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 April 3, 2017

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
BGT 5 Proposed Alternative Method Permit or Closure Plan Application
Type of action: X Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method Modification to an existing permit/or registration X Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Harvest Four Corners OGRID #_ 373888
Address: 1755 Arroyo Dr., Bloomfield, NM 87413
Facility or well name: _Wilmer Canyon 2
API Number: _300453459 OCD Permit Number:
U/L or Qtr/Qtr _C Section 25 Township _32N_ Range 8W County: _San Juan
Center of Proposed Design: Latitude 36.958051 Longitude 107.629654 NAD83
Surface Owner: Federal State Tribal Trust or Indian Allotment
Pit: Subsection F, G or J of 19.15.17.11 NMAC NOTAPPROVED Temporary: Drilling Workover Drilling Workover Drilling Workover Low Chloride Drilling Fluid yes no Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other String-Reinforced Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D
3.
Volume: 45 bbl Type of fluid: Produced Water
Tank Construction material:metal 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: Thicknessmil
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 (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet ☐ Alternate. Please specify 4' hog wire fencing topped with two stands barbed wire.

Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen □ Netting □ Other □ Monthly inspections (If netting or screening is not physically feasible)	
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 accematerial are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	ptable source
General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - □ NM Office of the State Engineer - iWATERS database search; □ USGS; ☑ Data obtained from nearby wells	Yes No
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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.) - 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. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached. Yeld Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: or P	NMAC 15.17.9 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 doc attached. Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: or Permit Number:	.15.17.9 NMAC

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

- 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 	
Within a 100-year floodplain.	Yes No
- FEMA map	Yes No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.13 NMAC Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	7.11 NMAC 9.15.17.11 NMAC
17. Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and believe	ef.
Name (Print): Title:	<u></u>
Signatura	
Signature: Date:	
e-mail address:	
e-mail address:	
e-mail address:	
e-mail address:	the closure report.
e-mail address: Telephone:	the closure report.

	d with this closure report is true, accurate and complete to the best of my knowledge and ble closure requirements and conditions specified in the approved closure plan.
Name (Print):	
Signature:	Date:
e-mail address:	Telephone:



NMOCD Site Assessment/Characterization, Remediation & Closure

Wilmer Canyon 2
300-45-23459
36.958051 -107.629654
NE/NW-25-32N-8W
BLM
San Juan
David Reese
11/5/2019

weine	ead Protection Area A	ASSESSITIETT.		
Determine the horizontal distance from all known wo sources. Water sources are wells, springs or other so water sources used by less than five households for a	urces of fresh water ext	raction. Private and	domestic water source	
Water Source Type (well/spring/stock pond)	ID (if available)	Latitude	Longitude	Distance
no NMOSE-rgstrd wells or other sources				
		())) 44 0 40 45 4	20.444.4)	
Distance to Nearest 5		rse (NMAC 19.15.2	29.11A.4)	
tributary to Wilmer Canyon wash is 480 ft to NE	water Determination	/NIMAC 10 1E 20 1	11 \ 2\	
Deptil to droulid	water Determination	(INIVIAC 19.15.29.1	11A.Z)	
Cathodic Report/Site Specific Hydrogeology	491 ft according to S	ite Specific Hydrog	geology (120 bbl BGT	C-144)
Elevation Differential				
Water Wells				
Cathodic Report Nearby Wells				
	eceptor Determination			
If a release occurs within the following areas, the	e RP must treat the re	lease as if it occur	red less than 50 ft	Yes
to Groundwater (NMAC 19.15.29.12C.4): <300' of any continuously flowing watercourse (or any other significa	at watercourse		П
<200' of any lakebed, sinkhole or playa lake (me			Mark)	П
<300' of an occupied permanent residence, scho		, ,	viai k)	
<500' of a spring or private/domestic water well			r stock watering	
purposes	•			
<1000' of any water well or spring				
within incorporated municipal boundaries or wi	thin a defined munic	pal fresh water w	ell field	
<300' of a wetland				
within the area overlying a subsurface mine				
within an unstable area				
within a 100-year floodplain				
Explain any 'Yes' Marks:				
No mark: Nearest wash is 480 ft to NE				

Actual Depth to Groundwater is:	≤50 □	50-100 🗆	>100 🗸
Treat Depth to Groundwa	ter as it it's \(\) 50 ft?	Yes □ No ☑	
	≤50	50-100	>100
Release Action Levels are Benzene	10	10	10
BTEX (mg/kg)	50	50	50
8015 TPH (GRO/DRO) (mg/kg)	Not Applicable	1,000	1,000
8015 TPH (GRO/DRO/MRO) (mg/kg)	100	2,500	2,500
Chlorides (mg/kg)	600	10,000	20,000

NMAC 19.15.29.12 Table I. Release Action Levels are determined by the depth below bottom of pit to groundwater.

· New Mexico Office of the State Engineer

Page 1 of 1

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 32N Range: 07W Sections: Search Radius: NAD27 X: Y: Zone: County: Basin: Number: Suffix: Owner Name: (First) (Last) O Non-Domestic O Domestic O All POD / Surface Data Report Avg Depth to Water Report Water Column Report Clear Form **iWATERS Menu** Help

WATER COLUMN REPORT 08/20/2008

	(quarter									Depth	Depth	Water	(in f	eet)
POD Number	Tws	Rng	Sec	g	q	q	Zone	x	Y	Well	Water	Column		
SJ 03117	32N	07W	07	2	2	2				240				
SJ 01612	32N	07W	34	3						800				

Record Count: 2

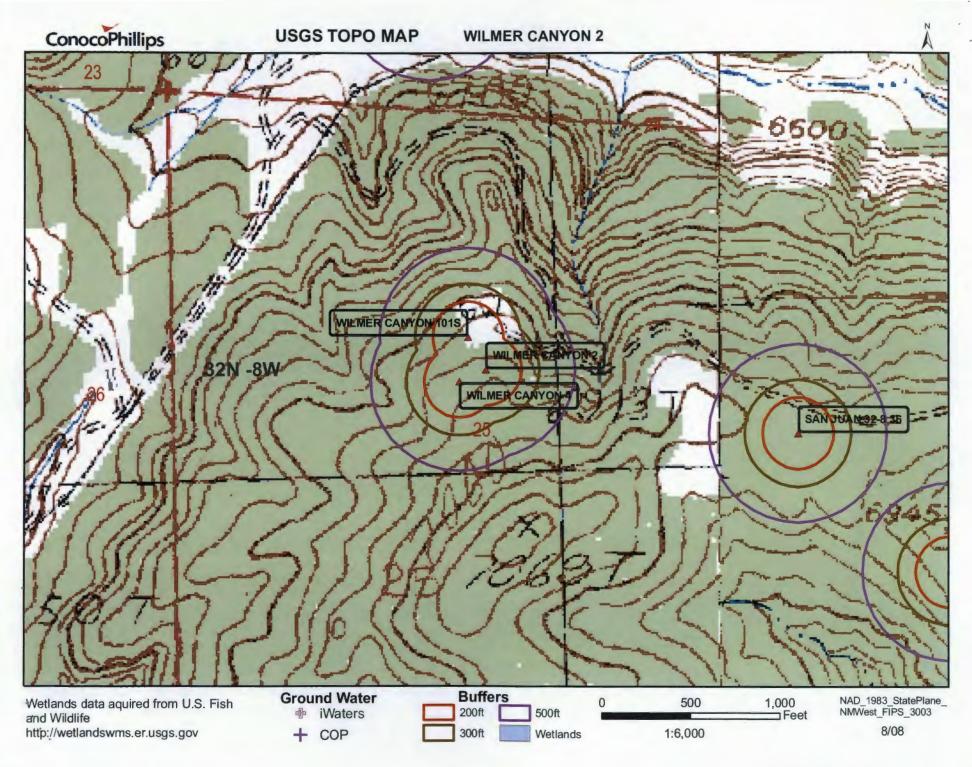
New Mexico Office of the State Engineer POD Reports and Downloads

Township: 32N Range: 08W Sections: NAD27 X: Y: Zone: Search Radius: Number: Suffix: County: Basin: O Non-Domestic O Domestic O All Owner Name: (First) (Last) POD / Surface Data Report Avg Depth to Water Report Water Column Report Clear Form **iWATERS Menu** Help

WATER COLUMN REPORT 08/20/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Depth Depth Water (in feet) POD Number Tws Rng Sec q q q Zone Well Water Column SJ 02992 32N 08W 27 3 2 1 330 230 100 3 2 3 32N 277182 2165918 380 250 130 SJ 03823 POD1 08W 27 400 SJ 03250 32N 08W 27 4 3 4 375 25 32N 08W 34 1 2 3 550 500 50 SJ 03259 08W 34 1 4 1 100 32N SJ 02816 32N 08W 35 1 3 500 SJ 03379 32N 08W 35 1 4 2 300 300 SJ 02726

Record Count: 7





The San Juan County Assessor's Office assumes no liability for the accuracy of the information provided and it is not intended to be used as a survey.

The data contained herein was derived from the most current

information available at the time of publishing. While the San Juan County Assessor's Office makes every effort to provide accurate and complete information, the data contained on this map is subject to change.

 $\label{thm:controlled} The \ San \ Juan \ County \ Assessor's \ Office \ provides \ no \ warranty, expressed or implied, as to the accuracy , reliability or completeness of the furnished \ data.$

Aerial Date: 2015

0.0250.0125 0 0.025 mi

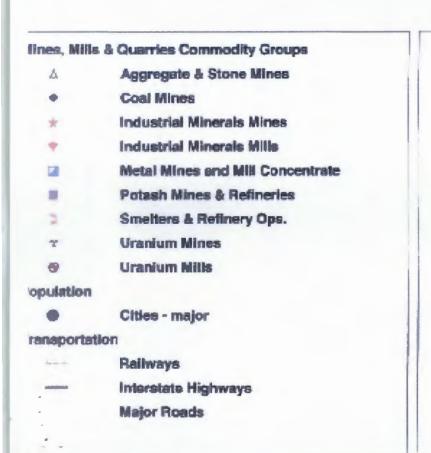


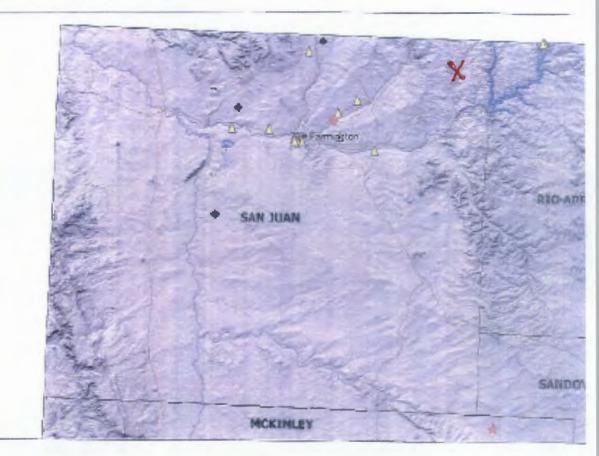
San Juan County Assessor's Office 100 S. Oliver Dr. **Aztec, NM 87410** 505-334-6157

Mines, Mills and Quarries Web Map

WILMER CANYON 2

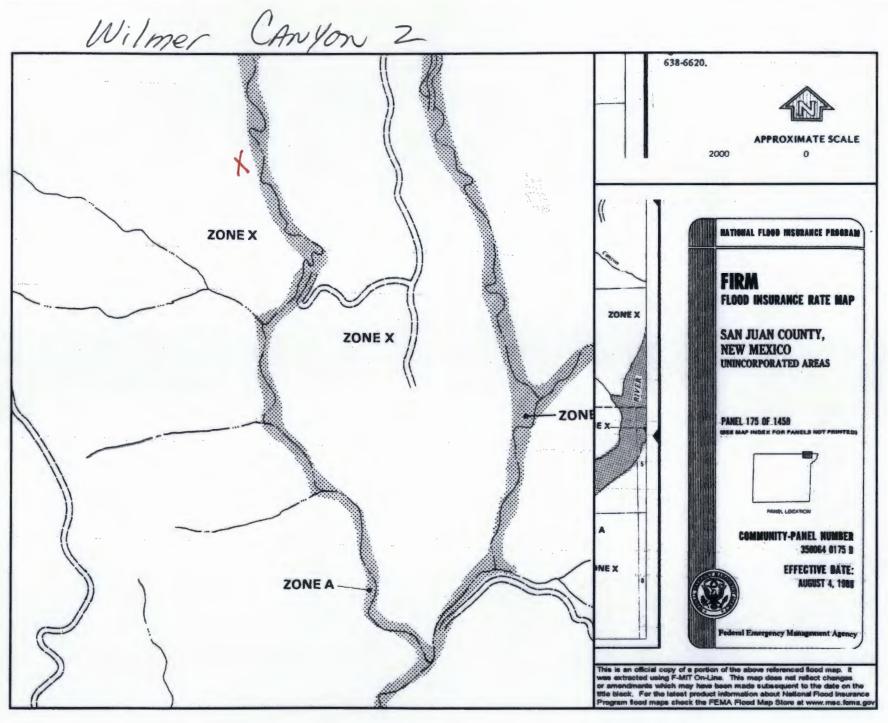
Unit Letter: C, Section: 25, Town: 032N, Range: 008W





SCALE 1: 1,180,363





WILMER CANYON 2

Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'WILMER CANYON 2', which is located at 36.95735 degrees North latitude and 107.62946 degrees West longitude. This location is located on the Anastacio Spring 7.5' USGS topographic quadrangle. This location is in section 25 of Township 32 North Range 8 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in San Juan County, New Mexico. The nearest town is Tiffany, located 7.2 miles to the northeast. The nearest large town (population greater than 10,000) is Durango, located 25.9 miles to the northwest (National Atlas). The nearest highway is State Highway 511, located 1.5 miles to the northwest. The location is on BLM land and is 3,953 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Upper San Juan. Colorado. New Mexico, Sub-basin. This location is located 2118 meters or 6947 feet above sea level and receives 16 inches of rain each year. The vegetation at this location is classified as Colorado Plateau Pinon-Juniper Woodland as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 491 feet. This estimation is based on the data published on the New Mexico Engineer's iWaters Database website and water depth data from ConocoPhillips' Cathodic wells. Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 486 feet to the northeast and is classified by the USGS as an intermittent stream. The nearest perrenial stream is 4.139 feet to the southwest. The nearest water body is 4,127 feet to the southwest. It is classified by the USGS as an intermittent lake and is 0.4 acres in size. The nearest spring is 15,516 feet to the northwest. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 7,107 feet to the southwest. The nearest wetland is a 0.7 acre other located 6,983 feet to the west. The slope at this location is 5 degrees to the north as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is SAN JOSE FORMATION--Siltstone, shale, and sandstone with a Sandstone dominated formations of all ages substrate. The soil at this location is 'Travessilla-Weska-Rock outcrop complex, moderately steep' and is well drained and not hydric with severe erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 14.6 miles to the west as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

Regional Hydrogeological context:

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line. The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use. The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its iributaries all tend to reduce the effective recharge to the unit.

Harvest Four Corners LLC Design and Construction Plan - Below Grade Tanks

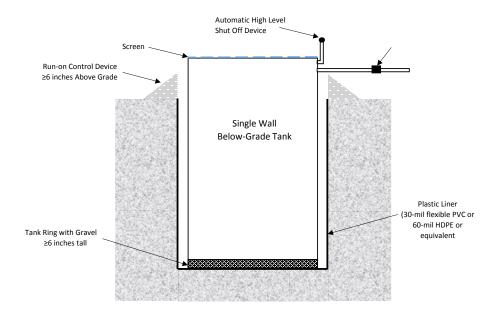
In accordance with Rule 19.15.17.11 NMAC of the New Mexico Administrative Code (NMAC), the information within this document describes the design and construction standards to be used by Harvest Four Corners LLC (Harvest) when installing Below Grade Tanks (BGTs). This is Harvest's standard procedure for all BGTs. A separate design and construction plan will be submitted for any BGT which does not conform to this plan.

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements
19.15.17.11.A	Design	Harvest will design and construct a properly sized and approved BGT to contain liquids and solids, prevent contamination of fresh water and protect public health and environment. A solid riser pipe will be installed to facilitate liquid removal from the tank. The riser shall have a cap or cover and be positioned to prevent standing accumulation of liquids within the riser.
19.15.17.11.C	Construction	Harvest will post appropriate signage to include operator name, legal location information, and emergency telephone contact information. The sign will be at least 12-inches x 24-inches with lettering not less than 2-inches in height and be placed on the fence surrounding the BGT.
19.15.17.11.D(1)	Construction	Harvest will fence the BGT in a manner that deters unauthorized access and will maintain the fence in good repair. Harvest facilities with an exterior perimeter fence will not have a fence installed around the BGT if it is located within the facility exterior perimeter fence.
19.15.17.11.D(3)	Construction	BGT installations will be fenced to protect livestock and wildlife. Fencing will be a minimum of four feet high with four strands of barbed wire spaced in the interval between one foot and four feet above ground. As a variance (if approved with the BGT registration), the fence may be constructed using four 4 foot tall "hog wire" with 1 stand of barbed wire at the top.
19.15.17.11.E	Construction	BGTs will have one-inch (or less) steel mesh (i.e. expanded metal), solid steel covers, or otherwise be constructed to prevent migratory bird contact.
19.15.17.11. (1)	Design/Construction	Harvest will design and construct the BGT to contain liquids associated with the dehydration and compression of natural gas, which will be resistant to the contents of the tank and resistant to damage from ultra violet light.
19.15.17.11.1(2)	Construction	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.
19.15.17.11.l(3)	Construction	BGT installations will include an earthen berm or equivalent alternative at least 6-inches above ground to prevent surface water run-on; and install overflow monitoring device and/or monitor the tank at a frequency to prevent overflow as depicted in Figure 1.
19.15.17.11.I.4(a)	Construction	For BGTs that do not have double walls, Harvest will construct the BGT to meet the requirements listed in 19.15.17.11.1.4(a) associated with visual inspection, tank construction, liner, and overflow as depicted in Figure 1. All other BGTs, in which the side walls are not open for visible inspection shall be double walled with leak detection capability as depicted in Figure 2.
19.15.17.11.I.4.(b)	Construction	Buried BGTs will be constructed of steel with double-walls and double-bottom, welded following appropriate API and industry codes, coated with an epoxy based paint. A solid riser pipe will be installed between the space of the double-walls to allow monthly inspection to determine tank integrity.
19.15.17.11.I.4.(c)	Design/Construction	Harvest will meet with NMOCD district office before submitting application for an alternative BGT design.
19.15.17.11.1(5)	Construction	A single walled tank (installed prior to June 16, 2008) which has completely open sidewalls for visible inspection and which may or may not have a geomembrane liner, need not meet the above design and construction standards defined in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC unless the integrity fails. If the integrity failes, the tank will then be closed pursuant to the approved Closure Plan or be retrofitted in accordance with the design drawings (see Figures 1 or 2) or NMOCD approved modification. Retrofitting actions that include changes to the BGT design and construction require an update to the BGT registration.
19.15.17.11.1(6)	Construction	All single walled BGTs must have sidewalls that are completely visible for inspection. Single walled tanks that do not meet this requirement must be retrofitted or closed persuant to the approved Closure Plan. Retrofitting actions that include changes to the BGT design and construction require an update to the BGT registration.
19.15.17.11.I(7)	Construction	A double walled tank (installed prior to June 16, 2008) need not meet the above design and construction standards defined in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC unless the integrity fails. If the integrity fails, the tank will then be closed pursuant to the approved Closure Plan or be retrofitted in accordance with the design drawings (see Figures 1 or 2) or NMOCD approved modification. Retrofitting actions that include changes to the BGT design and construction require an update to the BGT registration.

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Harvest Four Corners LLC Design and Construction Plan - Below Grade Tanks

FIGURE 1. BGT DESIGN AND CONSTRUCTION – 19.15.17.11.I.(4)(a) NMAC



- 1. The BGT's bottom must be elevated a minimum of six inches above the underlying ground surface.
- 2. The BGT must be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. Gravel will be contained within a tank ring and not cover the visible portion of the liner
- 3. Geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material. The liner must have a hydraulic conductivity no greater than 1 x 10-9 cm/sec, be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions, and resistant to ultraviolet light. The liner compatibility must comply with USEPA SW-
- 4. Equipped with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows.

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Harvest Four Corners LLC Operations and Maintenance Plan - Below Grade Tanks

In accordance with Rule 19.15.17.12 NMAC of the New Mexico Administrative Code (NMAC), the information within this document describes the operations and maintenance standards to be used by Harvest Four Corners LLC (Harvest) when operating Below Grade Tanks (BGTs). This is Harvest's standard procedure for all BGTs. A separate operations and maintenance plan will be submitted for any BGT which does not conform to this plan.

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements
19.15.17.12.A(1)	Integrity	Harvest will operate and maintain the BGT to contain liquids and solids and maintain the integrity of the liner, liner systems and secondary containment system to prevent contamination of fresh water and protect public health and environment.
19.15.17.12.A(3)	Waste Management	Willams will not discharge or store any hazardous waste in a BGT. "Hazardous waste" means non-exempt waste that exceeds the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended.
19.15.17.12.A(5)	Release Requirements	If the BGT integrity is compromised: 1. All discharges will be shut off to the BGT. 2. All liquids will be removed as soon as possible but no later than 48 hours after discovery. 3. Harvest will notify and report to NMOCD in accordance to 19.15.29 NMAC and all other applicable agencys as require.
19.15.17.12.A(7)	Surface Water Run-on	Harvest will maintain a berm or equivalent alternative at least 6-inches above ground to keep surface water run- on from entering the BGT as shown on the Design and Construction Plan.
19.15.17.12.D(1)	Surface Water Run- on and Overflow	Harvest will require and maintain an adequate freeboard to prevent overtopping of the BGT.
19.15.17.12.D(2)	Measurable Oil	Any oil or hydrocarbon collecting in the BGT will be removed. Saleable condensate will be returned to the facility or field condensate tank. Slop oil from compression will be removed and transported to an offsite recycle facility.
19.15.17.12.D(3)	Inspection	Harvest will inspect the BGT for leakage and damage on a monthly basis. Harvest will document the integrity of each tank at least annually and maintain a written record for five years. Inspections may include: 1. Containment berms adequate and no oil present 2. Tank had no visible signs of corrosion 3. Tank valves, flanges, and hatches had no visible leaks 4. No evidence of significant spillage of produced liquids. 5. BGT cover intact and no signs of dead wildlife. 6. Sidewalls are completely visible for single walled BGTs.
19.15.17.12.D(4)	Freeboard	Harvest will maintain a 10-inch freeboard to prevent overtopping of the BGT.
19.15.17.12.D(5)	Integrity	If the BGT loses integrity, Harvest will repair the damage or close the BGT pursuant to the approved Closure Plan.
19.15.17.12.D(6)	Retrofit or Replacement Requirements	While performing BGT equipment or retrofitting actions, Harvest will visually inspect the area beneath the BGT and document any areas that are wet, discolored or showing other evidence of a release on OCD Form C-141. Harvest will report the concentration of contaminants to the OCD with respect to the standards set forth in Table I of 19.15.17.13 NMAC. Harvest will proceed with the approved Closure Plan if no evidence of impacts are present or concentrations of contaminants are below the OCD standards.

Harvest Four Corners LLC Closure Plan - Below Grade Tanks

In accordance with Rule 19.15.17.13 NMAC of the New Mexico Administrative Code (NMAC), the information within this document describes the closure requirements to be used by Harvest Four Corners LLC (Harvest) when closing Below Grade Tanks (BGTs). This is Harvest's standard procedure for all BGTs. A separate closure plan will be submitted for any BGT closure which does not conform to this plan.

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements	
19.15.17.13.A		This plan describes Harvest proposed closure methods and the proposed procedures and protocols to implement and complete BGT closure.	
19.15.17.13.C(1)		Prior to commencing BGT closure, Harvest will obtain a NMOCD approved closure plan before any closure activities start. Harvest understands that the NMOCD considers the start of closure for a BGT is when the BGT is being removed from the ground.	
19.15.17.13.C(2)		Harvest will remove liquids and sludge from a BGT prior to commencing closure actions and will dispose the material in a NMOCD approved facility.	
19.15.17.13.C.3(a)	Closure Plan	Following removal of the tank and any liner material, Harvest will test the soils beneath the BGT in accordance with 19.15.17.13.C.3(a) NMAC. Samples will be collected from beneath the liner and/or BGT for obvious stained or wet soils, or any other evidence of contamination.	
19.15.17.13.C.3(b)		If any contaminant concentration is higher than the parameters listed in Table I of 19.15.17.13 NMAC, the NMOCD may require additional delineation upon review of the results and Harvest must receive approval before proceeding with closure.	
19.15.17.13.C.3(c)		Upon completion of BGT removal, if all contaminant concentrations are less than or equal to the parameters listed in Table I of 19.15.17.13 NMAC, the excavation will be backfilled with non-waste contained, uncontaminated, earthen material.	
19.15.17.13.E(1)	Notification	Notice of closure will be given to the surface owner at least 72 hours, but not more than one week, prior to any closure operation via Certified mail. As a variance (if approved with the closure plan), surface owners which are public entities (State, BLM, or Tribal) will be notified by email or phone. The notification of closure will include the following: operators name, well name and API number (if applicable), and location (ULSTR).	
19.15.17.13.E(2)		Notice of Closure will be given to the NMOCD office at least 72 hours, but not more than one week, prior to any closure operation via Certified mail. As a variance (if approved with the closure plan), the NMOCD district office will be notified by email or phone. The notification of closure will include the following: operators name, well name and API number (if applicable), and location (ULSTR).	
19.15.17.13.F(1)	Reporting	Operator will send the NMOCD a closure report in accordance with 19.15.17.F(1) NMAC within 60 days of closure including the following items: Proof of closure notice, analytical results, backfill information, revegetation, and photo documentation of reclamation. Harvest understands that the NMOCD considers the closure date the day in which the BGT is backfilled and re-contoured. Revegetation is still required but, may be addressed in closure report.	
19.15.17.13.G.4(a)		Within 60 days of cessation of operations, Harvest will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the material in a NMOCD approved facility. Disposal facilities to be used by Harvest are listed below based on the listed waste types.	
19.15.17.13.G.4(b)		Within 6 months of cessation of operations, Harvest will dispose, recycle, reuse, or reclaim the BGT in a NMOCD approved manner. If required, Harvest will provide documentation of the disposition of the BGT to the NMOCD. Liner materials will be cleaned to remove soils or contaminated material for disposal as solid waste. Disposal facilities to be used by Harvest are listed below based on the listed waste types.	
19.15.17.13.H.1(a)		Harvest will reclaim the area by substantially restoring the impacted surface area to the condition that existed prior to oil and gas operations by placement of soil cover as described below for 19.15.17.13.H.2 NMAC. The location and associated areas will be recontoured that approximates the original contour and blends with the surrounding topography and revegetate as described below for 19.15.17.13.H.5 NMAC.	
19.15.17.13.H.1(b)	Reclamation	Harvest will submit an alternative plan to be approved by the NMOCD and written approval from the surface owner before submitting the C-144 application.	
19.15.17.13.H.1(c)		If a BGT is removed from an area where production operations will continue, the area will be reclaimed in such a way to minimize dust and erosion to the extent practicable.	
19.15.17.13.H.2		Cover will include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.	
19.15.17.13.H.4		Harvest will construct the soil cover to the existing grade to prevent ponding of water and erosion of the cover material.	

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Harvest Four Corners LLC Closure Plan - Below Grade Tanks

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements	
19.15.17.13.H.5(a) 19.15.17.13.H.5(b) 19.15.17.13.H.5(c) 19.15.17.13.H.5(d) 19.15.17.13.H.5(e)	Reclamation	For those portions of the former BGT area no longer in use with the exception where production operations will continue, the area will be reclaimed as nearly as practicable to their original condition or their final land use. Reclamation will begin as early as practical. The areas will be maintained to minimize dust and topsoils placed and contoured to limit erosion control, maintain stability, and preserve surface-water flow patterns. Harvest will seed the disturbed areas the first favorable growing season following closure of the BGT. Harvest 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. Harvest will notify the NMOCD when reclamation and re-vegetation is complete.	

Summary of Waste Materials and Disposal Facilities				
Waste Types	Disposal Facility			
Steel Tank	San Juan County Landfill; Steel Recycling			
Fiberglass Tank	San Juan County Landfill; Bondad Landfill; Re-use			
Liner (cleaned – absent soil / sludge)	San Juan County Landfill; Bondad Landfill			
Sludge	Envirotech; Industrial Ecosystems Inc.; T-N-T; Bondad Landfill			
Liquids (Water / Hydrocarbons)	Basin Disposal; Key Energy; T-N-T			
Contaminated Soil	Envirotech; Industrial Ecosystems Inc.; T-N-T; Bondad Landfill			
Fencing / Miscellaneous	Re-use or Scrap			

epth Below Bottom of pit to ground water less than 10,000 mg/l	Constituent	Method	Limit**
	Chloride	EPA 300.0	600 mg/kg
≤50 feet	ТРН	EPA SW-846 Method 418.1	100 mg/kg
	BTEX	EPA SW-846 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 8021B or 8260B	10 mg/kg
	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 SW-846 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 8021B or 8260B	10 mg/kg
	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
	ВТЕХ	EPA SW-846 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846	10 mg/kg

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