

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.

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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>
<b><u>OCD Only</u></b> Received by:  Date: <u>12/11/19</u>

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## 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?	<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 <b>not</b> 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><b><u>Characterization Report Checklist:</u> Each of the following items must be included in the report.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li><input type="checkbox"/> Field data</li> <li><input type="checkbox"/> Data table of soil contaminant concentration data</li> <li><input type="checkbox"/> Depth to water determination</li> <li><input type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li><input type="checkbox"/> Boring or excavation logs</li> <li><input type="checkbox"/> Photographs including date and GIS information</li> <li><input type="checkbox"/> Topographic/Aerial maps</li> <li><input type="checkbox"/> Laboratory data including chain of custody</li> </ul>
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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.

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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: \_\_\_\_\_

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## 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  
1/4-1/4/FOOTAGE: 990 FNL x 990 FEL LEASE TYPE: FEDERAL / STATE / FEE / INDIAN  
LEASE #: NMNM 78391C PROD. FORMATION: \_\_\_\_\_ CONTRACTOR: -

DATE STARTED: 10/14/2019

DATE FINISHED: 10/14/2019

ENVIRONMENTAL 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:	OVM READING (ppm)
1) SAMPLE ID: <u>5-pt comp 26" OUTSIDE CONTAINMENT</u> SAMPLE DATE: <u>10/14/19</u> SAMPLE TIME: <u>0910</u> LAB ANALYSIS: <u>TPH/BTEX/CL</u>	<u>ENVIROTECH</u>	<u>1.4</u>
2) SAMPLE ID: <u>5-pt comp 26" INSIDE CONTAINMENT</u> SAMPLE DATE: <u>"</u> SAMPLE TIME: <u>0920</u> LAB ANALYSIS: <u>"</u>		<u>13.7</u>
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 - \_\_\_\_\_

MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED ANY AREAS DISPLAYING WETNESS: YES / NO EXPLANATION - \_\_\_\_\_

SAMPLE TYPE: GRAB COMPOSITE - # OF PTS. 5 DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION - WHITE CRUST FORMING

**SITE OBSERVATIONS:** LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION - DOWNHOLE IN GAS WELL

APPARENT 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

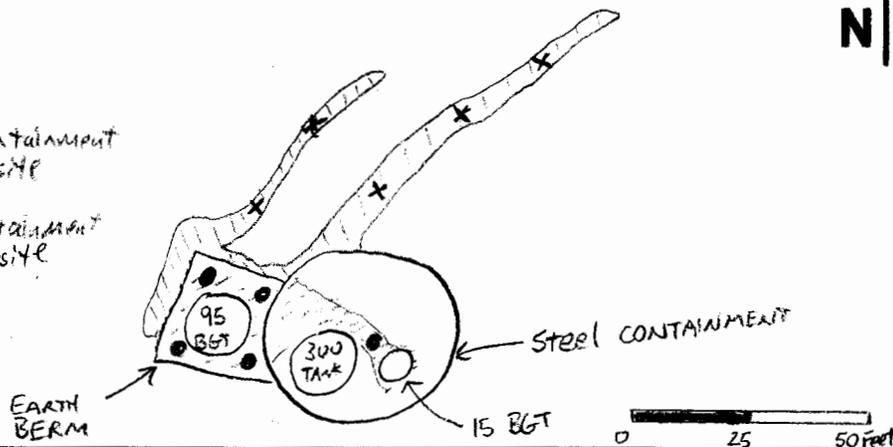
OVM CALIB. READ. = 99.7 ppm RF 1.0

OVM CALIB. GAS = 100 ppm

TIME 0925 (am/pm) DATE 10/14

X = Outside Containment  
5-pt Composite

● = Inside Containment  
5-pt Composite



## 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

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.

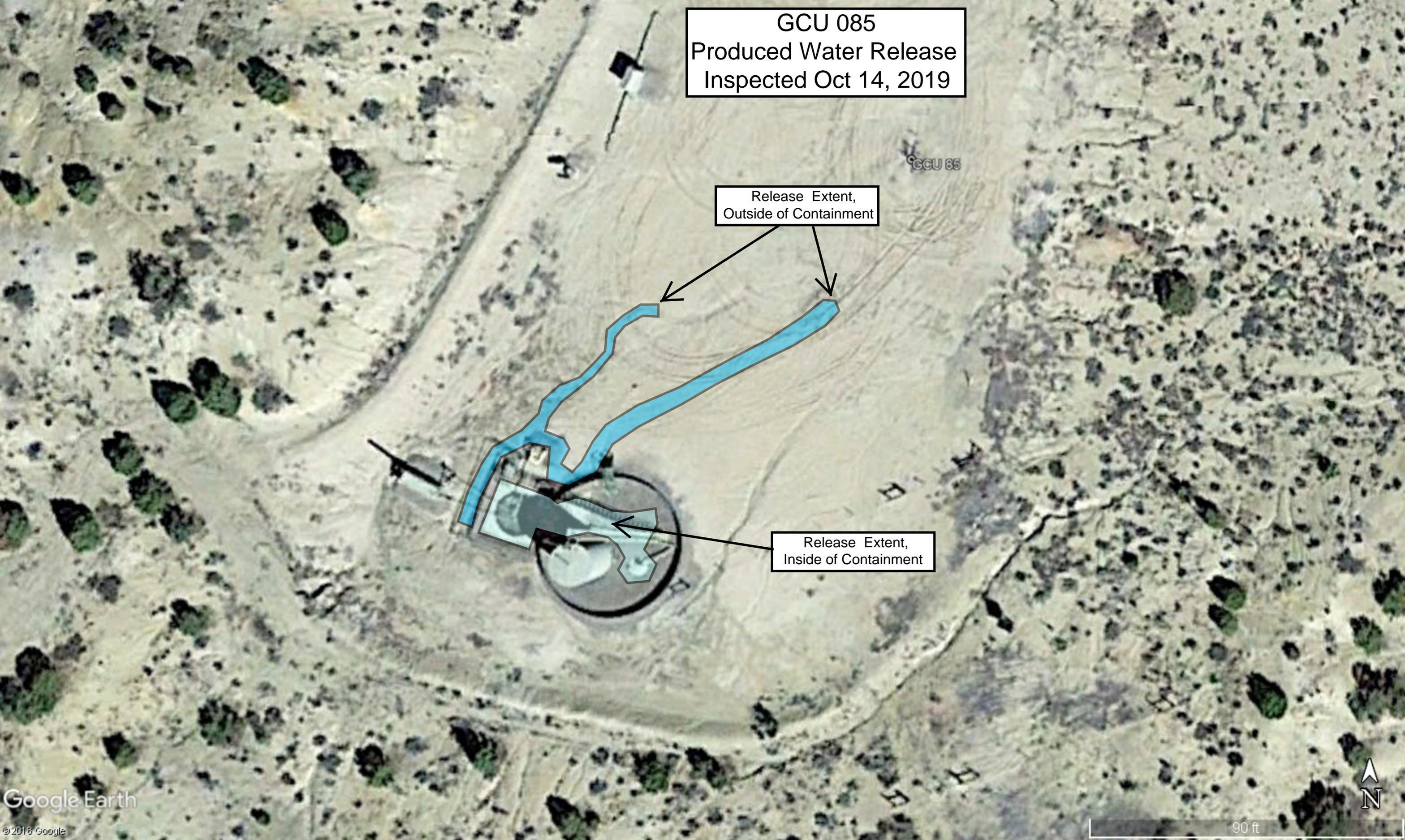
NOTES: \_\_\_\_\_ ONSITE: 10/14/2019

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

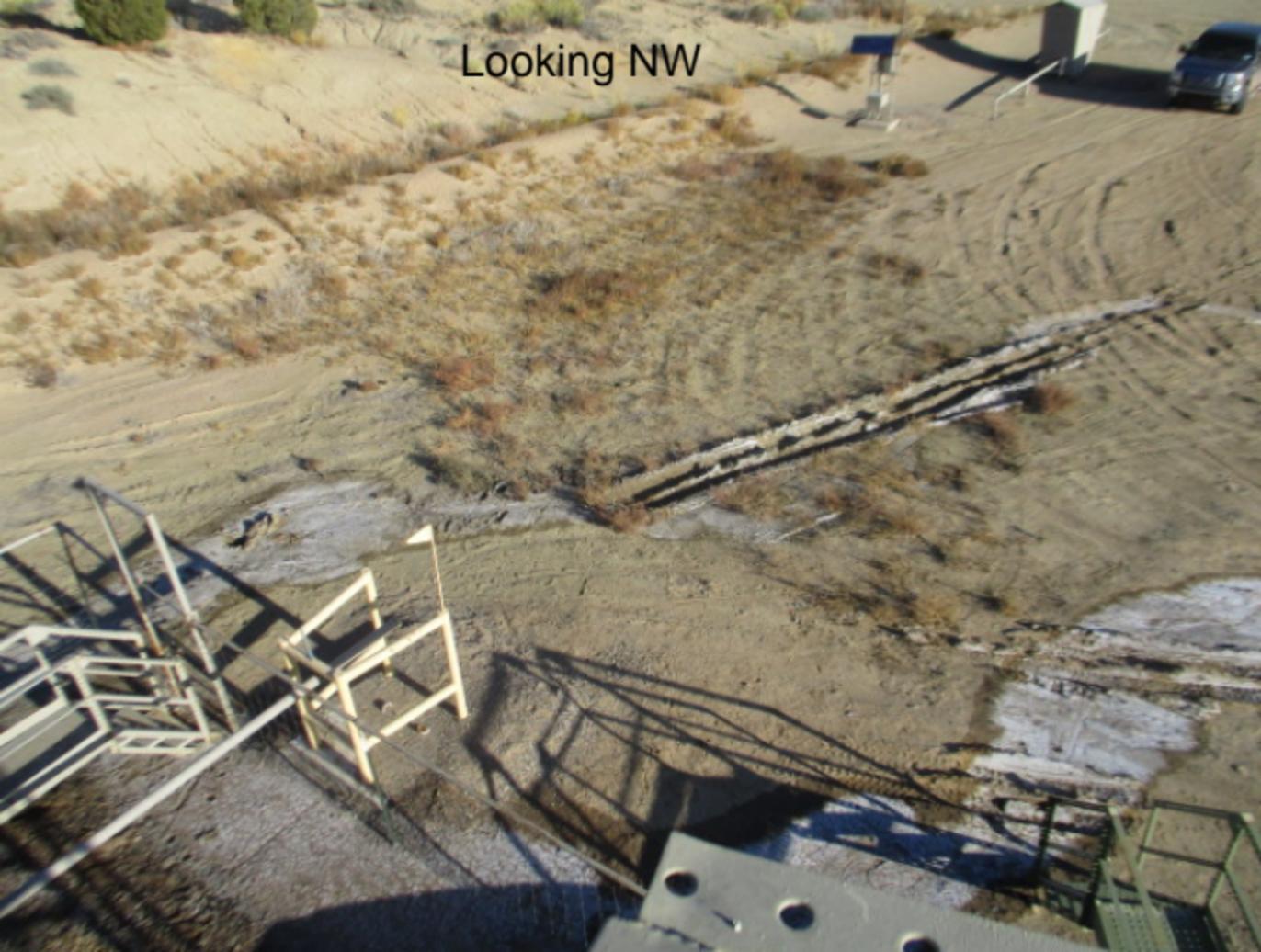




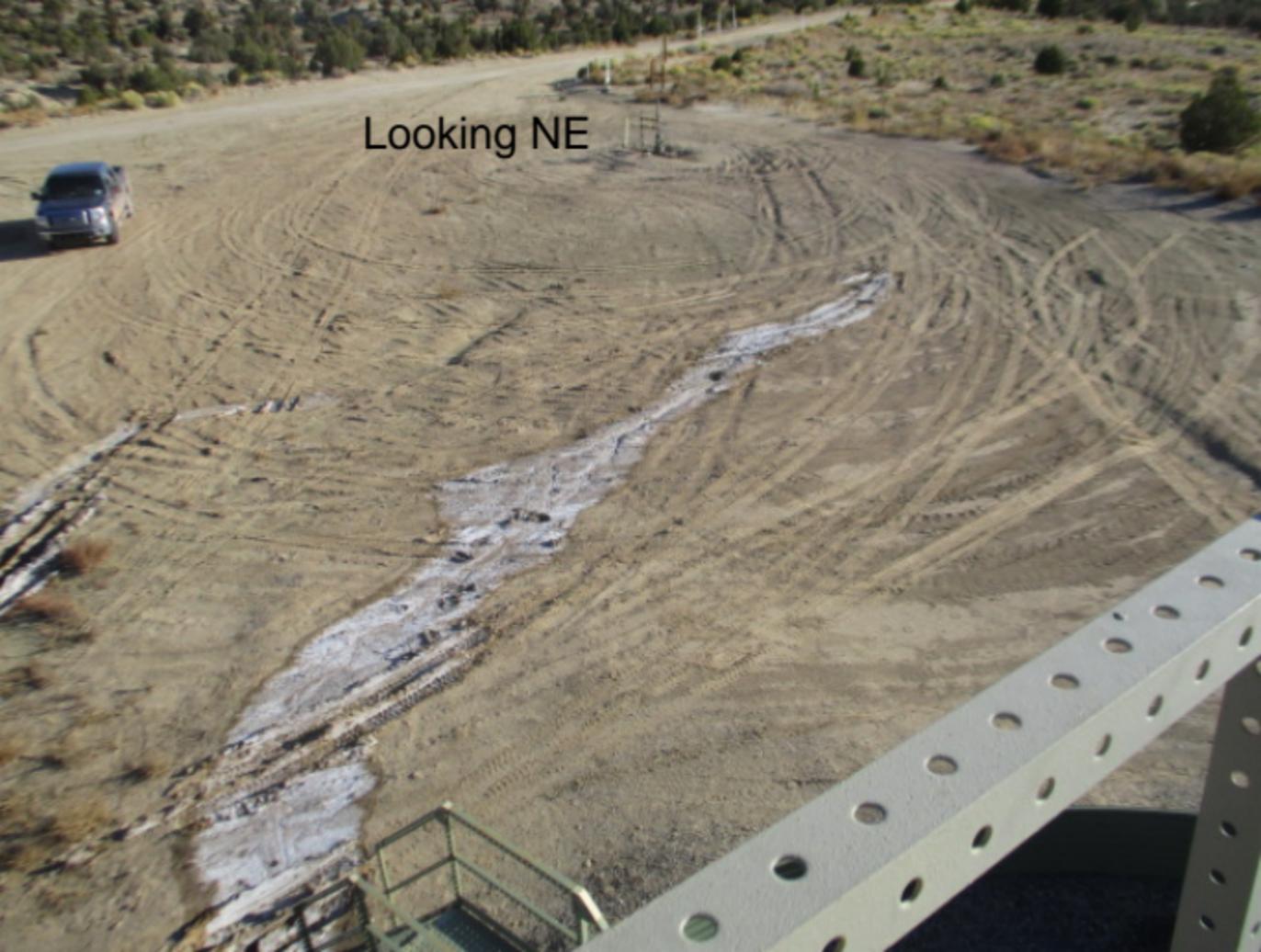
A circular metal manhole cover is set into a gravel surface. A white PVC pipe extends from the center of the cover, passing through a vertical riser pipe. To the left, a white cylindrical tank is partially visible. In the background, there is a green corrugated metal structure and a metal ladder. The scene is brightly lit, casting shadows.

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	<b>Reported:</b> 10/21/19 12:23
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### 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.

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: GCU 85 Project Number: 03143-0424 Project Manager: Steve Moskal	<b>Reported:</b> 10/21/19 12:23
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**Release-5 pt. Comp.-Outside Containment  
P910063-01 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					

**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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
<i>Surrogate: Toluene-d8</i>		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
<i>Surrogate: Bromofluorobenzene</i>		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	
<i>Surrogate: n-Nonane</i>		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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
<i>Surrogate: Toluene-d8</i>		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
<i>Surrogate: Bromofluorobenzene</i>		98.2 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	<b>3040</b>	200	mg/kg	10	1942010	10/15/19	10/15/19	EPA 300.0/9056A	
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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: GCU 85 Project Number: 03143-0424 Project Manager: Steve Moskal	<b>Reported:</b> 10/21/19 12:23
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**Release-5 pt. Comp.-Within Containment  
P910063-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						

**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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
<i>Surrogate: Toluene-d8</i>		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8260B	
<i>Surrogate: Bromofluorobenzene</i>		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	
<i>Surrogate: n-Nonane</i>		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	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
<i>Surrogate: Toluene-d8</i>		103 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	
<i>Surrogate: Bromofluorobenzene</i>		98.5 %		70-130	1942002	10/14/19	10/15/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	<b>3690</b>	200	mg/kg	10	1942010	10/15/19	10/15/19	EPA 300.0/9056A	
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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

### 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
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#### 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			

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

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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
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**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
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**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			

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: GCU 85 Project Number: 03143-0424 Project Manager: Steve Moskal	<b>Reported:</b> 10/21/19 12:23
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**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
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**Batch 1942010 - Anion Extraction EPA 300.0/9056A**

**Blank (1942010-BLK1)**

Prepared & Analyzed: 10/15/19 1

Chloride	ND	20.0	mg/kg							
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**LCS (1942010-BS1)**

Prepared & Analyzed: 10/15/19 1

Chloride	254	20.0	mg/kg	250		102	90-110			
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**Matrix Spike (1942010-MS1)**

Source: P910063-01

Prepared & Analyzed: 10/15/19 1

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

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

**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.

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Client: <u>BPX Energy</u> Project: <u>GCU 95</u> Project Manager: <u>Steve Moskal</u> Address: _____ City, State, Zip _____ Phone: _____ Email: _____	<b>Report Attention</b> Report due by: <u>10/21/2019</u> Attention: <u>Steve Moskal / Jeff Blagg</u> Address: _____ City, State, Zip _____ Phone: _____ Email: _____	<b>Lab Use Only</b> Lab WO# <u>P916063</u> Job Number <u>03143-0404</u>	<b>TAT</b> 1D <input type="checkbox"/> 3D <input type="checkbox"/>	<b>EPA Program</b> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/>					
		<b>Analysis and Method</b>							
		DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	State NM <input type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> AZ <input type="checkbox"/> TX <input type="checkbox"/> OK <input type="checkbox"/>	

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Remarks
0910	10/14/2019	SOIL	1	RELEASE - 5pt Comp. - Outside Containment	1	X	X	X			X	
0920	10/14/2019	SOIL	1	RELEASE - 5 pt. Comp - Within Containment	2	X	X	X			X	

**Additional Instructions:** Bill BPX - SECOND HALF 2019 SPILL ASSESSMENTS P.O.

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

vis ice in cooler

Relinquished by: (Signature) <u>JH Blagg</u>	Date <u>10/14/2019</u>	Time <u>1036</u>	Received by: (Signature) <u>Raine Lopez</u>	Date <u>10/14/19</u>	Time <u>10:36</u>	Lab Use Only Received on ice: <input checked="" type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

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.