

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	nCS1921340463
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: BP America Production Co	OGRID: 778	Initial & Final Spill Report
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD)	
Contact mailing address: 1199 Main St., Suite 101, Durango CO, 81301	nCS1921340463	

Location of Release Source

Latitude: 36.786082° Longitude: -107.588964°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Northeast Blanco Unit 477	Site Type: Natural Gas Production Well Pad
Date Release Discovered: July 10, 2019	API#: 30-039-24448

Unit Letter	Section	Township	Range	County
H	29	T30N	R7W	Rio Blanco

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): 6.7	Volume Recovered (bbls): 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls):	Volume Recovered (bbls): <u>0 bbls</u>
☐ 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 produced water associated with the tank load line piping. The valve on the tank load line was not fully closed and the bull plug not tightened after the last load was transported, leaking for approximately 10 days.

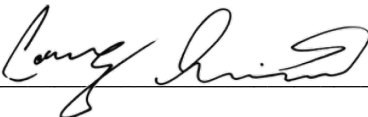
Based on site assessment and sample results, no remedial action is necessary based on the site ranking. No remedial action was performed. Attached are the lab results, sampling photos and site ranking criteria.

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

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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>July 22, 2019</u>
email: <u>steven.moskal@bpx.com</u>	Telephone: <u>(505) 330-9179</u>
<u>OCD Only</u> Received by: 	
Date: <u>8/1/19</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?	<u>>100</u> (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: <i>Each of the following items must be included in the report.</i> ☐ 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
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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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Printed Name: Steve Moskal Title: Environmental Coordinator

Signature:  Date: July 22, 2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
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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.

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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: July 22, 2019

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

OCD Only

Received by: OCD Date: 7/22/19

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: 8/1/19

Printed Name: Cory Title: Environmental Specialist

CLIENT: <u>BPx</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	API #: <u>30-039-2448</u> TANK ID (if applicable): <u> </u>
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FIELD REPORT:	(circle one): BGT CONFIRMATION / <u>RELEASE INVESTIGATION</u> / OTHER:	PAGE #: <u>1</u> of <u>1</u>
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SITE INFORMATION:	SITE NAME: <u>NEBU 477</u> QUAD/UNIT: <u>H SEC: 29 TWP: 30N RING: 7W PM: NM CNTY: RA ST: NM</u> 1/4-1/4 FOOTAGE: <u>1650 FNL x 1160 FEL</u> LEASE TYPE: <u>FEDERAL</u> STATE / FEE / INDIAN LEASE #: <u>SF-079060</u> PROD. FORMATION: <u>FC</u> CONTRACTOR: <u> </u>
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REFERENCE POINT:	WELL HEAD (W.H.) GPS COORD.: <u>36.786406 x 107.589324</u> GLELEV: <u>6,336</u> 1) <u>Release Point</u> GPS COORD.: <u>36.786082 x 107.588946</u> 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.:
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SAMPLING DATA:	CHAIN OF CUSTODY RECORD(S) # OR LAB USED: <u>ENVIROTECH</u>	OVM READING (ppm)
1) SAMPLE ID: <u>5-pt #1 @ 6"</u> SAMPLE DATE: <u>7/11/19</u> SAMPLE TIME: <u>0905</u> LAB ANALYSIS: <u>TPH/BTEX/CL</u>		<u>8.5</u>
2) SAMPLE ID: <u>5-pt #2 @ 6"</u> SAMPLE DATE: <u>7/11/19</u> SAMPLE TIME: <u>0908</u> LAB ANALYSIS: <u>TPH/BTEX/CL</u>		<u>12.4</u>
3) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:		
4) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:		

SOIL DESCRIPTION:	SOIL TYPE: SAND / <u>SILTY SAND</u> / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER SOIL COLOR: <u>TAN</u> COHESION (ALL OTHERS): NON COHESIVE / <u>SLIGHTLY COHESIVE</u> / COHESIVE / HIGHLY COHESIVE CONSISTENCY (NON COHESIVE SOILS): LOOSE / <u>FIRM</u> / DENSE / VERY DENSE MOISTURE: DRY / <u>SLIGHTLY MOIST</u> / MOIST / WET / SATURATED / SUPER SATURATED SAMPLE TYPE: GRAB / <u>COMPOSITE</u> # OF PTS. <u>5</u> DISCOLORATION/STAINING OBSERVED: YES / <u>NO</u> EXPLANATION -
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SITE OBSERVATIONS:	LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION - APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: <u>YES</u> / NO EXPLANATION: <u>MOIST GROUND SURFACE</u> EQUIPMENT SET OVER RECLAIMED AREA: YES / NO EXPLANATION - OTHER:
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SOIL IMPACT DIMENSION ESTIMATION: <u>20</u> ft X <u>10</u> ft X <u>1.25</u> ft EXCAVATION ESTIMATION (Cubic Yards):	DEPTH TO GROUNDWATER: <u>> 100</u> NEAREST WATER SOURCE: <u>> 1000</u> NEAREST SURFACE WATER: NMOC DTPH CLOSURE STD: ppm
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SITE SKETCH	BGT Located: off / on site PLOT PLAN circle: <u>attached</u>	OVM CALIB. READ. = ppm RF = 0.52 OVM CALIB. GAS = ppm TIME: am/pm DATE:
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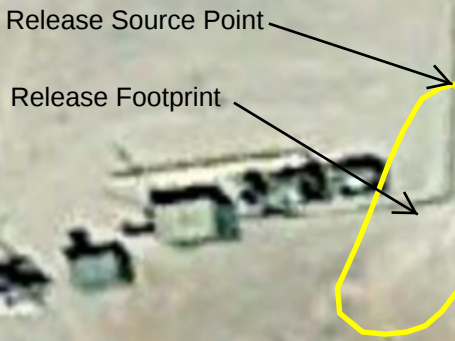
0 25 50'

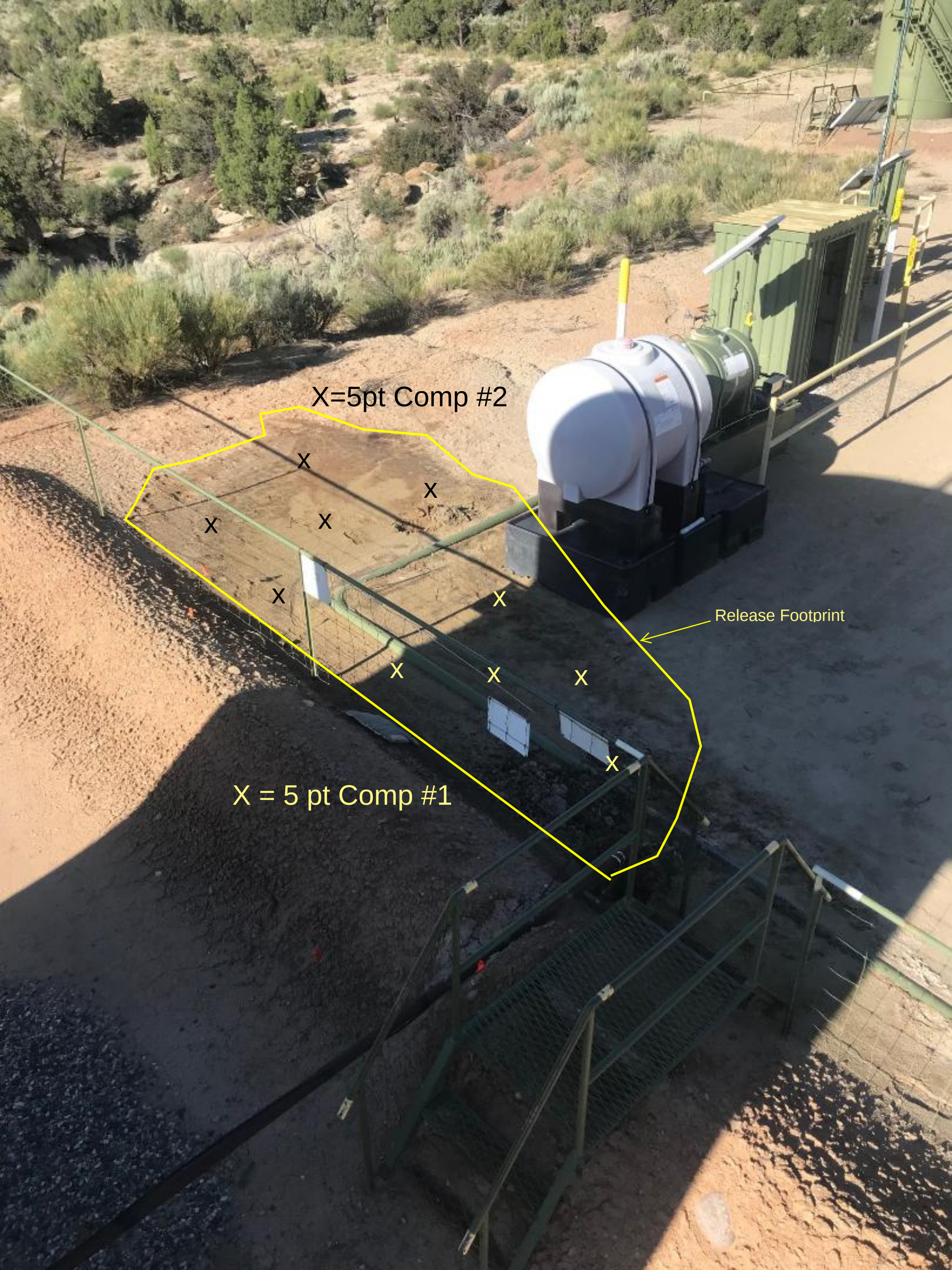
N ↑

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.	MISCELL. NOTES WO: PO #: PK: PJ #: Permit date(s): OCD Appr. date(s): 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: <u>10° E</u>
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NOTES:	ONSITE: <u>7/11/2012</u>
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NEBU 477
(H) Sec 29 - T30N - R7W
API: 30-039-24448





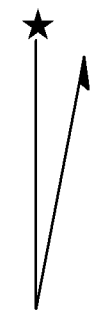
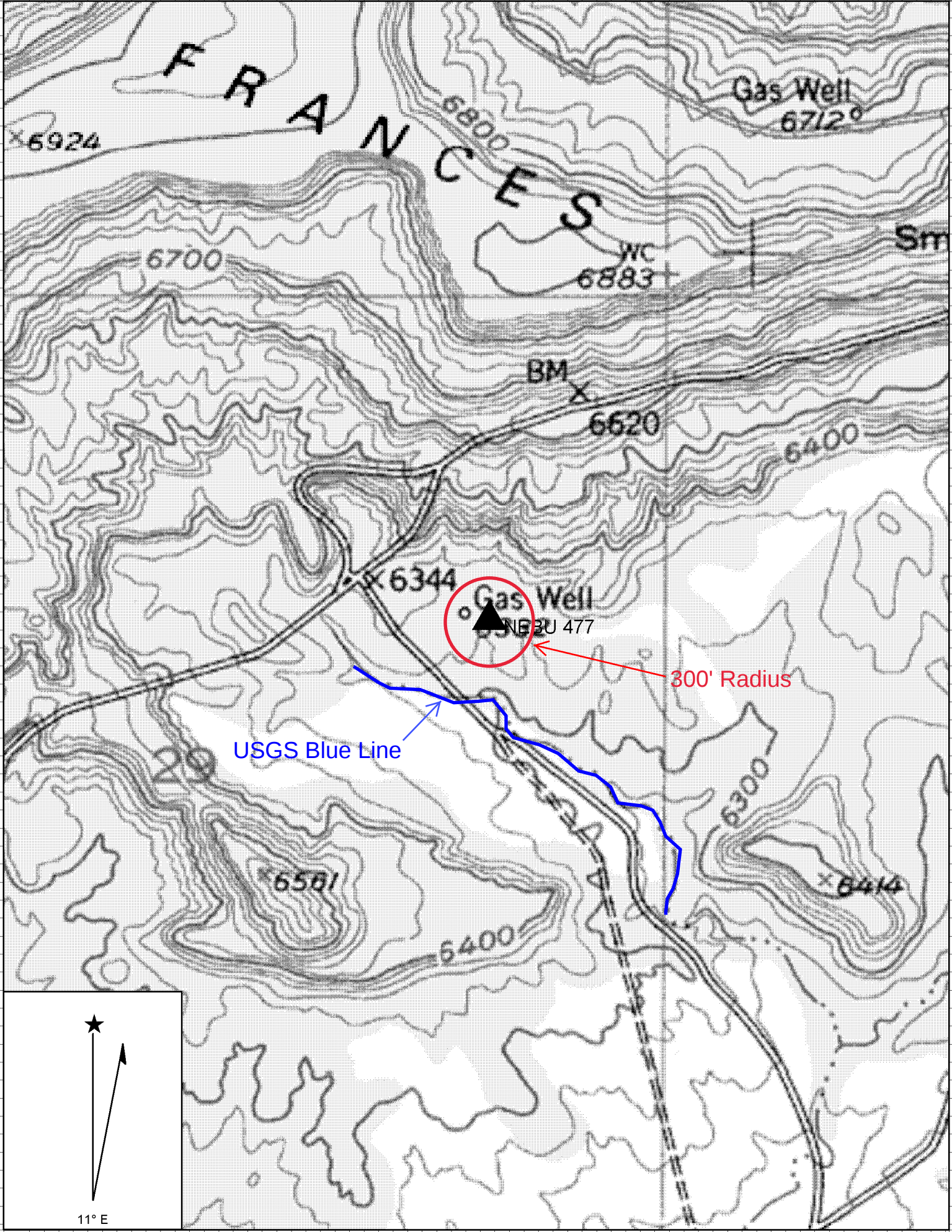
X=5pt Comp #2

Release Footprint

X = 5 pt Comp #1







11° E



New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 268978

Northing (Y): 4074262

Radius: 1000

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer **Wells Without Well Log Information**

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 268978

Northing (Y): 4074262

Radius: 1000

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/12/19 6:21 AM

WELLS WITHOUT WELL LOG INFORMATION

Steven Moskal

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Thursday, July 11, 2019 8:51 AM
To: Steven Moskal
Cc: Blagg, Jefferey
Subject: RE: [EXT] NEBU 477 Spill and sampling notification

Steve,

OCD approves 2 samples for the area based on phone conversation with Mr. Blagg

Please include this approval in your final report.

Thanks for quick follow up.

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

From: Steven Moskal <Steven.Moskal@BPX.COM>
Sent: Thursday, July 11, 2019 8:48 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Blagg, Jefferey <jeffcblagg@aol.com>
Subject: Re: [EXT] NEBU 477 Spill and sampling notification

Cory,

Based on the site assessment by Blagg Engineering, the release is approximately 6.5 bbls of produced water, all remaining on pad.

The attached photo demonstrates the extents of the release, originating from the load line of the tank. BP proposes to collect 2 composite samples from the release area, splitting the area into two segments, left and right as depicted in the photo.

Steve Moskal
Environmental Coordinator
BP San Juan
(505) 330-9179
steven.moskal@bpx.com

Sent from my mobile device

From: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Sent: Thursday, July 11, 2019 8:16:37 AM
To: Steven Moskal
Cc: Blagg, Jefferey
Subject: RE: [EXT] NEBU 477 Spill and sampling notification

Steve,

Send me some pictures of the site investigation and a rough proposed sampling plan.

If it dosnt look to bad I am ok with sampling today.

Thanks

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

From: Steven Moskal <Steven.Moskal@BPX.COM>
Sent: Wednesday, July 10, 2019 2:41 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>
Cc: Blagg, Jefferey <jeffcblagg@aol.com>
Subject: [EXT] NEBU 477 Spill and sampling notification

Cory,

BP has a material release of water from a load line leak on a coal bed methane water tank at the subject site. All released water remained on site with an estimate volume of 5 bbls, but to be confirmed with a site visit tomorrow.

Jeff Blagg plans to visit the site tomorrow morning and will be assessing the release and sampling as needed. If the spill is 5 bbls or greater, the spill will be reported under a C-141 and will like be closed out using the anticipated samples from tomorrow.

Please let me know if you approve sampling of the release area as an assessment and for use as potential closure.

Thank you,

Steve Moskal
Environmental Coordinator

BP San Juan

(505) 330-9179

steven.moskal@bpx.com

Sent from my mobile device

Analytical Report

Report Summary

Client: BP America Production Co.

Samples Received: 7/11/2019

Job Number: 03143-0424

Work Order: P907029

Project Name/Location: NEBU 477

Report Reviewed By:



Date: 7/17/19

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, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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

Project Name: NEBU 477
Project Number: 03143-0424
Project Manager: Steve Moskal

Reported:
07/17/19 11:38

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
5-pt Comp #1	P907029-01A	Soil	07/11/19	07/11/19	Glass Jar, 4 oz.
5-pt Comp #2	P907029-02A	Soil	07/11/19	07/11/19	Glass Jar, 4 oz.

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

 Project Name: NEBU 477
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 07/17/19 11:38

5-pt Comp #1
P907029-01 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		95.5 %		50-150	1928041	07/12/19	07/15/19	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	40.4	25.0	mg/kg	1	1928040	07/12/19	07/15/19	EPA 8015D	
Oil Range Organics (C28-C40)	50.6	50.0	mg/kg	1	1928040	07/12/19	07/15/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		99.1 %		50-200	1928040	07/12/19	07/15/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		102 %		50-150	1928041	07/12/19	07/15/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	329	20.0	mg/kg	1	1928046	07/12/19	07/12/19	EPA 300.0/9056A	
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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: NEBU 477
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 07/17/19 11:38

5-pt Comp #2
P907029-02 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		97.4 %		50-150	1928041	07/12/19	07/15/19	EPA 8021B	

Nonhalogenated Organics by 8015 - DRO/ORO

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1928040	07/12/19	07/15/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1928040	07/12/19	07/15/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		103 %		50-200	1928040	07/12/19	07/15/19	EPA 8015D	

Nonhalogenated Organics by 8015 - GRO

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1928041	07/12/19	07/15/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		104 %		50-150	1928041	07/12/19	07/15/19	EPA 8015D	

Anions by 300.0/9056A

Chloride	569	20.0	mg/kg	1	1928046	07/12/19	07/12/19	EPA 300.0/9056A	
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BP America Production Co.	Project Name: NEBU 477	
PO Box 22024	Project Number: 03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager: Steve Moskal	07/17/19 11:38

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
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Batch 1928041 - Purge and Trap EPA 5030A

Blank (1928041-BLK1)

Prepared: 07/12/19 1 Analyzed: 07/15/19 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: 4-Bromochlorobenzene-PID	7.61	"	8.00	95.1	50-150
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LCS (1928041-BS1)

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Benzene	4.49	0.0250	mg/kg	5.00		89.7	70-130			
Toluene	4.86	0.0250	"	5.00		97.2	70-130			
Ethylbenzene	4.83	0.0250	"	5.00		96.6	70-130			
p,m-Xylene	9.95	0.0500	"	10.0		99.5	70-130			
o-Xylene	4.82	0.0250	"	5.00		96.4	70-130			
Total Xylenes	14.8	0.0250	"	15.0		98.5	70-130			

Surrogate: 4-Bromochlorobenzene-PID	7.68	"	8.00	96.0	50-150
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Matrix Spike (1928041-MS1)

Source: P907029-01

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Benzene	4.56	0.0250	mg/kg	5.00	ND	91.2	54.3-133			
Toluene	4.93	0.0250	"	5.00	ND	98.7	61.4-130			
Ethylbenzene	4.89	0.0250	"	5.00	ND	97.7	61.4-133			
p,m-Xylene	10.0	0.0500	"	10.0	ND	100	63.3-131			
o-Xylene	4.86	0.0250	"	5.00	ND	97.2	63.3-131			
Total Xylenes	14.9	0.0250	"	15.0	ND	99.4	63.3-131			

Surrogate: 4-Bromochlorobenzene-PID	7.68	"	8.00	96.0	50-150
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Matrix Spike Dup (1928041-MSD1)

Source: P907029-01

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Benzene	4.22	0.0250	mg/kg	5.00	ND	84.4	54.3-133	7.75	20	
Toluene	4.57	0.0250	"	5.00	ND	91.4	61.4-130	7.64	20	
Ethylbenzene	4.55	0.0250	"	5.00	ND	90.9	61.4-133	7.21	20	
p,m-Xylene	9.35	0.0500	"	10.0	ND	93.5	63.3-131	7.09	20	
o-Xylene	4.53	0.0250	"	5.00	ND	90.6	63.3-131	7.09	20	
Total Xylenes	13.9	0.0250	"	15.0	ND	92.6	63.3-131	7.09	20	

Surrogate: 4-Bromochlorobenzene-PID	7.81	"	8.00	97.6	50-150
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BP America Production Co.
 PO Box 22024
 Tulsa OK, 74121-2024

 Project Name: NEBU 477
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 07/17/19 11:38

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 1928040 - DRO Extraction EPA 3570
Blank (1928040-BLK1)

Prepared: 07/12/19 0 Analyzed: 07/15/19 1

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40)	ND	50.0	"							
Surrogate: n-Nonane	54.9		"	50.0		110	50-200			

LCS (1928040-BS1)

Prepared: 07/12/19 0 Analyzed: 07/15/19 1

Diesel Range Organics (C10-C28)	486	25.0	mg/kg	500		97.3	38-132			
Surrogate: n-Nonane	50.7		"	50.0		101	50-200			

Matrix Spike (1928040-MS1)

Source: P907029-01

Prepared: 07/12/19 0 Analyzed: 07/15/19 1

Diesel Range Organics (C10-C28)	530	25.0	mg/kg	500	40.4	98.0	38-132			
Surrogate: n-Nonane	50.5		"	50.0		101	50-200			

Matrix Spike Dup (1928040-MSD1)

Source: P907029-01

Prepared: 07/12/19 0 Analyzed: 07/15/19 1

Diesel Range Organics (C10-C28)	534	25.0	mg/kg	500	40.4	98.7	38-132	0.660	20	
Surrogate: n-Nonane	50.7		"	50.0		101	50-200			

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

 Project Name: NEBU 477
 Project Number: 03143-0424
 Project Manager: Steve Moskal

Reported:
 07/17/19 11:38

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 1928041 - Purge and Trap EPA 5030A
Blank (1928041-BLK1)

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.25		"	8.00		103	50-150			

LCS (1928041-BS2)

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Gasoline Range Organics (C6-C10)	54.9	20.0	mg/kg	50.0		110	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.25		"	8.00		103	50-150			

Matrix Spike (1928041-MS2)

Source: P907029-01

Prepared: 07/12/19 1 Analyzed: 07/15/19 1

Gasoline Range Organics (C6-C10)	56.1	20.0	mg/kg	50.0	ND	112	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.37		"	8.00		105	50-150			

Matrix Spike Dup (1928041-MSD2)

Source: P907029-01

Prepared: 07/12/19 1 Analyzed: 07/15/19 2

Gasoline Range Organics (C6-C10)	55.6	20.0	mg/kg	50.0	ND	111	70-130	0.996	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.24		"	8.00		103	50-150			

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BP America Production Co.	Project Name:	NEBU 477	
PO Box 22024	Project Number:	03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager:	Steve Moskal	07/17/19 11:38

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 1928046 - Anion Extraction EPA 300.0/9056A

Blank (1928046-BLK1)

Prepared & Analyzed: 07/12/19 1

Chloride	ND	20.0	mg/kg							
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LCS (1928046-BS1)

Prepared & Analyzed: 07/12/19 1

Chloride	267	20.0	mg/kg	250		107	90-110			
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Matrix Spike (1928046-MS1)

Source: P907029-01

Prepared & Analyzed: 07/12/19 1

Chloride	594	20.0	mg/kg	250	329	106	80-120			
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Matrix Spike Dup (1928046-MSD1)

Source: P907029-01

Prepared & Analyzed: 07/12/19 1

Chloride	587	20.0	mg/kg	250	329	103	80-120	1.27	20	
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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.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: NEBU 477
Project Number: 03143-0424
Project Manager: Steve Moskal

Reported:
07/17/19 11:38

Notes and Definitions

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

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