Fax#:
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time: ☐ Standard ☒ Rush SAME DAY
Project Name: GCU 89E
Project #:
Project Manager: STEVE MOSKAL
Sampler: JEFF BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.1-1.0(CF) 0.1

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806A94	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/18/19	0922	SOIL	WEST WALL, SOUTH HALF (6'-18')	4 oz × 1	COOL	-001			X													
"	0933	"	EAST WALL, SOUTH THIRD (6'-18')	"	"	-002			X													

Date	Time	Relinquished by	Received by	Date	Time
6/18/2018	1417	Jeff Blagg	Christine Walters	6/18/2018	1417
6/18/18	1830	Christine Walters	[signature]	6/19/18	720

Remarks: DEPENDING ON TEST RESULTS, WE MAY REQUEST BTEX (8021) + CL⁻ TESTING ON NEXT DAY ANALYSIS.
CONTACT: Steve Moskal
VID: VHIXONEVRM
WBS: LI-00ICT-E:GG 8

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 25, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806C88

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/21/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806C88**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: South Base East Extension @ 19'
Project: GCU 89E
Collection Date: 6/20/2018 2:15:00 PM
Lab ID: 1806C88-001
Matrix: MEOH (SOIL)
Received Date: 6/21/2018 7:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	34	30		mg/Kg	20	6/21/2018 1:56:55 PM	38815
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/21/2018 11:32:54 AM	38808
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/21/2018 11:32:54 AM	38808
Surr: DNOP	103	70-130		%Rec	1	6/21/2018 11:32:54 AM	38808
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/21/2018 10:45:40 AM	38791
Surr: BFB	86.0	15-316		%Rec	1	6/21/2018 10:45:40 AM	38791
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/21/2018 10:45:40 AM	38791
Toluene	ND	0.041		mg/Kg	1	6/21/2018 10:45:40 AM	38791
Ethylbenzene	ND	0.041		mg/Kg	1	6/21/2018 10:45:40 AM	38791
Xylenes, Total	ND	0.081		mg/Kg	1	6/21/2018 10:45:40 AM	38791
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	6/21/2018 10:45:40 AM	38791

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C88**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38815**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38815**	RunNo:	**52139**					
Prep Date:	**6/21/2018**	Analysis Date:	**6/21/2018**	SeqNo:	**1708541**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38815**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38815**	RunNo:	**52139**					
Prep Date:	**6/21/2018**	Analysis Date:	**6/21/2018**	SeqNo:	**1708542**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C88**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **LCS-38808**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38808**	RunNo: **52132**
Prep Date: **6/21/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707219** 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	70	130			
Surr: DNOP	4.9		5.000		97.1	70	130			

Sample ID **MB-38808**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38808**	RunNo: **52132**
Prep Date: **6/21/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707225** 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		101	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C88**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-38791**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707771** 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	880		1000		88.0	15	316			

Sample ID **LCS-38791**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707772** 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	75.9	131			
Surr: BFB	990		1000		98.5	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C88**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-38791**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707783** 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 **LCS-38791**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707784** 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	77.3	128			
Toluene	0.97	0.050	1.000	0	97.5	79.2	125			
Ethylbenzene	0.97	0.050	1.000	0	97.2	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	99.4	81.6	129			
Surr: 4-Bromofluorobenzene	1.1		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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806C88 RcptNo: 1

Received By: **Isaiah Ortiz** 6/21/2018 7:11:00 AM IO

Completed By: **Isaiah Ortiz** 6/21/2018 7:40:01 AM IO

Reviewed By: IO 6/21/18 MW 6/21/18

Chain of Custody

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

Log In

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

MW 6/21/18

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

MW 6/20/18

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			
2	1.9	Good	Yes			
3	0.3	Good	Yes			

Chain-of-Custody Record

Client: BP AMERICA

BLAGG ENGINEERING, INC.

Mailing Address:

Phone #: (505) 320 - 1183

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush SAME DAY

Project Name:
GCU 89E

Project #:

Project Manager:
STEVE MOSKAC

Sampler: JEFF BLAGG

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8 19 03

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806C88	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
6/20/2018	1415	SOIL	South Base, East Extension @ 19'	4 oz x 1	COOL	-001	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/20/2018	1719			6/20/2018	1719
Date:	Time:	Relinquished by:	Received by:	Date	Time
6/20/18	1820		courier	6/21/18	07:11

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VD: VHLKONEVRM
WBS: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 25, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806C90

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/21/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806C90**
Date Reported: **6/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: East Wall 5-pt Composite Impact
Project: GCU 89E
Collection Date: 6/20/2018 12:45:00 PM
Lab ID: 1806C90-001 **Matrix:** SOIL **Received Date:** 6/21/2018 7:11:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	700	9.3		mg/Kg	1	6/21/2018 12:17:07 PM	38808
Motor Oil Range Organics (MRO)	310	46		mg/Kg	1	6/21/2018 12:17:07 PM	38808
Surr: DNOP	123	70-130		%Rec	1	6/21/2018 12:17:07 PM	38808
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	930	21		mg/Kg	5	6/21/2018 9:35:34 AM	38791
Surr: BFB	1130	15-316	S	%Rec	5	6/21/2018 9:35:34 AM	38791

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C90**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **LCS-38808**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38808**	RunNo: **52132**
Prep Date: **6/21/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707219** 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	70	130			
Surr: DNOP	4.9		5.000		97.1	70	130			

Sample ID **MB-38808**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38808**	RunNo: **52132**
Prep Date: **6/21/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707225** 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		101	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806C90**

25-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-38791**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707771** 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	880		1000		88.0	15	316			

Sample ID **LCS-38791**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **38791**	RunNo: **52136**
Prep Date: **6/20/2018**	Analysis Date: **6/21/2018**	SeqNo: **1707772** 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	75.9	131			
Surr: BFB	990		1000		98.5	15	316			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806C90 RcptNo: 1

Received By: Isaiah Ortiz 6/21/2018 7:11:00 AM IO

Completed By: Isaiah Ortiz 6/21/2018 8:01:06 AM IO

Reviewed By: IO 6/21/18 MW 6/21/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____
MW 6/21/18

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			
2	1.9	Good	Yes			
3	0.3	Good	Yes			

Chain-of-Custody Record

Client: BP AMERICA

BLAGG ENGINEERING

Mailing Address:

Phone #: 505-320-1183

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: SAME DAY

☐ Standard ☒ Rush _____

Project Name: GCU 89E

Project #:

Project Manager: STEVE MOSKAL

Sampler: JEFF BLAGG

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 1.8 1.9 0.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806C90	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
6/20/18	1245	SOIL	EAST WALL 5-PT COMPOSITE IMPACT	4 oz x 1	COOL	-001			X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/20/18	1719			6/20/18	1719
Date:	Time:	Relinquished by:	Received by:	Date	Time
6/20/18	1812		courier	6/21/18	07:11

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VD: VHIXONEVRM
WBS: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 27, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806F17

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/26/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806F17**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1806F17-001 **Matrix:** SOIL

Client Sample ID: NE Base 6-pt (18'-22')
Collection Date: 6/25/2018 1:18:00 PM
Received Date: 6/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	41	30		mg/Kg	20	6/26/2018 11:29:31 AM	38882
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/26/2018 10:41:16 AM	38880
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/26/2018 10:41:16 AM	38880
Surr: DNOP	93.1	70-130		%Rec	1	6/26/2018 10:41:16 AM	38880
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/26/2018 10:39:29 AM	38874
Surr: BFB	82.3	15-316		%Rec	1	6/26/2018 10:39:29 AM	38874
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/26/2018 10:39:29 AM	38874
Toluene	ND	0.039		mg/Kg	1	6/26/2018 10:39:29 AM	38874
Ethylbenzene	ND	0.039		mg/Kg	1	6/26/2018 10:39:29 AM	38874
Xylenes, Total	ND	0.078		mg/Kg	1	6/26/2018 10:39:29 AM	38874
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	6/26/2018 10:39:29 AM	38874

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

Qualifiers:

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

Analytical Report
Lab Order **1806F17**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: NORTH Wall (East 1) 5-pt (6'-1
Project: GCU 89E
Collection Date: 6/25/2018 1:26:00 PM
Lab ID: 1806F17-002 **Matrix:** SOIL **Received Date:** 6/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/26/2018 11:41:56 AM	38882
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/26/2018 11:03:24 AM	38880
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/26/2018 11:03:24 AM	38880
Surr: DNOP	91.2	70-130		%Rec	1	6/26/2018 11:03:24 AM	38880
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/26/2018 11:02:48 AM	38874
Surr: BFB	76.4	15-316		%Rec	1	6/26/2018 11:02:48 AM	38874
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/26/2018 11:02:48 AM	38874
Toluene	ND	0.041		mg/Kg	1	6/26/2018 11:02:48 AM	38874
Ethylbenzene	ND	0.041		mg/Kg	1	6/26/2018 11:02:48 AM	38874
Xylenes, Total	ND	0.082		mg/Kg	1	6/26/2018 11:02:48 AM	38874
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	6/26/2018 11:02:48 AM	38874

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

Qualifiers:

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

Analytical Report
Lab Order **1806F17**
Date Reported: **6/27/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: EAST Wall (North 1) 5-pt (6'-18'
Project: GCU 89E
Collection Date: 6/25/2018 1:31:00 PM
Lab ID: 1806F17-003 **Matrix:** SOIL **Received Date:** 6/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/26/2018 11:54:21 AM	38882
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/26/2018 11:25:31 AM	38880
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/26/2018 11:25:31 AM	38880
Surr: DNOP	91.4	70-130		%Rec	1	6/26/2018 11:25:31 AM	38880
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/26/2018 11:26:08 AM	38874
Surr: BFB	79.1	15-316		%Rec	1	6/26/2018 11:26:08 AM	38874
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/26/2018 11:26:08 AM	38874
Toluene	ND	0.041		mg/Kg	1	6/26/2018 11:26:08 AM	38874
Ethylbenzene	ND	0.041		mg/Kg	1	6/26/2018 11:26:08 AM	38874
Xylenes, Total	ND	0.083		mg/Kg	1	6/26/2018 11:26:08 AM	38874
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/26/2018 11:26:08 AM	38874

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F17**

27-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38882**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38882**	RunNo:	**52249**					
Prep Date:	**6/26/2018**	Analysis Date:	**6/26/2018**	SeqNo:	**1712958**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38882**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38882**	RunNo:	**52249**					
Prep Date:	**6/26/2018**	Analysis Date:	**6/26/2018**	SeqNo:	**1712959**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F17**

27-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **LCS-38880**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38880**	RunNo: **52229**
Prep Date: **6/26/2018**	Analysis Date: **6/26/2018**	SeqNo: **1711417** 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	83.5	70	130			
Surr: DNOP	4.3		5.000		86.9	70	130			

Sample ID **MB-38880**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38880**	RunNo: **52229**
Prep Date: **6/26/2018**	Analysis Date: **6/26/2018**	SeqNo: **1711418** 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		101	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F17**

27-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38874**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**38874**	RunNo:	**52243**					
Prep Date:	**6/25/2018**	Analysis Date:	**6/26/2018**	SeqNo:	**1712080**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		86.8	15	316			

Sample ID	**LCS-38874**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**38874**	RunNo:	**52243**					
Prep Date:	**6/25/2018**	Analysis Date:	**6/26/2018**	SeqNo:	**1712081**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	75.9	131			
Surr: BFB	1000		1000		104	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F17**

27-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38874**	SampType:	**MBLK**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID:	**38874**		RunNo:	**52243**				
Prep Date:	**6/25/2018**	Analysis Date:	**6/26/2018**		SeqNo:	**1712109**	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	**LCS-38874**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID:	**38874**		RunNo:	**52243**				
Prep Date:	**6/25/2018**	Analysis Date:	**6/26/2018**		SeqNo:	**1712110**	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	77.3	128			
Toluene	0.96	0.050	1.000	0	96.1	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	96.8	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806F17 RcptNo: 1

Received By: Anne Thorne 6/26/2018 7:00:00 AM

Completed By: Anne Thorne 6/26/2018 7:24:30 AM

Reviewed By: JO 6/26/18

Labeled by: AT 6/26/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: BP AMERICA

BLAGG ENGINEERING INC.

Mailing Address:

Phone #: 505-320-1183

email or Fax#:

QA/QC Package:

[X] Standard [ ] Level 4 (Full Validation)

Accreditation

[ ] NELAP [ ] Other

[ ] EDD (Type)

Turn-Around Time: SAME DAY

[ ] Standard [X] Rush

Project Name: GCU 89E

Project #:

Project Manager: STEVE MOSKAL

Sampler: JEFF BLAGG

On Ice: [X] Yes [ ] No

Sample Temperature: 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1906E8	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
6/25/18	1318	SOIL	NE BASE 6-pt (18'-22')	4oz x 1 MeoH	COOL	-001	X		X									X				
"	1326	"	NORTH WALL (EAST 1) 5-pt (6'-16')	"	"	-002	X		X									X				
"	1331	"	EAST WALL (NORTH 1) 5-pt (6'-18')	"	"	-003	X		X									X				

Date	Time	Relinquished by	Received by	Date	Time
6/25/18	1618	Jeff Blagg	Mat Wall	6/25/18	1618
6/25/18	1804	Matthew Walker		06/26/18	0706

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VID: VHIXONEVRM
WBS ELEMENT: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 29, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806F82

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/27/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806F82**
Date Reported: **6/29/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1806F82-001 **Matrix:** SOIL

Client Sample ID: NE Base #2 @ 19'
Collection Date: 6/26/2018 1:42:00 PM
Received Date: 6/27/2018 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/27/2018 11:45:09 AM	38916
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/27/2018 9:42:01 AM	38909
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2018 9:42:01 AM	38909
Surr: DNOP	99.2	70-130		%Rec	1	6/27/2018 9:42:01 AM	38909
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/27/2018 9:30:39 AM	G52273
Surr: BFB	87.8	15-316		%Rec	1	6/27/2018 9:30:39 AM	G52273
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/27/2018 9:30:39 AM	B52273
Toluene	ND	0.040		mg/Kg	1	6/27/2018 9:30:39 AM	B52273
Ethylbenzene	ND	0.040		mg/Kg	1	6/27/2018 9:30:39 AM	B52273
Xylenes, Total	ND	0.080		mg/Kg	1	6/27/2018 9:30:39 AM	B52273
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	6/27/2018 9:30:39 AM	B52273

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

Qualifiers:

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

Analytical Report
Lab Order **1806F82**
Date Reported: **6/29/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1806F82-002 **Matrix:** SOIL

Client Sample ID: NORTH Wall (East 2) 5-pt (6'-1
Collection Date: 6/26/2018 1:52:00 PM
Received Date: 6/27/2018 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	6/27/2018 11:57:34 AM	38916
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/27/2018 10:04:03 AM	38909
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/27/2018 10:04:03 AM	38909
Surr: DNOP	98.5	70-130		%Rec	1	6/27/2018 10:04:03 AM	38909
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/27/2018 9:53:54 AM	G52273
Surr: BFB	84.4	15-316		%Rec	1	6/27/2018 9:53:54 AM	G52273
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/27/2018 9:53:54 AM	B52273
Toluene	ND	0.040		mg/Kg	1	6/27/2018 9:53:54 AM	B52273
Ethylbenzene	ND	0.040		mg/Kg	1	6/27/2018 9:53:54 AM	B52273
Xylenes, Total	ND	0.081		mg/Kg	1	6/27/2018 9:53:54 AM	B52273
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	6/27/2018 9:53:54 AM	B52273

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F82**

29-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38916**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38916**	RunNo:	**52281**					
Prep Date:	**6/27/2018**	Analysis Date:	**6/27/2018**	SeqNo:	**1714260**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38916**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38916**	RunNo:	**52281**					
Prep Date:	**6/27/2018**	Analysis Date:	**6/27/2018**	SeqNo:	**1714261**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F82**

29-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **LCS-38909**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38909**	RunNo: **52269**
Prep Date: **6/27/2018**	Analysis Date: **6/27/2018**	SeqNo: **1713078** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.6	70	130			
Surr: DNOP	4.4		5.000		88.4	70	130			

Sample ID **MB-38909**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38909**	RunNo: **52269**
Prep Date: **6/27/2018**	Analysis Date: **6/27/2018**	SeqNo: **1713079** 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	9.2		10.00		92.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F82**

29-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G52273**	RunNo: **52273**
Prep Date:	Analysis Date: **6/27/2018**	SeqNo: **1713631** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	830		1000		83.5	15	316			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G52273**	RunNo: **52273**
Prep Date:	Analysis Date: **6/27/2018**	SeqNo: **1713632** 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	75.9	131			
Surr: BFB	990		1000		98.6	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806F82**

29-Jun-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B52273**	RunNo: **52273**
Prep Date:	Analysis Date: **6/27/2018**	SeqNo: **1713652** 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		99.9	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B52273**	RunNo: **52273**
Prep Date:	Analysis Date: **6/27/2018**	SeqNo: **1713653** 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	94.6	77.3	128			
Toluene	0.97	0.050	1.000	0	97.1	79.2	125			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	98.2	81.6	129			
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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806F82 RcptNo: 1

Received By: Anne Thorne 6/27/2018 7:55:00 AM Anne Thorne

Completed By: Anne Thorne 6/27/2018 8:03:39 AM Anne Thorne

Reviewed By: ENM 6/27/18

Labeled by: AT 06/27/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: BP AMERICA

BLAGG ENGINEERING INC.

Mailing Address:

Phone #: 505-320-1183

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush SAME DAY

Project Name: GCU 89E

Project #:

Project Manager: STEVE MOSKAL

Sampler: JEFF BLAGG

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1806F82	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
6/26/2018	1342	SOIL	NE BASE #2 @ 19'	4 oz x 1	COOL	-001	X		X									X				
"	1352	"	NORTH Wall (EAST 2) 5-pt (6'-16')	"	"	-002	X		X									X				

Container Type and # note: A 06/27/18 ... meu/H ...

Date	Time	Relinquished by:	Received by:	Date	Time
6/26/2018	1548	Jeff Blagg	[signature]	6/26/2018	1548
6/26/18	1820	[signature]	[signature]	06/27/18	0755

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VID: VHIXONEVRM
WBS ELEMENT: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 01, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1806G68

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/28/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1806G68**
Date Reported: **7/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1806G68-001 **Matrix:** SOIL

Client Sample ID: BASE CENTER (EAST 1) @ 20'
Collection Date: 6/27/2018 1:12:00 PM
Received Date: 6/28/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	30		mg/Kg	20	6/28/2018 11:16:07 AM	38944
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/28/2018 10:58:35 AM	A52327
Surr: BFB	111	70-130		%Rec	1	6/28/2018 10:58:35 AM	A52327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/28/2018 10:41:23 AM	38939
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/28/2018 10:41:23 AM	38939
Surr: DNOP	98.8	70-130		%Rec	1	6/28/2018 10:41:23 AM	38939
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	6/28/2018 10:58:35 AM	R52327
Toluene	ND	0.040		mg/Kg	1	6/28/2018 10:58:35 AM	R52327
Ethylbenzene	ND	0.040		mg/Kg	1	6/28/2018 10:58:35 AM	R52327
Xylenes, Total	ND	0.081		mg/Kg	1	6/28/2018 10:58:35 AM	R52327
Surr: 4-Bromofluorobenzene	124	70-130		%Rec	1	6/28/2018 10:58:35 AM	R52327
Surr: Toluene-d8	97.2	70-130		%Rec	1	6/28/2018 10:58:35 AM	R52327

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

Qualifiers:

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

Analytical Report
Lab Order **1806G68**
Date Reported: **7/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1806G68-002 **Matrix:** SOIL

Client Sample ID: BASE CENTER (EAST 2) @ 20'
Collection Date: 6/27/2018 1:21:00 PM
Received Date: 6/28/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	30		mg/Kg	20	6/28/2018 11:28:31 AM	38944
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/28/2018 11:21:47 AM	A52327
Surr: BFB	113	70-130		%Rec	1	6/28/2018 11:21:47 AM	A52327
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/28/2018 11:03:37 AM	38939
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2018 11:03:37 AM	38939
Surr: DNOP	98.7	70-130		%Rec	1	6/28/2018 11:03:37 AM	38939
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.018		mg/Kg	1	6/28/2018 11:21:47 AM	R52327
Toluene	ND	0.036		mg/Kg	1	6/28/2018 11:21:47 AM	R52327
Ethylbenzene	ND	0.036		mg/Kg	1	6/28/2018 11:21:47 AM	R52327
Xylenes, Total	ND	0.073		mg/Kg	1	6/28/2018 11:21:47 AM	R52327
Surr: 4-Bromofluorobenzene	127	70-130		%Rec	1	6/28/2018 11:21:47 AM	R52327
Surr: Toluene-d8	96.5	70-130		%Rec	1	6/28/2018 11:21:47 AM	R52327

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806G68**

01-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-38944**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38944**	RunNo:	**52323**					
Prep Date:	**6/28/2018**	Analysis Date:	**6/28/2018**	SeqNo:	**1716138**	Units:	**mg/Kg**			

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

Sample ID	**LCS-38944**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38944**	RunNo:	**52323**					
Prep Date:	**6/28/2018**	Analysis Date:	**6/28/2018**	SeqNo:	**1716139**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806G68**

01-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-38939**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **38939**	RunNo: **52311**
Prep Date: **6/28/2018**	Analysis Date: **6/28/2018**	SeqNo: **1714246** 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			

Sample ID **LCS-38939**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **38939**	RunNo: **52311**
Prep Date: **6/28/2018**	Analysis Date: **6/28/2018**	SeqNo: **1714477** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	70	130			
Surr: DNOP	4.3		5.000		86.3	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806G68**

01-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **100ng btex lcs**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R52327**	RunNo: **52327**
Prep Date:	Analysis Date: **6/28/2018**	SeqNo: **1714706** 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	99.3	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.7	80	120			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.1	70	130			
Surr: Toluene-d8	0.49		0.5000		98.5	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R52327**	RunNo: **52327**
Prep Date:	Analysis Date: **6/28/2018**	SeqNo: **1714714** 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	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.50		0.5000		99.7	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1806G68**

01-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A52327**	RunNo: **52327**
Prep Date:	Analysis Date: **6/28/2018**	SeqNo: **1714696** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	70	130			
Surr: BFB	470		500.0		94.4	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **A52327**	RunNo: **52327**
Prep Date:	Analysis Date: **6/28/2018**	SeqNo: **1714697** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	510		500.0		102	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1806G68 RcptNo: 1

Received By: Anne Thorne 6/28/2018 7:00:00 AM
Completed By: Anne Thorne 6/28/2018 7:18:35 AM
Reviewed By: JO 6/28/18

Labeled by: AT 06/28/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: BP AMERICA
BLAGG ENGINEERING INC.
Mailing Address:

Phone #: 505-320-1183
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush SAME DAY
Project Name: GCU 89E
Project #:
Project Manager: STEVE MOSKAL
Sampler: JEFF BLAGG
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.8-CF-102:18

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and # (At 06/19/18 MeOH kit)	Preservative Type	HEAL No. (1806 G68)	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE				Air Bubbles (Y or N)
6/27/2018	1312	SOIL	BASE CENTER (EAST 1) @ 20'	4 oz x 1	COOL	001	X		X									X				
"	1321	"	BASE CENTER (EAST 2) @ 20'	"	"	002	X		X									X				

Remarks: BILL BP
CONTACT: STEVE MOSKAL
VID: VHIXONEVRM
WBS ELEMENT: L1-001CT-E:GCU89E

Date	Time	Relinquished by	Received by	Date	Time
6/27/2018	1604	Jeff Blagg			
6/27/18	1844			06/28/18	0700

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 23, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1807A21

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/19/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807A21**
Date Reported: **7/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807A21-001 **Matrix:** SOIL

Client Sample ID: NE BASE #3
Collection Date: 7/18/2018 1:12:00 PM
Received Date: 7/19/2018 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	41	30		mg/Kg	20	7/19/2018 2:03:26 PM	39295
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/19/2018 10:12:17 AM	39290
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/19/2018 10:12:17 AM	39290
Surr: DNOP	79.5	70-130		%Rec	1	7/19/2018 10:12:17 AM	39290
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/19/2018 10:22:18 AM	39265
Surr: BFB	90.0	15-316		%Rec	1	7/19/2018 10:22:18 AM	39265
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	7/19/2018 10:22:18 AM	39265
Toluene	ND	0.041		mg/Kg	1	7/19/2018 10:22:18 AM	39265
Ethylbenzene	ND	0.041		mg/Kg	1	7/19/2018 10:22:18 AM	39265
Xylenes, Total	ND	0.081		mg/Kg	1	7/19/2018 10:22:18 AM	39265
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	7/19/2018 10:22:18 AM	39265

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

Qualifiers:

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

Analytical Report
Lab Order **1807A21**
Date Reported: **7/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: NORTH WALL #3
Project: GCU 89E
Collection Date: 7/18/2018 1:25:00 PM
Lab ID: 1807A21-002 **Matrix:** SOIL **Received Date:** 7/19/2018 7:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **SRM**	
Chloride	ND	30		mg/Kg	20	7/19/2018 2:15:51 PM	39295
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/19/2018 10:36:40 AM	39290
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/19/2018 10:36:40 AM	39290
Surr: DNOP	99.3	70-130		%Rec	1	7/19/2018 10:36:40 AM	39290
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/19/2018 10:45:41 AM	39265
Surr: BFB	91.7	15-316		%Rec	1	7/19/2018 10:45:41 AM	39265
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	7/19/2018 10:45:41 AM	39265
Toluene	ND	0.037		mg/Kg	1	7/19/2018 10:45:41 AM	39265
Ethylbenzene	ND	0.037		mg/Kg	1	7/19/2018 10:45:41 AM	39265
Xylenes, Total	ND	0.074		mg/Kg	1	7/19/2018 10:45:41 AM	39265
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	7/19/2018 10:45:41 AM	39265

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807A21**

23-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-39290**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **39290**	RunNo: **52826**
Prep Date: **7/19/2018**	Analysis Date: **7/19/2018**	SeqNo: **1735403** 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	11		10.00		109	70	130			

Sample ID **LCS-39290**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **39290**	RunNo: **52826**
Prep Date: **7/19/2018**	Analysis Date: **7/19/2018**	SeqNo: **1735404** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	109	70	130			
Surr: DNOP	5.3		5.000		106	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807A21**

23-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-39265**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **39265**	RunNo: **52822**
Prep Date: **7/18/2018**	Analysis Date: **7/19/2018**	SeqNo: **1736162** 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		91.9	15	316			

Sample ID **LCS-39265**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **39265**	RunNo: **52822**
Prep Date: **7/18/2018**	Analysis Date: **7/19/2018**	SeqNo: **1736163** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	75.9	131			
Surr: BFB	1000		1000		101	15	316			

Sample ID **MB-39306**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **39306**	RunNo: **52899**
Prep Date: **7/19/2018**	Analysis Date: **7/20/2018**	SeqNo: **1737983** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		94.8	15	316			

Sample ID **LCS-39306**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **39306**	RunNo: **52899**
Prep Date: **7/19/2018**	Analysis Date: **7/20/2018**	SeqNo: **1737984** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		104	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807A21**

23-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-39265**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**39265**	RunNo:	**52822**					
Prep Date:	**7/18/2018**	Analysis Date:	**7/19/2018**	SeqNo:	**1736178**	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		103	80	120			

Sample ID	**LCS-39265**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**39265**	RunNo:	**52822**					
Prep Date:	**7/18/2018**	Analysis Date:	**7/19/2018**	SeqNo:	**1736179**	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	77.3	128			
Toluene	0.99	0.050	1.000	0	98.6	79.2	125			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80.7	127			
Xylenes, Total	3.0	0.10	3.000	0	98.9	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	**MB-39306**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**39306**	RunNo:	**52899**					
Prep Date:	**7/19/2018**	Analysis Date:	**7/20/2018**	SeqNo:	**1737999**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	**LCS-39306**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**39306**	RunNo:	**52899**					
Prep Date:	**7/19/2018**	Analysis Date:	**7/20/2018**	SeqNo:	**1738000**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1807A21 RcptNo: 1

Received By: Anne Thorne 7/19/2018 7:55:00 AM

Completed By: Anne Thorne 7/19/2018 8:27:33 AM

Reviewed By: ENM 7/19/18

Labeled by:

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: BP America

Blagg Engineering, Inc.

Mailing Address:

Phone #: (505)320-1183

email or Fax#: jeffcblagg@aol.com / steven.moskal@bpx.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other ______

☐ EDD (Type) ______

Turn-Around Time:

☐ Standard ☒ Rush Same Day

Project Name: GCU 89E

Project #:

Project Manager: Steve Moskal

Sampler: Jeff Blagg/Nelson Velez

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	AT07/19/18 Container Type and # Mccoakit	Preservative Type	HEAL No. 1807A21	BTEX Only (8021)		TPH 8015B (GRO / DRO / MRO)									Chloride		Air Bubbles (Y or N)
7/18/2018	1312	Soil	NE Base #3	4oz x 1	Cool	001	x		x									x		
"	1325	"	North Wall #3	"	"	002	X		X									X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/18/2018	1514	Jeff Blagg	Christine Walters	7/18/18	1514
7/18/18	1844	Christine Walters	[signature]	07/19/18	0755

Remarks: Bill BP
Contact: Steve Moskal
VID: VHIXONEVRM
WBS Element: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 25, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL:
FAX

RE: GCU 89E OrderNo.: 1807C17

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/24/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807C17**
Date Reported: **7/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: NE Base #4
Project: GCU 89E
Collection Date: 7/23/2018 1:46:00 PM
Lab ID: 1807C17-001
Matrix: MEOH (SOIL)
Received Date: 7/24/2018 8:34:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	7/24/2018 12:11:28 PM	39365
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/24/2018 10:31:40 AM	A52932
Surr: BFB	110	70-130		%Rec	1	7/24/2018 10:31:40 AM	A52932
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/24/2018 10:38:13 AM	39364
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/24/2018 10:38:13 AM	39364
Surr: DNOP	101	50.6-138		%Rec	1	7/24/2018 10:38:13 AM	39364
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	7/24/2018 10:31:40 AM	B52932
Toluene	ND	0.040		mg/Kg	1	7/24/2018 10:31:40 AM	B52932
Ethylbenzene	ND	0.040		mg/Kg	1	7/24/2018 10:31:40 AM	B52932
Xylenes, Total	ND	0.081		mg/Kg	1	7/24/2018 10:31:40 AM	B52932
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	7/24/2018 10:31:40 AM	B52932
Surr: Toluene-d8	89.3	70-130		%Rec	1	7/24/2018 10:31:40 AM	B52932

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

Qualifiers:

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

Analytical Report
Lab Order **1807C17**
Date Reported: **7/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: South Base #4
Project: GCU 89E
Collection Date: 7/23/2018 1:56:00 PM
Lab ID: 1807C17-002
Matrix: MEOH (SOIL)
Received Date: 7/24/2018 8:34:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	7/24/2018 12:23:52 PM	39365
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	2100	76		mg/Kg	20	7/24/2018 10:54:50 AM	A52932
Surr: BFB	105	70-130		%Rec	20	7/24/2018 10:54:50 AM	A52932
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	970	10		mg/Kg	1	7/24/2018 11:46:01 AM	39364
Motor Oil Range Organics (MRO)	280	50		mg/Kg	1	7/24/2018 11:46:01 AM	39364
Surr: DNOP	112	50.6-138		%Rec	1	7/24/2018 11:46:01 AM	39364
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.38		mg/Kg	20	7/24/2018 10:54:50 AM	B52932
Toluene	11	0.76		mg/Kg	20	7/24/2018 10:54:50 AM	B52932
Ethylbenzene	3.5	0.76		mg/Kg	20	7/24/2018 10:54:50 AM	B52932
Xylenes, Total	58	1.5		mg/Kg	20	7/24/2018 10:54:50 AM	B52932
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	20	7/24/2018 10:54:50 AM	B52932
Surr: Toluene-d8	97.4	70-130		%Rec	20	7/24/2018 10:54:50 AM	B52932

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C17**

25-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-39365**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39365**	RunNo:	**52936**					
Prep Date:	**7/24/2018**	Analysis Date:	**7/24/2018**	SeqNo:	**1740696**	Units:	**mg/Kg**			

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

Sample ID	**LCS-39365**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39365**	RunNo:	**52936**					
Prep Date:	**7/24/2018**	Analysis Date:	**7/24/2018**	SeqNo:	**1740697**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C17**

25-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-39364**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**39364**		RunNo:	**52926**				
Prep Date:	**7/24/2018**	Analysis Date:	**7/24/2018**		SeqNo:	**1739296**	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	9.2		10.00		92.4	50.6	138			

Sample ID	**LCS-39364**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**39364**		RunNo:	**52926**				
Prep Date:	**7/24/2018**	Analysis Date:	**7/24/2018**		SeqNo:	**1739306**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.4	70	130			
Surr: DNOP	4.3		5.000		86.1	50.6	138			

Sample ID	**MB-39346**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**39346**		RunNo:	**52926**				
Prep Date:	**7/23/2018**	Analysis Date:	**7/24/2018**		SeqNo:	**1739730**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.4	50.6	138			

Sample ID	**LCS-39346**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**39346**		RunNo:	**52926**				
Prep Date:	**7/23/2018**	Analysis Date:	**7/24/2018**		SeqNo:	**1739734**	Units:	**%Rec**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.8	50.6	138			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C17**

25-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**100ng btex lcs**	SampType:	**LCS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**BatchQC**	Batch ID:	**B52932**		RunNo:	**52932**				
Prep Date:		Analysis Date:	**7/24/2018**		SeqNo:	**1739552**	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	99.9	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.8	80	120			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.1	70	130			
Surr: Toluene-d8	0.46		0.5000		92.9	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**PBS**	Batch ID:	**B52932**		RunNo:	**52932**				
Prep Date:		Analysis Date:	**7/24/2018**		SeqNo:	**1739556**	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	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.46		0.5000		92.7	70	130			

Sample ID	**1807c17-002ams**	SampType:	**MS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**South Base #4**	Batch ID:	**B52932**		RunNo:	**52932**				
Prep Date:		Analysis Date:	**7/24/2018**		SeqNo:	**1740161**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	15	0.38	15.29	0.2096	95.4	80	120			
Toluene	26	0.76	15.29	11.40	97.1	80	120			
Ethylbenzene	19	0.76	15.29	3.474	104	82	121			
Xylenes, Total	100	1.5	45.87	57.71	91.5	80.2	120			
Surr: 4-Bromofluorobenzene	8.0		7.645		104	70	130			
Surr: Toluene-d8	7.2		7.645		94.4	70	130			

Sample ID	**1807c17-002amsd**	SampType:	**MSD4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**South Base #4**	Batch ID:	**B52932**		RunNo:	**52932**				
Prep Date:		Analysis Date:	**7/24/2018**		SeqNo:	**1740162**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	15	0.38	15.29	0.2096	95.9	80	120	0.509	20	
Toluene	26	0.76	15.29	11.40	93.2	80	120	2.30	20	
Ethylbenzene	19	0.76	15.29	3.474	102	82	121	1.86	20	
Xylenes, Total	98	1.5	45.87	57.71	88.9	80.2	120	1.22	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C17**

25-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**1807c17-002amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260B: Volatiles Short List**					
Client ID:	**South Base #4**	Batch ID:	**B52932**	RunNo:	**52932**					
Prep Date:		Analysis Date:	**7/24/2018**	SeqNo:	**1740162**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	8.1		7.645		105	70	130	0	0	
Surr: Toluene-d8	7.4		7.645		96.5	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807C17**

25-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A52932**	RunNo: **52932**
Prep Date:	Analysis Date: **7/24/2018**	SeqNo: **1739521** 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	70	130			
Surr: BFB	470		500.0		94.5	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **A52932**	RunNo: **52932**
Prep Date:	Analysis Date: **7/24/2018**	SeqNo: **1739522** 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		99.1	70	130			

Sample ID **1807c17-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **NE Base #4**	Batch ID: **A52932**	RunNo: **52932**
Prep Date:	Analysis Date: **7/24/2018**	SeqNo: **1740158** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.0	20.21	0	102	64.7	142			
Surr: BFB	410		404.2		101	70	130			

Sample ID **1807c17-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **NE Base #4**	Batch ID: **A52932**	RunNo: **52932**
Prep Date:	Analysis Date: **7/24/2018**	SeqNo: **1740159** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.0	20.21	0	101	64.7	142	1.30	20	
Surr: BFB	400		404.2		100	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1807C17 RcptNo: 1

Received By: **Isaiah Ortiz** 7/24/2018 8:34:00 AM IG

Completed By: **Ashley Gallegos** 7/24/2018 8:48:58 AM AG

Reviewed By: AG 07/24/18 labeled by: ENM 7/24/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____
ENM 7/24/18

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: BP America

Blagg Engineering, Inc.

Mailing Address:

Phone #: (505)320-1183

email or Fax#: jeffcblagg@aol.com / steven.moskal@bpx.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush Same Day

Project Name: GCU 89E

Project #:

Project Manager: Steve Moskal

Sampler: Jeff Blagg/Nelson Velez

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1807C17	BTEX Only (8021)		TPH 8015B (GRO / DRO / MRO)								Chloride		Air Bubbles (Y or N)
7/23/18	1346	Soil	NE BASE #4	4oz x 1	Cool	-001	x		x								x		
"	1356	"	SOUTH BASE #4	"	"	-002	X		X								X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/23/18	1545			7/23/18	1545
7/23/18	1810		Courier	7/24/18	0834

Remarks: Bill BP
Contact: Steve Moskal
VID: VHIXONEVRM
WBS Element: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 30, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1807D68

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/26/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-001 **Matrix:** SOIL

Client Sample ID: SEC BASE @ 20' (4-pt)
Collection Date: 7/25/2018 1:16:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/26/2018 10:40:44 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	7/26/2018 10:38:09 AM	A53000
Surr: BFB	115	70-130		%Rec	1	7/26/2018 10:38:09 AM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/26/2018 9:54:13 AM	39422
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2018 9:54:13 AM	39422
Surr: DNOP	88.0	50.6-138		%Rec	1	7/26/2018 9:54:13 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.018		mg/Kg	1	7/26/2018 10:38:09 AM	B53000
Toluene	ND	0.037		mg/Kg	1	7/26/2018 10:38:09 AM	B53000
Ethylbenzene	ND	0.037		mg/Kg	1	7/26/2018 10:38:09 AM	B53000
Xylenes, Total	ND	0.074		mg/Kg	1	7/26/2018 10:38:09 AM	B53000
Surr: 4-Bromofluorobenzene	129	70-130		%Rec	1	7/26/2018 10:38:09 AM	B53000
Surr: Toluene-d8	88.3	70-130		%Rec	1	7/26/2018 10:38:09 AM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-002 **Matrix:** SOIL

Client Sample ID: EAST BASE @ 20' (3-pt)
Collection Date: 7/25/2018 1:20:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/26/2018 10:53:09 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	7/26/2018 11:01:17 AM	A53000
Surr: BFB	116	70-130		%Rec	1	7/26/2018 11:01:17 AM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/26/2018 10:16:10 AM	39422
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2018 10:16:10 AM	39422
Surr: DNOP	87.4	50.6-138		%Rec	1	7/26/2018 10:16:10 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.019		mg/Kg	1	7/26/2018 11:01:17 AM	B53000
Toluene	ND	0.038		mg/Kg	1	7/26/2018 11:01:17 AM	B53000
Ethylbenzene	ND	0.038		mg/Kg	1	7/26/2018 11:01:17 AM	B53000
Xylenes, Total	ND	0.076		mg/Kg	1	7/26/2018 11:01:17 AM	B53000
Surr: 4-Bromofluorobenzene	131	70-130	S	%Rec	1	7/26/2018 11:01:17 AM	B53000
Surr: Toluene-d8	89.9	70-130		%Rec	1	7/26/2018 11:01:17 AM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-003 **Matrix:** SOIL

Client Sample ID: S/SEC-SW @ 5'-18' (6-pt)
Collection Date: 7/25/2018 1:29:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	270	30		mg/Kg	20	7/26/2018 11:05:34 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/26/2018 11:24:23 AM	A53000
Surr: BFB	115	70-130		%Rec	1	7/26/2018 11:24:23 AM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/26/2018 10:38:16 AM	39422
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/26/2018 10:38:16 AM	39422
Surr: DNOP	87.6	50.6-138		%Rec	1	7/26/2018 10:38:16 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	7/26/2018 11:24:23 AM	B53000
Toluene	ND	0.040		mg/Kg	1	7/26/2018 11:24:23 AM	B53000
Ethylbenzene	ND	0.040		mg/Kg	1	7/26/2018 11:24:23 AM	B53000
Xylenes, Total	ND	0.079		mg/Kg	1	7/26/2018 11:24:23 AM	B53000
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	7/26/2018 11:24:23 AM	B53000
Surr: Toluene-d8	91.4	70-130		%Rec	1	7/26/2018 11:24:23 AM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-004 **Matrix:** SOIL

Client Sample ID: E/SEC-SW @ 5'-18' (5-pt)
Collection Date: 7/25/2018 1:34:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	64	30		mg/Kg	20	7/26/2018 11:17:59 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	7/26/2018 11:47:41 AM	A53000
Surr: BFB	114	70-130		%Rec	1	7/26/2018 11:47:41 AM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/26/2018 11:00:17 AM	39422
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/26/2018 11:00:17 AM	39422
Surr: DNOP	91.9	50.6-138		%Rec	1	7/26/2018 11:00:17 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.022		mg/Kg	1	7/26/2018 11:47:41 AM	B53000
Toluene	ND	0.043		mg/Kg	1	7/26/2018 11:47:41 AM	B53000
Ethylbenzene	ND	0.043		mg/Kg	1	7/26/2018 11:47:41 AM	B53000
Xylenes, Total	ND	0.086		mg/Kg	1	7/26/2018 11:47:41 AM	B53000
Surr: 4-Bromofluorobenzene	128	70-130		%Rec	1	7/26/2018 11:47:41 AM	B53000
Surr: Toluene-d8	91.3	70-130		%Rec	1	7/26/2018 11:47:41 AM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-005 **Matrix:** SOIL

Client Sample ID: EAST-SW @ 6'-18' (5-pt)
Collection Date: 7/25/2018 1:40:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	38	30		mg/Kg	20	7/26/2018 11:30:24 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/26/2018 12:10:55 PM	A53000
Surr: BFB	112	70-130		%Rec	1	7/26/2018 12:10:55 PM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/26/2018 11:22:19 AM	39422
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/26/2018 11:22:19 AM	39422
Surr: DNOP	88.3	50.6-138		%Rec	1	7/26/2018 11:22:19 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	7/26/2018 12:10:55 PM	B53000
Toluene	ND	0.041		mg/Kg	1	7/26/2018 12:10:55 PM	B53000
Ethylbenzene	ND	0.041		mg/Kg	1	7/26/2018 12:10:55 PM	B53000
Xylenes, Total	ND	0.081		mg/Kg	1	7/26/2018 12:10:55 PM	B53000
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	7/26/2018 12:10:55 PM	B53000
Surr: Toluene-d8	90.8	70-130		%Rec	1	7/26/2018 12:10:55 PM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-006 **Matrix:** SOIL

Client Sample ID: N/NEC-SW @ 5'-17' (3-pt)
Collection Date: 7/25/2018 2:22:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/26/2018 11:42:48 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	7/26/2018 12:34:12 PM	A53000
Surr: BFB	113	70-130		%Rec	1	7/26/2018 12:34:12 PM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/26/2018 11:44:18 AM	39422
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/26/2018 11:44:18 AM	39422
Surr: DNOP	91.8	50.6-138		%Rec	1	7/26/2018 11:44:18 AM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.021		mg/Kg	1	7/26/2018 12:34:12 PM	B53000
Toluene	ND	0.042		mg/Kg	1	7/26/2018 12:34:12 PM	B53000
Ethylbenzene	ND	0.042		mg/Kg	1	7/26/2018 12:34:12 PM	B53000
Xylenes, Total	ND	0.084		mg/Kg	1	7/26/2018 12:34:12 PM	B53000
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	7/26/2018 12:34:12 PM	B53000
Surr: Toluene-d8	90.2	70-130		%Rec	1	7/26/2018 12:34:12 PM	B53000

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

Qualifiers:

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

Analytical Report
Lab Order **1807D68**
Date Reported: **7/30/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807D68-007 **Matrix:** SOIL

Client Sample ID: E/NEC-SW @ 5'-17' (3-pt)
Collection Date: 7/25/2018 2:27:00 PM
Received Date: 7/26/2018 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/26/2018 11:55:13 AM	39427
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	98	20		mg/Kg	5	7/26/2018 12:57:33 PM	A53000
Surr: BFB	108	70-130		%Rec	5	7/26/2018 12:57:33 PM	A53000
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	38	9.9		mg/Kg	1	7/26/2018 12:06:26 PM	39422
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/26/2018 12:06:26 PM	39422
Surr: DNOP	96.1	50.6-138		%Rec	1	7/26/2018 12:06:26 PM	39422
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.10		mg/Kg	5	7/26/2018 12:57:33 PM	B53000
Toluene	ND	0.20		mg/Kg	5	7/26/2018 12:57:33 PM	B53000
Ethylbenzene	0.22	0.20		mg/Kg	5	7/26/2018 12:57:33 PM	B53000
Xylenes, Total	1.9	0.41		mg/Kg	5	7/26/2018 12:57:33 PM	B53000
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	5	7/26/2018 12:57:33 PM	B53000
Surr: Toluene-d8	94.8	70-130		%Rec	5	7/26/2018 12:57:33 PM	B53000

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807D68**

30-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-39427**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39427**	RunNo:	**52996**					
Prep Date:	**7/26/2018**	Analysis Date:	**7/26/2018**	SeqNo:	**1743207**	Units:	**mg/Kg**			

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

Sample ID	**LCS-39427**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39427**	RunNo:	**52996**					
Prep Date:	**7/26/2018**	Analysis Date:	**7/26/2018**	SeqNo:	**1743208**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807D68**

30-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-39422**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **39422**	RunNo: **52984**
Prep Date: **7/26/2018**	Analysis Date: **7/26/2018**	SeqNo: **1741732** 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		88.4	50.6	138			

Sample ID **LCS-39422**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **39422**	RunNo: **52984**
Prep Date: **7/26/2018**	Analysis Date: **7/26/2018**	SeqNo: **1741733** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.1	70	130			
Surr: DNOP	4.3		5.000		86.1	50.6	138			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807D68**

30-Jul-18

Client: Blagg Engineering
Project: GCU 89E

Sample ID	**100ng btex lcs**	SampType:	**LCS4**	TestCode:	**EPA Method 8260B: Volatiles Short List**					
Client ID:	**BatchQC**	Batch ID:	**B53000**	RunNo:	**53000**					
Prep Date:		Analysis Date:	**7/26/2018**	SeqNo:	**1742323**	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	105	80	120			
Toluene	1.1	0.050	1.000	0	110	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.1	70	130			
Surr: Toluene-d8	0.46		0.5000		91.3	70	130			

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8260B: Volatiles Short List**					
Client ID:	**PBS**	Batch ID:	**B53000**	RunNo:	**53000**					
Prep Date:		Analysis Date:	**7/26/2018**	SeqNo:	**1742331**	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	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.46		0.5000		93.0	70	130			

Sample ID	**1807d68-002ams**	SampType:	**MS4**	TestCode:	**EPA Method 8260B: Volatiles Short List**					
Client ID:	**EAST BASE @ 20' (**	Batch ID:	**B53000**	RunNo:	**53000**					
Prep Date:		Analysis Date:	**7/26/2018**	SeqNo:	**1742552**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.019	0.7553	0	95.0	80	120			
Toluene	0.74	0.038	0.7553	0.005491	96.7	80	120			
Ethylbenzene	0.74	0.038	0.7553	0	98.3	82	121			
Xylenes, Total	2.4	0.076	2.266	0.03591	103	80.2	120			
Surr: 4-Bromofluorobenzene	0.39		0.3776		104	70	130			
Surr: Toluene-d8	0.32		0.3776		85.9	70	130			

Sample ID	**1807d68-002amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260B: Volatiles Short List**					
Client ID:	**EAST BASE @ 20' (**	Batch ID:	**B53000**	RunNo:	**53000**					
Prep Date:		Analysis Date:	**7/26/2018**	SeqNo:	**1742553**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.019	0.7553	0	92.2	80	120	2.99	20	
Toluene	0.73	0.038	0.7553	0.005491	95.6	80	120	1.12	20	
Ethylbenzene	0.74	0.038	0.7553	0	97.8	82	121	0.483	20	
Xylenes, Total	2.4	0.076	2.266	0.03591	102	80.2	120	0.766	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807D68**

30-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**1807d68-002amsd**	SampType:	**MSD4**	TestCode:	**EPA Method 8260B: Volatiles Short List**
Client ID:	**EAST BASE @ 20' (**	Batch ID:	**B53000**	RunNo:	**53000**
Prep Date:		Analysis Date:	**7/26/2018**	SeqNo:	**1742553** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.41		0.3776		108	70	130	0	0	
Surr: Toluene-d8	0.33		0.3776		86.6	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807D68**

30-Jul-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **A53000**	RunNo: **53000**
Prep Date:	Analysis Date: **7/26/2018**	SeqNo: **1742320** 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	70	130			
Surr: BFB	460		500.0		93.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **A53000**	RunNo: **53000**
Prep Date:	Analysis Date: **7/26/2018**	SeqNo: **1742321** 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	520		500.0		104	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1807D68 RcptNo: 1

Received By: Anne Thorne 7/26/2018 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 7/26/2018 7:38:47 AM Anne Thorne

Reviewed By: IO 7/26/18

Labeled by: AT 07/26/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			
2	1.7	Good	Yes			
3	1.7	Good	Yes			

Chain-of-Custody Record

Client: BP America

Blagg Engineering, Inc.

Mailing Address:

Phone #: (505)320-1183

email or Fax#: jeffcblagg@aol.com / steven.moskal@bpx.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☒ Rush Same Day

Project Name: GCU 89E

Project #:

Project Manager: Steve Moskal

Sampler: Jeff Blagg/Nelson Velez

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.7-CF-1.0 = 1.7

3 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX Only (8021)		TPH 8015B (GRO / DRO / MRO)								Chloride		Air Bubbles (Y or N)
				MeoHkts		1807068													
7/25/18	1316	Soil	SEC BASE @ 20' (4-pt.)	4oz x 1	Cool	201	x		x								x		
	1320		EAST BASE @ 20' (3-pt.)			202													
	1329		S/SEC-SW @ 5'-18' (6-pt.)			203													
	1334		E/SEC-SW @ 5'-18' (5-pt.)			204													
	1340		EAST-SW @ 6'-18' (5-pt.)			205													
	1422		N/NEC-SW @ 5'-17' (3-pt.)			206													
	1427		E/NEC-SW @ 5'-17' (3-pt.)			207													

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/25/18	1740			7/25/18	1740
7/25/18	1826			07/26/18	0700

Remarks: Bill BP
Contact: Steve Moskal
VID: VHIXONEVRM
WBS Element: L1-001CT-E:GCU89E

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 02, 2018

Steve Moskal

Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 632-1199
FAX (505) 632-3903

RE: GCU 89E OrderNo.: 1807F23

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/28/2018 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1807F23**
Date Reported: **8/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807F23-001 **Matrix:** SOIL

Client Sample ID: SOUTH BASE #4(2) @ 29' (5-
Collection Date: 7/27/2018 12:30:00 PM
Received Date: 7/28/2018 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/30/2018 10:43:56 AM	39477
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	7/30/2018 10:58:50 AM	39463
Surr: BFB	107	70-130		%Rec	5	7/30/2018 10:58:50 AM	39463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/30/2018 10:42:44 AM	39476
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/30/2018 10:42:44 AM	39476
Surr: DNOP	79.8	50.6-138		%Rec	1	7/30/2018 10:42:44 AM	39476
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.093		mg/Kg	5	7/30/2018 10:58:50 AM	39463
Toluene	ND	0.19		mg/Kg	5	7/30/2018 10:58:50 AM	39463
Ethylbenzene	ND	0.19		mg/Kg	5	7/30/2018 10:58:50 AM	39463
Xylenes, Total	ND	0.37		mg/Kg	5	7/30/2018 10:58:50 AM	39463
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	5	7/30/2018 10:58:50 AM	39463
Surr: Toluene-d8	90.6	70-130		%Rec	5	7/30/2018 10:58:50 AM	39463

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

Qualifiers:

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

Analytical Report
Lab Order **1807F23**
Date Reported: **8/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807F23-002 **Matrix:** SOIL

Client Sample ID: SOUTH BASE #4 ESW (23'-27')
Collection Date: 7/27/2018 12:38:00 PM
Received Date: 7/28/2018 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/30/2018 10:56:20 AM	39477
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	7/30/2018 11:22:04 AM	39463
Surr: BFB	104	70-130		%Rec	5	7/30/2018 11:22:04 AM	39463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/30/2018 11:04:50 AM	39476
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/30/2018 11:04:50 AM	39476
Surr: DNOP	80.0	50.6-138		%Rec	1	7/30/2018 11:04:50 AM	39476
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.092		mg/Kg	5	7/30/2018 11:22:04 AM	39463
Toluene	ND	0.18		mg/Kg	5	7/30/2018 11:22:04 AM	39463
Ethylbenzene	ND	0.18		mg/Kg	5	7/30/2018 11:22:04 AM	39463
Xylenes, Total	ND	0.37		mg/Kg	5	7/30/2018 11:22:04 AM	39463
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	5	7/30/2018 11:22:04 AM	39463
Surr: Toluene-d8	90.1	70-130		%Rec	5	7/30/2018 11:22:04 AM	39463

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

Qualifiers:

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

Analytical Report
Lab Order **1807F23**
Date Reported: **8/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807F23-003 **Matrix:** SOIL

Client Sample ID: SOUTH BASE #4 WSW (23'-27'
Collection Date: 7/27/2018 12:46:00 PM
Received Date: 7/28/2018 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/30/2018 11:08:45 AM	39477
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/30/2018 11:45:15 AM	39463
Surr: BFB	116	70-130		%Rec	1	7/30/2018 11:45:15 AM	39463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/30/2018 11:27:01 AM	39476
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/30/2018 11:27:01 AM	39476
Surr: DNOP	72.9	50.6-138		%Rec	1	7/30/2018 11:27:01 AM	39476
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.020		mg/Kg	1	7/30/2018 11:45:15 AM	39463
Toluene	ND	0.040		mg/Kg	1	7/30/2018 11:45:15 AM	39463
Ethylbenzene	ND	0.040		mg/Kg	1	7/30/2018 11:45:15 AM	39463
Xylenes, Total	ND	0.079		mg/Kg	1	7/30/2018 11:45:15 AM	39463
Surr: 4-Bromofluorobenzene	131	70-130	S	%Rec	1	7/30/2018 11:45:15 AM	39463
Surr: Toluene-d8	89.2	70-130		%Rec	1	7/30/2018 11:45:15 AM	39463

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

Qualifiers:

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

Analytical Report
Lab Order **1807F23**
Date Reported: **8/2/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: GCU 89E
Lab ID: 1807F23-004 **Matrix:** SOIL

Client Sample ID: E/NEC-SW @ 5'-17' (3-pt) (2)
Collection Date: 7/27/2018 12:53:00 PM
Received Date: 7/28/2018 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	38	30		mg/Kg	20	7/30/2018 11:21:09 AM	39477
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	7/30/2018 12:08:33 PM	39463
Surr: BFB	112	70-130		%Rec	1	7/30/2018 12:08:33 PM	39463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/30/2018 11:49:06 AM	39476
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/30/2018 11:49:06 AM	39476
Surr: DNOP	81.0	50.6-138		%Rec	1	7/30/2018 11:49:06 AM	39476
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.019		mg/Kg	1	7/30/2018 12:08:33 PM	39463
Toluene	ND	0.039		mg/Kg	1	7/30/2018 12:08:33 PM	39463
Ethylbenzene	ND	0.039		mg/Kg	1	7/30/2018 12:08:33 PM	39463
Xylenes, Total	ND	0.078		mg/Kg	1	7/30/2018 12:08:33 PM	39463
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	1	7/30/2018 12:08:33 PM	39463
Surr: Toluene-d8	86.7	70-130		%Rec	1	7/30/2018 12:08:33 PM	39463

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807F23**

02-Aug-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**MB-39477**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**39477**	RunNo:	**53089**					
Prep Date:	**7/30/2018**	Analysis Date:	**7/30/2018**	SeqNo:	**1746592**	Units:	**mg/Kg**			

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

Sample ID	**LCS-39477**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**39477**	RunNo:	**53089**					
Prep Date:	**7/30/2018**	Analysis Date:	**7/30/2018**	SeqNo:	**1746593**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807F23**

02-Aug-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **MB-39476**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **39476**	RunNo: **53063**
Prep Date: **7/30/2018**	Analysis Date: **7/30/2018**	SeqNo: **1745484** 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	8.0		10.00		80.1	50.6	138			

Sample ID **LCS-39476**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **39476**	RunNo: **53063**
Prep Date: **7/30/2018**	Analysis Date: **7/30/2018**	SeqNo: **1745485** 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	89.7	70	130			
Surr: DNOP	3.6		5.000		71.2	50.6	138			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807F23**

02-Aug-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID **lcs-39463**	SampType: **LCS4**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **39463**	RunNo: **53058**
Prep Date: **7/27/2018**	Analysis Date: **7/30/2018**	SeqNo: **1745295** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.1	80	120			
Toluene	0.96	0.050	1.000	0	95.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.5	80	120			
Surr: 4-Bromofluorobenzene	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.43		0.5000		86.1	70	130			

Sample ID **mb-39463**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **39463**	RunNo: **53058**
Prep Date: **7/27/2018**	Analysis Date: **7/30/2018**	SeqNo: **1745296** 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	0.66		0.5000		133	70	130			S
Surr: Toluene-d8	0.45		0.5000		89.9	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1807F23**

02-Aug-18

Client: Blagg Engineering

Project: GCU 89E

Sample ID	**lcs-39463**	SampType:	**LCS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**LCSS**	Batch ID:	**39463**		RunNo:	**53058**				
Prep Date:	**7/27/2018**	Analysis Date:	**7/30/2018**		SeqNo:	**1745288**	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	70	130			
Surr: BFB	520		500.0		105	70	130			

Sample ID	**mb-39463**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**				
Client ID:	**PBS**	Batch ID:	**39463**		RunNo:	**53058**				
Prep Date:	**7/27/2018**	Analysis Date:	**7/30/2018**		SeqNo:	**1745289**	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	590		500.0		118	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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: BLAGG Work Order Number: 1807F23 RcptNo: 1

Received By: Andy Freeman 7/28/2018 8:30:00 AM

Completed By: Anne Thome 7/30/2018 7:42:02 AM

Reviewed By: ENM 7/30/18

Labeled by: AT 07/30/18

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

Client: BP America

Blagg Engineering, Inc.

Mailing Address:

Phone #: (505)320-1183

email or Fax#: jeffcblagg@aol.com / steven.moskal@bpx.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush Same Day

Project Name: GCU 89E

Project #:

Project Manager: Steve Moskal

Sampler: Jeff Blagg/Nelson Velez

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.1 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and # (AT 071341) MeOH Kits	Preservative Type	HEAL No. 1807F23	BTEX Only (8021)		TPH 8015B (GRO / DRO / MRO)									Chloride		Air Bubbles (Y or N)
7/27/18	1230	Soil	SOUTH BASE #4 (2) @ 29' (5-PT.)	4oz x 1	Cool	201	x		x									x		
7/27/18	1238	Soil	SOUTH BASE #4 ~~NSW (23'-27') 6-PT.~~ EA 071801/18	4oz - 1	Cool	202	X		X									X		
7/27/18	1246	Soil	SOUTH BASE #4 NSW (23'-27') 6-PT. EA 071801/18	4oz - 1	Cool	203	X		X									X		
7/27/18	1258	Soil	E/NE @ -SW @ 5'-17' (3-PT.) (2)	4oz - 1	Cool	204	X		X									X		

Date	Time	Relinquished by:	Received by:	Date	Time
7/27/18	1737		Chris Walters	7/27/18	1737
7/27/18	1826	Chris Walters		7/28/18	0830

Remarks: Bill BP
Contact: Steve Moskal
VID: VHIXONEVRM
WBS Element: L1-001CT-E:GCU89E

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.

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 8/7/2019
Job Number: 03143-0424
Work Order: P908019
Project Name/Location: GCU 89E

Report Reviewed By: Date: 8/9/19

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

5796 Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
24 Hour Emergency Response Phone (800) 362-1879
envirotech-inc.com
Labadmin@envirotech-inc.com

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WW (II) West Wall- North (0'-9')	P908019-01A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) West Wall- South (0'-9')	P908019-02A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) North Face (3'-18')	P908019-03A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) North Base @ 20'	P908019-04A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) South Base @ 24'	P908019-05A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) West Wall- North (10'-18')	P908019-06A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.
WW (II) West Wall- South (10'-20')	P908019-07A	Soil	08/07/19	08/07/19	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) West Wall- North (0'-9')
P908019-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*104 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*117 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.7 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**204**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) West Wall- South (0'-9')
P908019-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*111 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.6 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**121**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) North Face (3'-18')
P908019-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*107 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.4 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**105**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) North Base @ 20'
P908019-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*104 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*111 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.4 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**25.3**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) South Base @ 24'
P908019-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*111 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.3 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**21.5**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) West Wall- North (10'-18')
P908019-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*109 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.3 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**73.7**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

WW (II) West Wall- South (10'-20')
P908019-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1932024	08/07/19	08/07/19	EPA 8015D	
Surrogate: n-Nonane		*112 %*		*50-200*	*1932024*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1932026	08/07/19	08/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.0 %*		*50-150*	*1932026*	*08/07/19*	*08/07/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**97.5**	20.0	mg/kg	1	1932025	08/07/19	08/07/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1932026 - Purge and Trap EPA 5030A										
Blank (1932026-BLK1)				Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	*8.68*		*"*	*8.00*		*109*	*50-150*			
LCS (1932026-BS1)				Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Benzene	4.80	0.0250	mg/kg	5.00		96.0	70-130			
Toluene	4.77	0.0250	"	5.00		95.4	70-130			
Ethylbenzene	4.76	0.0250	"	5.00		95.3	70-130			
p,m-Xylene	9.72	0.0500	"	10.0		97.2	70-130			
o-Xylene	4.79	0.0250	"	5.00		95.8	70-130			
Total Xylenes	14.5	0.0250	"	15.0		96.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.65*		*"*	*8.00*		*108*	*50-150*			
Matrix Spike (1932026-MS1)		**Source: P908018-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Benzene	4.85	0.0250	mg/kg	5.00	ND	97.0	54.3-133			
Toluene	4.82	0.0250	"	5.00	ND	96.3	61.4-130			
Ethylbenzene	4.78	0.0250	"	5.00	ND	95.7	61.4-133			
p,m-Xylene	9.76	0.0500	"	10.0	ND	97.6	63.3-131			
o-Xylene	4.80	0.0250	"	5.00	ND	95.9	63.3-131			
Total Xylenes	14.6	0.0250	"	15.0	ND	97.0	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.54*		*"*	*8.00*		*107*	*50-150*			
Matrix Spike Dup (1932026-MSD1)		**Source: P908018-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Benzene	4.78	0.0250	mg/kg	5.00	ND	95.6	54.3-133	1.43	20	
Toluene	4.74	0.0250	"	5.00	ND	94.9	61.4-130	1.51	20	
Ethylbenzene	4.75	0.0250	"	5.00	ND	95.0	61.4-133	0.745	20	
p,m-Xylene	9.71	0.0500	"	10.0	ND	97.1	63.3-131	0.533	20	
o-Xylene	4.77	0.0250	"	5.00	ND	95.4	63.3-131	0.572	20	
Total Xylenes	14.5	0.0250	"	15.0	ND	96.5	63.3-131	0.546	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.48*		*"*	*8.00*		*106*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1932024 - DRO Extraction EPA 3570										
Blank (1932024-BLK1)				Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*54.3*		*"*	*50.0*		*109*	*50-200*			
LCS (1932024-BS1)				Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Diesel Range Organics (C10-C28)	514	25.0	mg/kg	500		103	38-132			
Surrogate: n-Nonane	*54.7*		*"*	*50.0*		*109*	*50-200*			
Matrix Spike (1932024-MS1)		**Source: P908019-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Diesel Range Organics (C10-C28)	524	25.0	mg/kg	500	ND	105	38-132			
Surrogate: n-Nonane	*54.8*		*"*	*50.0*		*110*	*50-200*			
Matrix Spike Dup (1932024-MSD1)		**Source: P908019-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Diesel Range Organics (C10-C28)	526	25.0	mg/kg	500	ND	105	38-132	0.291	20	
Surrogate: n-Nonane	*55.3*		*"*	*50.0*		*111*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1932026 - Purge and Trap EPA 5030A										
Blank (1932026-BLK1)				Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.34*		*"*	*8.00*		*91.7*	*50-150*			
LCS (1932026-BS2)				Prepared: 08/07/19 1 Analyzed: 08/08/19 0						
Gasoline Range Organics (C6-C10)	45.5	20.0	mg/kg	50.0		91.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.47*		*"*	*8.00*		*93.4*	*50-150*			
Matrix Spike (1932026-MS2)		**Source: P908018-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Gasoline Range Organics (C6-C10)	44.0	20.0	mg/kg	50.0	ND	88.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.62*		*"*	*8.00*		*95.2*	*50-150*			
Matrix Spike Dup (1932026-MSD2)		**Source: P908018-01**		Prepared: 08/07/19 1 Analyzed: 08/08/19 1						
Gasoline Range Organics (C6-C10)	46.8	20.0	mg/kg	50.0	ND	93.7	70-130	6.19	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.54*		*"*	*8.00*		*94.3*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1932025 - Anion Extraction EPA 300.0/9056A										
Blank (1932025-BLK1)				Prepared & Analyzed: 08/07/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1932025-BS1)				Prepared & Analyzed: 08/07/19 1						
Chloride	267	20.0	mg/kg	250		107	90-110			
Matrix Spike (1932025-MS1)	**Source: P908019-01**			Prepared & Analyzed: 08/07/19 1						
Chloride	480	20.0	mg/kg	250	204	110	80-120			
Matrix Spike Dup (1932025-MSD1)	**Source: P908019-01**			Prepared & Analyzed: 08/07/19 1						
Chloride	475	20.0	mg/kg	250	204	108	80-120	0.909	20	

QC Summary Report
Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values my differ slightly.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/09/19 13:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 1

Client: BPX ENERGY
Project: GCU 89E
Project Manager: STEVE MOSKAL
Address:
City, State, Zip
Phone:
Email:

Report Attention
Report due by: AUGUST 8, 2019
Attention: STEVE MOSKAL / JEFF BLAGG
Address:
City, State, Zip
Phone:
Email:

Lab Use Only
Lab WO# P908019
Job Number 03143-0424

TAT: 1D X, 3D

EPA Program: RCRA, CWA, SDWA

State: NM X, CO, UT, AZ, TX, OK

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Remarks
1308	8/7/2019	SOIL	1	WW(II) West Wall-North (0'-9')	1	X	X	X			X	
1310	"	"	1	WW(II) West Wall-South (0'-9')	2	"	"	"			"	
1316	"	"	1	WW(II) NORTH FACE (3'-19')	3	"	"	"			"	
1325	"	"	1	WW(II) NORTH BASE @ 20'	4	"	"	"			"	
1329	"	"	1	WW(II) SOUTH BASE @ 24'	5	"	"	"			"	
1334	"	"	1	WW(II) West Wall-North (10'-18')	6	"	"	"			"	
1338	"	"	1	WW(II) West Wall-South (10'-20')	7	"	"	"			"	

Additional Instructions: BILL BPX
PROJECT P.O. to be issued.

V.S ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	8/7/2019	1451	Jessica Gilbert	8/7/19	14:51
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401
Ph (505) 632-1881 Fx (505) 632-1865
24 Hour Emergency Response Phone (800) 362-1879
envirotech-inc.com
labadmin@envirotech-inc.com

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 8/13/2019
Job Number: 03143-0424
Work Order: P908028
Project Name/Location: GCU 89E

Report Reviewed By: Walter Hinchman Date: 8/15/19

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
South Wall (II) East Base	P908028-01A	Soil	08/13/19	08/13/19	Glass Jar, 4 oz.
South Wall (II) SE Corner Wall	P908028-02A	Soil	08/13/19	08/13/19	Glass Jar, 4 oz.
South Wall (II) South Mid Wall	P908028-03A	Soil	08/13/19	08/13/19	Glass Jar, 4 oz.
South Wall (II) West Base	P908028-04A	Soil	08/13/19	08/13/19	Glass Jar, 4 oz.
South Wall (II) SW Corner Wall	P908028-05A	Soil	08/13/19	08/13/19	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

South Wall (II) East Base
P908028-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*108 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Surrogate: n-Nonane		*106 %*		*50-200*	*1933013*	*08/13/19*	*08/13/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.5 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1933014	08/13/19	08/14/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

South Wall (II) SE Corner Wall
P908028-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*107 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Surrogate: n-Nonane		*105 %*		*50-200*	*1933013*	*08/13/19*	*08/13/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.6 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**199**	20.0	mg/kg	1	1933014	08/13/19	08/14/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

South Wall (II) South Mid Wall
P908028-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*108 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Surrogate: n-Nonane		*103 %*		*50-200*	*1933013*	*08/13/19*	*08/13/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*93.1 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**97.8**	20.0	mg/kg	1	1933014	08/13/19	08/14/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

South Wall (II) West Base
P908028-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Surrogate: n-Nonane		*106 %*		*50-200*	*1933013*	*08/13/19*	*08/13/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.0 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1933014	08/13/19	08/14/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

South Wall (II) SW Corner Wall
P908028-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*106 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1933013	08/13/19	08/13/19	EPA 8015D	
Surrogate: n-Nonane		*108 %*		*50-200*	*1933013*	*08/13/19*	*08/13/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1933012	08/13/19	08/14/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.1 %*		*50-150*	*1933012*	*08/13/19*	*08/14/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**142**	20.0	mg/kg	1	1933014	08/13/19	08/14/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1933012 - Purge and Trap EPA 5030A										
Blank (1933012-BLK1)				Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 4-Bromochlorobenzene-PID	*8.50*		*"*	*8.00*		*106*	*50-150*			
LCS (1933012-BS1)				Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Benzene	4.91	0.0250	mg/kg	5.00		98.2	70-130			
Toluene	4.90	0.0250	"	5.00		98.0	70-130			
Ethylbenzene	4.90	0.0250	"	5.00		98.0	70-130			
p,m-Xylene	9.98	0.0500	"	10.0		99.8	70-130			
o-Xylene	4.90	0.0250	"	5.00		98.0	70-130			
Total Xylenes	14.9	0.0250	"	15.0		99.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.61*		*"*	*8.00*		*108*	*50-150*			
Matrix Spike (1933012-MS1)		**Source: P908028-01**		Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Benzene	4.64	0.0250	mg/kg	5.00	ND	92.8	54.3-133			
Toluene	4.63	0.0250	"	5.00	ND	92.7	61.4-130			
Ethylbenzene	4.63	0.0250	"	5.00	ND	92.6	61.4-133			
p,m-Xylene	9.47	0.0500	"	10.0	ND	94.6	63.3-131			
o-Xylene	4.63	0.0250	"	5.00	ND	92.6	63.3-131			
Total Xylenes	14.1	0.0250	"	15.0	ND	94.0	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.62*		*"*	*8.00*		*108*	*50-150*			
Matrix Spike Dup (1933012-MSD1)		**Source: P908028-01**		Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Benzene	4.81	0.0250	mg/kg	5.00	ND	96.2	54.3-133	3.57	20	
Toluene	4.79	0.0250	"	5.00	ND	95.7	61.4-130	3.24	20	
Ethylbenzene	4.80	0.0250	"	5.00	ND	95.9	61.4-133	3.50	20	
p,m-Xylene	9.78	0.0500	"	10.0	ND	97.8	63.3-131	3.32	20	
o-Xylene	4.79	0.0250	"	5.00	ND	95.8	63.3-131	3.36	20	
Total Xylenes	14.6	0.0250	"	15.0	ND	97.2	63.3-131	3.33	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.62*		*"*	*8.00*		*108*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Nonhalogenated Organics by 8015 - DRO/ORO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1933013 - DRO Extraction EPA 3570										
Blank (1933013-BLK1)				Prepared & Analyzed: 08/13/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*57.6*		*"*	*50.0*		*115*	*50-200*			
LCS (1933013-BS1)				Prepared & Analyzed: 08/13/19 1						
Diesel Range Organics (C10-C28)	522	25.0	mg/kg	500		104	38-132			
Surrogate: n-Nonane	*55.0*		*"*	*50.0*		*110*	*50-200*			
Matrix Spike (1933013-MS1)	**Source: P908028-01**			Prepared & Analyzed: 08/13/19 1						
Diesel Range Organics (C10-C28)	501	25.0	mg/kg	500	ND	100	38-132			
Surrogate: n-Nonane	*52.2*		*"*	*50.0*		*104*	*50-200*			
Matrix Spike Dup (1933013-MSD1)	**Source: P908028-01**			Prepared & Analyzed: 08/13/19 1						
Diesel Range Organics (C10-C28)	507	25.0	mg/kg	500	ND	101	38-132	1.18	20	
Surrogate: n-Nonane	*52.2*		*"*	*50.0*		*104*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Nonhalogenated Organics by 8015 - GRO - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1933012 - Purge and Trap EPA 5030A										
Blank (1933012-BLK1)				Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.47*		*"*	*8.00*		*93.4*	*50-150*			
LCS (1933012-BS2)				Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Gasoline Range Organics (C6-C10)	46.4	20.0	mg/kg	50.0		92.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.51*		*"*	*8.00*		*93.8*	*50-150*			
Matrix Spike (1933012-MS2)		**Source: P908028-01**		Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Gasoline Range Organics (C6-C10)	43.2	20.0	mg/kg	50.0	ND	86.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.54*		*"*	*8.00*		*94.3*	*50-150*			
Matrix Spike Dup (1933012-MSD2)		**Source: P908028-01**		Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Gasoline Range Organics (C6-C10)	48.5	20.0	mg/kg	50.0	ND	96.9	70-130	11.5	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.46*		*"*	*8.00*		*93.2*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1933014 - Anion Extraction EPA 300.0/9056A										
Blank (1933014-BLK1)				Prepared & Analyzed: 08/13/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1933014-BS1)				Prepared & Analyzed: 08/13/19 1						
Chloride	265	20.0	mg/kg	250		106	90-110			
Matrix Spike (1933014-MS1)	**Source: P908028-01**			Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Chloride	268	20.0	mg/kg	250	ND	107	80-120			
Matrix Spike Dup (1933014-MSD1)	**Source: P908028-01**			Prepared: 08/13/19 1 Analyzed: 08/14/19 1						
Chloride	268	20.0	mg/kg	250	ND	107	80-120	0.321	20	

QC Summary Report
Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values my differ slightly.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	GCU 89E	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	08/15/19 14:02

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Project Information

Chain of Custody

Page 1 of 1

Client:	BPX ENERGY
Project:	GCU 89E
Project Manager:	STEVE MOSKAL
Address:	
City, State, Zip	
Phone:	
Email:	

Report Attention

Report due by:	8/14/2019
Attention:	Steve Moskal / Jeff Blagg
Address:	
City, State, Zip	
Phone:	
Email:	

Lab Use Only

Lab WO# P908028

Job Number 03143-0424

TAT: 1D X, 3D

EPA Program: RCRA, CWA, SDWA

State: NM X, CO, UT, AZ, TX, OK

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Remarks
1335	8/13/19	SOIL	1	SOUTH WALL (II) EAST BASE	1	X	X	X			X	
1338	"	"	"	SOUTH WALL (II) SE Corner Wall	2	"	"	"			"	
1342	"	"	"	SOUTH WALL (II) SOUTH MID Wall	3	"	"	"			"	
1345	"	"	"	SOUTH WALL (II) WEST BASE	4	"	"	"			"	
1350	"	"	"	SOUTH WALL (II) SW Corner Wall	5	"	"	"			"	

Additional Instructions: BILL BPX – PROJECT PO FOR GCU 89E

U.S ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Jeff Blagg

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Jeff Blagg	8/13/2019	1506	Josh A. Mat	8/13/19	15:06
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

Received on ice: (Y) / N

T1 ____ T2 ____ T3 ____

AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other ____

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory

5796 US Highway 64, Farmington, NM 87401

24 Hour Emergency Response Phone (800) 362-1879

Ph (505) 632-1881 Fx (505) 632-1865

envirotech-inc.com

labadmin@envirotech-inc.com