District I REGISTERI	1220 South St. Francis Dr.	Form C-144 July 21, 2008 For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office.			
1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505	Santa Fe, NM 87505	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-Grad	e Tank, or			
_	Alternative Method Permit or Closur				
	 X Permit of a pit, closed-loop system, below-grade t Closure of a pit, closed-loop system, below-grade Modification to an existing permit Closure plan only submitted for an existing permi below-grade tank, or proposed alternative method below (Form C-144) per individual pit, closed-loop 	tank, or proposed alternative method tted or non-permitted pit, closed-loop system,			
	is request does not relieve the operator of liability should operations r the operator of its responsibility to comply with any other applicable				
I Operator: Burlington Resources Oil & Address: PO Box 4289, Farmington, Facility or well name: SAN JUAN 28-	& Gas Company, LP NM 87499	OGRID#: 14538			
	03925431 OCD Permit Numbe	r'			
U/L or Qtr/Qtr: <u>A</u> Section: Center of Proposed Design: Latitude: Surface Owner: <u>X</u> Federal [18 Township: 28N Range: 36.66609°N Longitude: State Private Tribal Trust or Indian	4W County: Rio Arriba -107.2853°W NAD: X 1927 1983 n Allotment			
Pit: Subsection F or G of 19.15.17.1 Temporary: Drilling Workov Permanent Emergency Cav	ver itation P&A r type: Thickness mil LLDPE	HDPE PVC Other bbl Dimensions L x W x D			
	notice of intent) Steel Tanks Haul-off Bins Other ype: Thickness mil LLDPE H	activities which require prior approval of a permit or IDPE PVD Other			
4 X Below-grade tank: Subsection loss Volume: 120 bbl Tank Construction material: Secondary containment with leak detee Visible sidewalls and liner Liner Type: Thickness	Type of fluid: Produced Water Metal Ction X Visible sidewalls, liner, 6-inch lift and auto Visible sidewalls only Other	omatic overflow shut-off			
5 Alternative Method:		nmental Purson office for consideration of computed			
Submittal of an exception request is requi	red. Exceptions must be submitted to the Santa Fe Enviro Oil Conservation Division	numental bureau office for consideration of approval.			

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, 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, hospite	al, institution or church)							
and four feet strands of particity spaced between one and four feet								
X Alternate. Please specify <u>4' hog wire fencing topped with two strands barbed wire</u> .								
7 Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) X Screen Netting Other								
Monthly inspections (If netting or screening is not physically feasible)								
8								
Signs: Subsection C of 19.15.17.11 NMAC								
12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers X Signed in compliance with 19.15.3.103 NMAC								
9 <u>Administrative Approvals and Exceptions:</u> Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a hor if one or provide 6.14. In the second seco								
Please check a box if one or more of the following is requested, if not leave blank:								
X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for (Fencing/BGT Liner)	consideration of approval.							
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.								
10 <u>Siting Criteria (regarding permitting)</u> : 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 XNo							
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								
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.								
(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 XNo							
- 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 Written confirmation or verification from the municipality: Written approval obtained from the municipality	Yes XNo							
 Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	Yes XNo							
Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	Yes XNo							
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							

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Temporary Pits, Emerg	ency Pits and Below-grade Tanks Permi flowing items must be attached to the application	it Application Attachment Che	cklist: Subsection B of 19.15.17.9 NMAC
	in a second to the applied the	om, i riedw manade, by a check mar	(in the how that the terminant of terminant of the terminant of
Hydrogeologic Dat	port (Below-grade Tanks) - based upon the ta (Temporary and Emergency Pits) - based	trequirements of Paragraph (4) of	Subsection B of 19.15.17.9 NMAC
X Siting Criteria Con	opliance Demonstrations - based upon the a	a upon the requirements of Paragr	aph (2) of Subsection B of 19:15:17.9
X Design Plan - base	d upon the appropriate requirements of 19.	appropriate requirements of 19.15	6.17.10 NMAC
X Operating and Mai	ntenance Plan, based usion the annual of	15.17.11 NMAC	
X Closure Plan (Pleas	ntenance Plan - based upon the appropriate	e requirements of 19.15.17.12 NM	IAC
	se complete Boxes 14 through 18, if applies and 19.15.17.13 NMAC	able) - based upon the appropriate	requirements of Subsection C of
Previously Approved D	Design (attach copy of design) AF	P1	or Permit
Geologic and Hydro Siting Criteria Com Design Plan - based Operating and Main Closure Plan (Please NMAC and 19.15.1	phance Demonstrations (only for on-site cl l upon the appropriate requirements of 19.1 atenance Plan - based upon the appropriate e complete Boxes 14 through 18. if applica	m. Please indicate, by a check mark is based upon the requirements of Pa losure) - based upon the appropria 15.17.11 NMAC requirements of 19.15.17.12 NM. ible) - based upon the appropriate 1	ragraph (3) of Subsection B of 19,15,17,9 te requirements of 19,15,17,10 NMAC
Instructions: Each of the foll Hydrogeologic Repo Siting Criteria Comp Climatological Facto Certified Engineering Dike Protection and 1 Leak Detection Desig Liner Specifications a Quality Control/Qual Operating and Mainte Freeboard and Overte Nuisance or Hazardon Emergency Response Oil Field Waste Strea Monitoring and Inspe	of a based upon the requirements of Paragra obliance Demonstrations - based upon the ap- rs Assessment g Design Plans - based upon the appropriate Structural Integrity Design: based upon the gn - based upon the appropriate requirement and Compatibility Assessment - based upon ity Assurance Construction and Installation enance Plan - based upon the appropriate re opping Prevention Plan - based upon the ap us Odors, including H2S, Prevention Plan Plan m Characterization	ion. Please indicate, by a check mark aph (1) of Subsection B of 19.15.1 propriate requirements of 19.15.17.11 NM e appropriate requirements of 19.1 nts of 19.15.17.11 NMAC n the appropriate requirements of o Plan equirements of 19.15.17.12 NMA propriate requirements of 19.15.1	7.10 NMAC 4AC 5.17.11 NMAC 19.15.17.11 NMAC C 7.11 NMAC
14			
Proposed Closure: 19.15.17 Instructions: Please complete t	7.13 NMAC he applicable boxes, Boxes 14 through 18, in .	regards to the proposed element	
Type: Drilling Work			n. w-grade Tank Closed-loop System
	X Waste Excavation and Removal	Below Grade Tasta	
	Waste Removal (Closed-loop systems onl	(Below-Grade Tank) ly)	
	On-site Closure Method (only for tempora		
	In-place Burial On-site		
[Alternative Closure Method (Exceptions r		Environmental Bureau for consideration
15			
Waste Excavation and Rem	oval Closure Plan Checklist: (19.15.17.13	NMAC) Instructions: Each of the fa	ollowing items must be attached to the closure plan.
	and the accuments are machen.		atins muss de unachea to the closure plan.
X Protocols and Procedur	es - based upon the appropriate requirement	nts of 19.15.17.13 NMAC	
X Confirmation Sampling X Disposal Facility Name	Plan (if applicable) - based upon the appro	opriate requirements of Subsection	a F of 19.15.17.13 NMAC
In Disposal Lacinty Marine	and Permit Number (for liquids, drilling f)	luids and drill cuttings)	
X Re-vegetation Plan - ba	Design Specifications - based upon the appropriate receiver a fill	propriate requirements of Subsect	ion H of 19.15.17.13 NMAC
-	sed upon the appropriate requirements of S	subsection 1 of 19.15.17.13 NMA(2
She Keelamation Plan -	based upon the appropriate requirements of	of Subsection G of 19.15.17.13 N	MAC

Oil Conservation Devision

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To <u>Waste Removal Closure For Closed-loop Systems That I</u> Instructions: Please identify the facility or facilities for the a are required.	Julize Above Ground Steel Tanks or Haut-off Bins Only: (19.15.17.13.D NMA) Itsposal of liquids, drilling fluids and drill cuttings. Use attachment if more than P	C) vo facilities
Disposal Facility Name: Disposal Facility Name-		
Disposal Facility Name: Will any of the proposed closed-loop system operations Yes (If yes, please provide the information	and associated activities occur on or in areas that will not be used for future	re service and operations?
Required for impacted areas which will not be used for future Soil Backfill and Cover Design Specification - b Re-vegetation Plan - based upon the appropriate		
17		
Siting Criteria (Regarding on-site closure methods of Instructions: Each siting criteria requires a domain training of	0119:15-17-10 NMAC	
for consideration of approval. Justifications and/or demonstration	<u>inter-</u> 1771511710 NMAL. sliance in the closure plan. Recommendations of acceptable source material are provided l. e appropriate district office or may be considered an exception which must be submitted to s of equivalency are required. Please refer to 19,15,17,10 NMAC for guidance.	elow, Requests/regarding changes to the Santa Fe Environmental Bureau office
Ground water is less than 50 feet below the bottom of th	te buried waste.	Yes No
 NM Office of the State Engineer - iWATERS database 		
Ground water is between 50 and 100 feet below the bott	tom of the buried waste	Yes No
- NM Office of the State Engineer - iWATERS database	search: USGS: Data obtained from nearby wells	Ves No
Ground water is more than 100 feet below the bottom of	the buried waste.	
- NM Office of the State Engineer - iWATERS database		Ves No
and a second provided matching the) feet of any other significant watercourse or lakebed, sinkhole, or playa lake	Yes No
- Topographic map: Visual inspection (certification) of th		
Within 300 feet from a permanent residence, school, hospital, Visual inspection (certification) of the proposed site: Aer	institution, or church in existence at the time of initial application, ial photo; satellite image	Yes No
Within 500 horizontal feet of a private, domestic fresh water w purposes, or within 1000 horizontal fee of any other fresh wate - NM Office of the State Engineer - iWATERS database: N	rell or spring that less than five households use for domestic or stock watering re well or spring, in existence at the time of the initial application.	Yes No
Within incorporated municipal boundaries or within a defined ursuant to NMSA 1978, Section 3-27-3, as amended. Written confirmation or verification from the municipalit	municipal fresh water well field covered under a municipal ordinance adopted	Yes No
Vithin 500 feet of a wetland		Yes No
Vithin the area overlying a subsurface mine.	raphic map; Visual inspection (certification) of the proposed site	
- Written confirantion or verification or map from the NM	EMNRD-Mining and Mineral Division	Yes No
 /ithin an unstable area. Engineering measures incorporated into the design; NM B Topographic map 	tureau of Geology & Mineral Resources: USGS; NM Geological Society:	Yes No
/ithin a 100-year floodplain. - FEMA map		Yes No
» <u>Desite Closure Plan Checklist:</u> (19.15.17.13 NMAC) by a check mark in the box, that the documents are attack	Instructions: Each of the following items must bee attached to the closur-	e plan. Please indicate,
	upon the appropriate requirements of 19.15.17.10 NMAC	
Proof of Surface Owner Notice - based upon the an	propriate requirements of Subsection F of 19.15.17.10 NMAC	
Construction/Design Plan of Burial Trench (if ann	icable) based upon the appropriate requirements of 19.15.17.11 NMAC	
Construction/Design Plan of Temporary Pit (for in	place burial of a drying pad) - based upon the appropriate requirements of 19	15 17 21 8184 0
Frotocols and Procedures - based upon the appropri	ate requirements of 19.15.17.13 NMAC	SULT II NMAU
Confirmation Sampling Plan (if applicable) - based	upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC	
Waste Material Sampling Plan - based upon the app	ropriate requirements of Subsection F of 19.15.17.13 NMAC	
Disposal Facility Name and Permit Number (for liquestic) Soil Cover Design - based upon the appropriate requests	uids, drilling fluids and drill cuttings or in case on-site closure standards can	not be achieved)
Re-vegetation Plan - based upon the appropriate req	uirements of Subsection I of 19.15.17.13 NMAC	

Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

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PI		
Operator Application Certification: Thereby certify that the information submitted with this application is true, accur	atta and complete a st	
Name (Print); Crystal Tafoya	Title:	
Signature:atal Tabya	Date:	Regulatory Technician
e-mail address:	Telephone:	505-326-9837
20 OCD Approval: Permit Application (including closure plan)	Closure Plan (only)	
OCD Representative Signature:	custic r tan (only)	OCD Conditions (see attachment)
Title:		Approval Date:
	OCD Perm	it Number:
21 <u>Closure Report (required within 60 days of closure completion)</u> : Subsec Instructions: Operators are required to obtain an approved closure plan prior to report is required to be submitted to the division within 60 days of the completion approved closure plan has been obtained and the closure activities have been com-	implementing any closur of the closure activities. npleted	re activities and submitting the closure report. The closure . Please do not complete this section of the form until an Completion Date:
22		
Closure Method: Waste Excavation and Removal On-site Closure Method If different from approved plan. please explain.	Alternative Closure N	Aethod Waste Removal (Closed-loop systems only)
23 <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems 1</u> Instructions, Places identify the fully		
instructions: Flease taenity the facility or facilities for where the liquids, drillin	g fluids and drill cutting	und Steel Tanks or Haul-off Bins Only: es were disposed. Use attachment if more than two facilities
Disposal Facility Name: Disposal Facility Name:	Disposal Facility P	
	Disposal Facility P	ermit Number:
Were the closed-loop system operations and associated activities performed on Yes (If yes, please demonstrate compliane to the items below)		be used for future service and opeartions?
Required for impacted areas which will not be used for future service and opera		
Site Reclamation (Photo Documentation)	auons:	
Soil Backfilling and Cover Installation		
Re-vegetation Application Rates and Seeding Technique		
24 <u>Closure Report Attachment Checklist:</u> Instructions: Each of the followithe box, that the documents are attached	ng items must be attach	ed to the closure report. Please indicate, by a check mark in
 Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) 		
Plot Plan (for on-site closures and temporary pits)		
Confirmation Sampling Analytical Results (if applicable)		
Waste Material Sampling Analytical Results (if applicable)		
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 Location: Latitude:	Longitude:	NAD 1927 1983
		[1727 [763
25		
Operator Closure Certification:		
hereby certify that the information and attachments submitted with this closure rep te closure complies with all applicable closure requirements and conditions specifi	ort is ture, accurate and ed in the approved closu	complete to the best of my knowledge and belief. I also certify that tre plan.
lame (Print):	Title:	
ignature:	Date:	
mail address:	Telephone:	

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New Mexico Office of the State Engineer

Page	1	of	1
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New Mexico Office of the State Engineer POD Reports and Downloads
r OD Reports and Downloads
Township: 28N Range: 04W Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) C Non-Domestic C Domestic C All
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		
POD Number	Tws	Rng	Sec	P	a a	I	Zone	x	Y	Well	Water	Column
SJ 00045	28N	04W	07							600		
SJ 02385	28N	04W	26	1	1 1	L				160	85	75

Record Count: 2

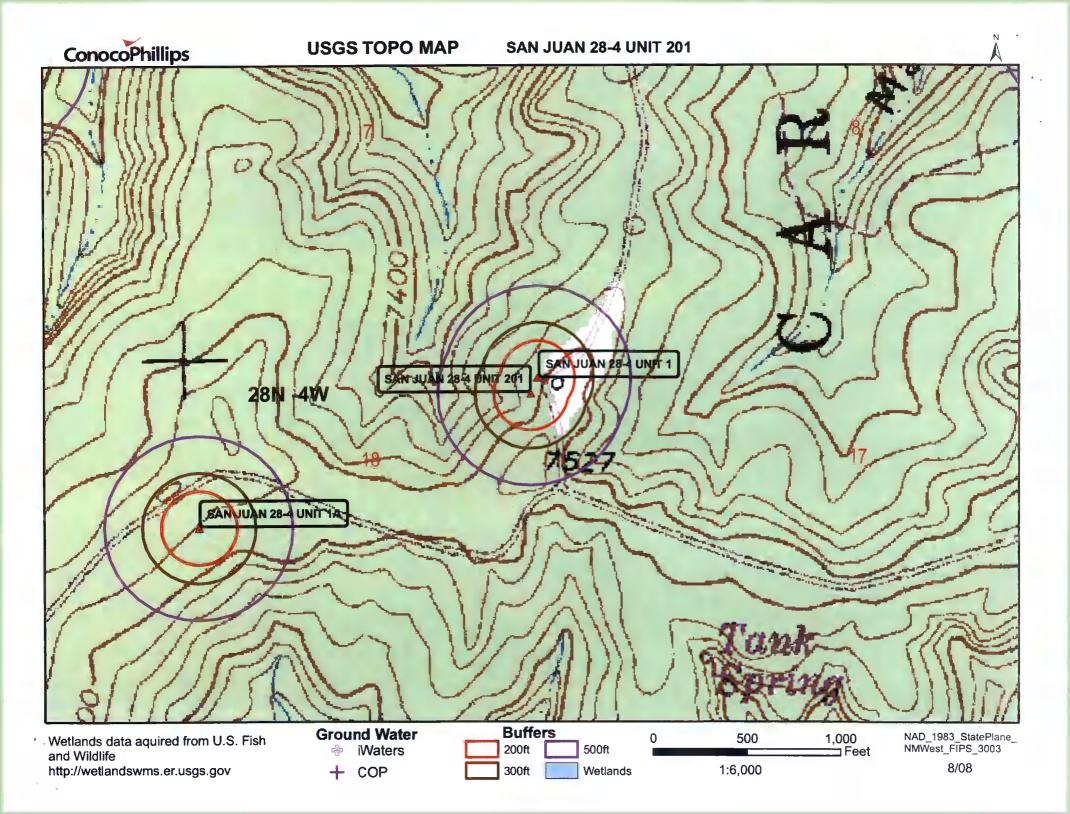
· ·

Township: 28N Range:	OD Reports and Down	110805	
NAD27 X: Y:	Zone:	Search	Radius:
County: Basin:		Number:	Suffix:
Owner Name: (First)	(Last)	C Non-Do	omestic C Domestic C Al
POD / Surface Data Report	Avg Depth to Water	Report	Water Column Report
Clear F	orm iWATERS Me	nu Help	

WATER COLUMN REPORT 08/20/2008

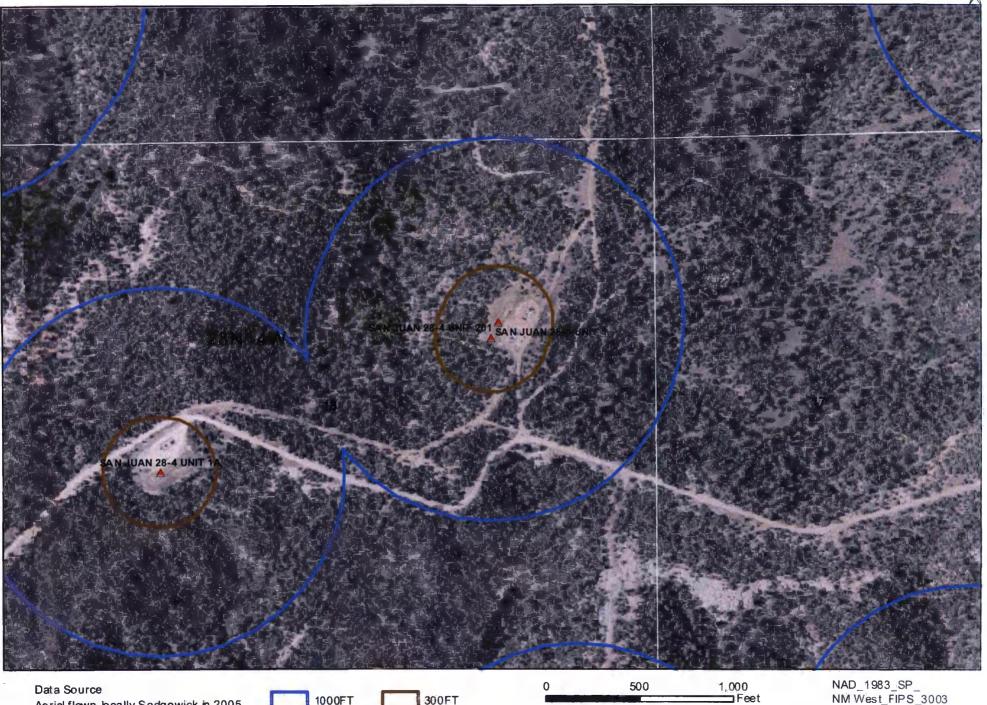
	(quarter (quarter								Depth	Depth	Water (in
POD Number	TWS	Rng	Sec	P	a a	Zone	х	Y	Well	Water	Column
SJ 01893	28N	05W	18	4					390	290	100
SJ 00047	28N	05W	28						465	265	200
SJ 00036	28N	05W	28	3					303	243	60

Record Count: 3



ConocoPhillips

AERIAL MAP **SAN JUAN 28-4 UNIT 201**



Aerial flown locally Sedgewick in 2005.

1000FT

300FT

1:6,000

NAD_1983_SP_ NM West_FIPS_3003 8/08

Mines, Mills and Quarries Web Map

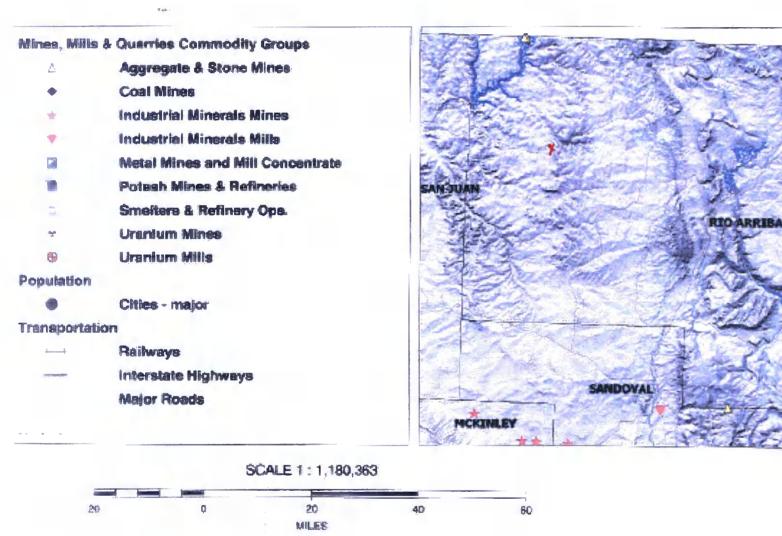
SAN JUAN 28-4 UNIT 201

Espanola

OS ALAMOS

SANTA

Unit Letter: A, Section: 18, Town: 028N, Range: 004W



SAN JUAN 28-4 UNIT 201

Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'SAN JUAN 28-4 UNIT 201', which is located at 36.66609 degree. North latitude and 107.2853 degree, West longitude. This location is located on the Gobernador 7.5' USGS tooographic quadrangle. This location is located in si section 18 of Township 28 North Range 4 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in Rio Arriba County, New Mexico. The nearest town is Dulce, located 24.4 miles to the northeast. The nearest large town (population greater than 10.000) is Farmington, located 51.3 miles to the west (National Atlas). The nearest highway is US Highway 64, located 3.1 miles to the north. The location is located Januar, 2008. This location is in the Upper San Juan. Colorado. New Mexico, Subbasin. This location is located 2289 meters or 7507 feet above sea level and receives 17 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 176 reet. 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 tMd State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 229 feet to the northwest and is classified by the USGS as an intermittent stream. The nearest perennia: atream is 0,433 feet to the northeast. The nearest water body is 3,433 feet to the northeast. It is classified by the USGS as a perennial lake and is 0.1 acres in size. The nearest spring is 1,622 feet to the southeast. 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 2,746 feet to the southeast. The nearest waterand is a 0.6 acre Freshwater Emergent Wetland located 15,737 feet to the north. The slope at this location is 3AN JOSE FORMATION--Siltstone, shale, and sandstone with a Sandstone dominated formation of a lage's substrate. There is no SSURGO soil data available for this location. The nearest underground mine is 11.8 miles to the north as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

Regional Hydrogeological context:

The San Jose Formation of Eccene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern hall of the central beam. It overlas the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and over us 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 interpeopled social and stone, siltstone, and variegated shale. Thickness of the San Jose Formation generation nereases from west to east (200 feet in the west and south to almost 2,700 reef in the center of the structure pasin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence in 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 minimat. Values of 40 and 120 feet squared per day were determined from two aguifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in Sab Jose Formation ranges included and the gallons per minute and the median is 5 gallons per minute. Most of the webs provide water for mestdok and domestic use. The San Jose Formation is a very suitable unit for recharge man prevapilation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb predicitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and open disaliciton of the San Jose Formation by the San Juan River and its tribucaries all tend to reduce the effective scharge to the unit.

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

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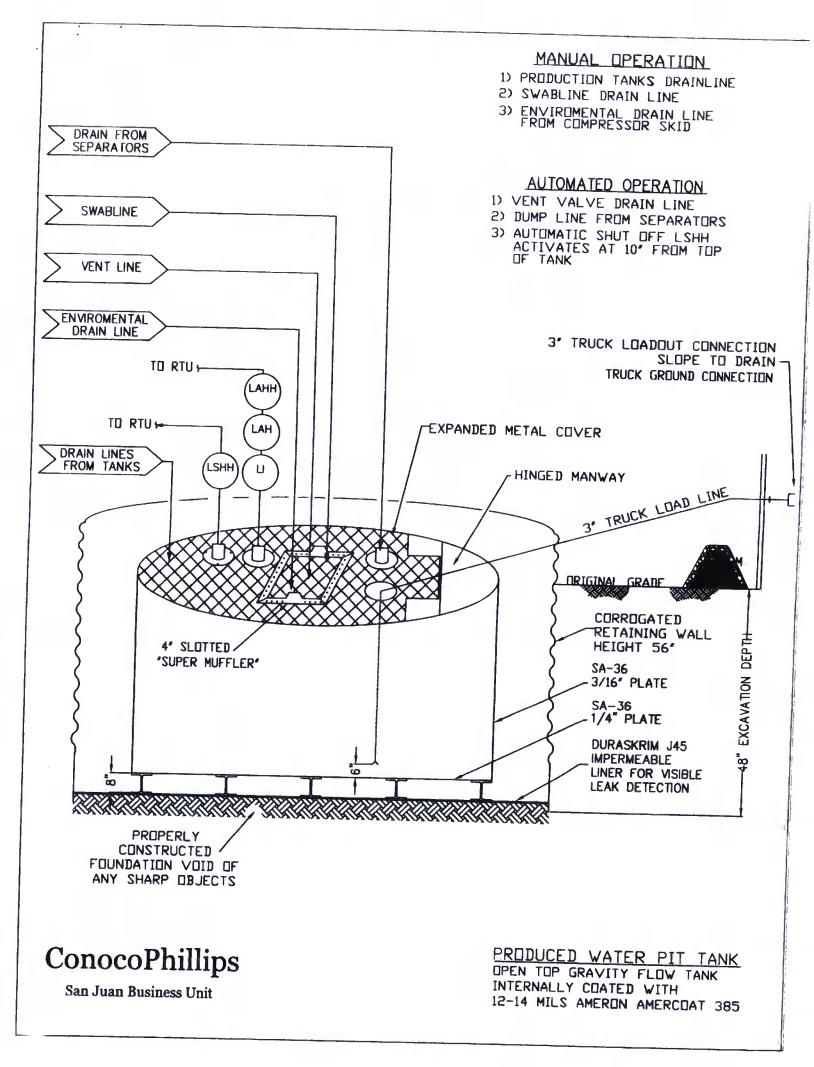
Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

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 properly sized and approved BGT which will contain liquids and should prevent contamination of fresh water to protect the public health and environment.
- 2. BR signage will comply with 19.15.3.103 NMAC when BR is the operator. If BR is not the operator it will comply with 19.15.17.11NMAC. BR includes Emergency Contact information on all signage.
- 3. BR has approval to use alternative fencing that provides better protection. BR constructs 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. BR ensures that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- 4. BR will construct a screened, 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 as shown on design drawing and specification sheet.
- 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 as shown on design drawing.
- 7. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a below-grade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 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 has equipped the below-grade tanks with the ability to detect high level in the tank and provide alarm notification and shutdown process streams into the tank. Once high level is detected RTU logic closes the inlet separator sales valve and does not permit vent valve to open. This shutdown of the sales valve and gagging of the vent valves prevents any hydrocarbon process streams from entering the pit tank once a high level is detected. Furthermore, an electronic page is sent to the BR MSO for that well site and to the designated contract "Water-Hauling" Company indicating a high level and that action must be taken to address this alarm. The environmental drain line from BR's compressor skid under normal operating conditions is in the open position. The environmental drain line is in place to capture any collected rain water or spilled lubricants from our compressor skids. The swab drain line is a manually operated drain and by normal operating procedures is in the closed position. The tank drain line is also a manually operated drain and during normal operations it is in the closed position.
- 10. The geomembrane liner consists of a 45-mil flexible LLDPE material manufactured by Raven Industries as J45BB. This product is a four layer reinforced laminated containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. The J45BB is reinforced with 1300 denier (minimum) tri-directional scrim reinforcement. It exceeds ASTMD3083 standard by 10%. J45BB has a warranty for 20 years from Raven Industries and is attached. It is typically used in Brine Pond, Oilfield Pit liner and other industrial applications. The manufacture specific sheet is attached and the design attached displays the proper installation of the liner.
- 11. The general specification for design and construction are attached in the BR document.



PROPERTIES TEST METHOD J30BB J36BE **J45BE** Min. Roll Typical Roll Min. Roll Typical Roll Min. Roll **Typical Roll** Averages Averages Averages Averages Averages Averages Appearance Black/Black Black/Black Black/Black Thickness **ASTM D 5199** 27 mil 30 mil 32 mil 36 mil 40 mil 45 mil Weight Lbs Per MSF 126 lbs 140 lbs ASTM D 5261 151 lbs 168 lbs 189 lbs (oz/yd²) 210 lbs (18.14)(20.16)(21.74)(24.19)(27.21)(30.24)Construction **Extrusion laminated with encapsulated tri-directional scrim reinforcement Ply Adhesion ASTM D 413 16 lbs 20 lbs 19 lbs 24 lbs 25 lbs 31 lbs 88 lbf MD 110 lbf MD 1" Tensile Strenath 90 lbf MD ASTM D 7003 113 lbf MD 110 lbf MD 138 lbf MD 63 lbf DD 79 lbf DD 70 lbf DD 87 lbf DD 84 lbf DD 105 lbf DD 1" Tensile Elongation @ 550 MD 750 MD ASTM D 7003 550 MD 750 MD Break, % (Film Break) 550 MD 750 MD 550 DD 750 DD 550 DD 750 DD 550 DD 750 DD 1" Tensile Elongation @ 20 MD 33 MD 20 MD ASTM D 7003 30 MD Peak % (Scrim Break) 20 MD 36 MD 20 DD 33 DD 20 DD 31DD 20 DD 36 DD 75 lbf MD Tongue Tear Strength 97 lbf MD **ASTM D 5884** 75 lbf MD 104 lbf MD 100 lbf MD 117 lbf MD 75 lbf DD 90 lbf DD 75 lbf DD 92 lbf DD 100 lbf DD 118 lbf DD 180 lbf MD Grab Tensile 218 lbf MD 180 lbf MD ASTM D 7004 222 lbf MD 220 lbf MD 257 lbf MD 180 lbf DD 210 lbf DD 180 lbf DD 223 lbf DD 220 lbf DD 258 lbf DD 120 lbf MD Trapezoid Tear 146 lbf MD 130 lbf MD **ASTM D 4533** 189 lbf MD 160 lbf MD 193 lbf MD 120 lbf DD 130 lbf DD 141 lbf DD 172 lbf DD 160 lbf DD 191 lbf DD * Dimensional Stability ASTM D 1204 <1 < 0.5 <1 <0.5 <1 <0.5 Puncture Resistance **ASTM D 4833** 50 lbf 64 lbf 65 lbf 83 lbf 80 lbf 99 lbf Maximum Use Temperature 180° F 180° F 180° F 180° F 180° F 180° F Minimum Use Temperature -70° F -70° F -70° F -70° F -70° F -70° F

MD = Machine Direction DD = Diagonal Directions

Note: Minimum Roll Averages are set to take into account product variability in addition to testing variability between laboratories.

*Dimensional Stability Maximum Value

**DURA-SKRIM J30BB, J36BB & J45BB are a four layer reinforced laminate containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. DURA-SKRIM J30BB, J36BB & J45BB are reinforced with a 1300 denier (minimum) tri-directional scrim reinforcement.

Note: IRAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO: no guarantee of substructory results from resulted upon contained information or recommendations and disclaims aid fuderty for resulting loss or damage.

RAVEN Industries

PLANT LOCATION

Sioux Falls, South Dakota

SALES OFFICE

P.O. Box 5107 Sioux Falls, SD 57117-5107 (605) 335-0174 (605) 331-0333 FAX **800-635-3456**



RAVEN INDUSTRIES INC. EXPOSED GEOMEMBRANE LIMITED WARRANTY

Raven Industries Inc. warrants Dura-Skrim J30BB, J36BB, and J45BB to be free from manufacturing defects and to be able to withstand normal exposure to sunlight for a period of 20 years from the date of sale for normal use in approved applications in the U.S and Canada, excluding Hawaii. This warranty is effective for products sold and shipped from January 1, 2008 to December 31, 2008.

This Limited Warranty does not include damages or defects in the Raven geomembrane resulting from acts of God, casualty or catastrophe including but not limited to: earthquakes, floods, piercing hail, or tornadoes. The term "normal use" as used herein does not include, among other things improper handling during transportation, unloading, storage or installation, the exposure of Raven geomembranes to harmful chemicals, atypical atmospheric conditions, abuse of Raven geomembranes by machinery, equipment or people; improper site preparation or covering materials, excessive pressures or stresses from any source or improper application or installation. Raven geomembrane material warranty is intended for commercial use only and is not in effect for the consumer as defined in the Magnuson Moss Warranty or any similar federal, state, or local statues. The parties expressly agree that the sale hereunder is for commercial or industrial use only.

Should defects or premature loss of use within the scope of the above Limited Warranty occur, Raven Industries Inc. will, at its option, repair or replace the Raven geomembrane on a pro-rata basis at the then current price in such manner as to charge the Purchaser/User only for that portion of the warranted life which has elapsed since purchase of the material. Raven Industries Inc. will have the right to inspect and determine the cause of any alleged defect in the Raven geomembrane and to take appropriate steps to repair or replace the Raven geomembrane if a defect exists which is covered under this warranty. This Limited Warranty extends only to Raven's geomembrane, and does not extend to the installation service of third parties nor does it extend to materials furnished or installed by others in connection with the intended use of the Raven geomembranes.

Any claim for any alleged breach of this warranty must be made in writing, by certified mail, to the General Manager of Engineered Films Division of Raven Industries Inc. within ten (10) days of becoming aware of the alleged defect. Should the required notice not be given, the defect and all warranties are waived by the Purchaser, and Purchaser shall not have any rights under this warranty. Raven Industries Inc. shall not be obligated to perform repairs or replacements under this warranty unless and until the area to be repaired or replaced is clean, dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or replacement of Raven geomembrane to be free from all water, dirt, sludge, residuals and liquids of any kind. If after inspection it is determined that there is no claim under this Limited Warranty, Purchaser shall reimburse Raven Industries Inc. for its costs

In the event the exclusive remedy provided herein fails in its essential purpose, and in that event only, the Purchaser shall be entitled to a return of the purchase price for so much of the material as Raven Industries Inc. determines to have violated the warranty provided herein. Raven Industries Inc. shall not be liable for direct, indirect, special, consequential or incidental damages resulting from a breach of this warranty including, but not limited to, damages for loss of production, lost profits, personal injury or property damage. Raven Industries Inc. shall not be obligated to reimburse Purchaser for any repairs, replacement, modifications or alterations made by Purchaser unless Raven Industries Inc. specifically authorized, in writing, said repairs, replacements, modifications or alteration in advance of them having been made. Raven Industry's liability under this warranty shall in no event exceed the replacement cost of the material sold to the Purchaser for the particular installation in which it failed.

Raven Industries Inc. neither assumes nor authorizes any person other than the undersigned of Raven Industries Inc. to assume for it any other or additional liability in connection with the Raven geomembrane made on the basis of the Limited Warranty. The Limited Warranty on the Raven geomembrane herein is given in lieu of all other possible material warranties, either expressed or implied, and by accepting delivery of the material; Purchaser waives all other possible warranties, except those specifically given. This Limited Warranty may only be modified by written document mutually executed by Owner and Raven Industries Inc.

Limited Warranty is extended to the purchaser/owner and is non-transferable and non-assignable; i.e., there are no third-party beneficiaries to this warranty.

Purchaser acknowledges by acceptance that the Limited Warranty given herein is accepted in preference to any and other possible materials warranties.

THIS LIMITED WARRANTY SHALL BE GOVERNED BY SOUTH DAKOTA LAW AND VENUE FOR ALL LEGAL PROCEEDINGS IN CONNECTION WITH THIS LIMITED WARRANTY SHALL BE IN MINNEHAHA COUNTY, SOUTH DAKOTA. RAVEN INDUSTRIES INC. MAKES NO WARRANTY OF ANY KIND OTHER THAN THAT GIVEN ABOVE AND HEREBY DISCLAIMS ALL WARRANTIES, BOTH EXPRESSED OR IMPLIED. OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THIS IS THE ONLY WARRANTY THAT APPLIES TO THE MATERIALS REFERRED TO HEREIN AND RAVEN INDUSTRIES INC. DISCLAIMS ANY LIABILITY FOR ANY WARRANTIES GIVEN BY ANY OTHER PERSON OR ENTITY, EITHER WRITTEN OR ORAL.

RAVEN INDUSTRIES' WARRANTY BECOMES AN OBLIGATION OF RAVEN INDUSTRIES INC. TO PERFORM UNDER THE WARRANTY ONLY UPON RECEIPT OF FINAL PAYMENT AND EXECUTION BY A DULY AUTHORIZED OFFICER OF RAVEN INDUSTRIES INC.

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 Tank (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:

- BR will operate and maintain a BGT to contain liquids and solids and maintain the integrity of the liner, liner system and secondary containment system to prevent contamination of fresh water and protect public health and environment. BR will accomplish this by performing an inspection on a monthly basis, installing cathodic protection, and automatic overflow shutoff devices as seen on the design plan.
- 2. BR will not discharge into or store any hazardous waste in the BGT.
- 3. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a below-grade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 4. As per 19.17.15.12 Subsection D, Paragraph 3, BR will inspect the below-grade tank at least monthly reviewing several items which include 1) containment berms adequate and no oil present, 2) tanks had no visible leaks or sign of corrosion, 3) tank valves, flanges, and hatches had no visible leaks and 4) no evidence of significant spillage of produced liquids. In addition, BR's multi-skilled operators (MSOs) are required to visit each well location once per week. If detected on either inspection, BR shall 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. The written record of the monthly inspections will include the items listed above and will be maintained for five years.
- 5. BR shall require and maintain a 10" adequate freeboard to prevent overtopping of the below-grade tank.
- 6. If the below grade tank develops a leak, or if any penetration of the pit liner or below grade tank, occurs below the liquid's surface, then BR shall remove all liquid above the damage or leak line within 48 hours. BR shall notify the appropriate district office. BR shall repair or replace the pit liner or below grade tank, within 48 hours of discovery. If the below grade tank or pit liner does not demonstrate integrity, BR shall promptly remove and install a below grade tank or pit liner that complies with Subsection I of 19.15.17.11 NMAC. BR shall notify the appropriate district office of a discovery of leaks less than 25 barrels as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.

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

In accordance with Rule 19.15.17.13 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:

- BR shall close a below-grade tank within the time periods provided in Subsection A of 19.15.17.13 NMAC. This will include a) below-grade tanks that do 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 o f19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) permitted below-grade tanks within 60 days of cessation of the below-grade tank's operation., or c) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, BR will file the C144 Closure Report as required.
- 2. 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. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.
- 3. BR will receive prior approval to 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. Documentation of how the below-grade tank was disposed of or recycled will be provided in the closure report.
- 4. 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.
- 5. 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 50 mg/kg; the TPH division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by 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.
- 6. 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.

- 7. 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.
- Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week 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.
- 9. The surface owner shall be notified of BR's closing of the below-grade tank prior to closure as per the approved closure plan via certified mail, return receipt requested.
- 10. 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.
- 11. 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 stipulated seed mixes will used on federally jurisdicted lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private 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. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. BR will repeat seeding or planting will be continued until successful vegetative growth occurs.
- 12. 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.
- 13. 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:
 - Soil Backfilling and Cover Installation
 - Re-vegetation application rates and seeding techniques
 - Photo documentation of the site reclamation
 - Confirmation Sampling Results
 - Proof of closure notice