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.

16042	Pit, Below-Gr	ade Tank, or	
Propose	d Alternative Method Per	mit or Closure Plan A	Application
	Below grade tank registration Permit of a pit or proposed alterna Closure of a pit, below-grade tank Modification to an existing permi Closure plan only submitted for a tive method	c, or proposed alternative met t/or registration (Modified for	r location-updated lat/long)
	submit one application (Form C-144) p		•
Please be advised that approval of this reque environment. Nor does approval relieve the			on of surface water, ground water or the ntal authority's rules, regulations or ordinances.
<u>ī</u> .			
		OGRID #:	120782
Address: <u>PO Box 640/7</u>			
Facility or well name: NW Lybrook Uni			
API Number: <u>30-045-35623 and 30-045</u>			
U/L or Qtr/Qtr <u>O</u> Section <u>3</u>			
Center of Proposed Design: Latitude			1927 🛛 1983
Surface Owner: 🗌 Federal 🖾 State 🗌	Private Tribal Trust or Indian Allotr	nent	
 2. Pit: Subsection F, G or J of 19.15. Temporary: Drilling Completion Permanent Emergency Cavita Lined Unlined Liner type: Th String-Reinforced Liner Seams: Welded Factory [Image: Workover ation P&A Multi-Well Fluid Mage ickness mil Image: LLDPE Image: Other	anagement Low Chlo HDPE PVC Other Volume:bbl Dimensio	
Volume: <u>120</u> b			
Tank Construction material:			but off
☐ Visible sidewalls and liner ☐ Visi			
Liner type: Thickness			
4. Alternative Method: Submittal of an exception request is requ			
5.			
Fencing: Subsection D of 19.15.17.111	ands of barbed wire at top (Required if la	ocated within 1000 feet of a perm	,
Alternate. Please specify <u>As p</u>	er BLM specifications		
Form C-144	Oil Conservation	on Division	Page I of 6



August 29, 2017

Vanessa Fields Cory Smith New Mexico Oil Conservation Division Energy, Minerals, and Natural Resources 1000 Rio Brazos Road Aztec, New Mexico 87410 OIL CONS. DIV DIST. 3 AUG 31 2017

RE: BGT Registration C-144 Modification to Existing Permit NW Lybrook Unit #133H and NW Lybrook Unit #134H API # 30-045-35623 and 30-045-35622

Dear Ms. Fields and Mr. Smith,

Please see the enclosed Form C-144, modification of existing below grade tank (BGT) permit for the NW Lybrook Unit #133H and NW Lybrook Unit #134H located in Section 36, Township24N, Range 8W, San Juan County, New Mexico. The original registration is being modified with an updated BGT location.

On June 3, 2017, a release was discovered beneath the NW Lybrook Unit #133H PDP. Cleanup at the site included dismantling the facility and removing the BGT to excavate and treat impacted soils located beneath the facility. Following completion of the remediation, the facility was reconstructed and the site of the BGT was moved approximately 32 feet southwest of the initial location. Enclosed is the laboratory report for samples collected from the portion of the excavation located beneath the northern portion of the tank battery and BGT.

If you have any questions or need additional information, please contact me at 505-333-1880.

Sincerely,

Debrah Water

Deborah Watson Environmental Specialist

Enclosure: Form C-144 BGT Registration-Modification Form C-144 BGT Registration-Approved April 6, 2015 Hall Environmental Laboratory Report (Order #1707324) Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)

Screen 🗋 Netting 🗋 Other_

6.

8

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.

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 acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting	
 Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. 	☐ 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 ☐ NA
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	Yes No
 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)	Yes No
 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	
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).	Yes 🛛 No
- 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 	
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.	🗌 Yes 🗌 No
 Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	
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.	🗌 Yes 🗌 No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	🗌 Yes 🗌 No
 10. <u>Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist</u>: Subsection B of 19.15.17.9 Ni <i>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.</i> X 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 X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC X Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC X Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.1 and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: 	cuments are NMAC
11. <u>Multi-Well Fluid Management Pit Checklist</u> : 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	suments are
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 19.15.17.10 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:	

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Permanent Pisc Permit Application Checklist: Solution: Solution: Network in the box, that the documents are analysis in the box, that the documents are analysis in the properties requirements of 19.15.17.9 NMAC Infunction:: Extension: beta approximate requirements of 19.15.17.9 NMAC Climatological Pattors Assessment based upon the appropriate requirements of 19.15.17.11 NMAC Climatological Pattors Assessment 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 Leak Detection Design-based upon the appropriate requirements of 19.15.17.11 NMAC Clause Construction and Simulation Design-based upon the appropriate requirements of 19.15.17.11 NMAC Clause Detection and Simulation Design-based upon the appropriate requirements of 19.15.17.11 NMAC Clause Detection and Simulation Design Design - based upon the appropriate requirements of 19.15.17.11 NMAC Emergency Reponse Plan Discore Orathor Plan Closure Plan based upon the appropriate requirements of 19.15.17.11 NMAC Low Detection and Simulation Plan Closure Plan Closure Plan based plan the appropriate requirements of 19.15.17.13 NMAC Loreplace Hundition: Rescient Closure Pl	12.	
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subbection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstration - subsed 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 Lack Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Diffect Wase Structural Integrity Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Diffect Wase Structural Characterization Monitoring and Inspection Plan Emergency Reports Plan Closure Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Plane - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Plane - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Plane - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Plane - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Plane - based upon the appropriate requirements of 19.15.17.13 NMAC Instructions: Expension Plane - based upon the approp	<u>Permanent Pits Permit Application Checklist</u> : 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 docu	uments are
Lack 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 Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Oli Field Wast Stream Characterization Operating and Inspection Plan Erosin Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Instructions: Fleaze complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: [] Orling [] Completion [] Waste Renoval [] Coster Method [] Only for temporaterize tracting the solution of the box, that the dealcondum temporate acted.ed Protocols and Procedures - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Stream Reson II and Cover Deside Specification and peropriate requirements of Subsection H of 19.15.17.13 NMAC Stream Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Stream Plan - based upon the appr	 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 	
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardox Odors, including H5S, Prevention Plan Dil Field Wates Stream Characterization Monitoring and Inspection Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Instructions: Place complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type:	 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 	
□01 Field Waste Stream Characterization □11 Field Waste Stream Characterizatin and Removal Closed-Ioop Stream Opticater Reputerem	 Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H₂S, Prevention Plan 	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable baxes, Boxes 14 through 18, in regards to the proposed closure plan. Type:	 Oil Field Waste Stream Characterization Monitoring and Inspection Plan 	
Proposed Closurg: 19.15.17.13 NMAC Instructions: Pease 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 Multi-well Fluid Alternative On-site Closure Method (Only for temporary pits and closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) See Image: Alternative Closure Method (Only for temporary pits and closed-loop systems) See See Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC See See Confirmation Sampling Plan (f applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC See Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC See Site Reclamation Plan - based upon the appropriate requirements of Subsection A of 19.15.17.13 NMAC See Isting Criteria (regarding on-site closure methods only): 19.15.17.13 NMAC See Isting Criteria (regarding on-site closure methods only): 19.15.17.13 NMAC See Site Reclamation Plan - based upon the appropriate requirements of Subsection G 19.15.17.13 NMA		
Management Pit Alternative Proposed Closure Method: Waste Excavation and Removal On-site Closure Method: On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Closure Method Waste Removal (Closure Method (Only for temporary pits and closed-loop systems) Implace Burial In-Place Burial On-site Trench Burial Katemative Closure Method Implace Burial Waste Removal Closure Plan Checklist: (19.15.17.13 NMAC) Consure plan. Please indicate, by a check mark in the box, that the documents are attached. See Enclosed Original Revergetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC See Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Submitted Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Submitted Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Submitted 15 Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Submitted 15.17.10 NMAC Instructions: Each siting criteria requirements of Subsection H of 19.15.17.13 NMAC Submitt	Proposed Closure: 19.15.17.13 NMAC	
Proposed Closure Method: Waste Removal (Closed-loop systems only) Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Closure Method Waste Excavation and Removal (Closed-loop systems only) In-place Burial Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC See Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC See Re-vegation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Siten Closure Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Siten Subsection H of 19.15.17.13 NMAC Sitie Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC 3/27/15 It Sitien Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC sec Instructions: Each sling criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance. Instructions: Each sling criteria requires a demonstration of compliance in the closure plan. Recomme	Management Pit	Multi-well Fluid
Alternative Closure Method Alternative Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Yese Protoclos and Procedures - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC See Enclosed Original Resistration Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC See See Section Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC See Section Solid Backfill and Cover Design Specifications - 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 Site Reclamation 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 Site Reclamation 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 Site Reclamation 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 Site Reclamation 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 Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests	Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only)	
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. See Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC See 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 See Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Submitted 3/27/15 Site Reclamation 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 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 source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance. Ground water is less than 25 feet below the bottom of the buried waste. Yes No NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA Ground water is more than 100 feet below the bottom of the buried waste.	In-place Burial On-site Trench Burial	
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 source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance. 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 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells NA Yes No NA Yes No NA Ground water is more than 100 feet below the bottom of the buried waste. Yes No NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells 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	Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attacc closure plan. Please indicate, by a check mark in the box, that the documents are attached. Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Image: Confirmation Sampling Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	See Enclosed Original Registration submitted
 NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells 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 	Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source m provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please	
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 lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 		
	lake (measured from the ordinary high-water mark).	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	at the time of initial application.	Yes 🗌 No
Written confirmation or verification from the municipality; Written approval obtained from the municipality		Yes 🗌 No
Within 200 fast of a watland	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
16. 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.	11 NMAC 15.17.11 NMAC ot be achieved)
OCD Approval: A Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature:	2/14
Title: ENO Spec. OCD Permit Number:	
^{19.} <u>Closure Report (required within 60 days of closure completion)</u> : 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:	
20. Closure Method: □ Waste Excavation and Removal □ On-Site Closure Method □ Alternative Closure Method □ Waste Removal (Closed-lo □ If different from approved plan, please explain.	op systems only)
 21. <u>Closure Report Attachment Checklist</u>: <i>Instructions: Each of the following items must be attached to the closure report. Please ind</i> mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) 	dicate, by a check

Oil Conservation Division

22. Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closur belief. I also certify that the closure complies with all applicable closure requir	
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

.

<u>District 1</u>
 1625 N. French Dr., Hobbs, NM 88240
 <u>District 11</u>
 811 S. First St., Artesia, NM 88210
 <u>District 111</u>
 1000 Rio Brazos Road, Aztec, NM 87410
 <u>District IV</u>
 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 OIL CONS. DIV DIST. 3 45-35623 Permit of a pit or proposed alternative method MAR 3 0 2015 45-35622 Closure of a pit, below-grade tank, or proposed alternative method MAR 3 0 2015 Or proposed alternative method 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.
I. Operator: WPX Energy Production' LLC OGRID #: 120782 Address: PO Box 640/721 S Main Aztec, NM 87410 Aztec, NM 87410
Facility or well name: NW Lybrook UT #133H & NW Lybrook UT #134H API Number: 30-045-35623,30-045-35622 OCD Permit Number:
U/L or Qtr/Qtr <u>O</u> Section <u>36</u> Township <u>24N</u> Range <u>08W</u> County: <u>San Juan</u>
Center of Proposed Design: Latitude 36.26525N Longitude -107.63181W NAD: □1927 ⊠ 1983
Surface Owner: Sederal State Private Tribal Trust or Indian Allotment
Temporary: Drilling 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 String-Reinforced
3. ⊠ Below-grade tank: Subsection 1 of 19.15.17.11 NMAC Volume: 120 bbl Type of fluid: Produced Water
Volume: 120 bbl Tupe of fluid: Produced Water Tank Construction material: Double wall, double bottom, Steel
Secondary containment with leak detection 🗌 Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
Visible sidewalls and liner Visible sidewalls only Other
Liner type: Thickness mil HDPE PVC Other
 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. 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 (<i>Required if located within 1000 feet of a permanent residence, school, hospital, institution or church</i>)
Four foot height, four strands of barbed wire evenly spaced between one and four feet
Alternate. Please specify As per BLM specifications

Oil Conservation Division



6. Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen Contenting Conter	
Monthly inspections (If netting or screening is not physically feasible)	
7.	
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	
8. 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 accept material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	otable 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 □ NA
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	🗍 Yes 🗌 No
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.)	🗌 Ycs 🗌 No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial	🗌 Yes 🗌 No
 application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	
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	
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 	Ycs 🗌 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	🗌 Ycs 🗌 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
10. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NM Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct attached. X 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 X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC X Design Plan - based upon the appropriate requirements of 19.15.17.10 NMAC X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC X Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.1 and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:	uments are NMAC 5.17.9 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 doct 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 19.1 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:	

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 t attached.	he documents are
 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 H₂S, 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 	
^{13.} <u>Proposed Closure</u> : 19.15.17.13 NMAC <i>Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.</i>	
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-wel Alternative	l Fluid Management Pit
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 	
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must itele 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 More 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 Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
^{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 so provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. 19.15.17.10 NMAC for guidance.	
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 	e 🗌 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	
Form C-144 Oil Conservation Division Page 4	of 25

e-mail address: Vanessa.Fields@wpxenergy.com // Telephone: 505-333-1880 IK. OCD Approval: Permit Application functuding closure plan) Closure Phar(only) OCD Conditions (see attachment) OCD Representative Signature:		
- Writen confirmation verification or map from the NM PMNRD>Mining and Mineral Division Writen confirmation verification or map from the NM PMNRD>Mining and Mineral Division Writen confirmation or verification on map from the SM PMNRD>Mining and Mineral Division Writen confirmation receives incorporated into the design: NM Bureau of Geology & Mineral Resources; IISGS: NM Geological Society: Topographic map Write Confirmation and the design: NM Bureau of Geology & Mineral Resources; IISGS: NM Geological Society: Topographic map Write Control Medica (19.15.17.13 NMAC) Instructions: Each of the following items must be attacked to the closure plan. Please indicate, by a check mark in the bea, that the documents are attacked. Sing Creeria Complicate Composite requirements of 91.51.71.13 NMAC Construction Design Plan of Institu Trends (17.20) PMNRC Construction Design Plan of Institu Trends (17.20) PMNRC Construction Design Plan of Institu Trends (17.20) PMNRC Society: Topographic map (19.15.17.13 NMAC) Construction Design Plan of Institu Trends (17.20) PMNRC Society: Topographic map (19.15.17.13 NMAC) Construction Design Plan of Institu Trends (17.20) PMNRC Society: Topographic map (19.15.17.13 NMAC) Society: Topographic map (19.15.17.13 NMAC) Construction Design Plan of Institu Trends (19.15.17.13 NMAC) Society: Topographic map (19.15.17.13 NMAC) Confirmation Submitted with this application is true, accurate and complete to the best of my knowledge and helier. Name (19.111.11.111.111.111.111.111.		Yes 🛛 No
Implementing measures incorporated into the design: NM Hureau of Geology & Mineral Resources: USGS: NM Geological Society: Topographic map Within a 100-year floodplain. FBAA map Proof Standard	Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes 🛛 No
Within a 100-year floodplain. If its gr (or	- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	
Instruction Desire Closure Plan Checklist: (19.15.17.13 NMAC) instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the bas, that the documents are attached. Image: Instruction Checklist: (19.15.17.13 NMAC) instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the bas, that the documents are attached. Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.11 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.11 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: (19.15.17.13 NMAC) Image: Instruction Checklist: Image: Image	Within a 100-year floodplain.	
On-State Closure Plan Checklist: (19,15):1,13 NMAC Instructions: Each of the following liens must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.		
Operator Application Certification: Thereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief. Name (Print: Vanessa Fields: Signature: Date: 3-27-2015 e-mail address: Vanessa Fields: Date: 3-27-2015 e-mail address: Vanessa Fields: Date: 505-333-1880 OCD Approval: © Permit Application (including course plan) Closure Pfant(only) OCD Conditions (see attachment) OCD Representative Signature:	On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure properties of 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 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 19.15.17.13 NMAC	11 NMAC 15.17.11 NMAC
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief. Name (Prinf:		
Signature: Date: 3-27-2015 c-mail address: Vanessa Fields/# wpxenergy.com is. OCD Approval: OCD Approval: Permit Application uncluding closure plan) Closure Pfan(only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: 4/14/15 Title: Environmental West Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC Instructions: Operation within 60 days of closure plan prior to implementing any closure activities and submitting the closure report. The closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC Instructions: Operation within 60 days of the completion of the closure activities and submitting the closure report. The closure Poort is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Method: Closure Completion Date: 10. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the documents are attached. 10. Proof of Closure Notice (required for on-site closure for private land only) 11. Pr		ef.
Signature: Date: 3-27-2015 c-mail address: Vanessa Fields/@wpxenergy.com is felephone: 505-333-1880 OCD Approval: Permit Application uncluding closure plan) Closure Plan(only) OCD Conditions (see attachment) OCD Representative Signature:	Name (Print): Vanessa Fields Title: Environmental Specialist	
18. OCD Approval: Permit Application functuding clostice plan) Closure Plan(only) OCD Conditions (see attachment) OCD Representative Signature:		
OCD Approval: Permit Application Uncluding closure plan) Closure Plan(only) OCD Conditions (see attachment) OCD Representative Signature:	e-mail address: Vanessa.Fields@wpxenergy.com Telephone: 505-333-1880	
Title: Environmental Gec. OCD Permit Number:		
Title:		15
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. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Method: Closure Completion Date:		
 20. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only) If different from approved plan, please explain. 21. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (ir quired for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) 	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. complete this
Closure Method: On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only) If different from approved plan, please explain. 21. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	Closure Completion Date:	
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	🗌 Waste Excavation and Removal 📋 On-Site Closure Method 📄 Alternative Closure Method 📄 Waste Removal (Closed-lo	op systems only)
	mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	

Oil Conservation Division

22. Operation Classes Continue	
	ents submitted with this closure report is true, accurate and complete to the best of my knowledge and h all applicable closure requirements and conditions specified in the approved closure plan.
Name (Print):	Title:
Signature:	Date:
e-mail address:	

Hydrogeological Report WPX Energy Production, LLC Chaco NW Lybrook UT 133H/134H

Regional Hydrological Context

Referenced Well Location:

The referenced well and BGT is located on Bureau of Land Management land within Farmington Field Office (FFO) jurisdiction in Rio Arriba County, New Mexico. This site is positioned in the northeastern portion of the San Juan Basin, an asymmetrical syncline that extends from northwestern New Mexico into southwestern Colorado (Carson National Forest FEIS, 2008). Elevation of the referenced well is approximately 6,893 feet MSL.

General Regional Groundwater Description:

As a portion of the San Juan Basin, the FFO is underlain by sandstone aquifers of the Colorado Plateau. The primary aquifer of potential concern at this location is the Uinta-Animas Aquifer, composed primarily of Lower Tertiary rocks in the San Juan Basin. The aquifer consists of the San Jose Formation; the underlying Animas formation and its lateral equivalent, the Nacimiento formation; and the Ojo Alamo Sandstone. The thickness of the Uinta-Animas aquifer generally increases toward the central part of the basin. In this region, the maximum thickness of the aquifer is approximately 3500 feet (USGS, 2001). This aquifer contains fresh to moderately saline water.

Groundwater generally flows toward the San Juan River and its tributaries, where it becomes alluvial groundwater or is discharged to stream flow. Additional information regarding the hydrogeologic setting can be found in the provided references.

The BGT is located on gently rolling area with a gentle slope to

<u>Site Specific Information:</u> Surface Hydrology:

1st Water Bearing Formation:the northwest, draining into Blanco Wash.Ist Water Bearing Formation:San Jose, TertiaryFormation Thickness:Approximately 1,900 ft.Underlying Formation:Nacimiento, TertiaryDepth to Groundwater:Depth to groundwater is estimated at 75 feet below bottom of pitUiner. Within a one-mile radius of this location, there is noiWATERS well with groundwater at 75 feet (see Siting Criteria Map 1

References:

Allen, Erin. Undated. Colorado Plateau Aquifers. http://academic.emporia.edu/schulmem/hydro/TERM%20PROJECTS/2007/Allen/Aquifer.html.

for details).

New Mexico Energy, Minerals and Natural Resources Department, Division of Mining and Minerals. Database. 2010. Internet accessed January 2010.

New Mexico Office of the State Engineer. 2013. iWaters database. Internet accessed July 2013.

New Mexico WQCC. 2005. State of New Mexico Water Quality Act and the Water Control Commission Regulations.

United States Department of Agriculture, Forest Service. 2008. Final Environmental Impact Statement for Surface Management of Gas Leasing and Development. Jicarilla Ranger District, Carson National Forest, Rio Arriba County, New Mexico.

United States Department of the Interior. Bureau of Land Management. 2003. Final Farmington Resource Management Plan and Final Environmental Impact Statement. Farmington Field Office, Farmington, New Mexico.

United States Geological Survey. 2001. Ground Water Atlas of the United States: Arizona, Colorado, New Mexico and Utah. USGS Publication HA 730-C;

		GROU	NDWATER DEPTH LOG
Company:		τ γ	Location: 1/120 #133H 134H
Probe type	POWERS H	ell Sourcer	
Date	Time	Depth	Comments
326-15	12:20	75	water at 75. jt.
32615	1:30	65	water-leveled out at
		1	
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(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file)	(R=POD has been replaced, O=orphaned, C=the file is closed)	(quar						NE 3=SW b largest)	,	3 UTM in meters)		(In feet)
POD Number SJ 00870	POD Sub- Code basin Co	ounty SJ	1	100				-	X 263248	Y 4017010* 🍑	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Depth Water	Water Column
SJ 00960		SJ	3	3	3	36	24N	08W	262730	4016518* 🌑			
SJ 00960 S		SJ	3	1	3	36	24N	W80	262744	4016920* 🎯			
SJ 00960 S-2		SJ	3	2	3	36	24N	08W	263147	4016909* 🌍			
SJ 00960 S-3		SJ	2	4	3	36	24N	08W	263336	4016707* 🌑			
SJ 02686		SJ	3	4	2	32	24N	08W	257502	4017472* 🌍	690	690	0
										Average Depth to Minimum Maximum	Depth:	690 fe 690 fe 690 fe	et

Record Count: 6

PLSS Search:

Township: 24N

Range: 08W

*UTM location was derived from PLSS - see Help

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.



(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD ha been replac O=orphane C=the file is closed)	ed, d, ; (quar						NE 3=SW b largest)	· ·	3 UTM in meters)		(In fee	t)
POD Number SJ 01304	POD Sub- Code basir			Q 16	4	Sec		Rng 08W	X 263823	Y 4015987* 🎱	11- State - 12 2	- 14 File 1990 19	Water Column
SJ 01334		SJ			2	01	23N	08W	263823	4015987* 🍪	90	40	50
SJ 01709		SJ		1	1	27	23N	08W	259451	4009831* 🌑	317	225	92
SJ 03978 POD1		SJ	1	2	1	22	23N	08W	259816	4011541 🌑	500	260	240
										Average Depth to Minimum Maximum	Depth:	175 f 40 f 260 f	eet

Record Count: 4

PLSS Search:

Township: 23N Range: 08W

*UTM location was derived from PLSS - see Help

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.

7/31/13 1:00 PM

Page 1 of 1

WATER COLUMN/ AVERAGE DEPTH TO WATER



(A CLW###### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replace O=orphaned, C=the file is closed)	(quar						NE 3=SW		33 UTM in meters)		(In fee	t)
POD Number SJ 00681 37	POD Sub- Code basin (County RA	64	Q 16 1	4	Sec		Rng 07W	X 269408		and the second second	COVER STOR	Water Column
SJ 00681 39		RA	4	2	2	18	24N	07W	265824	4022392* 🎯	1825	500	1325
SJ 01131		RA		1	4	19	24N	07W	265313	4020131* 🌑	1700	400	1300
SJ 01335		RA			1	31	24N	07W	264672	4017581* 🌍	185		
										Average Depth to Minimum Maximum	Depth:	450 f 400 f 500 f	eet

Record Count: 4

PLSS Search:

Township: 24N

Range: 07W

*UTM location was derived from PLSS - see Help

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.

WATER COLUMN/ AVERAGE DEPTH TO WATER



(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)	(quarters a							=SE) (NAD83 UTM	1 in meters)		(In fee	et)
POD Number	POD Code Subbas	in County	12	Q 16	12		Tws	Rng	x	Y	a second second second	Sector Sector Sector	Water Column
SJ 01507		RA	3	3	4	10	23N	07W	269889	4013098*	1709	900	809
SJ 02233		RA	1	1	2	15	23N	07W	269856	4012864*	1100		
SJ 02233 CLW223636	0	RA	1	1	2	15	23N	07W	269856	4012864*	1100		
									Avera	age Depth to	Water	900	feet
										Minimun	Depth	900	feet
										Maximum	Depth	900	feet

Record Count: 3

PLSS Search:

Township: 23N Range: 07W

*UTM location was derived from PLSS - see Help

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.

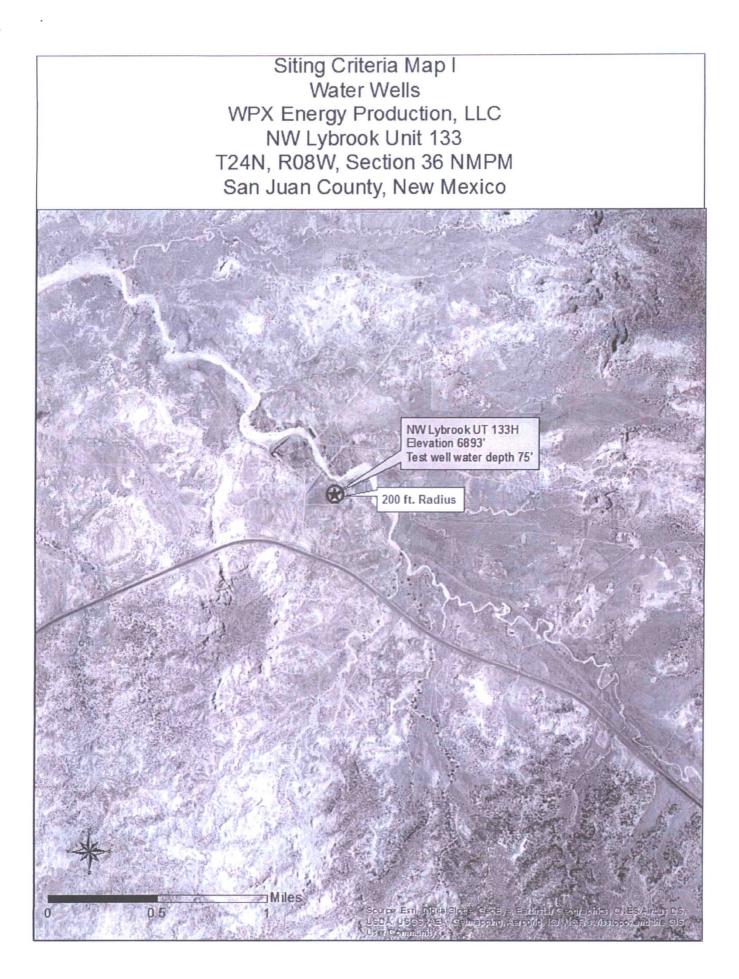
1/30/13 2:51 PM

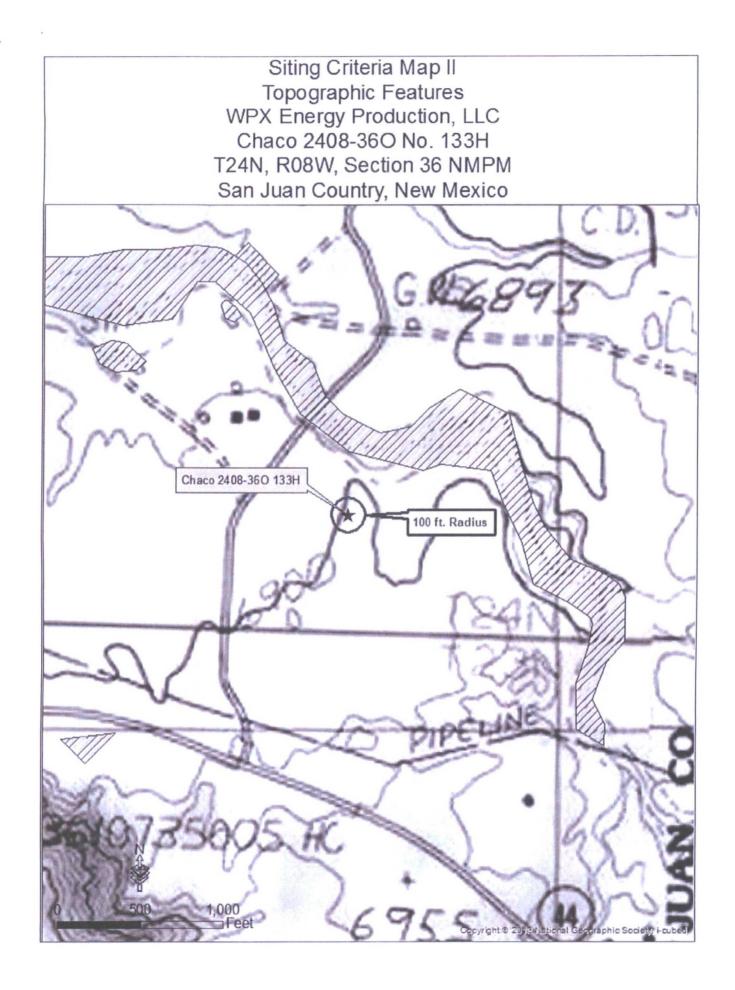
Page 1 of 1

WATER COLUMN/ AVERAGE DEPTH TO WATER

Oil Conservation Division

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Siting Criteria Compliance Demonstrations:

- The Chaco NW Lybrook UT 133H well is not located in an unstable area. The location is not situated over a mine or a steep slope.
- The BGT will not be located within 100 feet of a continuously flowing water course or within 100 feet of any other significant water course, lakebed, sinkhole, or playa lake (see Siting Criteria Map II). The site is not within 100 feet of any reported riparian areas or wetlands (see attached USFWS wetland map); within 200 feet of any private, domestic fresh water well or spring; or within 200 feet of any other fresh water well or spring (see Siting Criteria Map I).
- The BGT will not be within any incorporated municipal boundaries or defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. The location of the proposed pit is not within 200 feet of any permanent residence, school, hospital, institution, or church.
- The Chaco NW Lybrook UT #133H/134H DTG is measured at 75".



WPX Energy requests the following variances:

- The BGT will be protected from run on by being installed upon a top felt rock shield with a overlay of 30 mil rubber liner attached to the sidewalls of the inside of the containment berm. The 30 mill rubber liner will provide equal and/or better protection in the prevention of contamination of fresh water and protecting public health and the environment. (See attached photo))
- A 42 inch tall, 12 gauge coated metal steel fence will be constructed around the BGT to protect livestock/wildlife as specified by the federal Surface Management Agency or, if not federal land/minerals; which will provide equal and/or better protection of a fence while preventing contamination of fresh water, protecting public health and the environment. (See attached photo)
- 3. If the surface owner is of public entity (i.e.: BLM) WPX Energy will notify by email the intent to close the BGT in place of a certified mail letter. WPX Energy will request a read receipt of the email which will be equal and/ or equivalent notification as certified mail.

Thank you,

Vanessa Fields Environmental Specialist

CC: / Environmental File

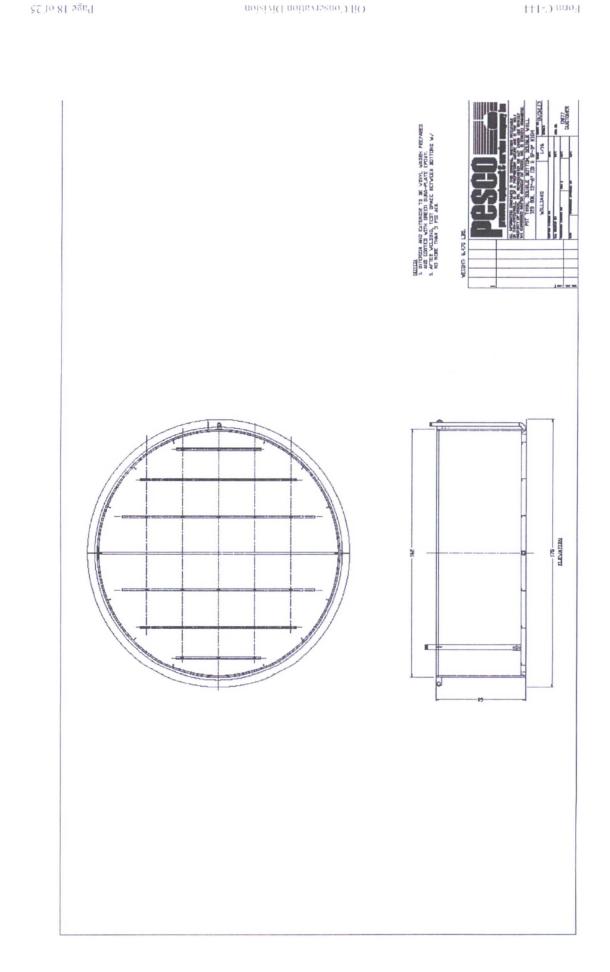
Page 16 of 25

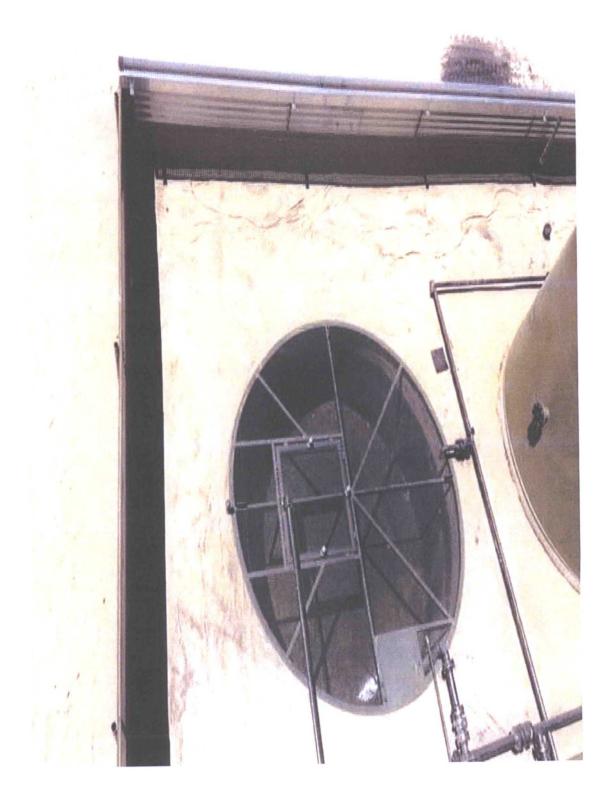
WPX Energy Co., LLC San Juan Basin: New Mexico Assets Production BGT: Buried Double-Wall Steel Tank Design and Construction Plan

In accordance with Rule 19.15.17 NMAC, the following plan describes the general design and construction (D&C) of Below Grade Tanks (BGT) using buried double-wall steel tanks on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. For those BGT which do not conform to this standard plan, a separate well-specific D&C plan will be developed and utilized.

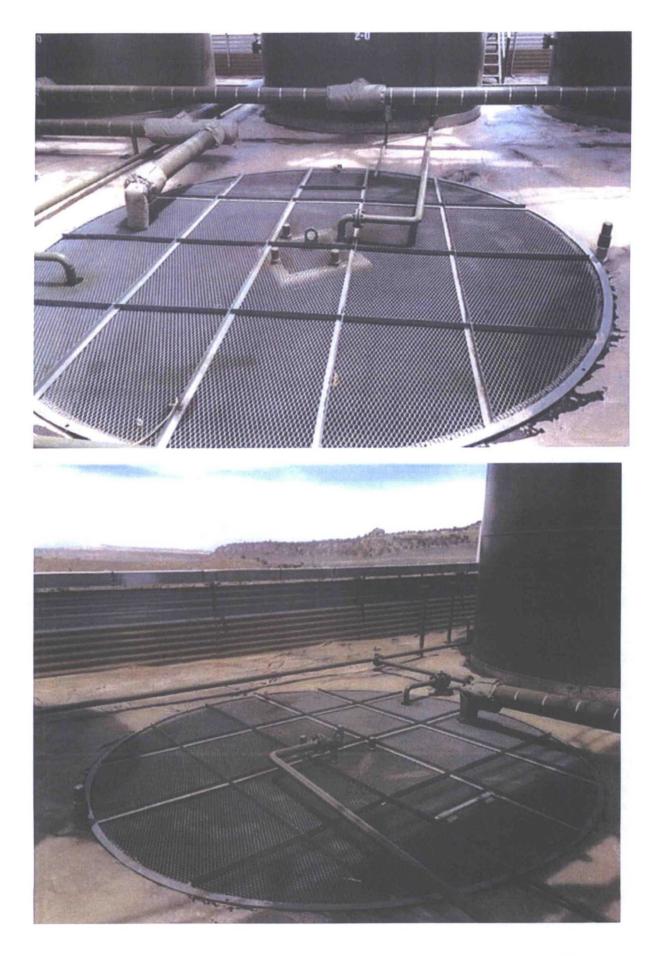
General Plan Requirements:

- 1. WPX will post a well sign in accordance with the federal Surface Management Agency and rule NMAC 19.15.17.11.C
- 2. As a variance a 42 inch tall, 12 gauge coated metal steel "Fence" will be constructed around the BGT to protect livestock/wildlife as specified by the federal Surface Management Agency or, if not federal land/minerals, NMOCD rule 17 requirements. See Attached Design/photo.
- 3. The buried BGT will be constructed of steel with double-walls and double-bottom, welded following appropriate API and industry codes, coated with an epoxy based paint, covered with a steel #9 mesh screen, and equipped with an EFM to monitor high liquid levels and automatically shut off liquid discharges. A solid riser pipe will be installed between the interstitial space of the double-walls to allow monthly inspection to determine tank integrity.
- 4. WPX will design and construct a BGT to contain liquids associated with the dehydration and compression of produced natural gas, which will be resistant to ultra violet light and the contents of the tank to prevent contamination of fresh water resources and protect public health and the environment.
- 5. The BGT foundation will be level and free of rocks, debris, sharp edges or irregularities and have a firm compacted bottom and sidewalls that are stable for the soil conditions.
- 6. The BGT will be protected from run on by being installed within the impervious secondary containment provided by the AST tanks on location. See attached Design (Same as Fence)
- 7. The BGT will be placed in the excavation such that there is 30 mil rubber liner overlay between the surrounding soils and the tank top see attached design.
- 8. A solid riser pipe will be installed to allow withdrawal of liquids by suction. The riser will draw from the bottom of the BGT, capped when not in use and sloped to the BGT to allow drainage of liquids not collected during withdrawal operations.





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Oil Conservation Division

WPX Energy Co., LLC San Juan Basin: New Mexico Assets Production BGT: Buried Double-Wall Steel Tank Operations and Maintenance Plan

In accordance with Rule 19.15.17 NMAC, the following plan describes the general operations and maintenance (O&M) of production Below Grade Tanks (BGT) on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. For those BGT which do not conform to this standard O&M plan, a separate well specific O&M plan will be developed and utilized.

- 1. WPX will inspect the BGT monthly for leaks and damage. Electronic copies of the inspections will be kept at the WPX San Juan Basin office for a minimum of five years following completion. Copies of the inspections will be available to NMOCD upon request.
- 2. Any oil or hydrocarbon collecting on the BGT will be removed. Saleable condensate will be returned to the sales tank. Slop oil from compression will be recycled with Safety Kleen, Farmington, NM or Hydropure, Aztec, NM (No Permit Required).
- 3. WPX will only allow produced liquids meeting the RCRA exemption for O&G wastes to be stored in the BGT. WPX will not discharge or store any hazardous waste as defined under RCRA 40CFR 261 and 19.15.2.7.H.3 NMAC in any BGT.
- 4. WPX shall maintain sufficient freeboard for to prevent overflow. Discharges to the BGT will be shutoff automatically if the high-level alarm is triggered from the EFM or manually if the EFM is not functional.
- 5. The Steel fencing around the perimeter of the BGT shall be maintained as protection

from run-on.

- 6. Produced water will be disposed by evaporation or transport any of the following NMOCD approved facilities depending on the well location: Basin Disposal, Inc in Bloomfield, New Mexico (Permit # NM-01-005), WPX Energy Rosa SWD#1 (Permit # SWD-916), WPX Energy Rosa #94 (Permit # SWD-758), Burlington Resources Jillson SWD#1 (Permit #R10168A), or other NMOCD approved water disposal facilities.
- 7. If the tank integrity is compromised:
 - a. All discharges will be shut off to the BGT.
 - b. All liquids will be removed as soon as possible but no later than 24 hours after discovery.
 - c. WPX will notify and report to NMOCD in accordance to 19.15.29 NMAC and all other applicable agency's as require.

WPX Energy Co., LLC San Juan Basin: New Mexico Assets Production BGT: Buried Double-Wall Steel Tank Closure Plan

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general closure requirements of below-grade tanks (BGT) on WPX Energy Co, LLC (WPX) locations in the San Juan Basin of New Mexico. This is WPX's standard closure procedure for all BGTs regulated under Rule 19.15.17 NMAC and operated by WPX. For those closures which do not conform to this standard closure plan, a separate BGT specific closure plan will be developed and utilized.

Closure Conditions and Timing for BGT:

- Within 60 days of cessation of operation WPX will:
 - o Remove all liquids and sludge and dispose in a division approved manner
- Within 72 Hrs or 1 week prior to closure WPX will:
 - Give notice to Surface owners by certified mail. For public entities by email as specified on the variance page.
 - o Give notice to District Division verbally and in writing/email
- Within 6 months of cessation of operation WPX will:
 - o Remove BGT and dispose, recycle, reuse, or reclaim in a division approved manner
 - o Remove unused onsite equipment associated with the BGT
- Within 60 Days of Closure WPX will:
 - o Send the District Division a Closure Report per 19.15.17.13.F

General Plan Requirements:

- 1. Prior to initiating any BGT Closure except in the case of an emergency, WPX will notify the surface owner of the intent to close the BGT by certified mail no later than 72 hours or 1 week before closure and a copy of this notification will be included in the closure report. In the case of an emergency, the surface owner of record will be notified as soon as practical.
- 2. 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. The notification of closure will include the following:
 - a. Operators Name (WPX)
 - b. Well Name and API Number
 - c. Location (USTR)
- All liquids will be removed from the BGT following cessation of operation. Produced water will be disposed at one of the following NMOCD approved facilities depending on the proximity of the BGT site: Rosa Unit SWD #1 (Order: SWD-916, API: 30-039-27055), Rosa Unit #94 (Order: SWD-3RP-1003-0, API: 30-039-23035), Jillson Fed. SWD #001 (Order: R10168/R10168A, API: 30-039-25465), Middle Mesa SWD #001 (Order: SWD-350-0, API: 30-045-27004) and/or Basin Disposal (Permit: NM-01-0005).
- 4. Solids and sludge's will be shoveled and /or vacuumed out for disposal at Envirotech (Permit Number NM-01-0011).

5. WPX will obtain prior approval from NMOCD to dispose, recycle, reuse, or reclaim the BGT and provide documentation of the disposition of the BGT in the closure report. Steel materials will be recycled or reused as approved by the Division. Fiberglass tanks will be empty, cut up or shredded, and EPA cleaned for disposal as solid waste. Liners materials will be cleaned without soils or contaminated material for disposal as solid waste. Fiberglass tanks and liner materials will meet the conditions of 19.15.35 NMAC. Disposal will be at a licensed disposal facility, presently San Juan Regional Landfill operated by Waste Management under NMED Permit SWM-052426.

- 6. Any equipment associated with the BGT that is no longer required for some other purpose, following the closure will be removed from the location.
- 7. Following removal of the tank and any liner material, WPX will test the soils beneath the BGT as follows:
 - a. At a minimum, a five-point composite sample will be taken to include any obvious stained or wet soils or any other evidence of contamination.
 - b. The laboratory sample shall be analyzed for the constituents listed in Table I of 19.15.17.13

Depth below bottom of pit to groundwater less than 10,000 mg/1 TDS	Constituent	Method	Limit
	Chloride	EPA 300.0	600 mg/kg
	ТРН	EPA SW-846 Method 418.1	100 mg/kg
\leq 50 feet	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

Depth below bottom of pit to groundwater less than 10,000 mg/1 TDS	Constituent	Method	Limit
	Chloride	EPA 300.0	10,000 mg/kg
	ТРН	EPA SW-846 Method 418.1	2,500 mg/kg
51 feet-100 feet	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg



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Depth below bottom of pit to groundwater less than 10,000 mg/1 TDS	Constituent	Method	Limit
	Chloride	EPA 300.0	20,000 mg/kg
	ТРН	EPA SW-846 Method 418.1	2,500 mg/kg
>100 feet	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SE-846 Method 8021B or 8015M	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg

(1) Or other test methods approved by the division

- ⁽²⁾ Numerical limits or natural background level, whichever is greater (19.15.17.13 NMAC-Ro, 19.15.17.13 NMAC 3/28/2013)
- 8. If the Division and/or WPX determine there is a release, WPX will comply with 19.15.17.13.C.3b
- 9. Upon completion of the tank removal, the excavation will be backfilled with nonwaste earthen material compacted and covered with a minimum of one foot of top soil or background thickness whichever is greater and to existing grade. The surface will be re-contoured to match the native grade and prevent ponding.

For those portions of the former BGT area no longer required for production activities, WPX will seed the disturbed areas the first favorable growing season after the BGT is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division-approved methods. WPX will notify the Division when reclamation and re-vegetation is complete.

Reclamation of the BGT shall be considered complete when:

- a. Vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels
- b. Total percent plant cover of at least 70% of pre-disturbance levels (Excluding noxious weeds)

OR

- c. Pursuant to 19.15.17.13.H.5d WPX will comply with obligations imposed by other applicable federal or tribal agencies in which their re-vegetation and reclamation requirements provide equal or better protection of fresh water, human health and the environment.
- 10. For those portions of the former BGT area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

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. The Report will include the following:

- Proof of Closure Notice (surface owner & NMOCD)
- Backfilling & Cover Installation
- Confirmation Sampling Analytical Results
- Disposal Facility Name(s) and Permit Number(s)
- Application Rate & Seeding techniques

E

Photo Documentation of Reclamation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

July 11, 2017

Heather Woods Rule Engineering LLC 501 Airport Dr., Ste 205 Farmington, NM 87401 TEL: (505) 860-2712 FAX

RE: WPX NW Lybrook 133H

OrderNo.: 1707324

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/8/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical I	Report
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Lab Order 1707324

Date Reported: 7/11/2017

7/10/2017 10:37:05 AM A44092

7/10/2017 10:37:05 AM A44092

CLIENT: Rule Engineering LLC **Client Sample ID: SC-18** WPX NW Lybrook 133H **Project:** Collection Date: 7/7/2017 1:16:00 PM Lab ID: 1707324-001 Matrix: MEOH (SOIL) Received Date: 7/8/2017 9:30:00 AM Analyses Result **POL Qual Units DF** Date Analyzed Batch EPA METHOD 8015D MOD: GASOLINE RANGE Analyst: AG Gasoline Range Organics (GRO) 7/10/2017 10:37:05 AM R44092 ND 3.3 mg/Kg 1 Surr: BFB 87.3 70-130 %Rec 1 7/10/2017 10:37:05 AM R44092 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM **Diesel Range Organics (DRO)** ND 9.3 mg/Kg 1 7/10/2017 10:41:01 AM 32699 Motor Oil Range Organics (MRO) ND 46 mg/Kg 1 7/10/2017 10:41:01 AM 32699 Surr: DNOP 99.4 70-130 %Rec 1 7/10/2017 10:41:01 AM 32699 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: AG Benzene ND 0.016 mg/Kg 1 7/10/2017 10:37:05 AM A44092 Toluene ND 0.033 mg/Kg 7/10/2017 10:37:05 AM A44092 1 Ethylbenzene ND 0.033 mg/Kg 1 7/10/2017 10:37:05 AM A44092 Xvlenes, Total ND 0.066 mg/Kg 1 7/10/2017 10:37:05 AM A44092 Surr: 1,2-Dichloroethane-d4 95.1 70-130 %Rec 7/10/2017 10:37:05 AM A44092 1 Surr: 4-Bromofluorobenzene 90.6 70-130 %Rec 1 7/10/2017 10:37:05 AM A44092

70-130

70-130

%Rec

%Rec

1

1

93.9

102

Hall Environmental Analysis Laboratory, Inc.

Surr: Dibromofluoromethane

Surr: Toluene-d8

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	s	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Hall Environmental Analys	sis Labora	itory, Inc	•		Analytical Report Lab Order 1707324 Date Reported: 7/11/20)17
CLIENT:Rule Engineering LLCProject:WPX NW Lybrook 133HLab ID:1707324-002	Matrix:	MEOH (SO		Date: 7/7	C-19 7/2017 1:15:00 PM 8/2017 9:30:00 AM	
Analyses	Result	PQL Q	Qual Ünits	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLIN	E RANGE				Analys	t: AG
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	7/10/2017 11:06:16 AM	A R44092
Surr: BFB	87.8	70-130	%Rec	1	7/10/2017 11:06:16 AM	/ R44092
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	7/10/2017 11:03:06 AM	1 32699
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/10/2017 11:03:06 AM	1 32699
Surr: DNOP	96.8	70-130	%Rec	1	7/10/2017 11:03:06 AM	1 32699
EPA METHOD 8260B: VOLATILES SH	ORT LIST				Analys	t: AG
Benzene	ND	0.016	mg/Kg	1	7/10/2017 11:06:16 AM	1 A44092
Toluene	ND	0.032	mg/Kg	1	7/10/2017 11:06:16 AM	A44092
Ethylbenzene	ND	. 0.032	mg/Kg	1	7/10/2017 11:06:16 AM	A44092
Xylenes, Total	ND	0.063	mg/Kg	1	7/10/2017 11:06:16 AM	1 A44092
Surr: 1,2-Dichloroethane-d4	95.4	70-130	%Rec	1	7/10/2017 11:06:16 AM	1 A44092
Surr: 4-Bromofluorobenzene	88.2	70-130	%Rec	1	7/10/2017 11:06:16 AM	1 A44092
Surr: Dibromofluoromethane	92.7	70-130	%Rec	1	7/10/2017 11:06:16 AN	1 A44092
Surr: Toluene-d8	102	70-130	%Rec	1	7/10/2017 11:06:16 AM	1 A44092

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Hall Environmental Analys	Lab Order 1707324 Date Reported: 7/11/20	17				
CLIENT: Rule Engineering LLC Project: WPX NW Lybrook 133H Lab ID: 1707324-003	Motrix: 1	(MEOH (SOIL)		Date: 7/7	2-20 1/2017 1:20:00 PM 2/2017 9:30:00 AM	
Analyses	Result	PQL Qual			Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLIN	E RANGE				Analys	: AG
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	7/10/2017 11:35:29 AN	R44092
Surr: BFB	91.3	70-130	%Rec	1	7/10/2017 11:35:29 AN	R44092
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	: ТОМ
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/10/2017 11:25:18 AN	32699
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/10/2017 11:25:18 AM	32699
Surr: DNOP	94.7	70-130	%Rec	1	7/10/2017 11:25:18 AM	32699
EPA METHOD 8260B: VOLATILES SH	ORT LIST				Analyst	: AG
Benzene	ND	0.016	mg/Kg	1	7/10/2017 11:35:29 AM	A44092
Toluene	ND	0.031	mg/Kg	1	7/10/2017 11:35:29 AM	A44092
Ethylbenzene	ND	0.031	mg/Kg	1	7/10/2017 11:35:29 AM	A44092
Xylenes, Total	ND	0.063	mg/Kg	1	7/10/2017 11:35:29 AM	A44092
Surr: 1,2-Dichloroethane-d4	98.4	70-130	%Rec	1	7/10/2017 11:35:29 AM	A44092
Surr: 4-Bromofluorobenzene	91.4	70-130	%Rec	1	7/10/2017 11:35:29 AM	A44092
Surr: Dibromofluoromethane	95.7	70-130	%Rec	1	7/10/2017 11:35:29 AM	A44092
Surr: Toluene-d8	102	70-130	%Rec	1	7/10/2017 11:35:29 AM	A44092

Qualifiers:	
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- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 12 J

Analytical Report

- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Hall Environmental Analys		Analytical Report Lab Order 1707324 Date Reported: 7/11/20)17				
CLIENT: Rule Engineering LLCProject:WPX NW Lybrook 133HLab ID:1707324-004	Client Sample ID: SC-21 Collection Date: 7/7/2017 1:25:00 PM Matrix: MEOH (SOIL) Received Date: 7/8/2017 9:30:00 AM						
Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 8015D MOD: GASOLIN	E RANGE				Analys	t: AG	
Gasoline Range Organics (GRO)	ND	. 3.2	mg/Kg	1	7/10/2017 12:05:09 PM	1 R44092	
Surr: BFB	89.6	70-130	%Rec	1	7/10/2017 12:05:09 PN	R44092	
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: TOM	
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/10/2017 11:47:30 AN	32699	
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/10/2017 11:47:30 AN	32699	
Surr: DNOP	93.6	70-130	%Rec	1	7/10/2017 11:47:30 AN	32699	
EPA METHOD 8260B: VOLATILES SH	ORT LIST				Analyst	t: AG	
Benzene	ND	0.016	mg/Kg	1	7/10/2017 12:05:09 PN	A44092	
Toluene	ND	0.032	mg/Kg	1	7/10/2017 12:05:09 PN	A44092	
Ethylbenzene	ND	0.032	mg/Kg	1	7/10/2017 12:05:09 PN	A44092	
Xylenes, Total	ND	0.063	mg/Kg	1	7/10/2017 12:05:09 PM	i A44092	
Surr: 1,2-Dichloroethane-d4	96.3	70-130	%Rec	1	7/10/2017 12:05:09 PM	A44092	
Surr: 4-Bromofluorobenzene	88.6	70-130	%Rec	1	7/10/2017 12:05:09 PM	A44092	
Surr: Dibromofluoromethane	95.6	70-130	%Rec	1	7/10/2017 12:05:09 PM	A44092	
Surr: Toluene-d8	107	70-130	%Rec	1	7/10/2017 12:05:09 PM	A44092	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 1
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Hall Environmental Analys		Analytical Report Lab Order 1707324 Date Reported: 7/11/20	017			
CLIENT: Rule Engineering LLCProject:WPX NW Lybrook 133HLab ID:1707324-005	Matrix:	MEOH (SOIL)		Date: 7/7	-22 /2017 1:30:00 PM /2017 9:30:00 AM	
Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLIN	E RANGE				Analys	t: AG
Gasoline Range Organics (GRO)	ND	3.0	mg/Kg	1	7/10/2017 12:34:39 PM	1 R44092
Surr: BFB	89.6	70-130	%Rec	1	7/10/2017 12:34:39 PM	1 R44092
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	5			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	7/10/2017 12:09:43 PM	1 32699
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/10/2017 12:09:43 PM	32699
Surr: DNOP	97.8	70-130	%Rec	1	7/10/2017 12:09:43 PM	1 32699
EPA METHOD 8260B: VOLATILES SH	ORT LIST				Analys	t: AG
Benzene	ND	0.015	mg/Kg	1	7/10/2017 12:34:39 PM	1 A44092
Toluene	ND	0.030	mg/Kg	1	7/10/2017 12:34:39 PM	1 A44092
Ethylbenzene	ND	0.030	mg/Kg	1	7/10/2017 12:34:39 PM	1 A44092
Xylenes, Total	ND	0.061	mg/Kg	1	7/10/2017 12:34:39 PM	A44092
Surr: 1,2-Dichloroethane-d4	95.9	70-130	%Rec	1	7/10/2017 12:34:39 PM	A44092
Surr: 4-Bromofluorobenzene	91.4	70-130	%Rec	1	7/10/2017 12:34:39 PM	A44092
Surr: Dibromofluoromethane	95.1	70-130	%Rec	1	7/10/2017 12:34:39 PM	A44092
Surr: Toluene-d8	106	70-130	%Rec	1	7/10/2017 12:34:39 PM	A44092

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Hall Environmental Analy	Lab Order 1707324 Date Reported: 7/11/2017							
CLIENT: Rule Engineering LLC Project: WPX NW Lybrook 133H Lab ID: 1707324-006	Client Sample ID: SC-23 Collection Date: 7/7/2017 1:32:00 PM Matrix: MEOH (SOIL) Received Date: 7/8/2017 9:30:00 AM							
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D MOD: GASOLIN	IE RANGE				Analyst	: AG		
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	7/10/2017 1:04:08 PM	R44092		
Surr: BFB	91.3	70-130	%Rec	1	7/10/2017 1:04:08 PM	R44092		
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	5			Analyst	: том		
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	7/10/2017 12:31:52 PM	32699		
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/10/2017 12:31:52 PM	32699		
Surr: DNOP	97.0	70-130	%Rec	1	7/10/2017 12:31:52 PM	32699		
EPA METHOD 8260B: VOLATILES SH	IORT LIST				Analyst	: AG		
Benzene	ND	0.015	mg/Kg	1	7/10/2017 1:04:08 PM	A44092		
Toluene	ND	0.031	mg/Kg	1	7/10/2017 1:04:08 PM	A44092		
Ethylbenzene	ND	0.031	mg/Kg	1	7/10/2017 1:04:08 PM	A44092		
Xylenes, Total	ND	0.061	mg/Kg	1	7/10/2017 1:04:08 PM	A44092		
Surr: 1,2-Dichloroethane-d4	99.4	70-130	%Rec	1	7/10/2017 1:04:08 PM	A44092		
Surr: 4-Bromofluorobenzene	91.3	70-130	%Rec	1	7/10/2017 1:04:08 PM	A44092		
Surr: Dibromofluoromethane	96.5	70-130	%Rec	1	7/10/2017 1:04:08 PM	A44092		
Surr: Toluene-d8	108	70-130	%Rec	1	7/10/2017 1:04:08 PM	A44092		

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Hall Environmental Analy		Lab Order 1707324 Date Reported: 7/11/2017						
CLIENT: Rule Engineering LLC Project: WPX NW Lybrook 133H Lab ID: 1707324-007	Client Sample ID: SC-24 Collection Date: 7/7/2017 1:35:00 PM Matrix: MEOH (SOIL) Received Date: 7/8/2017 9:30:00 AM							
Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	AG		
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	7/10/2017 1:33:46 PM	R44092		
Surr: BFB	91.1	70-130	%Rec	1	7/10/2017 1:33:46 PM	R44092		
EPA METHOD 8015M/D: DIESEL RAM	NGE ORGANICS	i			Analyst	TOM		
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	7/10/2017 12:54:05 PM	32699		
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/10/2017 12:54:05 PM	32699		
Surr: DNOP	97.1	70-130	%Rec	1	7/10/2017 12:54:05 PM	32699		
EPA METHOD 8260B: VOLATILES SI	HORT LIST				Analyst	AG		
Benzene	ND	0.015	mg/Kg	1	7/10/2017 1:33:46 PM	A44092		
Toluene	ND	0.031	mg/Kg	1	7/10/2017 1:33:46 PM	A44092		
Ethylbenzene	ND	0.031	mg/Kg	1	7/10/2017 1:33:46 PM	A44092		
Xylenes, Total	ND	0.061	mg/Kg	1	7/10/2017 1:33:46 PM	A44092		
Surr: 1,2-Dichloroethane-d4	96.5	70-130	%Rec	1	7/10/2017 1:33:46 PM	A44092		
Surr: 4-Bromofluorobenzene	94.2	70-130	%Rec	1	7/10/2017 1:33:46 PM	A44092		
Surr: Dibromofluoromethane	96.8	70-130	%Rec	1	7/10/2017 1:33:46 PM	A44092		
Surr: Toluene-d8	108	70-130	%Rec	1	7/10/2017 1:33:46 PM	A44092		

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Analytical Report

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 12
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

	gineering LLC W Lybrook 133H		
Sample ID LCS-32699	SampType: LCS	TestCode: EPA Method	I 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 32699	RunNo: 44080	
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391037	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	48 10 50.00		114
Surr: DNOP	4.3 5.000	85.8 70	130
Sample ID MB-32699	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 32699	RunNo: 44080	
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391038	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		
Motor Oil Range Organics (MRO)	ND 50	07 0 70	100
Surr: DNOP	8.7 10.00	87.2 70	130
Sample ID LCS-32681	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 32681	RunNo: 44081	
Prep Date: 7/7/2017	Analysis Date: 7/10/2017	SeqNo: 1391339	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	5.0 5.000	99.3 70	130
Sample ID MB-32681	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 32681	RunNo: 44081	-
Prep Date: 7/7/2017	Analysis Date: 7/10/2017	SeqNo: 1391340	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	9.2 10.00	91.6 70	130
Sample ID 1707324-001AMS	SampType: MS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: SC-18	Batch ID: 32699	RunNo: 44080	·····
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391377	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	46 9.4 46.82	2.245 94.5 55.8	122
Sun: DNOP	4.0 4.682	84.7 70	130
Sample ID 1707324-001AMS	SD SampType: MSD	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: SC-18	Batch ID: 32699	RunNo: 44080	- -
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391378	Units: mg/Kg

Hall Environmental Analysis Laboratory, Inc.

Qualifiers:

Analyte

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix

Diesel Range Organics (DRO)

Н Holding times for preparation or analysis exceeded

PQL

9.6

Result

47

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank

LowLimit

55.8

Е Value above quantitation range

%REC

92.9

SPK value SPK Ref Val

47.85

2.245

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL
- W Sample container temperature is out of limit as specified

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WO#:

HighLimit

122

%RPD

0.452

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RPDLimit

20

Reporting Detection Limit

Qual

QC SUMMARY REPORT

WO#: 1707324

Hall Environmental	Analysis	Laborator	y, Inc.
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Client:Rule Engineering LLCProject:WPX NW Lybrook 133H

Sample ID 1707324-001AMS	D Samp1	'ype: M	SD	TestCode: EPA Method 8015M/D: Diesel Range Organics										
Client ID: SC-18	Batch ID: 32699				RunNo: 44080									
Prep Date: 7/10/2017	Analysis D	ate: 7	/10/2017	5	SeqNo: 1	391378	Units: mg/H	٢g						
nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai				
Surr: DNOP	4.0		4.785		82.6	70	130	0	0					

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range .
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:

Rule Engineering LLC **Project:** WPX NW Lybrook 133H Sample ID rb SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List Client ID: PBS Batch ID: A44092 RunNo: 44092 Prep Date: Analysis Date: 7/10/2017 SeqNo: 1391308 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit Analyte Result PQL HighLimit %RPD **RPDLimit** Qual 0.025 ND Benzene ND 0.050 Toluene Ethylbenzene ND 0.050 Xylenes, Total ND 0.10 0.49 0.5000 97.5 70 130 Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene 0.47 0.5000 93.3 70 130 Surr: Dibromofluoromethane 0.47 0.5000 94.8 70 130 Surr: Toluene-d8 130 0 46 0.5000 927 70 Sample ID 100ng Ics SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List Client ID: LCSS Batch ID: A44092 RunNo: 44092 Prep Date: Analysis Date: 7/10/2017 SeqNo: 1391309 Units: mg/Kg Analyte Result POI SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual LowLimit Benzene 0.95 0.025 1.000 0 95.4 70 130 0.91 0.050 1.000 0 91.3 70 130 Toluene Surr: 1.2-Dichloroethane-d4 0.47 0.5000 95.0 70 130 0.5000 92.0 Surr: 4-Bromofluorobenzene 046 70 130 Surr: Dibromofluoromethane 0.46 0.5000 91.2 70 130 Surr: Toluene-d8 0.44 0.5000 87.3 70 130 Sample ID 1707324-002ams SampType: MS TestCode: EPA Method 8260B: Volatiles Short List Client ID: SC-19 RunNo: 44092 Batch ID: A44092 Prep Date: Analysis Date: 7/10/2017 SeqNo: 1391833 Units: mg/Kg Analyte Result SPK value SPK Ref Val HighLimit **RPDLimit** PQL %REC LowLimit %RPD Qual 0.64 0.016 0.6317 0.007277 99.9 61.9 146 Benzene 0.67 0.032 0.6317 70 130 Toluene 0.006917 105 Surr: 1,2-Dichloroethane-d4 0.31 0.3158 97.0 70 130 Surr: 4-Bromofluorobenzene 0.30 0.3158 95.6 70 130 Surr: Dibromofluoromethane 0.3158 98.3 70 130 0.31 Surr: Toluene-d8 0.34 0.3158 107 70 130 Sample ID 1707324-002amsd SampType: MSD TestCode: EPA Method 8260B: Volatiles Short List Client ID: SC-19 Batch ID: A44092 RunNo: 44092 Prep Date: Analysis Date: 7/10/2017 SeqNo: 1391834 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC %RPD RPDLimit Qual LowLimit HighLimit 0.62 Benzene 0.016 0.6317 0.007277 97.5 61.9 146 2.41 20 0.65 0.032 0.6317 0.006917 101 70 130 20 Toluene 3.51

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- Page 10 of 12

Ρ Sample pH Not In Range RL **Reporting Detection Limit**

B

- w Sample container temperature is out of limit as specified

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1707324

WO#:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Rule Engineering LLCProject:WPX NW Lybrook 133H

Sample ID 1707324-002ams	i SampType: MSD			TestCode: EPA Method 8260B: Volatiles Short List											
Client ID: SC-19	Batc	h ID: A4	4092	F	RunNo: 4	4092									
Prep Date:	Analysis Date: 7/10/2017			S	SeqNo: 1	391834	Units: mg/k	(g							
Analyte	Result PQL SPK value		SPK Ref Val	SPK Ref Val %REC LowLim		HighLimit	%RPD	RPDLimit	Qual						
Surr: 1,2-Dichloroethane-d4	0.31		0.3158		97.5	70	130	0	0						
Surr: 4-Bromofluorobenzene	0.30		0.3158		95.4	70	130	0	0						
Surr: Dibromofluoromethane	0.32		0.3158		100	70	130	0	0						
Surr: Toluene-d8	0.33		0.3158		105	70	130	0	0						

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1707324

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QC SUMMARY REPORT

Client:	Rule Eng	ineering L	LC												
Project:	WPX NV	V Lybrook	133H		-										
Sample ID	rb	SampT	ype: MI	BLK	TestCode: EPA Method 8015D Mod: Gasoline Range										
Client ID:	PBS	Batch	n ID: R4	4092	F	RunNo: 44092									
Prep Date:		Analysis D	ate: 7/	/10/2017	5	SeqNo: 1	391318	Units: mg/l	Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Gasoline Rang	e Organics (GRO)	ND	5.0												
Surr: BFB		480		500.0		95.4	70	130							
Sample ID	1707324-001ams	SampT	ype: MS	8	TestCode: EPA Method 8015D Mod: Gasoline Range										
Client ID:	SC-18	Batch	n ID: R4	4092	RunNo: 44092										
Prep Date:		Analysis D	ate: 7/	10/2017	- (SeqNo: 1	391830	Units: mg/k	<g< td=""><td></td><td></td></g<>						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Cacolina Dana		19	3.3	16.49	0 7000	111	00.0	128							
Gasoline Rany	e Organics (GRO)	19	3.3	10.49	0.7322	111	63.2	128							
Surr: BFB		300	3.3	329.8	0.7322	91.1	63.2 70	128							
Surr: BFB	1707324-001amsd	300	3.3 ype: MS	329.8		91.1	70		Gasoline	Range					
Surr: BFB	1707324-001amsd	300 SampT		329.8 SD	Tes	91.1	70 PA Method	130	Gasoline	Range					
Surr: BFB	1707324-001amsd	300 SampT	ype: MS	329.8 SD 4092	Tes	91.1 tCode: El	70 PA Method 4092	130		Range					
Surr: BFB Sample ID Client ID:	1707324-001amsd	300 SampT Batch	ype: MS	329.8 SD 4092 10/2017	Tes	91.1 tCode: El RunNo: 4	70 PA Method 4092	130 8015D Mod:		Range RPDLimit	Qual				
Surr: BFB Sample ID Client ID: Prep Date: Analyte	1707324-001amsd	300 SampT Batch Analysis D	ype: MS DD: R4 ate: 7/	329.8 SD 4092 10/2017	Tes F S	91.1 tCode: El RunNo: 4 SeqNo: 1	70 PA Method 4092 391831	130 8015D Mod: Units: mg/F	۶g	U	Qual				
Surr: BFB Sample ID Client ID: Prep Date: Analyte	1707324-001amsd SC-18	300 SampT Batch Analysis D Result	ype: MS DD: R4 ate: 7/ PQL	329.8 SD 4092 10/2017 SPK value	Tes F S SPK Ref Val	91.1 tCode: El RunNo: 4 SeqNo: 1 %REC	70 PA Method 4092 391831 LowLimit	130 8015D Mod: Units: mg/K HighLimit	(g %RPD	RPDLimit	Qual				
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	1707324-001amsd SC-18 e Organics (GRO)	300 SampT Batch Analysis D Result 19 290	ype: MS DD: R4 ate: 7/ PQL	329.8 5D 4092 10/2017 SPK value 16.49 329.8	Tes F S SPK Ref Val 0.7322	91.1 tCode: El RunNo: 4 SeqNo: 1 %REC 108 86.5	70 PA Method 4092 391831 LowLimit 63.2 70	130 8015D Mod: Units: mg/k HighLimit 128	(g <u>%RPD</u> 2.60 0	RPDLimit 20 0	Qual				
Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID	1707324-001amsd SC-18 e Organics (GRO)	300 SampT Batch Analysis D Result 19 290 SampT	ype: MS 1D: R4 ate: 7/ PQL 3.3	329.8 SD 4092 10/2017 SPK value 16.49 329.8 S	Tes F SPK Ref Val 0.7322 Tes	91.1 tCode: El RunNo: 4 SeqNo: 1 %REC 108 86.5	70 PA Method 4092 391831 LowLimit 63.2 70 PA Method	130 8015D Mod: Units: mg/k HighLimit 128 130	(g <u>%RPD</u> 2.60 0	RPDLimit 20 0	Qual				
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Hall Environmental Analysis Laboratory, Inc.

Qualifiers:

- ٠ Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

1707324 11-Jul-17

WO#:

Page 12 of 12

11. Were any sample containers received broken? Yes No Image: Containers received broken? 12. Does paperwork match bottle labels? Yes Yes No Image: Containers received broken? 12. Does paperwork match bottle labels? Yes Yes No Image: Containers received broken? 13. Are matrices correctly identified on Chain of Custody? Yes No Image: Containers requested? 14. Is it clear what analyses were requested? Yes Yes No Image: Containers received? 15. Were all holding times able to be met? Yes Yes No Image: Containers received? 15. Were all holding times able to be met? Yes No Image: Containers received? Yes 16. Was client notified of all discrepancies with this order? Yes No Image: Containers received? Person Notified: Date Date Image: Containers received? Yes	Sample Log-In Check List								
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Client: Rule Engineering			□ Standard	ANALYSIS LABORATORY																		
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Mailing	Mailing Address: 501 Airport Dr. Ste 205			LIPY WILLI IN HIZCH				4901 Hawkins NE - Albuquergue, NM 87109														
E	SUL Airport Ur Ste 205			WPX NW Lybrook #133H Project #:				Tel. 505-345-3975 Fax 505-345-4107														
Farmington, NM 87401 Phone #: (565)716-2787							Analysis Request															
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	Time	Matrix	Sample Request ID	Type and #	Туре	11		TEX	H B	H	EDB (AH's	CRA	noic	118	60B	70 (a	ng J	
THI		<i>E</i> 1		MLOH Kit	MeO#	1707324		.8		F	ū	d	R	A	80	8	8	\rightarrow	_	4	ξ.	
1/17	1316	Soil		(1) YOZGIUS	non	-001	X		X	_	_							\rightarrow	\rightarrow	++	_	
7/7/17	1315	50:1	SC-19			-003	X		×	_				-				_	_		_	
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.