

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	NCS1934553275
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co	OGRID: 778	Initial Spill Report
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD)	NCS1934553275
Contact mailing address: 1199 Main St., Suite 101, Durango CO, 81301		

Location of Release Source

Latitude: 36.65227° Longitude: -107.14745°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gallegos Canyon Unit 085	Site Type: Natural Gas Production Well Pad
Date Release Discovered: October 11, 2019	API#: 30-045-13075

Unit Letter	Section	Township	Range	County
A	19	T28N	R12W	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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 20	Volume Recovered (bbls): 15
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls):	Volume Recovered (bbls): <u>0 bbls</u>
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

Release of produced water caused from a suspected production well issue, that appears to be downhole and is under investigation. The well is shut in at the master valve at this time.



The attached lab results indicate elevated chloride in the impacted soil. BP will elect to perform a dig and haul.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Steve Moskal</u>	Title: <u>Environmental Coordinator</u>
Signature: 	Date: <u>October 22, 2019</u>
email: <u>steven.moskal@bpx.com</u>	Telephone: <u>(505) 330-9179</u>
<u>OCD Only</u>	
Received by: 	Date: <u>12/11/19</u>

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?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

<p>Characterization Report Checklist: <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.<input type="checkbox"/> Field data<input type="checkbox"/> Data table of soil contaminant concentration data<input type="checkbox"/> Depth to water determination<input type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release<input type="checkbox"/> Boring or excavation logs<input type="checkbox"/> Photographs including date and GIS information<input type="checkbox"/> Topographic/Aerial maps<input type="checkbox"/> 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.

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: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Steve Moskal Title: Environmental Coordinator

Signature: _____ Date: _____

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

CLIENT:

BPX

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

API #: 30-045-13075

TANK ID
(if applicable):**FIELD REPORT:**(circle one): BGT CONFIRMATION RELEASE INVESTIGATION / OTHER:

PAGE #: 1 of 1

SITE INFORMATION:

SITE NAME: GCU 085

QUAD/UNIT: A SEC. 19 TWP. 28N RNG. 12W PM. NM CNTY. SJ ST. NM

DATE STARTED: 10/14/2019

DATE FINISHED: 10/14/2019

1/4-1/4 FOOTAGE: 990 FNL x 990 FEL

LEASE TYPE: FEDERAL / STATE / FEE / INDIAN

ENVIRONMENTAL

LEASE #: NMNM 78391C

PROD. FORMATION:

CONTRACTOR: -

SPECIALIST(S): JCB

REFERENCE POINT:

WELL HEAD (W.H.) GPS COORD.: 36.65230 x 108.14748

GL ELEV.: 5685

- | | | |
|----------|-------------------|-----------------------------------|
| 1) _____ | GPS COORD.: _____ | DISTANCE/BEARING FROM W.H.: _____ |
| 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: 5-pt comp 26" ^{OUTSIDE} CONTAMINANT | SAMPLE DATE: 10/14/19 | SAMPLE TIME: 0910 | LAB ANALYSIS: TPH/BTEX/CL | 1.4 |
| 2) SAMPLE ID: 5-pt comp 26" ^{INSIDE} CONTAMINANT | SAMPLE DATE: " | SAMPLE TIME: 0920 | LAB ANALYSIS: " | 13.7 |
| 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

COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVECONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSEMOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATEDSAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. 5DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION: WHITE CRUST FORMING

PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC

DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD

HC ODOR DETECTED: YES / NO EXPLANATION: _____ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION: _____**SITE OBSERVATIONS:**LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION: DOWNHOLE IN GAS WELLAPPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: YES / NO EXPLANATION: WATER

EQUIPMENT SET OVER RECLAIMED AREA: YES / NO EXPLANATION: NA

OTHER: _____

SOIL IMPACT DIMENSION ESTIMATION: _____ ft. X _____ ft. X _____ ft.

EXCAVATION ESTIMATION (Cubic Yards): _____

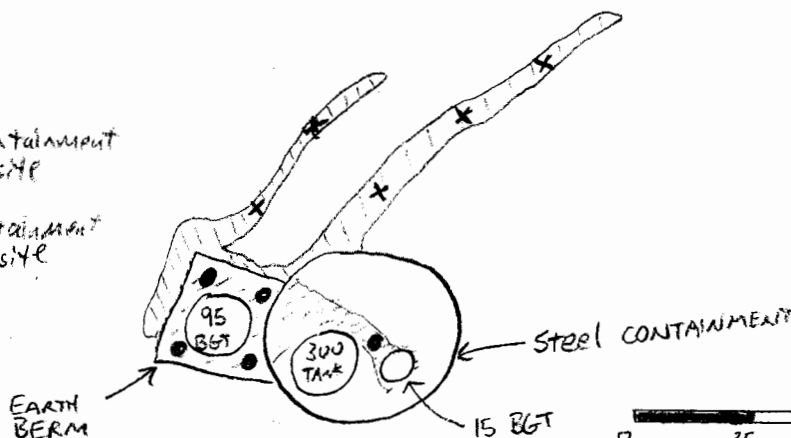
DEPTH TO GROUNDWATER: > 100 NEAREST WATER SOURCE: > 1000 NEAREST SURFACE WATER: < 300 NMCCD TPH CLOSURE STD: 100 ppm

SITE SKETCH

BGT Located: off / on site

PLOT PLAN circle: attached

OVM CALIB. READ. = 99.7 ppm RF 1.0
 OVM CALIB. GAS = 100 ppm
 TIME 0925 am DATE 10/14

X = Outside Contaminant
5-pt composite● = Inside Contaminant
5-pt composite

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; PBGT = 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.

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:

ONSITE: 10/14/2019

GCU 085
Produced Water Release
Inspected Oct 14, 2019

GCU 85

Release Extent,
Outside of Containment

Release Extent,
Inside of Containment



GCU 085
Produced Water Release
Site Overview

247' to Nearest
Water Course

Initial Release
Point (95 BGT)

GCU 85

505-326-9200
OR
505-947-9900

BP AMERICA PRODUCTION COMPANY
GALLEGOS CANYON UNIT 085
API 3004513075 LEASE NMNM78391C
990 FNL 990 FEL (A) SEC 19 T28N R12W
San Juan County ELEV 5685
LAT 36° 39' 8.172"
LONG 108° 8' 51.360"



95 BGT

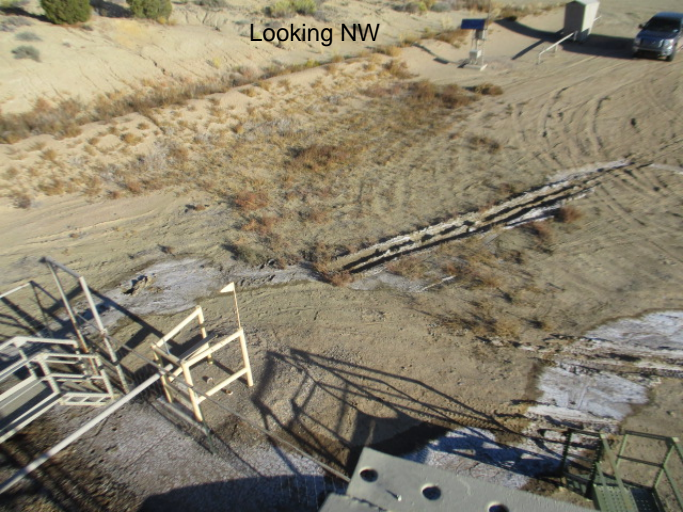
An aerial photograph of an industrial site, likely an oil or gas wellhead. The central feature is a circular, dark-colored wellhead with a radial pattern of internal components. A yellow label with the text "95 BGT" is positioned over the wellhead. To the right of the wellhead is a metal platform or staircase structure. A large, curved, yellow flexible hose or pipe runs across the foreground. The ground is a mix of dirt and gravel, with shadows cast by the structures and equipment. A long, thin metal rod or pipe extends from the top left towards the wellhead.



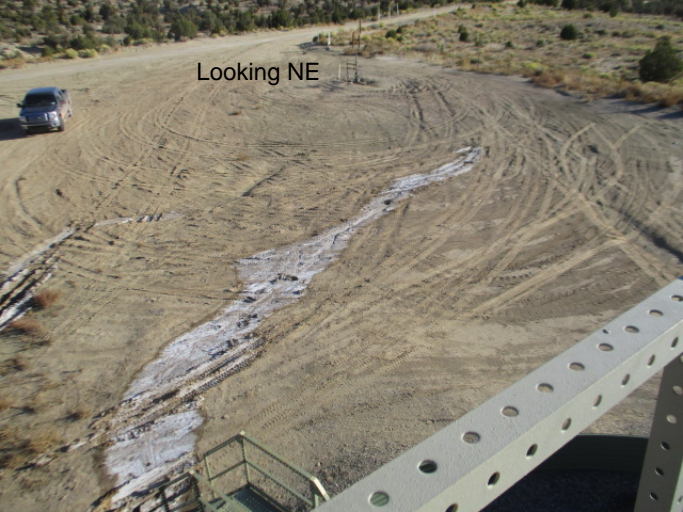


15 BGT

Looking NW



Looking NE



Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 10/14/2019

Job Number: 03143-0424

Work Order: P910063

Project Name/Location: GCU 85

Report Reviewed By:



Date: 10/21/19

Walter Hinchman, Laboratory Director



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.

BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: GCU 85
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 10/21/19 12:23

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Release-5 pt. Comp.-Outside Containment	P910063-01A	Soil	10/14/19	10/14/19	Glass Jar, 4 oz.
Release-5 pt. Comp.-Within Containment	P910063-02A	Soil	10/14/19	10/14/19	Glass Jar, 4 oz.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: GCU 85
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 10/21/19 12:23

**Release-5 pt. Comp.-Outside Containment
 P910063-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		106 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: Toluene-d8		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: Bromofluorobenzene		98.2 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1942013	10/15/19	10/17/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1942013	10/15/19	10/17/19	EPA 8015D	
Surrogate: n-Nonane		115 %		50-200	1942013	10/15/19	10/17/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		106 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: Toluene-d8		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: Bromofluorobenzene		98.2 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	3040	200	mg/kg	10	1942010	10/15/19	10/15/19	EPA 300.0/9056A	
----------	------	-----	-------	----	---------	----------	----------	--------------------	--

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: GCU 85
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 10/21/19 12:23

Release-5 pt. Comp.-Within Containment
P910063-02 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organic Compounds by 8260

Benzene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Toluene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Ethylbenzene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
p,m-Xylene	ND	0.0500	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
o-Xylene	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Total Xylenes	ND	0.0250	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		105 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: Toluene-d8		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
Surrogate: Bromofluorobenzene		98.5 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	50.0	mg/kg	2	1942013	10/15/19	10/17/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	100	mg/kg	2	1942013	10/15/19	10/17/19	EPA 8015D	
Surrogate: n-Nonane		125 %		50-200	1942013	10/15/19	10/17/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: 1,2-Dichloroethane-d4		105 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: Toluene-d8		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
Surrogate: Bromofluorobenzene		98.5 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	3690	200	mg/kg	10	1942010	10/15/19	10/15/19	EPA 300.0/9056A	
----------	------	-----	-------	----	---------	----------	----------	-----------------	--

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.	Project Name: GCU 85	
PO Box 22024	Project Number: 03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager: Steve Moskal	10/21/19 12:23

Volatile Organic Compounds by 8260 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1942002 - Purge and Trap EPA 5030A

Blank (1942002-BLK1)

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
Surrogate: 1,2-Dichloroethane-d4	0.528		"	0.500		106	70-130			
Surrogate: Toluene-d8	0.510		"	0.500		102	70-130			
Surrogate: Bromofluorobenzene	0.481		"	0.500		96.1	70-130			

LCS (1942002-BS1)

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Benzene	2.06	0.0250	mg/kg	2.50		82.4	70-130			
Toluene	2.18	0.0250	"	2.50		87.2	70-130			
Ethylbenzene	2.25	0.0250	"	2.50		90.1	70-130			
p,m-Xylene	4.41	0.0500	"	5.00		88.2	70-130			
o-Xylene	2.21	0.0250	"	2.50		88.4	70-130			
Total Xylenes	6.62	0.0250	"	7.50		88.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.521		"	0.500		104	70-130			
Surrogate: Toluene-d8	0.526		"	0.500		105	70-130			
Surrogate: Bromofluorobenzene	0.510		"	0.500		102	70-130			

Matrix Spike (1942002-MS1)

Source: P910061-01

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Benzene	2.12	0.0250	mg/kg	2.50	ND	84.8	48-131			
Toluene	2.22	0.0250	"	2.50	ND	88.7	48-130			
Ethylbenzene	2.29	0.0250	"	2.50	ND	91.6	45-135			
p,m-Xylene	4.50	0.0500	"	5.00	ND	90.1	43-135			
o-Xylene	2.25	0.0250	"	2.50	ND	89.9	43-135			
Total Xylenes	6.75	0.0250	"	7.50	ND	90.0	43-135			
Surrogate: 1,2-Dichloroethane-d4	0.523		"	0.500		105	70-130			
Surrogate: Toluene-d8	0.520		"	0.500		104	70-130			
Surrogate: Bromofluorobenzene	0.500		"	0.500		99.9	70-130			

Matrix Spike Dup (1942002-MSD1)

Source: P910061-01

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Benzene	2.32	0.0250	mg/kg	2.50	ND	93.0	48-131	9.16	23	
Toluene	2.40	0.0250	"	2.50	ND	96.1	48-130	7.97	24	
Ethylbenzene	2.48	0.0250	"	2.50	ND	99.1	45-135	7.82	27	
p,m-Xylene	4.86	0.0500	"	5.00	ND	97.2	43-135	7.64	27	
o-Xylene	2.43	0.0250	"	2.50	ND	97.2	43-135	7.78	27	
Total Xylenes	7.29	0.0250	"	7.50	ND	97.2	43-135	7.69	27	
Surrogate: 1,2-Dichloroethane-d4	0.520		"	0.500		104	70-130			
Surrogate: Toluene-d8	0.521		"	0.500		104	70-130			
Surrogate: Bromofluorobenzene	0.503		"	0.500		101	70-130			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: GCU 85
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 10/21/19 12:23

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 1942013 - DRO Extraction EPA 3570
Blank (1942013-BLK1)

Prepared: 10/15/19 1 Analyzed: 10/16/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	54.5		"	50.0		109	50-200			

LCS (1942013-BS1)

Prepared: 10/15/19 1 Analyzed: 10/16/19 2

Diesel Range Organics (C10-C28)	520	25.0	mg/kg	500		104	38-132			
Surrogate: n-Nonane	53.9		"	50.0		108	50-200			

Matrix Spike (1942013-MS1)

Source: P910066-11

Prepared: 10/15/19 1 Analyzed: 10/16/19 2

Diesel Range Organics (C10-C28)	548	25.0	mg/kg	500	ND	110	38-132			
Surrogate: n-Nonane	55.8		"	50.0		112	50-200			

Matrix Spike Dup (1942013-MSD1)

Source: P910066-11

Prepared: 10/15/19 1 Analyzed: 10/16/19 2

Diesel Range Organics (C10-C28)	556	25.0	mg/kg	500	ND	111	38-132	1.50	20	
Surrogate: n-Nonane	55.2		"	50.0		110	50-200			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.	Project Name:	GCU 85	
PO Box 22024	Project Number:	03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	10/21/19 12:23

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 1942002 - Purge and Trap EPA 5030A

Blank (1942002-BLK1)

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	0.528		"	0.500		106	70-130			
Surrogate: Toluene-d8	0.510		"	0.500		102	70-130			
Surrogate: Bromofluorobenzene	0.481		"	0.500		96.1	70-130			

LCS (1942002-BS2)

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Gasoline Range Organics (C6-C10)	46.1	20.0	mg/kg	50.0		92.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.505		"	0.500		101	70-130			
Surrogate: Toluene-d8	0.524		"	0.500		105	70-130			
Surrogate: Bromofluorobenzene	0.496		"	0.500		99.1	70-130			

Matrix Spike (1942002-MS2)

Source: P910061-01

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Gasoline Range Organics (C6-C10)	46.3	20.0	mg/kg	50.0	ND	92.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.531		"	0.500		106	70-130			
Surrogate: Toluene-d8	0.522		"	0.500		104	70-130			
Surrogate: Bromofluorobenzene	0.494		"	0.500		98.7	70-130			

Matrix Spike Dup (1942002-MSD2)

Source: P910061-01

Prepared: 10/14/19 0 Analyzed: 10/15/19 1

Gasoline Range Organics (C6-C10)	46.8	20.0	mg/kg	50.0	ND	93.6	70-130	1.13	20	
Surrogate: 1,2-Dichloroethane-d4	0.527		"	0.500		105	70-130			
Surrogate: Toluene-d8	0.525		"	0.500		105	70-130			
Surrogate: Bromofluorobenzene	0.500		"	0.500		100	70-130			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: GCU 85
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 10/21/19 12:23

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 1942010 - Anion Extraction EPA 300.0/9056A
Blank (1942010-BLK1)

Prepared & Analyzed: 10/15/19 1

Chloride	ND	20.0	mg/kg
----------	----	------	-------

LCS (1942010-BS1)

Prepared & Analyzed: 10/15/19 1

Chloride	254	20.0	mg/kg	250	102	90-110
----------	-----	------	-------	-----	-----	--------

Matrix Spike (1942010-MS1)
Source: P910063-01

Prepared & Analyzed: 10/15/19 1

Chloride	3290	200	mg/kg	250	3040	97.0	80-120
----------	------	-----	-------	-----	------	------	--------

Matrix Spike Dup (1942010-MSD1)
Source: P910063-01

Prepared & Analyzed: 10/15/19 1

Chloride	3420	200	mg/kg	250	3040	150	80-120	3.94	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 may differ slightly.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: GCU 85
Project Number: 03143-0424
Project Manager: Steve Moskal

Reported:
10/21/19 12:23

Notes and Definitions

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.

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.



envirotech
Analytical Laboratory