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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co	OGRID: 778	REVISED REMEDIATION PLAN
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # *(assigned by OCD)* **NCS1928833906**	
Contact mailing address: 1199 Main St., Suite 101, Durango CO, 81301		

Location of Release Source

Latitude: 36.73679° Longitude: -107.75107°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: A L ELLIOTT D No. 002	Site Type: Natural Gas Production Well Pad
Date Release Discovered: October 14, 2019	API#: 30-045-08495

Unit Letter	Section	Township	Range	County
K	11	T29N	R09W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

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): 10	Volume Recovered (bbls): 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): 48.8	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:
Release of condensate and produced water caused from a storage tank integrity failure.

Due to the depth of the soil contamination and limited lateral impacts, BP will elect to install a soil vapor extraction system.

From: Smith, Cory, EMNRD
To: Steven Moskal - BP America (steven.moskal@BPX.com)
Cc: Powell, Brandon, EMNRD
Subject: Incident #NCS1928833906 Remediation Plan Conditions of Approval.
Date: Monday, April 20, 2020 3:12:00 PM

Steve,

OCD has reviewed the SVE Remediation plan received on January 30, 2020 for incident #NCS1928833906 at the A L ELLIOTT D #002 (30-045-08495) and have approved it with the following Conditions of approval

- BP did not include an estimated start up timeframe . Start of SVE remediation needs to commence no later than end of Q4 of 2020.
- BP will notify OCD at least 72 hours but no more than 1 week prior to the start of installation of SVE systems
- BP will notify OCD at least 72 hours but no more than 1 week prior to the collection of initial air samples of SVE systems
  BP will design the SVE system to collect and monitor air sample upstream of the vacuum
- BP will include O2 and CO2 in the air sampling analytics for both the initial and annual air samples.
- BP will submit to the OCD an initial quarterly report detailing, initial/weekly VOC readings, results of initial air sample, and quarterly run time from the first quarter following start up and then annually there after.
- BP will maintain a runtime equal to or greater than 90% Run time per quarter.
- BP proposed closure sampling plan is denied, upon completion of remediation BP can submit to the OCD a proposed borehole/sampling method/plan for approval.

If there are any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

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? Greater than 25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Steve Moskal to Cory Smith (cell phone – Voicemail) on October 14, 2019 at 2:00 PM	

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: _____

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.

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: Steve Moskal Title: Environmental Coordinator

Signature:_____ Date: _____

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

OCD Only

Received by: _____ Date: _____

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: Steve Moskal Title: Environmental Coordinator

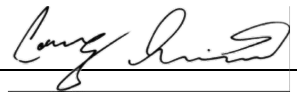
Signature:  Date: 1/30/2020

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

OCD Only

Received by: OCD Date: 1/30/2020

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

Signature:  Date: 4/20/2020

REVISED REMEDIATION PLAN BP had initially submitted a plan to perform soil shredding on site, however, due to the confined nature, diameter, and depth of the impacts, BP is requesting the use of soil vapor extraction at the site. BP has already engaged with the electric power provider to confirm electricity to be ran to the site. BP is currently awaiting ROW approval for the electrical drop and will begin installation one the power drop is set.

From: Smith, Cory, EMNRD
To: Steven Moskal - BP America (steven.moskal@BPX.com)
Cc: Powell, Brandon, EMNRD
Subject: Incident #NCS1928833906 Remediation Plan Conditions of Approval.
Date: Monday, April 20, 2020 3:12:00 PM

Steve,

OCD has reviewed the SVE Remediation plan received on January 30, 2020 for incident #NCS1928833906 at the A L ELLIOTT D #002 (30-045-08495) and have approved it with the following Conditions of approval

- BP did not include an estimated start up timeframe . Start of SVE remediation needs to commence no later than end of Q4 of 2020.
- BP will notify OCD at least 72 hours but no more than 1 week prior to the start of installation of SVE systems
- BP will notify OCD at least 72 hours but no more than 1 week prior to the collection of initial air samples of SVE systems
  BP will design the SVE system to collect and monitor air sample upstream of the vacuum
- BP will include O2 and CO2 in the air sampling analytics for both the initial and annual air samples.
- BP will submit to the OCD an initial quarterly report detailing, initial/weekly VOC readings, results of initial air sample, and quarterly run time from the first quarter following start up and then annually there after.
- BP will maintain a runtime equal to or greater than 90% Run time per quarter.
- BP proposed closure sampling plan is denied, upon completion of remediation BP can submit to the OCD a proposed borehole/sampling method/plan for approval.

If there are any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

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: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

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 Remediation Plan A L Elliott D 002	
To:	Cory Smith (NMOCD)
From:	Steven Moskal (BP)
CC:	Jeff Blagg (Blagg Engineering)
Date:	1/30/2020
Re:	A L Elliott D 002 – Soil vapor extraction remedial plan. API #30-045-08495, (K), S-11, T29N, R09W NMOCD Incident #NCS1928833906

The A L Elliott D 002 site is an active natural gas production pad within the San Juan Basin Gas Field in San Juan County, New Mexico. The site is located on land managed by the Bureau of Land Management.

On October 14, 2019 evidence of a production tank leaking was observed by oil staining on the tank and evidence along the tank grade ring. Tank gauging data indicated that approximately 48.8 bbls of condensate were lost. In November of 2019, five soil vapor extraction points were installed as part of site characterization and delineation was executed. Hydrocarbon contamination was confirmed from approximately 0-50 feet below ground surface during the boring activity directly beneath the removed leaking tank. The contamination appears to be confined to the immediate area below the tank based on the soil boring data.

The site soils consist of loose sand, silty sands; thin clay lenses that overlie a silty clay strata that appears to be a confining layer ranging from approximately 50-55 feet below ground surface.

REMEDIATION PLAN

The objectives of this proposed remediation plan is to perform in-situ remediation to effectively address the contaminants at depths of 50 feet or greater.

BP proposes to employ soil vapor extraction (SVE) technology to the determined SVE points or monitoring wells described above. The system will incorporate the following:

1) An explosion proof, (Class 1, Div. 1) electrically driven skid mounted SVE pump will be installed on site:

    a. Rotron EN505 (2.0 HP, single phase, 230 volt, 12 amp continuous, 56 amp inrush).

The SVE package will be fitted with a water/product knockout drum, high water level shutoff, two vacuum gauges, one flow rate gauge and explosion proof starter switch.

2) The air extraction points will be fitted with 2-inch quick-connect fittings.

3) A 2-inch diameter PVC pipe and/or flexible hose with quick connect fittings will be connected from the SVE blower to one SVE well at a time. The hose will be long enough to reach any of the SVE manifold or any single SVE point.

4) During operation, the flexible air hose will be moved to other points as deemed necessary by site monitoring:

A) Exhaust vapors from the SVE pump will be measured with an organic vapor meter (OVM) on a daily basis for the first 5 days operation, weekly for the first month of operation, and then monthly thereafter or adjusted as needed based on system performance.

B) Upon start up, a gas sample will be collected from the vacuum stream; thereafter, an annual sample will be collected from the vacuum stream and will be laboratory analyzed for total petroleum hydrocarbons (TPH) by U.S. EPA Method 8015B and volatile hydrocarbons (BTEX) by U.S. EPA Method 8021. The location of the collection point will be determined based on the SVE system setup, but will preferably be upstream of the blower to reduce impacts of heat and turbulence to the air stream.

C) When exhaust vapors appear to reach an asymptotic limit, the air injection hose will be moved to various other injection points and exhaust vapors from other unused observation points will be measured with an organic vapor meter (OVM) on a monthly basis.

5) When site remediation appears to be complete based on monitoring results from the active remediation system, test borings will be advanced to a depth of approximately 50-60 feet at locations about 5 feet from the remediation point. Soil samples will be collected at various depths of known contamination intervals for laboratory determination of residual hydrocarbons. This testing will include total petroleum hydrocarbons (TPH) by U.S. EPA Method 8015B and volatile hydrocarbons (BTEX) by U.S. EPA Method 8021. Note that the New Mexico Oil Conservation Division (NMOCD), Aztec District Office, will be notified prior to this drilling and sampling so that personnel may be available for witnessing.

NMOCD will be provided with laboratory test results. Following review of the remediation system monitoring and laboratory test results, either site closure, continued system operation or modifications to the remediation plan will be requested.

During operation, BP will strive to operate the system continuously, with hopes of achieving 90% or greater run time.

REPORTING

The performance of the SVE system and remediation will be reported annually with field OVM data, estimated run times, system performance, mass removal and product recovery and maintenance or changes in the system configuration will be included. The sampling of the vacuum stream will be reported in an annual report.

A final report will be provided within 60 days of the final closure sampling event.

Regards,

Steve Moskal
BP America Production Co.

A.L. Elliott D 002

Borehole Locations

Nov. 15 - 18, 2019

505-947-9900

BLAGG ENGINEERING, INC. Boring ID: BH-1 Page: 1 of 2

Field Boring Log

Project ID: A L ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 TRACK
Date Start: 11/14/2019 Date Finish: 11/15/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments: PLACED @ CENTER OF PRIOR AGT.

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
1	0835	START Cutting			Lite Tan, Medium Grained Sand, little Moisture, wet with HC
2					
3					
4					
5					
6	0844	SS	>5,000	Cuttings	Recover 20". Medium Sand, wet with HC Strong odor.
7					
8					
9					
10					
11	0855	SS.	>5,000		Recover 19", SAA
12		TPH = 9,980 mg/Kg			
13					
14				Bent Seal	
15					
16	0902	SS.	4,872		Recover 17", SAA, with minor Pea Gravel
17					
18					
19					
20					
21	0912		3,950	Cuttings	Recover 16", SAA, Increased Pea Gravel
22					
23					
24					
25					
26	0923		4,166		Recover 17", SAA, less Pea Gravel
27					
28					
29					
30				Bent Seal	

BLAGG ENGINEERING, INC. Boring ID: BH-1 Page: 2 of 2

Field Boring Log

Project ID: AL ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 TRACK
Date Start: 11/14/2019 Date Finish: 11/15/19 Driller: KP Logged by: JCB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments:

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
31	0934	S.S. TPH = 3,405 mg/Kg	4,121	BENT. SEAL	Recovered 18", SAA, NJ Pea Gravel
32					
33					
34					
35					
36	0947	S.S.	3,916		Recovered 19", SAA
37					
38					
39					
40					
41	1011	S.S.	4,136	10/20 SAND	Recovered 20", SAA
42					
43					
44					
45					
46	1029	S.S.	4,511		RECOVERED 17", SAA
47					
48					
49					
50					
51	1047	S.S. TPH = 1,163 mg/Kg	4,188		RECOVERED 24" SILT, Dark Brown, MOIST, STRONG HC ODOR MINOR CLAY CONTENT
52					
53					
54					
55					
56	1106	S.S. TPH = ND	877		Recovered 24", Fine SAND, Likely MOIST, MODERATE HC ODOR
57					
58					
59			TD	Drilled = 55'	
60					

BLAGG ENGINEERING, INC. Boring ID: BH-2 Page: 1 of 2

Field Boring Log

Project ID: A.L ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 TRACK
Date Start: 11/14/2019 Date Finish: 11/15/19 Driller: KP Logged by: JCB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments:
LOCATED 12' NW OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
1	13:57	START cuttings	1.2	cuttings	Medium Grained Silty SAND, DARK Brown, Lite Moisture, No HC ODOR
2					
3					
4					
5					
6	14:00	S.S.	1.5		SAA, Recover 21"
7					
8					
9					
10					
11	14:05	SS	15.4	BENTONITE SEAL	Recover 22", SAA
12					
13					
14					
15					
16	14:10	S.S.	82.1		Recover 18", Medium Grained SAND, lite Moisture, Lite Gray color, ODOR of Degraded H.C
17					
18					
19					
20					
21	14:17	S.S.	TPH = ND 106	10/20 SAND	Recover 18", SAA, with Minor Rounded Pebbles
22					
23					
24					
25					
26	14:24	S.S.	1959		Recover 18", SAA, No Rounded Pebbles
27					
28					
29					
30					

BLAGG ENGINEERING, INC. Boring ID: BH-2 Page: 2 of 2

Field Boring Log

Project ID: A.L ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 TRACK
Date Start: 11/14/2019 Date Finish: 11/15/19 Driller: KP Logged by: JCB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments:

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
31	14:32	S.S.	3545	10/20 SAND	Recover 16", Medium Grained Sand, lite Moisture, NO staining, ODOR of Fresh H.C.
32					
33					
34					
35					
36	1442	S.S.	2,911	BENT SEAL	Recover 16", SAA
37					
38					
39					
40					
41	1453	S.S.	3,777		Recover 18", SAA
42					
43					
44					
45				CUTTINGS	
46	1505		3,951		Recover 22", SAA
47					
48					
49					
50					
51	1517		4,075		Recover 24", DARK BROWN silt, minor Clay, MOIST, Strong HC ODOR
52		TPH = 4,988 mg/Kg			
53					
54					
55				BENT SEAL	
56	1533		179.4		Recover 23", Yellow Medium Grained Sand, lite Moisture, MINOR HC ODOR
57		TPH = ND			
58					
59					
60					

BLAGG ENGINEERING, INC. Boring ID: BH-3 Page: 1 of 2

Field Boring Log

Project ID: A.L. ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 - TRACK
Date Start: 11/15/19 Date Finish: 11/15/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments: LOCATED 16' NE OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
1	0956	START Cuttings			TAN, Medium Grained silty SAND, Dry Moisture
2					
3					
4					
5					
6	1000	SS	0.3	CUTTINGS	Recover 23", Yellow TAN Medium Grained SAND, Dry Moisture, No HC odor or Stain.
7					
8					
9					
10					
11	1004	SS	0.9		RECOVER 20", SAA, with V. Minor Rounded Pebbles
12					
13					
14				BENT. SEAL	
15					
16	1008	SS	1.1	CUTTINGS	RECOVER 17", DARK BROWN, Medium SAND, Dry Moisture, No HC odor or stain
17					
18					
19					
20					
21	1013	SS	1.4		RECOVER 18", SAA
22					
23					
24					
25					
26	1020	SS	4.3		RECOVER 17", SAA
27					
28					
29					
30					

BLAGG ENGINEERING, INC. Boring ID: BH-3 Page: 2 of 2

Field Boring Log

Project ID: A.L. ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 - TRACK
Date Start: 11/15/19 Date Finish: 11/15/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments: LOCATED 16' NE OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
31	1028	SS	46.4	BENT. SEAL	RECOVER 17", SAA, with lite odor of fresh HC
32					
33					
34					
35					
36	1037	SS	196		RECOVER 17", SAA, STRONGER ODOR OF FRESH HC
37					
38					
39					
40					
41	1048	SS	55.7	10/20 SAND	RECOVER 22", SAA, LESS HC ODOR
42					
43					
44					
45					
46	1058	SS	312		RECOVER 18", SAA, INCREASED HC ODOR
47			TPH = ND		
48					
49					
50					
51	1107	SS	47.7		RECOVER 24", DARK BROWN SILT W/ MINOR CLAY CONTENT, LITELY MOIST, LITE HC ODOR
52					
53					
54					
55					
56	1119	SS.	110		RECOVER 15", LITE TAN FINE SAND, LITE MOISTURE, LITE HC ODOR
57			TPH = ND		
58					
59					
60					

BLAGG ENGINEERING, INC. Boring ID: BH-4 Page: 1 of 2

Field Boring Log

Project ID: A.L. ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55-TRACK
Date Start: 11/15/19 Date Finish: 11/15/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments:
LOCATED 12' SW OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
1	1306	START cuttings			Dark Brown Silty Sand, lite Moisture
2					
3					
4					
5					
6	1310	SS.	0.6		Recover 20", Brown Medium/Fine Grained Sand, Lite Moisture, No HC ODOR
7					
8					
9					
10					
11	1314	SS	1.1		Recover 20", SAA, Medium Grained
12					
13					
14					
15				BENT SEAL	
16	1318	SS	2.3		Recover 21", SAA, Very Minor HC ODOR?
17					
18					
19					
20					
21	1324	SS	0.9		Recover 19", SAA, with Minor Rounded Pebbles
22					
23					
24					
25					
26	1331	SS	1.8		Recover 20", SAA, No Pebbles
27					
28					
29					
30				BENT SEAL	

CUTTINGS
CUTTINGS

BLAGG ENGINEERING, INC. Boring ID: BH-4 Page: 2 of 2

Field Boring Log

Project ID: A.L. ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 - TRACK
Date Start: 11/15/19 Date Finish: 11/15/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments:
LOCATED 12' SW OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
31	1341	SS	26.2		RECOVER 20", SAA
32					
33					
34					
35					
36	1349	SS	39.2	CUTTINGS	RECOVER 18", SAA
37					
38					
39					
40					
41	1359	SS	376	BENT SEAL	RECOVER 23", SAA, MODERATE HC ODOR
42					
43					
44					
45					
46	1409	SS	410	10/20 SAND	RECOVER 21", SAA, INCREASED HC ODOR
47					
48					
49					
50					
51	1420	SS TPH = 643 mg/Kg	3,808		RECOVER 24", DARK BROWN SILT/CLAY, MOIST, STRONG HC ODOR.
52					
53					
54					
55					
56	1432	SS TPH = ND	81		RECOVER 22", YELLOW TAN FINE SAND, MOIST, NO HC ODOR.
57					
58					
59					
60					

BLAGG ENGINEERING, INC. Boring ID: BH-5 Page: 1 of 2

Field Boring Log

Project ID: A.L. Elliott D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 - TRACK
Date Start: 11/18/2019 Date Finish: 11/18/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments: LOCATED 10' WEST OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
1	0830	START CUTTINGS			
2					
3					
4					
5					
6	0835	SS	0.2	CUTTINGS	RECOVER 19", TAN, DRY MOIST SILTY SAND, NO MINOR HC ODOR
7					
8					
9					
10					
11	0840	SS.	1.0		RECOVER 21", DARK TAN, DRY MOIST, MEDIUM GRAINED SAND. NO HC ODOR.
12					
13					
14				BENTONITE SEAL	
15					
16	0846	SS.	0.7	CUTTINGS	RECOVER 20", SAA, WITH MINOR ROUNDED PEBBLES
17					
18					
19					
20					
21	0851	SS	20.3		RECOVER 18", SAA, MINOR HC ODOR
22					
23					
24					
25					
26	0857	SS	27.7		RECOVER 21", SAA, NO PEBBLES
27					
28					
29					
30					

BLAGG ENGINEERING, INC. Boring ID: BH-5 Page: 2 of 2

Field Boring Log

Project ID: A.L. ELLIOTT D 002
Client: BPX
Drilling Contractor: HRL
Drilling Equipment: CME-55 - TRACK
Date Start: 11/18/2019 Date Finish: 11/18/19 Driller: KP Logged by: JB
Total Depth: 55' Casing Type/Size: 2" PVC Slot Size: 0.010
Comments: LOCATED 10' WEST OF BH-1

Depth (Feet)	Sample Time	Sample Type	Field OVM	Well Completion	SAMPLE DESCRIPTION
31	0906	SS	136	BENT. SEAL	RECOVER 20", SAA, INCREASED HC ODOR
32					
33					
34					
35					
36	0915	SS	2,982		RECOVER 19", SAA, STRONG HC ODOR
37					
38					
39					
40					
41	0924	SS	3,841	10/20 SAND	RECOVER 22", SAA
42		TPH = 4,630 mg/Kg			
43					
44					
45					
46	0939	SS	3,797		RECOVER 20", SAA
47					
48					
49					
50					
51	0954	SS	3,773		RECOVER 24", DARK BROWN, SILT W/ CLAY, PLASTIC, MOIST, STRONG HC ODOR
52					
53					
54					
55					
56	1011	SS	62.6		RECOVER 24", LITE TAN FINE SAND, LITE MOISTURE, MINOR HC ODOR
57		TPH = ND			
58					
59					
60					

CLIENT: BPX

BLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

API #: 30-045-08495
TANK ID (if applicable): -

FIELD REPORT:

(circle one): BGT CONFIRMATION / RELEASE INVESTIGATION / OTHER: CONDENSATE RELEASE

PAGE #: 1 of 1

SITE INFORMATION:

SITE NAME: A.L. ELLIOTT D 002
DATE STARTED: 10/15/2019
DATE FINISHED: 10/15/2019
QUAD/UNIT: K SEC: 11 TWP: 29N RNG: 9W PM: NM CNTY: SJ ST: NM
1/4 -1/4/FOOTAGE: 1650 FSL x 1650 FWL LEASE TYPE: FEDERAL / STATE / FEE / INDIAN
LEASE #: NMSF 078132 PROD. FORMATION: CONTRACTOR: -
ENVIRONMENTAL SPECIALIST(S): JCB

REFERENCE POINT:

WELL HEAD (W.H.) GPS COORD.: 36.73665 x 107.75162 GL ELEV.: 5879

1) 300 TANK	GPS COORD.: 36.73677 x 107.75107	DISTANCE/BEARING FROM W.H.: 167' N73°E
2)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
3)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:
4)	GPS COORD.:	DISTANCE/BEARING FROM W.H.:

SAMPLING DATA:

CHAIN OF CUSTODY RECORD(S) # OR LAB USED: ENVIROTECH

					OVM READING (ppm)
1) SAMPLE ID: IMPACT GRAB @ 6"	SAMPLE DATE: 10/15/19	SAMPLE TIME: 0805	LAB ANALYSIS: TPH/BTEX/Cl		1,475
2) SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:		
3) SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:		
4) SAMPLE ID:	SAMPLE DATE:	SAMPLE TIME:	LAB ANALYSIS:		

SOIL DESCRIPTION:

SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: TAN
PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD
CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE
HC ODOR DETECTED: YES / NO EXPLANATION - STRONG
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS.
ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION - N. Side of tank
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - North side of tank, within Grade BAND

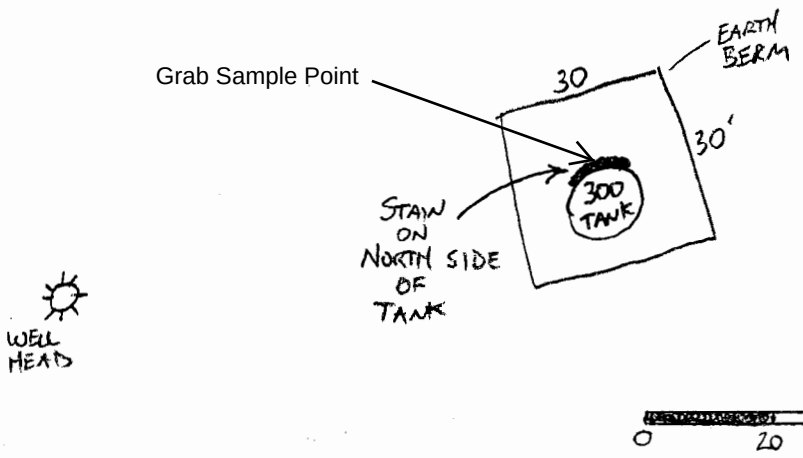
SITE OBSERVATIONS:

LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION - 300 TANK - Apparently BASE
APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: YES / NO EXPLANATION: Wetness outside of tank base
EQUIPMENT SET OVER RECLAIMED AREA: YES / NO EXPLANATION - NA
OTHER: Inspected PAUL Velosquez Water well (930') Dry at 51' from Ground Surface

SOIL IMPACT DIMENSION ESTIMATION: ____ ft. X ____ ft. X ____ ft. EXCAVATION ESTIMATION (Cubic Yards): ____
DEPTH TO GROUNDWATER: > 50' NEAREST WATER SOURCE: 930' NEAREST SURFACE WATER: < 300' NMOCD TPH CLOSURE STD: 100 ppm

SITE SKETCH

BGT Located: off / on site | PLOT PLAN circle: attached



OVM CALIB. READ. = 100.3 ppm RF = 0.52
OVM CALIB. GAS = 100.0 ppm
TIME: 0810 am/pm DATE: 10/15

MISCELL. NOTES

WO:
PO #:
PK:
PJ #:
Permit date(s):
OCD Appr. date(s):

Tank ID	OVM = Organic Vapor Meter ppm = parts per million
	BGT Sidewalls Visible: Y / N
	BGT Sidewalls Visible: Y / N
	BGT Sidewalls Visible: Y / N

Magnetic declination: 10° E

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA - NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM.

NOTES: ONSITE: 10/15/2019

A.L. Elliott D 002
Release Inspection
October 15, 2019

Nearest Dry Wash
125' +/-

Release Point
300 BBL Tank

A.L. Elliott D2

930 Feet

Paul Velasquez Water Well (Inactive)

Google Earth

N

300 ft

A.L. Elliott D 002
Release Inspection
October 15, 2019

Release Point
300 BBL Tank

A.L. Elliott D2

Google Earth

N

100 ft

A. L. Elliott D 2												
Lab Summary (Values in ppm)												
Sample ID	**Date**	**Time**	**GRO**	**DRO**	**MRO**	**TPH**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylene**	**BTEX**	**Chloride**
Release Grab @ 6'	10/15/2019		1710	16100	755	18565	5.81	78.4	20.8	255	360.01	ND
BH-1 @ 10'	11/14/2019	8:53 AM	3250	6730	ND	9980	1.82	68.00	34.20	310	414.02	ND
BH-1 @ 30'	11/14/2019	9:34 AM	2430	2910	64.7	5404.7	1.48	49.20	23.30	202	275.98	ND
BH-1 @ 50'	11/14/2019	10:47 AM	230	933	ND	1163	1.21	10.70	2.84	23	37.75	42.2
BH-1 @ 55'	11/14/2019	11:06 AM	ND	ND	ND	ND	ND	0.0276	ND	ND	0.03	ND
BH-2 @ 20'	11/14/2019	2:14 PM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-2 @ 50'	11/14/2019	3:17 PM	1850	3070	67.6	4987.6	5.94	87.6	25.4	52.2	171.14	27.8
BH-2 @ 55'	11/14/2019	3:33 PM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-3 @ 45'	11/15/2019	10:58 AM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-3 @ 55'	11/15/2019	11:19 AM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-4 @ 50'	11/15/2019	2:20 PM	360	283	ND	643	1.14	16.20	4.9	41.8	64.04	10.1
BH-4 @ 55'	11/15/2019	2:32 PM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH-5 @ 40'	11/18/2019	9:24 AM	2440	2190	ND	4630	2.94	56.9	22.8	196	44.3	41.3
BH-5 @ 55'	11/18/2019	10:11 AM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NMOCD Closure Standards (ppm)						**100**	**10**				**50**	**600**

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 11/15/2019
Job Number: 03143-0424
Work Order: P911070
Project Name/Location: A.L. Elliott D2

Report Reviewed By: _____ Date: 11/22/19

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, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH-1 @ 10'	P911070-01A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-1 @ 30'	P911070-02A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-1 @ 50'	P911070-03A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-1 @ 55'	P911070-04A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-2 @ 20'	P911070-05A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-2 @ 50'	P911070-06A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-2 @ 55'	P911070-07A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-3 @ 45'	P911070-08A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-3 @ 55'	P911070-09A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-4 @ 50'	P911070-10A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.
BH-4 @ 55'	P911070-11A	Soil	11/14/19	11/15/19	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-1 @ 10'
P911070-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**1.82**	1.25	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
Toluene	**68.0**	1.25	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
Ethylbenzene	**34.2**	1.25	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
p,m-Xylene	**310**	2.50	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
o-Xylene	**88.5**	1.25	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
Total Xylenes	**399**	1.25	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**6730**	125	mg/kg	5	1946050	11/18/19	11/18/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	250	mg/kg	5	1946050	11/18/19	11/18/19	EPA 8015D	
Surrogate: n-Nonane		*1180 %*		*50-200*	*1946050*	*11/18/19*	*11/18/19*	*EPA 8015D*	*S3*
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**3250**	1000	mg/kg	50	1947008	11/18/19	11/20/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.1 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-1 @ 30'

P911070-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**1.48**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Toluene	**49.2**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Ethylbenzene	**23.3**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
p,m-Xylene	**202**	0.500	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
o-Xylene	**46.4**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Total Xylenes	**248**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*108 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**2910**	25.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Oil Range Organics (C28-C40)	**64.7**	50.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Surrogate: n-Nonane		*592 %*		*50-200*	*1946050*	*11/18/19*	*11/18/19*	*EPA 8015D*	*S3*
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**2430**	200	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*98.5 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-1 @ 50'

P911070-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**1.21**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Toluene	**10.7**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Ethylbenzene	**2.84**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
p,m-Xylene	**23.0**	0.500	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
o-Xylene	**5.49**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Total Xylenes	**28.5**	0.250	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*104 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**933**	25.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Surrogate: n-Nonane		*199 %*		*50-200*	*1946050*	*11/18/19*	*11/18/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**230**	200	mg/kg	10	1947008	11/18/19	11/20/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*90.1 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**42.2**	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-1 @ 55'

P911070-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	**0.0276**	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/18/19	EPA 8015D	
Surrogate: n-Nonane		*104 %*		*50-200*	*1946050*	*11/18/19*	*11/18/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.6 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-2 @ 20'
P911070-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*101 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*102 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*84.4 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-2 @ 50'
P911070-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**5.94**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	**87.6**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	**25.4**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	**222**	0.500	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	**52.2**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	**275**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**3070**	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	**67.6**	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*629 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	*S3*
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**1850**	200	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.7 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**27.8**	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-2 @ 55'
P911070-07 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*97.4 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/20/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.6 %*		*50-150*	*1947008*	*11/18/19*	*11/20/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-3 @ 45'

P911070-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*97.7 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*97.9 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*87.1 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-3 @ 55'

P911070-09 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.4 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*101 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*85.4 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/18/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-4 @ 50'

P911070-10 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**1.14**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	**16.2**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	**4.90**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	**41.8**	0.500	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	**10.1**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	**51.9**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**283**	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*146 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**360**	200	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*89.3 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/19/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

BH-4 @ 55'
P911070-11 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*103 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1946050	11/18/19	11/19/19	EPA 8015D	
Surrogate: n-Nonane		*102 %*		*50-200*	*1946050*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.4 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/19/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

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 1947008 - Purge and Trap EPA 5030A										
Blank (1947008-BLK1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
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	*8.17*		*"*	*8.00*		*102*	*50-150*			
LCS (1947008-BS1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.80	0.0250	mg/kg	5.00		96.0	70-130			
Toluene	4.95	0.0250	"	5.00		98.9	70-130			
Ethylbenzene	4.88	0.0250	"	5.00		97.7	70-130			
p,m-Xylene	9.72	0.0500	"	10.0		97.2	70-130			
o-Xylene	4.85	0.0250	"	5.00		97.0	70-130			
Total Xylenes	14.6	0.0250	"	15.0		97.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.33*		*"*	*8.00*		*104*	*50-150*			
Matrix Spike (1947008-MS1)			**Source: P911080-01**	Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.89	0.0250	mg/kg	5.00	ND	97.7	54.3-133			
Toluene	5.05	0.0250	"	5.00	ND	101	61.4-130			
Ethylbenzene	5.00	0.0250	"	5.00	ND	100	61.4-133			
p,m-Xylene	9.94	0.0500	"	10.0	ND	99.4	63.3-131			
o-Xylene	4.98	0.0250	"	5.00	ND	99.6	63.3-131			
Total Xylenes	14.9	0.0250	"	15.0	ND	99.5	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.34*		*"*	*8.00*		*104*	*50-150*			
Matrix Spike Dup (1947008-MSD1)			**Source: P911080-01**	Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.83	0.0250	mg/kg	5.00	ND	96.7	54.3-133	1.06	20	
Toluene	5.02	0.0250	"	5.00	ND	100	61.4-130	0.522	20	
Ethylbenzene	4.98	0.0250	"	5.00	ND	99.6	61.4-133	0.427	20	
p,m-Xylene	9.91	0.0500	"	10.0	ND	99.1	63.3-131	0.304	20	
o-Xylene	4.97	0.0250	"	5.00	ND	99.5	63.3-131	0.148	20	
Total Xylenes	14.9	0.0250	"	15.0	ND	99.3	63.3-131	0.252	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.42*		*"*	*8.00*		*105*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

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 1946050 - DRO Extraction EPA 3570										
Blank (1946050-BLK1)				Prepared & Analyzed: 11/18/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*51.3*		*"*	*50.0*		*103*	*50-200*			
LCS (1946050-BS1)				Prepared & Analyzed: 11/18/19 1						
Diesel Range Organics (C10-C28)	484	25.0	mg/kg	500		96.8	38-132			
Surrogate: n-Nonane	*47.8*		*"*	*50.0*		*95.7*	*50-200*			
Matrix Spike (1946050-MS1)	**Source: P911079-01**			Prepared & Analyzed: 11/18/19 1						
Diesel Range Organics (C10-C28)	493	25.0	mg/kg	500	ND	98.6	38-132			
Surrogate: n-Nonane	*51.0*		*"*	*50.0*		*102*	*50-200*			
Matrix Spike Dup (1946050-MSD1)	**Source: P911079-01**			Prepared & Analyzed: 11/18/19 1						
Diesel Range Organics (C10-C28)	557	25.0	mg/kg	500	ND	111	38-132	12.2	20	
Surrogate: n-Nonane	*51.5*		*"*	*50.0*		*103*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

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 1947008 - Purge and Trap EPA 5030A										
Blank (1947008-BLK1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.73*		"	*8.00*		*84.1*	*50-150*			
LCS (1947008-BS2)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	48.4	20.0	mg/kg	50.0		96.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.73*		"	*8.00*		*84.2*	*50-150*			
Matrix Spike (1947008-MS2)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	49.7	20.0	mg/kg	50.0	ND	99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.82*		"	*8.00*		*85.2*	*50-150*			
Matrix Spike Dup (1947008-MSD2)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	49.8	20.0	mg/kg	50.0	ND	99.6	70-130	0.293	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.85*		"	*8.00*		*85.6*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

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 1947002 - Anion Extraction EPA 300.0/9056A										
Blank (1947002-BLK1)				Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1947002-BS1)				Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	252	20.0	mg/kg	250		101	90-110			
Matrix Spike (1947002-MS1)		**Source: P911065-01**		Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	7270	100	mg/kg	250	7980	NR	80-120			M4
Matrix Spike Dup (1947002-MSD1)		**Source: P911065-01**		Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	7670	100	mg/kg	250	7980	NR	80-120	5.29	20	M4

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:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 12:41

Notes and Definitions

S3	Surrogate spike recovery exceeded acceptance limits due to interfering target and/or non-target analytes.
M4	Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client:	BPX ENERGY
Project:	A. L. ELLIOTT D 2
Project Manager:	STEVE MOSKAL
Address:	
City, State, Zip	
Phone:	
Email:	

Report Attention

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

Lab Use Only

Lab WO#	Job Number
P911070	03143-0424

TAT: 1D, 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
0853	11/14/2019	SOIL	1	BH-1 @ 10'	1	X	X	X			X	
0934	"	"	1	BH-1 @ 30'	2	"	"	"			"	
1047	"	"	1	BH-1 @ 50'	3	"	"	"			"	
1106	"	"	1	BH-1 @ 55'	4	"	"	"			"	
1417	"	"	1	BH-2 @ 20'	5	"	"	"			"	
1517	"	"	1	BH-2 @ 50'	6	"	"	"			"	
1533	"	"	1	BH-2 @ 55'	7	"	"	"			"	
1058	11/15/2019	"	1	BH-3 @ 45'	8	"	"	"			"	
1119	11/15/2019	"	1	BH-3 @ 55'	9	"	"	"			"	

Additional Instructions: BILL BPX. P.O. TO BE ISSUED.
CONTACT: STEVE MOSKAL

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	11/15/19	1542	Rena Lopez	11/15/19	15:42

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

Client:	BPX ENERGY
Project:	A.L. ELLIOTT D 2
Project Manager:	STEVE MOSKAL
Address:	
City, State, Zip	
Phone:	
Email:	

Report Attention

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

Lab Use Only

Lab WO#	Job Number
P911070	03143-0424

TAT

1D	3D

EPA Program

RCRA	CWA	SDWA

State

NM	CO	UT	AZ
X			
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
1420	11/15/2019	SOIL	1	BH-4 @ 50'	10	X	X	X			X	
1432	"	"	1	BH-4 @ 55'	11	X	X	X			X	

Analysis and Method

Additional Instructions: BILL BPX. P.O. to be ISSUED
CONTACT: STEVE MOSKAL

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	11/15/19	1542	Rena Lopez	11/15/19	15:42
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
5795 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

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 11/18/2019
Job Number: 03143-0424
Work Order: P911078
Project Name/Location: A.L. Elliott D2

Report Reviewed By: _____ Date: 11/22/19

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, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH-5 @ 40'	P911078-01A	Soil	11/18/19	11/18/19	Glass Jar, 4 oz.
BH-5 @ 55'	P911078-02A	Soil	11/18/19	11/18/19	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

BH-5 @ 40'

P911078-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**2.94**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	**56.9**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	**22.8**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	**196**	0.500	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	**44.3**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	**240**	0.250	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*105 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**2190**	25.0	mg/kg	1	1947012	11/19/19	11/20/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1947012	11/19/19	11/20/19	EPA 8015D	
Surrogate: n-Nonane		*361 %*		*50-200*	*1947012*	*11/19/19*	*11/20/19*	*EPA 8015D*	*S3*
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**2440**	200	mg/kg	10	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.5 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	**41.3**	20.0	mg/kg	1	1947002	11/18/19	11/19/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

BH-5 @ 55'

P911078-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*99.5 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1947012	11/19/19	11/20/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1947012	11/19/19	11/20/19	EPA 8015D	
Surrogate: n-Nonane		*101 %*		*50-200*	*1947012*	*11/19/19*	*11/20/19*	*EPA 8015D*	
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1947008	11/18/19	11/19/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*83.7 %*		*50-150*	*1947008*	*11/18/19*	*11/19/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1947002	11/18/19	11/19/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

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 1947008 - Purge and Trap EPA 5030A										
Blank (1947008-BLK1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
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	*8.17*		*"*	*8.00*		*102*	*50-150*			
LCS (1947008-BS1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.80	0.0250	mg/kg	5.00		96.0	70-130			
Toluene	4.95	0.0250	"	5.00		98.9	70-130			
Ethylbenzene	4.88	0.0250	"	5.00		97.7	70-130			
p,m-Xylene	9.72	0.0500	"	10.0		97.2	70-130			
o-Xylene	4.85	0.0250	"	5.00		97.0	70-130			
Total Xylenes	14.6	0.0250	"	15.0		97.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*8.33*		*"*	*8.00*		*104*	*50-150*			
Matrix Spike (1947008-MS1)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.89	0.0250	mg/kg	5.00	ND	97.7	54.3-133			
Toluene	5.05	0.0250	"	5.00	ND	101	61.4-130			
Ethylbenzene	5.00	0.0250	"	5.00	ND	100	61.4-133			
p,m-Xylene	9.94	0.0500	"	10.0	ND	99.4	63.3-131			
o-Xylene	4.98	0.0250	"	5.00	ND	99.6	63.3-131			
Total Xylenes	14.9	0.0250	"	15.0	ND	99.5	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.34*		*"*	*8.00*		*104*	*50-150*			
Matrix Spike Dup (1947008-MSD1)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Benzene	4.83	0.0250	mg/kg	5.00	ND	96.7	54.3-133	1.06	20	
Toluene	5.02	0.0250	"	5.00	ND	100	61.4-130	0.522	20	
Ethylbenzene	4.98	0.0250	"	5.00	ND	99.6	61.4-133	0.427	20	
p,m-Xylene	9.91	0.0500	"	10.0	ND	99.1	63.3-131	0.304	20	
o-Xylene	4.97	0.0250	"	5.00	ND	99.5	63.3-131	0.148	20	
Total Xylenes	14.9	0.0250	"	15.0	ND	99.3	63.3-131	0.252	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.42*		*"*	*8.00*		*105*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

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 1947012 - DRO Extraction EPA 3570										
Blank (1947012-BLK1)				Prepared: 11/19/19 1 Analyzed: 11/20/19 1						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*51.7*		*"*	*50.0*		*103*	*50-200*			
LCS (1947012-BS1)				Prepared: 11/19/19 1 Analyzed: 11/20/19 0						
Diesel Range Organics (C10-C28)	559	25.0	mg/kg	500		112	38-132			
Surrogate: n-Nonane	*53.2*		*"*	*50.0*		*106*	*50-200*			
Matrix Spike (1947012-MS1)	**Source: P911059-01**			Prepared: 11/19/19 1 Analyzed: 11/20/19 0						
Diesel Range Organics (C10-C28)	510	25.0	mg/kg	500	ND	102	38-132			
Surrogate: n-Nonane	*48.8*		*"*	*50.0*		*97.6*	*50-200*			
Matrix Spike Dup (1947012-MSD1)	**Source: P911059-01**			Prepared: 11/19/19 1 Analyzed: 11/20/19 0						
Diesel Range Organics (C10-C28)	514	25.0	mg/kg	500	ND	103	38-132	0.702	20	
Surrogate: n-Nonane	*47.4*		*"*	*50.0*		*94.8*	*50-200*			

envirotech Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

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 1947008 - Purge and Trap EPA 5030A										
Blank (1947008-BLK1)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.73*		"	*8.00*		*84.1*	*50-150*			
LCS (1947008-BS2)				Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	48.4	20.0	mg/kg	50.0		96.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.73*		"	*8.00*		*84.2*	*50-150*			
Matrix Spike (1947008-MS2)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	49.7	20.0	mg/kg	50.0	ND	99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.82*		"	*8.00*		*85.2*	*50-150*			
Matrix Spike Dup (1947008-MSD2)		**Source: P911080-01**		Prepared: 11/18/19 1 Analyzed: 11/18/19 2						
Gasoline Range Organics (C6-C10)	49.8	20.0	mg/kg	50.0	ND	99.6	70-130	0.293	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.85*		"	*8.00*		*85.6*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

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 1947002 - Anion Extraction EPA 300.0/9056A										
Blank (1947002-BLK1)				Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1947002-BS1)				Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	252	20.0	mg/kg	250		101	90-110			
Matrix Spike (1947002-MS1)		**Source: P911065-01**		Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	7270	100	mg/kg	250	7980	NR	80-120			M4
Matrix Spike Dup (1947002-MSD1)		**Source: P911065-01**		Prepared: 11/18/19 0 Analyzed: 11/18/19 1						
Chloride	7670	100	mg/kg	250	7980	NR	80-120	5.29	20	M4

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:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	11/22/19 09:30

Notes and Definitions

S3	Surrogate spike recovery exceeded acceptance limits due to interfering target and/or non-target analytes.
M4	Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Chain of Custody

Project Information

Client: BPX Energy
Project: A.L. Elliott D 2
Project Manager: Steve Moskal
Address:
City, State, Zip
Phone:
Email:

Report Attention

Report due by: STANDARD TAT
Attention: Steve Moskal / Jeff Blagg
Address:
City, State, Zip
Phone:
Email:

Lab Use Only

Lab WO# P911078
Job Number 03143-0424

TAT: 1D | 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
0924	11/18/19	SOIL	1	BH-5 @ 40'	1	X	X	X			X		
1011	"	"	1	BH-5 @ 55'	2	X	X	X			X		

Additional Instructions: Bill BPX
Contact: Steve Moskal
Job P.O. to be issued

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	11/18/2019	1302	Rain Lopez	11/18/19	13:02
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 laboraotry 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.

Samples Received: 10/15/2019
Job Number: 03143-0424
Work Order: P910070
Project Name/Location: A.L. Elliott D2

Report Reviewed By: _____ Date: 10/21/19

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, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Release Grab @ 6"	P910070-01A	Soil	10/15/19	10/15/19	Glass Jar, 4 oz.

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

Release Grab @ 6"

P910070-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**5.81**	0.250	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
Toluene	**78.4**	0.250	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
Ethylbenzene	**20.8**	0.250	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
p,m-Xylene	**255**	0.500	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
o-Xylene	**69.7**	0.250	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
Total Xylenes	**324**	0.250	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*102 %*		*50-150*	*1942025*	*10/16/19*	*10/17/19*	*EPA 8021B*	
Nonhalogenated Organics by 8015 - DRO/ORO									
Diesel Range Organics (C10-C28)	**16100**	250	mg/kg	10	1942028	10/16/19	10/19/19	EPA 8015D	
Oil Range Organics (C28-C40)	**755**	500	mg/kg	10	1942028	10/16/19	10/19/19	EPA 8015D	
Surrogate: n-Nonane		*%*		*50-200*	*1942028*	*10/16/19*	*10/19/19*	*EPA 8015D*	*S4*
Nonhalogenated Organics by 8015 - GRO									
Gasoline Range Organics (C6-C10)	**1710**	200	mg/kg	10	1942025	10/16/19	10/17/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.1 %*		*50-150*	*1942025*	*10/16/19*	*10/17/19*	*EPA 8015D*	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1942031	10/17/19	10/17/19	EPA 300.0/9056A	

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

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 1942025 - Purge and Trap EPA 5030A										
Blank (1942025-BLK1)				Prepared: 10/16/19 0 Analyzed: 10/16/19 2						
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	*7.54*		*"*	*8.00*		*94.3*	*50-150*			
LCS (1942025-BS1)				Prepared: 10/16/19 0 Analyzed: 10/16/19 2						
Benzene	4.73	0.0250	mg/kg	5.00		94.5	70-130			
Toluene	4.69	0.0250	"	5.00		93.8	70-130			
Ethylbenzene	4.67	0.0250	"	5.00		93.4	70-130			
p,m-Xylene	9.33	0.0500	"	10.0		93.3	70-130			
o-Xylene	4.68	0.0250	"	5.00		93.6	70-130			
Total Xylenes	14.0	0.0250	"	15.0		93.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.56*		*"*	*8.00*		*94.5*	*50-150*			
Matrix Spike (1942025-MS1)		**Source: P910065-01**		Prepared: 10/16/19 0 Analyzed: 10/16/19 2						
Benzene	4.98	0.0250	mg/kg	5.00	ND	99.7	54.3-133			
Toluene	4.98	0.0250	"	5.00	ND	99.5	61.4-130			
Ethylbenzene	4.96	0.0250	"	5.00	ND	99.2	61.4-133			
p,m-Xylene	9.92	0.0500	"	10.0	ND	99.2	63.3-131			
o-Xylene	4.98	0.0250	"	5.00	ND	99.5	63.3-131			
Total Xylenes	14.9	0.0250	"	15.0	ND	99.3	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.60*		*"*	*8.00*		*95.0*	*50-150*			
Matrix Spike Dup (1942025-MSD1)		**Source: P910065-01**		Prepared: 10/16/19 0 Analyzed: 10/16/19 2						
Benzene	5.00	0.0250	mg/kg	5.00	ND	100	54.3-133	0.340	20	
Toluene	4.99	0.0250	"	5.00	ND	99.8	61.4-130	0.255	20	
Ethylbenzene	4.98	0.0250	"	5.00	ND	99.6	61.4-133	0.409	20	
p,m-Xylene	9.96	0.0500	"	10.0	ND	99.6	63.3-131	0.380	20	
o-Xylene	5.00	0.0250	"	5.00	ND	99.9	63.3-131	0.394	20	
Total Xylenes	15.0	0.0250	"	15.0	ND	99.7	63.3-131	0.385	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.56*		*"*	*8.00*		*94.5*	*50-150*			

envirotech Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

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 1942028 - DRO Extraction EPA 3570										
Blank (1942028-BLK1)				Prepared: 10/16/19 1 Analyzed: 10/17/19 2						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	*57.2*		*"*	*50.0*		*114*	*50-200*			
LCS (1942028-BS1)				Prepared: 10/16/19 1 Analyzed: 10/17/19 2						
Diesel Range Organics (C10-C28)	535	25.0	mg/kg	500		107	38-132			
Surrogate: n-Nonane	*55.1*		*"*	*50.0*		*110*	*50-200*			
Matrix Spike (1942028-MS1)	**Source: P910071-01**			Prepared: 10/16/19 1 Analyzed: 10/17/19 2						
Diesel Range Organics (C10-C28)	553	25.0	mg/kg	500	ND	111	38-132			
Surrogate: n-Nonane	*56.8*		*"*	*50.0*		*114*	*50-200*			
Matrix Spike Dup (1942028-MSD1)	**Source: P910071-01**			Prepared: 10/16/19 1 Analyzed: 10/17/19 2						
Diesel Range Organics (C10-C28)	548	25.0	mg/kg	500	ND	110	38-132	0.997	20	
Surrogate: n-Nonane	*55.7*		*"*	*50.0*		*111*	*50-200*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

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 1942025 - Purge and Trap EPA 5030A										
Blank (1942025-BLK1)				Prepared: 10/16/19 0 Analyzed: 10/16/19 2						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.91*		*"*	*8.00*		*86.4*	*50-150*			
LCS (1942025-BS2)				Prepared: 10/16/19 0 Analyzed: 10/17/19 0						
Gasoline Range Organics (C6-C10)	48.4	20.0	mg/kg	50.0		96.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.90*		*"*	*8.00*		*86.2*	*50-150*			
Matrix Spike (1942025-MS2)			**Source: P910065-01**	Prepared: 10/16/19 0 Analyzed: 10/17/19 0						
Gasoline Range Organics (C6-C10)	44.9	20.0	mg/kg	50.0	ND	89.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.03*		*"*	*8.00*		*87.9*	*50-150*			
Matrix Spike Dup (1942025-MSD2)			**Source: P910065-01**	Prepared: 10/16/19 0 Analyzed: 10/17/19 0						
Gasoline Range Organics (C6-C10)	44.9	20.0	mg/kg	50.0	ND	89.9	70-130	0.189	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*6.96*		*"*	*8.00*		*86.9*	*50-150*			

envirotech
Analytical Laboratory

BP America Production Co.	Project Name:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

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 1942031 - Anion Extraction EPA 300.0/9056A										
Blank (1942031-BLK1)				Prepared: 10/17/19 0 Analyzed: 10/17/19 1						
Chloride	ND	20.0	mg/kg							
LCS (1942031-BS1)				Prepared: 10/17/19 0 Analyzed: 10/17/19 1						
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1942031-MS1)		**Source: P910079-01**		Prepared: 10/17/19 0 Analyzed: 10/17/19 1						
Chloride	2190	40.0	mg/kg	250	2000	74.1	80-120			M4
Matrix Spike Dup (1942031-MSD1)		**Source: P910079-01**		Prepared: 10/17/19 0 Analyzed: 10/17/19 1						
Chloride	2150	40.0	mg/kg	250	2000	59.8	80-120	1.64	20	M4

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:	A.L. Elliott D2	
PO Box 22024	Project Number:	03143-0424	**Reported:**
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 15:01

Notes and Definitions

S4	Surrogate was diluted out due to high concentrations of target and/or non-target analytes and does not provide useful information. The associated LCS spike recovery was acceptable.
M4	Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client: BPX ENERGY
Project: A.L. ELLIOTT D 2
Project Manager: Steve Moskal
Address:
City, State, Zip
Phone:
Email:

Report Attention
Report due by: 10/22/2019
Attention: Steve Moskal / Jeff Blagg
Address:
City, State, Zip
Phone:
Email:

Lab Use Only: Lab WO# P910070 Job Number 03143-0424
TAT: 1D 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
0805	10/15/2019	SOIL	1	Release GRAB @ 6"	1	X	X	X			X	

Additional Instructions: BILL BP 2ND HALF 2019 Spill Assesments P.O. 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	10/15/2019	1056	Raine Lopez	10/15/19	10:56
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