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-144 Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.

For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application
Type of action: Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method Modification to an existing permit/or registration Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: WPX Energy Production, LLC OGRID #: 120782
Address: PO Box 640/721 S Main Aztec, NM 87410
Facility or well name: Logos 701H & Logos 702H
API Number: 30-043-21202, 30-043-21219 OCD Permit Number:
U/L or Qtr/Qtr _ D _ Section _ 08 _ Township _ 22N _ Range _ 5W _ County: _ Sandoval
Center of Proposed Design: Latitude N36.157876 Longitude W107.391945 NAD: ☐1927 ☐ 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment
□ Pit: Subsection F, G or J of 19.15.17.11 NMAC Temporary: □ Drilling □ Completion □ Workover □ Permanent □ Emergency □ Cavitation □ P&A □ Multi-Well Fluid Management □ Low Chloride Drilling Fluid □ yes □ no □ Lined □ Unlined □ Liner type: Thickness _ mil □ LLDPE □ HDPE □ PVC □ Other _ Dimensions: _ x W x D □ String-Reinforced □ Liner Seams: □ Welded □ Factory □ Other _ Volume: _ bbl Dimensions: _ x W x D
THE DIVINIT 3
3. Below-grade tank: Subsection I of 19.15.17.11 NMAC OIL CONS. DIV DIST. 3
Volume: 120 bbl Type of fluid: Produced Water MAY 18 2016
Tank Construction material: Metal
□ Secondary containment with leak detection
4.
Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
5. Fancing: Subsection D of 19.15.17.11 NMAC (Applies to paymanent pits townovers pits and below and tanks)
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital,
institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify 4'hog wire with one strand of barbed wire on top

Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)						
Screen Netting Other						
☐ Monthly inspections (If netting or screening is not physically feasible)						
Signs: Subsection C of 19.15.17.11 NMAC ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers ☐ Signed in compliance with 19.15.16.8 NMAC						
Variances and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: □ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. □ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.						
9. Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptant material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	ptable source					
General siting						
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - □ NM Office of the State Engineer - iWATERS database search; □ USGS; □ Data obtained from nearby wells	☐ Yes ☑ No ☐ NA					
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No					
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) - Written confirmation or verification from the municipality; Written approval obtained from the municipality						
Within the area overlying a subsurface mine. (Does not apply to below grade tanks) - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No					
 Within an unstable area. (Does not apply to below grade tanks) Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	☐ Yes ☐ No					
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	☐ Yes ☐ No					
Below Grade Tanks						
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☑ No					
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☑ No					
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)						
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	Yes No					
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	Yes No					
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No					

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
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, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:	NMAC
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached. Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:	.15.17.9 NMAC

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	documents are
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.	
Type: Drilling Completion Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Management Pit Alternative Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method	☐ Multi-well Fluid
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	attached to the
15.	
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. F 19.15.17.10 NMAC for guidance.	rce material are Please refer to
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes No
Within a 100-year floodplain FEMA map	☐ Yes ☐ No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.13 NMAC Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	11 NMAC 15.17.11 NMAC
Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete to the best of my knowledge and believe the complete the complete to the best of my knowledge and believe the complete the complete to the best of my knowledge and believe the complete the	
Signature: Date:	
e-mail address: Telephone:	
OCD Approval: Permit Application (vicluding closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: OCD Permit Number:	6/13
19.	
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not section of the form until an approved closure plan has been obtained and the closure activities have been completed.	
Closure Completion Date February 5, 2015	
20. Closure Method: Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loc ☐ If different from approved plan, please explain.	op systems only)

22.	
Operator Closure Certification:	
	osure report is true, accurate and complete to the best of my knowledge and
belief. I also certify that the closure complies with all applicable closure re	quirements and conditions specified in the approved closure plan.
	m
Name (Print): _Deborah Watson	Title: Environmental Specialist
Debruck Water	
Signature:	Date: May 18, 2016
e-mail address: deborah.watson@wpxenergy.com	Telephone: 505.333.1880

WPX Energy Production Co., LLC San Juan Basin: New Mexico Assets

Below-Grade Tank Removal Closure Report Logos #701H (30-043-21202) and Logos #702H (30-043-21219) Unit Letter D, Section 08, T22N, R05W Sandoval County, NM

The closure of the Logos #701H and Logos #702H BGT was completed February 2015. Due to turn over within the WPX EH&S Department, limited closure records/details are available. The facility was upgraded shortly after BGT closure and production equipment is in operation within lined secondary containment in the former BGT location.

Closure Notice:

The landowner of record will be notified of the intent to closure the BGT by certified mail and a copy of this
notification will be included in the closure report. In the case of an emergency, the landowner of record will be
notified as soon as practical.

No record available.

 Notice of Closure will be given to the Aztec District office between 72 hours and one week of the scheduled closure via email or phone.
 No record available.

Closure Method:

All liquids and sludge will be removed from the BGT within 60 days of cessation of operations. Fluids will be disposed of at a division approved facility.

All liquids from the BGT were vacuumed out for disposal at Basin Disposal (Permit Number NM-01-0005).

 Within 6 months of cessation of operations, the operator will dispose, reuse/recycle, or reclaim in a division approved manner the BGT, and all unused equipment associated with the BGT.

The pit liner was disposed of at WCA Bondad facility as solid waste. The steel tank was removed from the location. All associated equipment no longer needed, was removed from the location.

The soils beneath the BGT will be tested as follows:

a) A five-point composite sample including any obvious staining or wet soils shall be taken under BGT and will be analyzed for constituents listed in Table I of 19.15.17.13 NMAC.

A sample was collected from beneath the BGT following BGT removal on February 5, 2015. The sample was submitted to Envirotech Analytical Laboratory, Farmington, NM, for analysis of benzene, BTEX, TPH, and chlorides. The laboratory analytical report is attached.

Table 1: Closure Criteria for BGTs

Components	Testing Methods	Closure Limits (mg/Kg)	Results (mg/kg)
Benzene	EPA SW-846 Method 8021B	10	ND
BTEX	EPA SW-846 Method 8021B	50	1.19
GRO/DRO	EPA SW-846 Method 8015M	1,000	16.5
TPH	EPA SW-846 Method 418.1	2,500	48
Chlorides	EPA SW-846 Method 300.0	20,000	ND

Based on the results of the soil test, the operator will obtain NMOCD District approval prior to completing any
necessary additional delineation for closure. If the soil tests are at or below the standards of closure, the operator
will proceed with closure.

Sampling results indicate no release occurred from the BGT.

7. Upon completion of the BGT, the operator will reclaim the unused BGT location to a safe and stable condition that blends with the surrounding undisturbed area as provided in Paragraph 2 of subsection H of 19.15.17.13 as well as recontouring the area in accordance with paragraph 5 in subsection H of 19.15.17.13 NMAC. The soil cover will be constructed to prevent ponding of water and erosion of cover material.

The BGT location was backfilled with clean soil and compacted. The facility was upgraded shortly after BGT closure and production equipment is in operation within lined secondary containment in the former BGT location.

 The reclamation of the BGT area will contain a uniform vegetative cover that reflects a total percent plant cover of at least 70 percent of pre-disturbance levels, excluding noxious weeds. The re-vegetation and reclamation obligations imposed by other applicable federal or tribal agencies that manage the lands will supersede these provisions and govern the obligations.

The BGT location was backfilled with clean soil and compacted. The facility was upgraded shortly after BGT closure and production equipment is in operation within lined secondary containment in the former BGT location. The BGT location will be reclaimed when it is no longer needed for production operations.

For those portions of the former pit area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

The BGT location was backfilled with clean soil and compacted. The facility was upgraded shortly after BGT closure and production equipment is in operation within lined secondary containment in the former BGT location. The BGT location will be reclaimed when it is no longer needed for production operations.

Closure Report:

All closure activities will include proper documentation and will be submitted to OCD within 60 days of the BGT closure on a Closure Report using Division Form C-144. (**Operator Closure Certification has been completed**.) The Report will include the following:

- · Proof of Closure Notice-Not available,
- · Confirmation Sampling Results,
- Disposal Facility Name and Permit Number,
- · Site Map, and
- · Photo Documentation of Reclamation

Attachments:

Figure 1. Topographic Location Map Figure 2. Aerial Site Map

Laboratory Analytical Report (WO Number P502018)

Photograph Documentation

Smith, Cory, EMNRD

From:

Fields, Vanessa < Vanessa. Fields@wpxenergy.com>

Sent:

Tuesday, February 03, 2015 8:17 AM

To:

Smith, Cory, EMNRD; Mark_Kelly@nm_blm.gov

Cc:

Fields, Vanessa

Importance:

High

Cory,

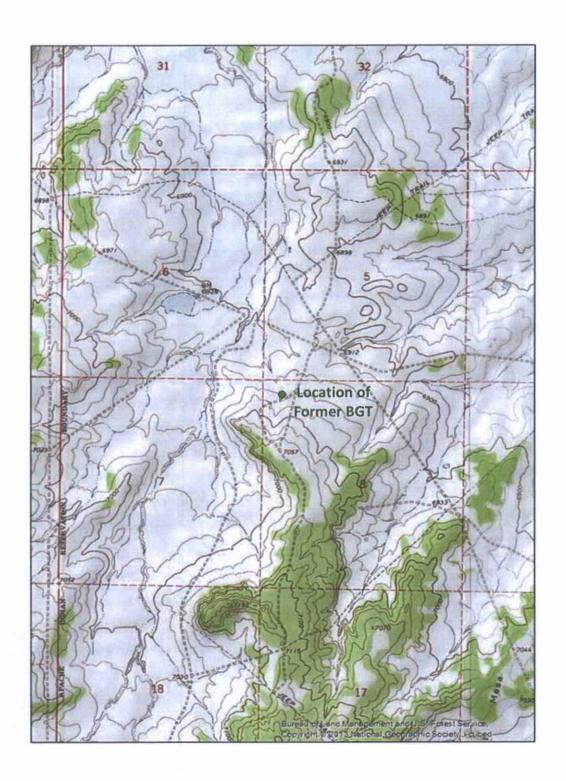
We need to take the following below grade tank out of service, and would like to close this existing BGT. We request your review to allow closure.

Well Site	API		SEC	TWN	RNG
Logos #701H	30-043-21202	D 08	22N	05W	
Logos #702H	30-043-21219	D 08	22N	05W	

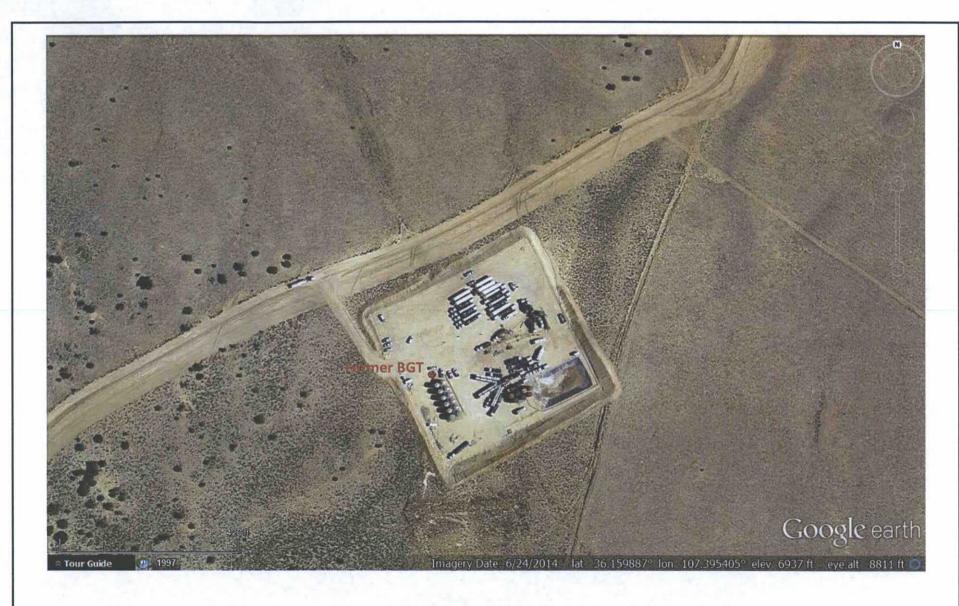
Please let me know if you have any questions and/or concerns.

Thank You, Vanessa

Vanessa Fields
Environmental Specialist
Office# 505-333-1880
Fax# 505-333-1805
Cell# 505-419-6219
vanessa.fields@wpxenergy.com
WPXENERGY



Topographic Map Logos #701H and Logos #702H Below Grade Tank Closure Report Section 08, Township 22N, Range 05W N36.157876, W107.391945 Sandoval County, NM Scale 1:24,000



Aerial Site Map Logos #701H and Logos #702H Below Grade Tank Closure Report Section 08, Township 22N, Range 05W N36.157876, W107.391945 Sandoval County, NM



Analytical Report

Report Summary

Client: WPX Energy, Inc.

Chain Of Custody Number: 16901

Samples Received: 2/6/2015 2:30:00PM

Job Number: 04108-0136 Work Order: P502018

Project Name/Location: Logos 701 BGT Removal

Entire Report Reviewed By:

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

2/10/15

Date:



PO Box 21218

Tulsa OK, 74121-1358

Project Name:

Logos 701 BGT Removal

Project Number: Project Manager: 04108-0136

Vanessa Fields

Reported:

10-Feb-15 12:26

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
36.157940-107.392275	P502018-01A	Soil	02/05/15	02/06/15	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865



Project Name:

Logos 701 BGT Removal

PO Box 21218

Project Number:

04108-0136

Reported: 10-Feb-15 12:26

Tulsa OK, 74121-1358

Project Manager:

Vanessa Fields

92275

36.157940-107.392275 P502018-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
Toluene	0.13	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
Ethylbenzene	0.13	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
p,m-Xylene	0.63	0.20	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
o-Xylene	0.29	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
Total Xylenes	0.92	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
Total BTEX	1.19	0.10	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		105 %	50	-150	1506018	02/06/15	02/09/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	16.5	9.97	mg/kg	1	1506018	02/06/15	02/09/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1506017	02/06/15	02/09/15	EPA 8015D	
Surrogate: o-Terphenyl		112 %	50	-200	1506017	02/06/15	02/09/15	EPA 8015D	
Surrogate: 4-Bromochlorobenzene-FID		92.7 %	50	-150	1506018	02/06/15	02/09/15	EPA 8015D	
Total Petroleum Hydrocarbons by 418.1									
Total Petroleum Hydrocarbons	48.0	35.0	mg/kg	1	1507009	02/09/15	02/09/15	EPA 418.1	
Cation/Anion Analysis									
Chloride	ND	9.98	mg/kg	1	1507004	02/09/15	02/09/15	EPA 300.0	

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Page 3 of 9



Tulsa OK, 74121-1358

Project Name:

Logos 701 BGT Removal

PO Box 21218

Analyte

Toluene

Ethylbenzene

p,m-Xylene

o-Xylene

Project Number: Project Manager:

Reporting

Limit

Result

19.8

23.5

97.0

36.8

0.471

0.10

0.10

0.20

0.10

04108-0136

Vanessa Fields

Spike

Level

Source

Result

%REC

Reported: 10-Feb-15 12:26

RPD

Limit

Notes

%REC

Limits

RPD

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Units

Blank (1506018-BLK1)				Prepared &	Analyzed:	06-Feb-15				
Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	11.							
Ethylbenzene	ND	0.002	11							
p,m-Xylene	ND	0.004								
o-Xylene	ND	0.002	11							
Total Xylenes	ND	0.002	"							
Total BTEX	ND	0.002	**							
Surrogate: 4-Bromochlorobenzene-PID	0.441		"	0.399		110	50-150			
LCS (1506018-BS1)				Prepared &	Analyzed:	06-Feb-15				
Benzene	17.2	0.10	mg/kg	20.0		86.1	75-125			
Toluene	18.5	0.10	(10)	20.0		92.7	70-125			
Ethylbenzene	19.4	0.10		20.0		97.1	75-125			
p,m-Xylene	39.2	0.20	**	39.9		98.2	80-125			
o-Xylene	19.2	0.10	**	20.0		96.4	75-125			
Surrogate: 4-Bromochlorobenzene-PID	0.443		"	0.399		111	50-150			
Matrix Spike (1506018-MS1)	Source	e: P502012-	01	Prepared & Analyzed: 06-Feb-15						
Benzene	16.9	0.10	mg/kg	20.0	ND	84.8	75-125			
Toluene	20.0	0.10	**	20.0	2.49	87.5	70-125			
Ethylbenzene	23.2	0.10	**	20.0	3.31	99.7	75-125			
p,m-Xylene	98.3	0.20	.01	40.0	81.6	41.7	80-125			SPK
o-Xylene	36.7	0.10	"	20.0	21.8	74.4	75-125			SPK
Surrogate: 4-Bromochlorobenzene-PID	0.471			0.400		118	50-150			
Matrix Spike Dup (1506018-MSD1)	Source	e: P502012-	01	Prepared &	Analyzed:	06-Feb-15				
Benzene	16.9	0.10	mg/kg	20.0	ND	84.7	75-125	0.269	15	

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5796 US Highway 64, Farmington, NM 87401

Surrogate: 4-Bromochlorobenzene-PID

Ph (505) 632-0615 Fx (505) 632-1865

20.0

20.0

39.9

20.0

0.399

2.49

3.31

81.6

86.8

101

38.4

75.0

118

70-125

75-125

80-125

75-125

50-150

0.815

1.30

1.37

0.294

15

15

15

15

Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com

SPK1



PO Box 21218

Tulsa OK, 74121-1358

Project Name:

Logos 701 BGT Removal

Project Number: Project Manager: 04108-0136 Vanessa Fields Reported:

10-Feb-15 12:26

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1506018 - Purge and Trap EPA 5030A										
Blank (1506018-BLK1)				Prepared &	Analyzed:	06-Feb-15				
Gasoline Range Organics (C6-C10)	ND	0.20	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	0.399		**	0.399		100	50-150			
LCS (1506018-BS1)				Prepared &	Analyzed:	06-Feb-15				
Gasoline Range Organics (C6-C10)	267	9.98	mg/kg	291		91.5	80-120			
Surrogate: 4-Bromochlorobenzene-FID	0.399		**	0.399		99.9	50-150			
Matrix Spike (1506018-MS1)	Sou	rce: P502012-	01	Prepared &	Analyzed:	06-Feb-15				
Gasoline Range Organics (C6-C10)	865	10.0	mg/kg	292	697	57.8	75-125			SPK
Surrogate: 4-Bromochlorobenzene-FID	0.451		**	0.400		113	50-150			
Matrix Spike Dup (1506018-MSD1)	Sou	rce: P502012-	01	Prepared &	Analyzed:	06-Feb-15				
Gasoline Range Organics (C6-C10)	880	9.98	mg/kg	292	697	63.0	75-125	1.72	15	SPK
Surrogate: 4-Bromochlorobenzene-FID	0.473		**	0.399		118	50-150			



Project Name:

Logos 701 BGT Removal

PO Box 21218

Project Number:

04108-0136

Reported:

Tulsa OK, 74121-1358

Project Manager: Vanessa Fields

10-Feb-15 12:26

Total Petroleum Hydrocarbons by 418.1 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1507009 - 418 Freon Extraction										
Blank (1507009-BLK1)	Prepared & Analyzed: 09-Feb-15									
Total Petroleum Hydrocarbons	ND	34.9	mg/kg							
Duplicate (1507009-DUP1)	Sour	Prepared &	Analyzed:	09-Feb-15						
Total Petroleum Hydrocarbons	51.9	34.9	mg/kg		48.0			7.78	30	
Matrix Spike (1507009-MS1)	Sour	Prepared &	Analyzed:	09-Feb-15						
Total Petroleum Hydrocarbons	2040	34.9	mg/kg	2010	48.0	98.8	80-120			



PO Box 21218

Tulsa OK, 74121-1358

Project Name:

Logos 701 BGT Removal

Project Number: Project Manager: 04108-0136

Vanessa Fields

Reported:

10-Feb-15 12:26

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1507004 - Anion Extraction EPA 300.0										
Blank (1507004-BLK1)				Prepared &	Analyzed:	09-Feb-15				
Chloride	ND	10.0	mg/kg							
LCS (1507004-BS1)				Prepared &	Analyzed:	09-Feb-15				
Chloride	480	9.89	mg/kg	494		97.2	90-110			
Matrix Spike (1507004-MS1)	Source: P502018-01			Prepared &	Analyzed:	09-Feb-15				
Chloride	482	9.86	mg/kg	493	ND	97.8	80-120			
Matrix Spike Dup (1507004-MSD1)	Source: P502018-01			Prepared &	Analyzed:	09-Feb-15				
Chloride	508	9.89	mg/kg	495	ND	103	80-120	5.29	20	



Tulsa OK, 74121-1358

Project Name:

Logos 701 BGT Removal

PO Box 21218

Project Number: Project Manager: 04108-0136

Reported: 10-Feb-15 12:26

Vanessa Fields

Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

CHAIN OF CUSTODY RECORD

16901

Client: Project Name / Location: Cook 20136-170-00-00-00-00-00-00-00-00-00-00-00-00-0										A	NALY	/SIS	/ PAI	RAM	ETER	S			
Email results to Client Phone No.:	80	Sai	mpler(Namet	08-036			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion		TCLP with H/P	CO Table 910-1	418.1)	RIDE			Sample Cool
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative		TPH (втех	VOC	RCRA	Cation	RCI	TCLP	CO Ta	TPH (418.1)	CHLORIDE			Samp
36.157940707.39225	01 5 15	B'00	P502018-01	1402		+	X	X		_					X	X			YY
		7				1													
						+											+	+	
									-										
						+													
Relinquished by: (Signature)			-	Date Time 2-6-15 230-pA	Received by:	: (Sig	gnati	ure)	#				1	7				Date 2/6/15	Time
Relinquished by: (Signature)					Received by:	(Sig	gnati	ure)				-6						areris	1471
Sample Matrix Soil X Solid Sludge	Aqueous [Other 🗆																	
Sample(s) dropped off after	hours to se	cure drop of	f area.	env	irote	oro	tor)					16	. 9			٠		

Photograph Log Logos 701H and Logos 702H BGT Closure Report WPX Energy

Photograph 1

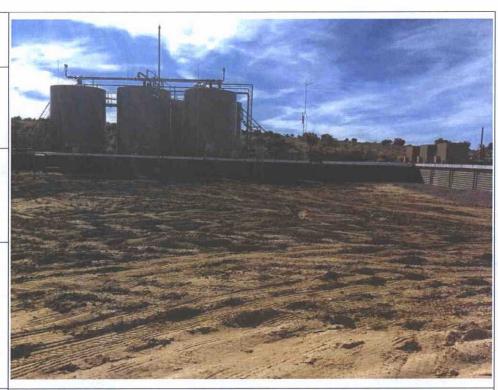
Former Site Name:

Logos 701H Logos 702H

Current Site Name: Jicarilla 103H Jicarilla 104H

> Former BGT Location: N36.157876, W107.391945

D-08-22N-05W Sandoval County, New Mexico



Description: Facing SW, current facility setup.