District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District [1]

1000 Rio Brazos Rd., 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

June 16, 2008 For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office.

Form C-144

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

Pit, Closed-Loop System, Below-Grade Tank. or Proposed Alternative Method Permit or Closure Plan Application

	bility should operations result in pollution of surface water, ground water or the
Operator: Burlington Resources Oil & Gas Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington. NM 87499	
Facility or well name: Sau Juan 27-4 Unit 52N	
API Number: 30-039-30488 00	CD Permit Number:
U/L or Qtr/Qtr; C(NENW Section: 29 Township: 27N	Range: 4W County: Rio Arriba
	ongitude: 107.278116667' W NAD: 1927 X 1983
	al Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: Drilling Workover	Closed-loop Systems: Subsection H of 19.15.17.11 NMAC Drying Pad Tanks Haul-off Bins Other:
Permanent Emergency Cavitation	Lined Unlined
Lined Unlined	Liner type: Thickness mil LLDPE HDPE PVC
Liner type: Thickness mil LLDPE HDPE PVC	Other:
Other String-Reinforced	Seams: Welded Factory Other.
Seams: Welded Factory Other	Volume: bbl yd3
Volume: bbl Dimensions: L xW xD	Dimernsions: Length x Width
X Below-grade tank: Subsection Lof 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC
Volume: 120 bbl	Chain link, six feet in height, two strangs of barbed wire at top
Type of fluid: Produced Water	Four foot height, four strands of barbed wire evenly spaced between
Tank Construction Material: Metal	one and four feet
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11
X Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	X Screen Notting Other
Visible sidewalls and liner	X Monthly inspections
Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC
Other:	12"x 24", 2" lettering, provided Operator's name, site location, and
Liner type: Thickness: 60 mil X HDPE PVC	emergency telephone numbers
Other:	X Signed in compliance with 19.15.3.103 NMAC
Alternative Method:	Administrative Approvals and Exceptions:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19,35.17 NMAC for guidance.
of approval.	Please check a box if one or more of the following is requested, if not
•	leave blank:
	Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau
	office for consideration of approval. (Fencing in Design Plan)
	Exception(5): 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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.						
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - IWATERS database search; USGS; Data obtained from nearby wells	Yes	XNo				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	□Yes	X No				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	XNo				
(Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	\square NA.					
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	□No				
(Applied to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	XNA					
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.	Yes	X No				
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.						
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	Yes	X No				
 Written confirmation or verification from the municipality; Written approval obtained from the municipality Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	Yes	X No				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	□Yes	X No				
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes	XNo				
Within a 100-year floodplain - FEMA map	Yes	XNo				
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment 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 d	ocuments ar	e attached.				
X Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC						
Previously Approved Design (attach copy of API Number: or Permit						
Closed-loop Systems Permit Application Attachment 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 documents are attached.						
Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC						
Previously Approved Design (attach copy of API 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 the documents are attached.					
Hydrogeologic Report - based upon the requirements of Paragraph (I) 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					
Proposed Closure: 19.15.17.13 NMAC					
Type: Drilling Workover Emergency Cavitation Permanent Pit X Below-grade Tank Closed-loop System Altern	ative				
Proposed Closure X Waste Excavation and Removal					
On-site Closure Method (only for temporary pits and closed-loop systems)	1				
In-place On-site Trench					
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau fo	r				
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. Recommentations of acceptable source material					
are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district					
office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justification and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.					
Ground water is less than 50 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 between 50 and 100 feet below the bottom of the buried waste	☐Yes ☐No				
- NM Office of the State Engineer - iWATERS database serach; USGS; Data obtained from nearby wells	□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	□NA				
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lak	☐ Yes ☐ No				
(measured from the ordinary high-water mark).					
- Topographic map; Visual inspection (certification) of the proposed site					
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐Yes ☐No				
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic	∐Yes ∐No				
or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, 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				
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					
1 Within 500 feet of a wetland	□vas□No				
Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map: Topographic map: Visual inspection (certification) of the proposed.	Yes No				
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed					
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed Within the area overlying a subsurface mine.	Yes No				
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed					
 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division Within an unstable area. 					
 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM 	Yes No				
 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division Within an unstable area. 	Yes No				
 US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM 	Yes No				

to the closure plan. Please indicfate, by a check mark in the box, that the documents are attached	Waste Excavation and Removal Closure Plan Checklist: (19 15 17 13 NMAC) Instructions: Each of the following items must be attached				
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC					
Confiramtion Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F 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 Subsect	tion H of 19 15 17 13 NMAC				
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMA					
Stee Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 N.					
Site Reciamation Fian - based apoli the appropriate requirements of subsection 0 of 15 15 17 15 W.	WIAC				
Waste Removal Closure for Closed-loop Systems That Utilize Haul-off Bins Only: (19 15 17 13.D NMAC) Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.					
Disposal Facility Name: Disposal Facility Permit	Number:				
On-Site Closure Plan Checklist: (19 15 17 13 NMAC) Instructions: Each of the following items must bee attached to the closure plan. Please indicate, 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 F of 19.15	.17 13 NMAC				
Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of	of 19.15.17.11 NMAC				
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	n F of 19.15.17.13 NMAC				
Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.	17.13 NMAC				
Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case of	on-site closure standards cannot be				
Soil Cover Design - based upon the appropriate requirements of Subsection H of 19 15 17 13 NMA					
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMA					
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17.13 N					
Operator Application Certification:					
I hereby certify that the information submitted with this application is true, accurate and complete to the best of m	w knowledge and belief				
Name (Print): Crystal Tafoya Title: Regulator	•				
	Ty Technician				
Signature: Japan Date: 7/2/2008					
e-mail address: <u>crystal tafoya@conocobhillips.com</u> Telephone <u>505-</u>	326-9837				
OCD Assessed D. Branch Analysis (valuation description)					
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Representative Signature: Approval Date: 7-8-08					
OCD Representative Signature: DS of Self Approva	al Date:				
OCD Representative Signature: DSAL BLOM Approva Title: ENDICO Spec OCD Permit Number	11 Date: 7-8-08				
	al Date: 7-8-08				
Title: Enviro / Spec OCD Permit Number	al Date: 7-8-08				
Title: ENDITO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Completion Date:	11 Date: 7-8-08				
Title: ENDICO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Completion Date: Closure Method:	nl Date:				
Title:	al Date:				
Title: ENDITO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Completion Date: Closure Method: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain					
Title:					
Title: ENDITO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Closure Completion Date: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure recognitions.					
Title: ENDITO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Closure Completion Date: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure rebox, that the documents are attached Proof of Closure Notice Proof of Deed Notice (if applicable)					
Title:					
Title:					
Title:					
Title: ENDITO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Completion Date: Closure Method: Alternative Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure rebox, that the documents are attached Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number					
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Title: ENDICO Spec OCD Permit Number Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Completion Date: Closure Method: Alternative Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure report of Closure Notice Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number					
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Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure rebox, that the documents are attached Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Latitude: Longitude	eport. Please indicate, by a check mark in the				
Closure Report (required within 60 days of closure completion): Subsection K of 1915 17 13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure rebox, that the documents are attached Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Latitude: Longitude	eport. Please indicate, by a check mark in the NAD: 1927 1983				
Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure Proof of Closure Notice Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Latitude: Longitude	eport. Please indicate, by a check mark in the NAD: 1927 1983				
Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Waste Excavation and Removal If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure robox, that the documents are attached Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Latitude: Longitude Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the beclosure complies with all applicable closure requirements and conditions specified in the approved closure plan.	Please indicate, by a check mark in the NAD: 1927 1983				
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Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC Closure Method: Waste Excavation and Removal On-Site Closure Alternative Closure If different from approved plan, please explain Closure Report Attactment Checklist: Instructions: Each of the following items must be attached to the closure proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Latitude: Longitude Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the beclosure complies with all applicable closure requirements and conditions specified in the approved closure plan. Name (Print): Title:	Please indicate, by a check mark in the NAD: 1927 1983				

Form C-144 Oil Conservation Division Page 4 of 4

New Mexico Office of the State Engineer POD Reports and Downloads

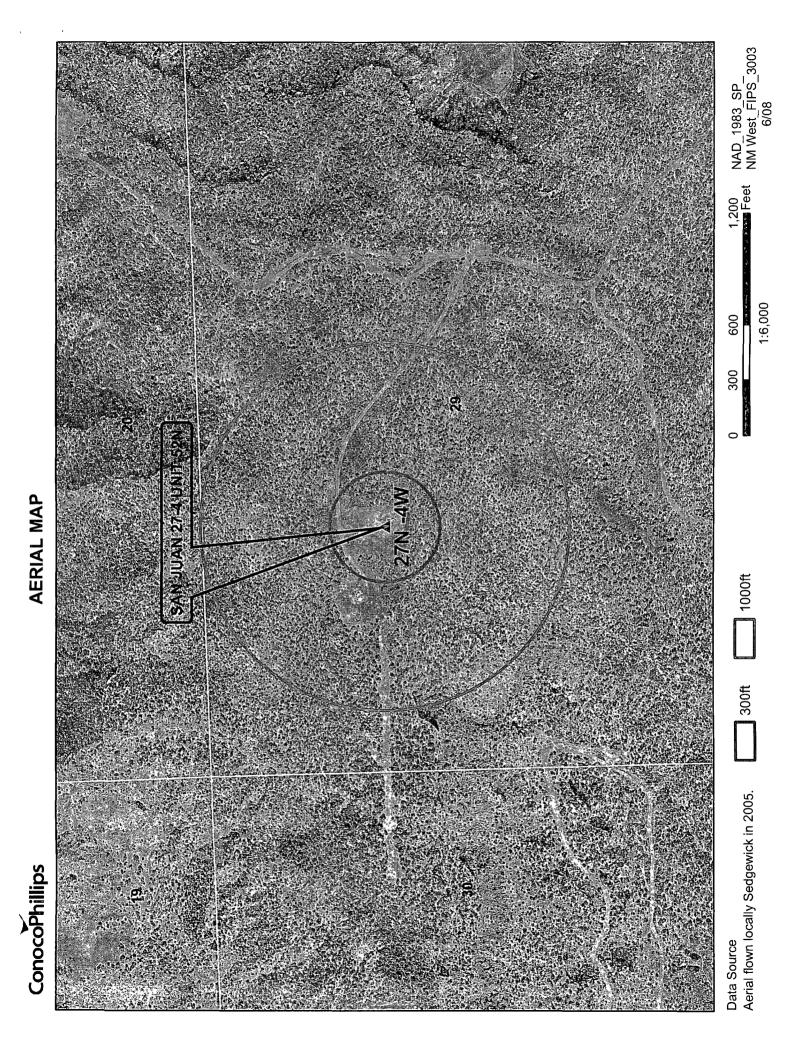
Township: 27	N Range: 04W	Sections:				
NAD27 X:	Y:	Zone:	Search Radius:			
County:	Basin:		Number:	Suffix:		
Owner Name: (First)	(Las	ot) ⑥ All	O Non-Domestic	ODomestic		
POD / Surface Data Report Avg Depth to Water Report Water Column Report						
Clear Form iWATERS Menu Help						

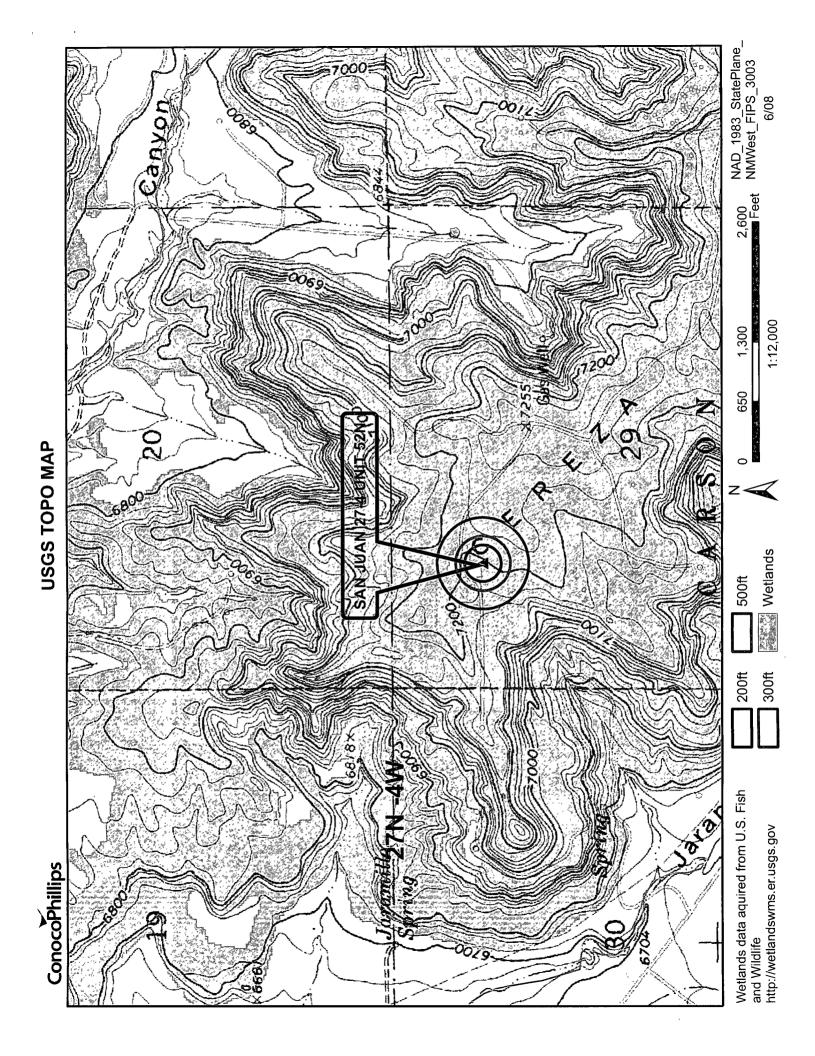
WATER COLUMN REPORT 07/02/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

	(quarter	s are	big	gge	st	to	smallest)			Depth	Depth	Wat∈
POD Number	Tws	Rng	Sec	q	đ	q	Zone	x	Y	Well	Water	Colum
SJ 00048	27N	04W	01							143		
SJ 01049	27N	04W	18	4	2	2				15		
SJ 01205	27N	04W	34	4	4	4				3054	750	23(

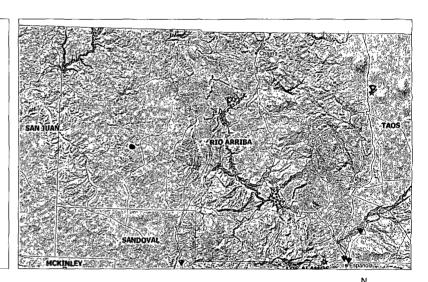
Record Count: 3

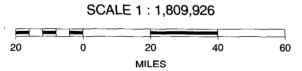




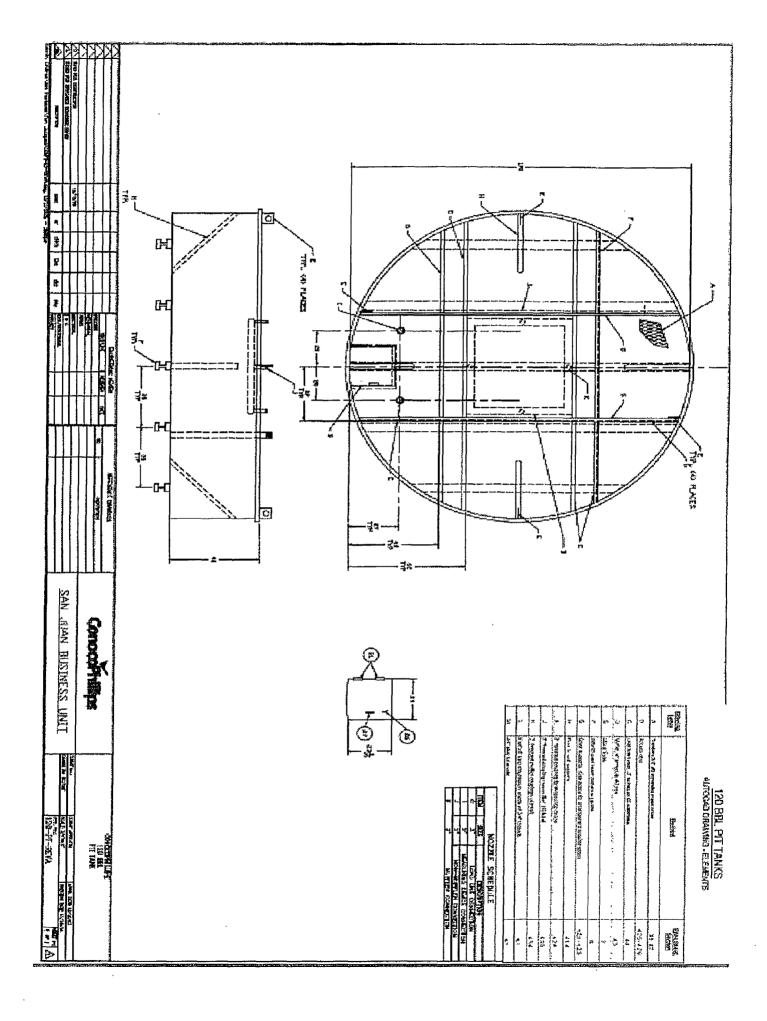
San Juan 27-4 Unit 58N Mines, Mills and Quarries Web Map

Mines, Mil	ls & Quarries Commodity Groups
Δ	Aggregate & Stone Mines
•	Coal Mines
*	Industrial Minerals Mines
•	Industrial Minerals Mills
	Metal Mines and Mill Concentrate
45	Potash Mines & Refineries
1	Smelters & Refinery Ops.
*	Uranium Mines
•	Uranium Mills









FEMA Map - 100 year floodplain

The FEMA Map for the San Juan 27-4 Unit 52N is unavailable due to its location being in the forest. FEMA does not provide floodplain information for Forest Service land. This well is not located near a wash or watercourse and is not in 100 year floodplain as visible on the topographic map.

Siting Criteria Compliance Demonstrations

The San Juan 27-4 Unit 52N is not located in an unstable area. The location is not over a mine and is not on the side of a hill. The location of the excavated below-grade tank material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse.

Hydrogeological report for San Juan 27-4 #52N

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 tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

Site specific information:

Surface hydrology: The site is located on top of Cereza Mesa drained

by a number of small intermittent drainages.

1st water-bearing formation: San Jose, tertiary

Formation thickness: 700 feet

Underlying formation: Nacimiento, tertiary

Depth to groundwater: A number of nearby water wells in the valley

bottom draw water from about 30-200-foot depth.

Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does not conform to this plan.

General Plan:

- 1. BR will design and construct a BGT to contain liquids and to prevent contamination of fresh water and protect public health and environment.
- 2. BR will use the general location sign posted on location. If no general sign is posted a separate sign at the location of the BGT will be provided.
- 3. BR shall construct fencing around the BGT using 4 foot hog wire fencing topped with two strands of barbed wire, or with a pipe top rail. A six foot chain link fence topped with three strands of barbed wire will be use if the well location is within 1000 feet of permanent residence, school, hospital, institution or church.
- 4. BR will construct a expanded metal covering on the top of the BGT
- 5. BR shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight.
- 6. The BR below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.
- 7. BR shall construct a below-grade tank to prevent overflow and the collection of surface water run-on.
- 8. BR will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.
- 9. BR shall equip below-grade tanks designed in this manner with a properly operating automatic high-level shut-off control device and manual controls to prevent overflows.
- 10. The geomembrane liner shall consist of 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner material that the appropriate division district office approves. The geomembrane liner shall have a hydraulic conductivity no greater than 1 x 10-9 cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to

ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

11. The general specification for design and construction are attached in the BR document.

Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of Below Grade Pit (BGT) on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all BGT. A separate plan will be submitted for any BGT which does not conform to this plan.

General Plan:

- 1. BR will operate and maintain a BGT to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2. BR shall not allow a below-grade tank to overflow or allow surface water run-on to enter the below-grade tank.
- 3. BR shall continuously remove any visible or measurable layer of oil from the fluid surface of a below-grade tank in an effort to prevent significant accumulation of oil overtime.
- 4. BR shall inspect the below-grade tank at least monthly and maintain a written record of each inspection for five years.
- 5. BR shall maintain adequate freeboard to prevent overtopping of the below-grade tank.

Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of Below Grade Tanks (BGTs) on Burlington Resources Oil & Gas Company, LP locations hereinafter known as BR locations. This is BR's standard procedure for all BGTs. A separate plan will be submitted for any BGT which does not conform to this plan.

General Requirements:

- 1. BR shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.
- 2. BR shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- 3. BR shall close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on C-144
- 4. BR shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility.
- 5. BR shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.
- 6. If there is any on-site equipment associated with a below-grade tank, then BR shall remove the equipment, unless the equipment is required for some other purpose.
- 7. BR shall test the soils beneath the below-grade tank to determine whether a release has occurred. BR shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100

mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BR shall notify the division of its results on form C-141.

- 8. If BR or the division determines that a release has occurred, then BR shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.
- If contamination is confirmed by field sampling. BR will follow the Guidelines For Remediation Of Leaks, Spills, and Releases NMOCD August 1993 when remediating contaminants identified
- 10. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then BR shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.
- 11. Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
 - i. Operator's name
 - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 12. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
 - Details on Capping and Covering, where applicable.
 - Inspection Reports
 - Sampling Results
- 13. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 14. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

- 15. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
- 16. The surface owner shall be notified of BR's closing of the below-grade tank as per the approved closure plan using certified mail, return receipt requested.