District 1

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

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

July 21, 2008

Form C-144

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

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

Type of action:	X Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
	Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
	Modification to an existing permit
	Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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 nyironment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable g	overnmental authority's rules, regulations or ordinances.
Operator: Burlington Resources Oil & Gas Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington, NM 87499	
Facility or well name: DECKER A 1	
API Number: 3004511089 OCD Permit Number	r:
U/L or Qtr/Qtr: C Section: 3 Township: 31N Range: 1	2W County: San Juan
Center of Proposed Design: Latitude: 36.93219°N Longitude:	-108.0853°W NAD: X 1927 1983
Surface Owner: Federal State X Private Tribal Trust or Indian	Allotment
String-Reinforced	HDPE PVC Other bbl Dimensions L x W x D
notice of intent) Drying Pad Above Ground Steel Tanks Haul-off Bins Other	activities which require prior approval of a permit or HDPE PVD Other
4 X Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: 120 bbl Type of fluid: Produced Water Tank Construction material: Metal Secondary containment with leak detection X Visible sidewalls, liner, 6-inch lift and automotion with leak detection Visible sidewalls only Other Liner Type: Thickness mil HDPE PVC X Other I	omatic overflow shut-off Unspecified
Alternative Method: Solvaint of an expectation request in required. Exceptions must be submitted to the Santa Fe Environment of the Santa Fe	opportal Bureau office for consideration of approval.

6		
Parcities: Subsection D of 19 13.17.11 NBMC (Applies to permanent pat, temperary pats, and below, quale tooks)		
The state of the s		
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence	z, school, hospital, institution or ch	urch)
Four foot height, four strands of barbed wire evenly spaced between one and four feet		
X Alternate. Please specify 4' hog wire fencing topped with two strands barbed wire.		
7		
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)		
X Screen Netting Other		
Thomas inspections (1) items to screening is not payments, seasons)		
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		
10.3		
	Bureau office for consideration of a	pproval.
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.		
	of accentable	
	-	
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.		
Crowned water is less than 50 feet below the bettern of the temperary nit neumanent nit or below and a tout		Wh.
		AINO
	le, or playa Yes	XNo
- Topographic map, visual inspection (certification) of the proposed site		1
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of	finitial Yes	X No
application,		
(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 analism	cation.	
	1 🖳	
	XNA	
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image		
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or	r stock watering Yes	XNo
purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application	n.	
NIM Office of the State Engineer (WATEDS database county Visual instantion (and Greek) of the		
- NM Office of the State Engineer - IWATERS database search; Visual inspection (certification) of the proposed	site.	
	ordinance Yes	X No
• •		_
		_
		X No
	oposed site	
	Yes	X No
- Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division		
Within an unstable area.	Yes	X No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM	Geological	_
Society; Topographic map		
Within a 100-year floodplain	Yes	X No
- FEMA map		_

Page 2 of 5

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 documents are attached.
X Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19:15.17.9
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
X Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
X Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API 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 (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only 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 (Please complete Boxes 14 through 18, if applicable) - 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 design) API
Previously Approved Operating and Maintenance Plan API
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 19.15.17.19 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 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 X Below-grade Tank Closed-loop System Alternative Proposed Closure Method: X Waste Excavation and Removal (Below-Grade Tank) Waste Removal (Closed-loop systems only) On-site Closure Method (only for temporary pits and closed-loop systems)
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. X Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC X Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) X Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC X Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16 Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Stee	el Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)		
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling are required.	fluids and drill cuttings. Use attachment if more than two f	facilities -	
Disposal Facility Name:	Disposal Facility Permit #:		
Disposal Facility Name:	Disposal Facility Permit #:		
Will any of the proposed closed-loop system operations and associated activitie Yes (If yes, please provide the information No			ations?
Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specification - based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection Plan - based upon the appropriate Plan - based upon the a	tion I of 19.15.17.13 NMAC	С	
Site Reclamation Final Sused upon the appropriate requirements of Sub-	section of 12.13.17.13 NWAC		
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. Recetain siting criteria may require administrative approval from the appropriate district office of for consideration of approval. Justifications and/or demonstrations of equivalency are required.	ecommendations of acceptable source material are provided belo or may be considered an exception which must be submitted to the		
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 obtain	ned from nearby wells	∐N/A	
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 search; USGS; Data obtain	ned from nearby wells	□N/A	
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 obtain	ned from nearby wells	□N/A	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significe (measured from the ordinary high-water mark).	ant watercourse or lakebed, sinkhole, or playa lake	Yes	No
- Topographic map; Visual inspection (certification) of the proposed site			
Within 300 feet from a permanent residence, school, hospital, institution, or church in e - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	xistence at the time of initial application.	Yes	∐No
Visual inspection (continuation) of the proposed site, Fichal photo, satellite image		Yes	□No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less that purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existe - NM Office of the State Engineer - iWATERS database; Visual inspection (certification)	nce at the time of the initial application.		
Within incorporated municipal boundaries or within a defined municipal fresh water we pursuant to NMSA 1978, Section 3-27-3, as amended.		Yes	No
 Written confirmation or verification from the municipality; Written approval obta Within 500 feet of a wetland 	ned from the municipality	□Yes	□No
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspe	ction (certification) of the proposed site		
Within the area overlying a subsurface mine.		Yes	Ño
- Written confiramtion or verification or map from the NM EMNRD-Mining and M	ineral Division		_
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mir	Paral Paraurage LISCS, NIM Coolegical Society.	Yes	∐No
Topographic map	icial Resources, USGS; NWI Geological Society;		
Within a 100-year floodplain FEMA map		Yes	No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of by a check mark in the box, that the documents are attached.	f the following items must bee attached to the closure	e plan. Please i	indicate,
Siting Criteria Compliance Demonstrations - based upon the appropriate	requirements of 19.15.17.10 NMAC		
Proof of Surface Owner Notice - based upon the appropriate requirement	·		
Construction/Design Plan of Burial Trench (if applicable) based upon the	appropriate requirements of 19.15.17.11 NMAC		
Construction/Design Plan of Temporary Pit (for in place burial of a dryin	g pad) - based upon the appropriate requirements of 19	0.15.17.11 NMA	AC
Protocols and Procedures - based upon the appropriate requirements of 1	9.15.17.13 NMAC		
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 appropriate requirements			
Disposal Facility Name and Permit Number (for liquids, drilling fluids an		not be achieved)
Soil Cover Design - based upon the appropriate requirements of Subsection			
Re-vegetation Plan - based upon the appropriate requirements of Subsect Site Reclamation Plan - based upon the appropriate requirements of Subs			

110				
Operator Application C	Certification: ormation submitted with this application is true, accu	urate and complete to the	best of my knowledge and belief	
Name (Print):	Crystal Tafoya	Title:	Regulatory Technician	
Signature:	Canotal Talora	Date:	12/22/2008	
e-mail address:	crystal.tafoya@conocophillips.com	Telephone:	505-326-9837	
20 OCD Approval: Pe	ermit Application (including closure plan)	Closure Plan (only)	OCD Conditions (see attachment)	
OCD Representative Sig	gnature:		Approval Date:	
Title:		OCD Perm	nit Number:	
21				
Closure Report (require Instructions: Operators are report is required to be subt	ed within 60 days of closure completion): Substrequired to obtain an approved closure plan prior to mitted to the division within 60 days of the completion been obtained and the closure activities have been contained.	o implementing any closu on of the closure activitie, ompleted.	tre activities and submitting the closure report. The closure s. Please do not complete this section of the form until an c Completion Date:	44
Closure Method: Waste Excavation at	nd Removal On-site Closure Method proved plan, please explain.	Alternative Closure	Method Waste Removal (Closed-loop systems only)	
23 <u>Closure Report Regarding</u> Instructions: Please identify were utilized.	Waste Removal Closure For Closed-loop Systems y the facility or facilities for where the liquids, drill	s That Utilize Above Gr ling fluids and drill cutti	ound Steel Tanks or Haul-off Bins Only: ngs were disposed. Use attachment if more than two facilities	
Disposal Facility Name:		Disposal Facility	Permit Number:	
Disposal Facility Name:		Disposal Facility		
	stem operations and associated activities performed	on or in areas that will no	be used for future service and opeartions?	
Yes (If yes, please d	emonstrate complilane to the items below)	No		
	reas which will not be used for future service and op hoto Documentation)	perations:		
Soil Backfilling and				
Re-vegetation Appli	cation Rates and Seeding Technique			
the box, that the docume Proof of Closure N Proof of Deed Not Plot Plan (for on-si Confirmation Sam Waste Material Sa Disposal Facility N Soil Backfilling an Re-vegetation App	ents are attached. lotice (surface owner and division) ice (required for on-site closure) ite closures and temporary pits) pling Analytical Results (if applicable) mpling Analytical Results (if applicable) lame and Permit Number d Cover Installation blication Rates and Seeding Technique Photo Documentation)	owing items must be attack	ched to the closure report. Please indicate, by a check mark in	
25				
			and complete to the best of my knowledge and belief. I also certify the osure plan.	aı
Name (Print):		Title:		
Signature:		Date:		
e-mail address:		Telephone:		

New Mexico Office of the State Engineer POD Reports and Downloads

NAD27 County: Owner Name: (First	X: Y:		Zone:	S Numbe	Search Radius	s: Suffix:	
	Basin:		<u>*</u>	Numbe	er:	Suffix:	
wner Name: (Firs						•	
wher ivalie. (i ii	st)	(Last)		CNO	on-Domestic	C Domestic	• A
POD / Surface	e Data Report	Avg	Depth to Wate	er Report	Wate	er Column Repor	t .
	Clear	Form	iWATERS M	lenu H	lelp		

WATER COLUMN REPORT 08/21/2008

	(quarter (quarter							-		Depth	Depth	Water	(in f	eet)
POD Number	Tws	Rng	Sec	P	Ø	P	Zone	x	Y	Well	Water	Column		
SJ 01213	32N	12W	18	2	3	4				640	20	620		
SJ 01212	32N	12W	18	4	1	3				43	5	38		
SJ 03583	32N	12W	23	1	1	1				167	60	107		
SJ 00055	32N	12W	25	2						504				
SJ 02110	32N	12W	28	2	1	4	W	391500	2170000	171	90	81		
SJ 01106	32N	12W	35	3	4					180	115	65		

Record Count: 6

New Mexico Office of the State Engineer POD Reports and Downloads

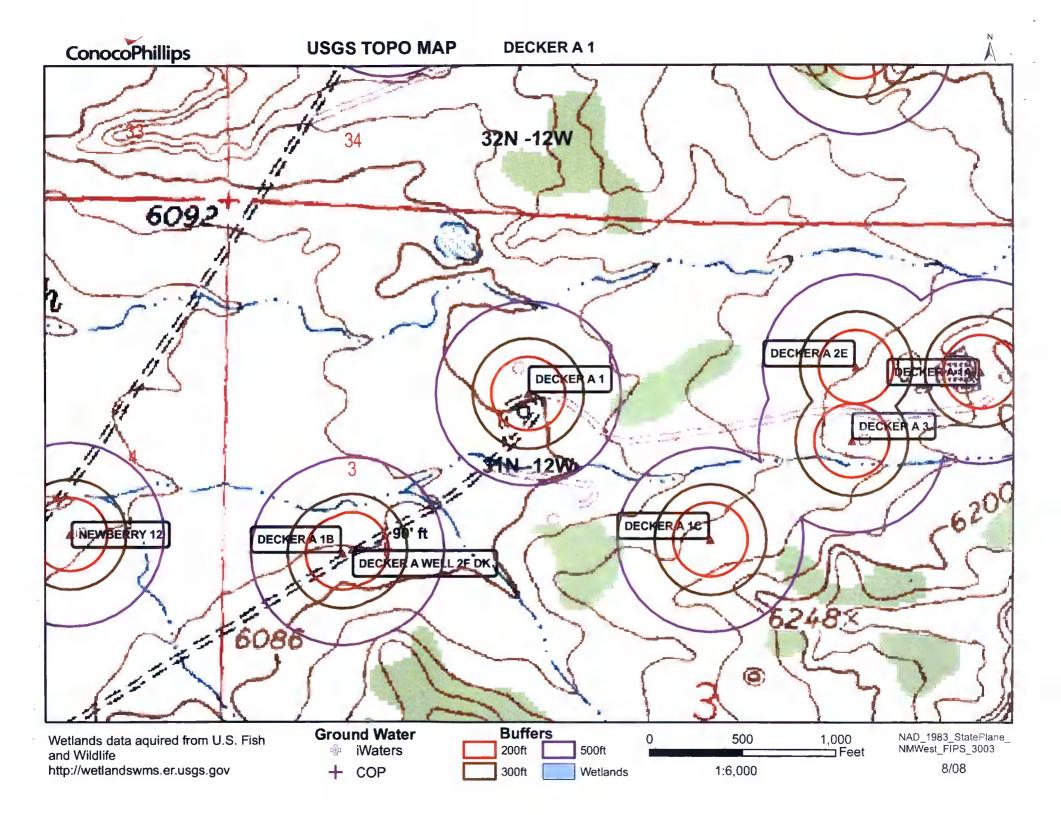
Township: 32N Range: 13W Sections: NAD27 X: Y: Zone: Search Radius: County: Number: Basin: Suffix: Owner Name: (First) (Last) ONon-Domestic ODomestic OAll POD / Surface Data Report Avg Depth to Water Report Water Column Report Clear Form iWATERS Menu Help

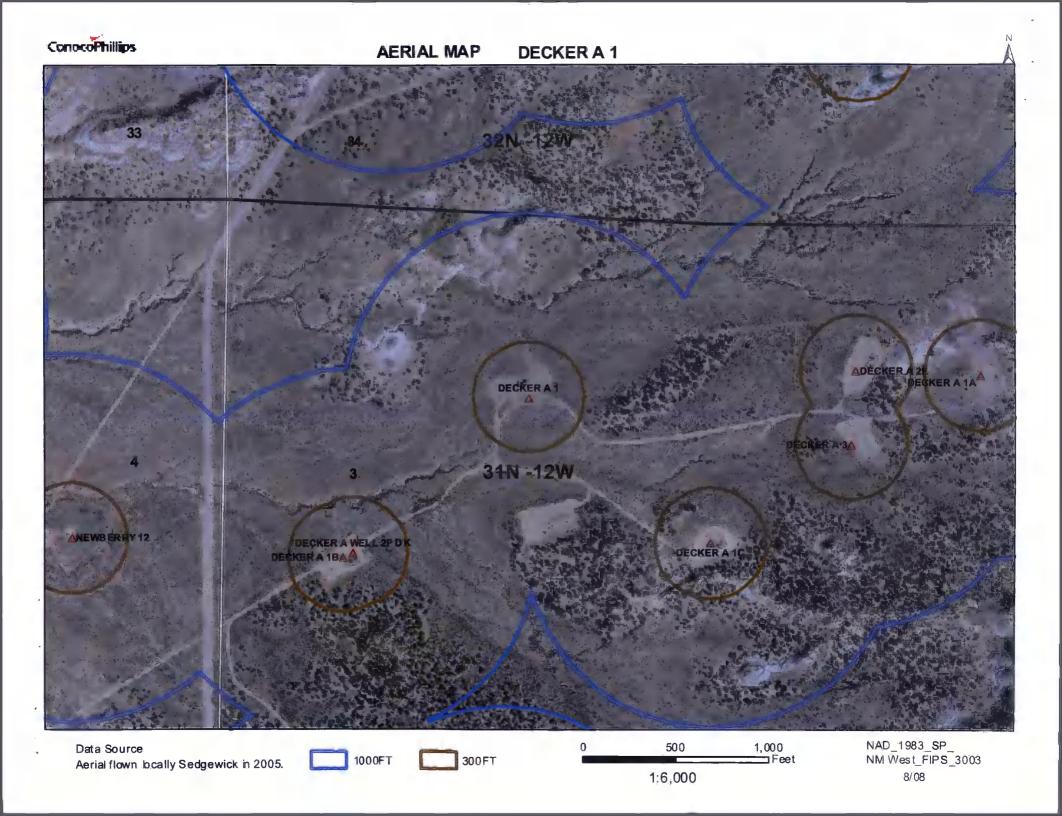
WATER COLUMN REPORT 08/20/2008

_							3=SW 4									
(đư	arter						small	est)			Depth	Depth	Water	(in	feet)	
POD Number	Tws	Rng					Zone		X	Y	Well	Water	Column			
SJ 01187 CLW226675	32N	13W		_	4	_					24	9	15			
SJ 01187	32N	13W		3		4					24	9	15			
SJ 01353	32N	13W		4								38				
SJ 01439	32N	13W		4	3						45	25	20			
SJ 02068	32N	13W		2							45	16	2.9			
SJ 01549	32N	13W		2							47	28	19			
SJ 02985	32N	13W	15	2		2					. 47	25	22			
SJ 02350	32N	13W		2							26					
SJ 02865	32N	13W		2		2					44	29	15			
SJ 02558	32N	13W		3		4					41	23	18			
SJ 02934	32N	13W	15	4		1					34	18	16			
SJ 02890	32N	13W	15	4		2 .					55	30	25			
SJ 02705	32N	13W		1							25	12	13			
SJ 02704	32N	13W		1							25	12	13			
SJ 03111	32N	13W		2		4					19	6	13			
SJ 02848	32N	13W		2							608	50	558			
SJ 00922	32N	13W		3		4					27	12	15			
SJ 00906 X	32N	13W		3							86	26	60			
SJ 02918	32N	13W		3		2					51	30	21			
SJ 00736	32N	13W		4							40	15	25			
SJ 00339	_ 32N	13W		4							50	12	38			
SJ 00340	32N	13W		4	1	3					50	12	38			
SJ 02847	32N	13W	22	4	4	1					1255		1255			
SJ 03123	_ 32N	13W		3	4	1					3.0					
SJ 03524	_ 32N	13W	27		4	1					33	10	.23			
SJ 03525	32N	13W	27	4	3	1					71	12	59			
SJ 01285	32N	13W	28	3	1	4					27					
SJ 03256	32N	13W	34	1	4	2					21	6	15			
SJ 03037	32N	13W	34	1	4	3					100					
SJ 03066	32N	13W	34	2	2	2					41	28	13			
SJ 01079	32N	13W	34	3	3						100	30	70			
SJ 01943	32N	13W	34	4							8	3	5			

SJ 02901	32N	13W 34	4 2 2	50		
SJ 03635	32N	13W 34	4 2 4	44	35	9
SJ 02577	32N	13W 34	4 4	30	15	15
SJ 03090	32N	13W 35	3 1 1	59	47	12
SJ 02589	32N	13W 35	3 3 2	60	35	25
SJ 02783	32N	13W 35	3 3 4	62	48	14

Record Count: 38

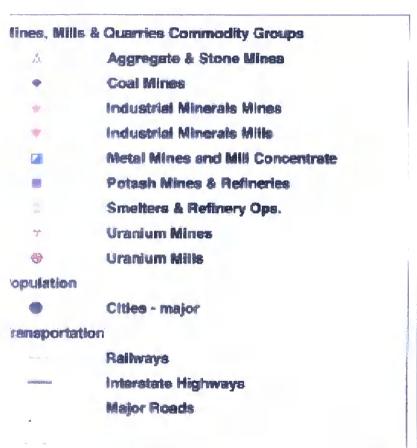


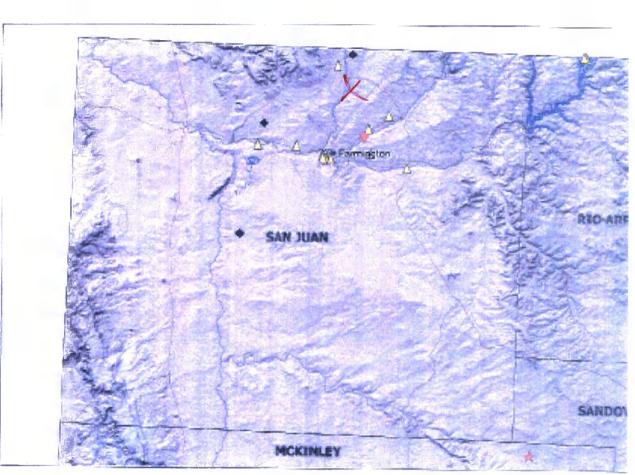


Mines, Mills and Quarries Web Map

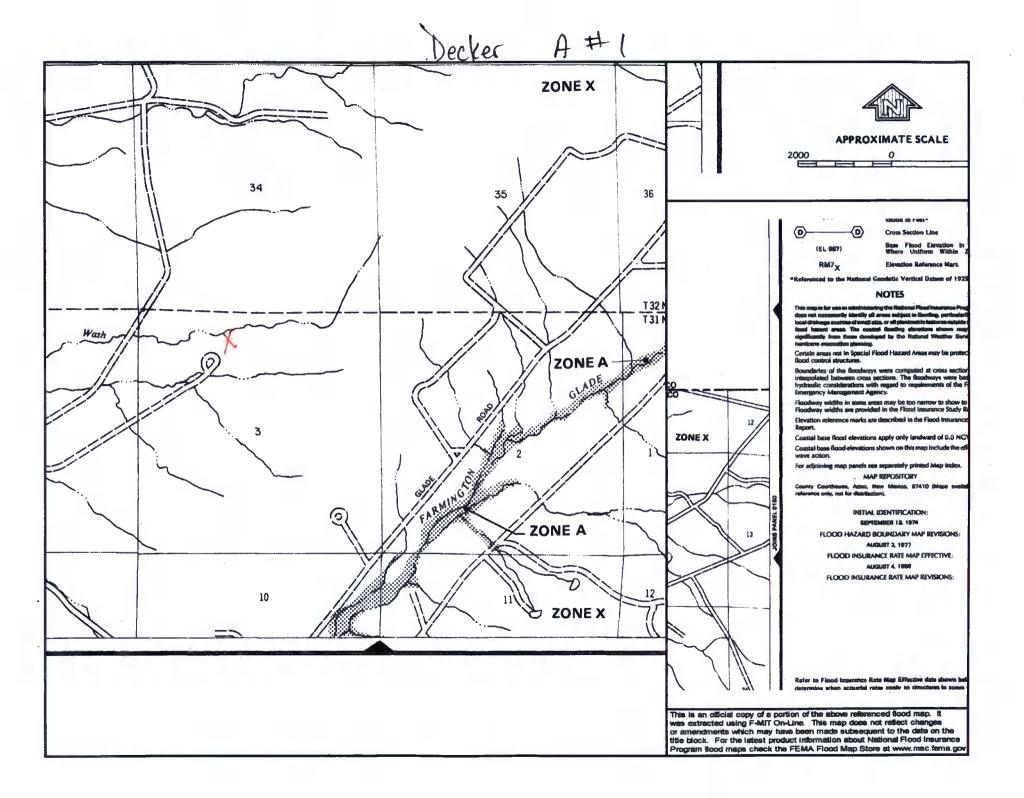
DECKER A 1

Unit Letter: C, Section: 03, Town: 031N, Range: 012W









DECKER A1

Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'DECKER A 1', which is located at 36.93219 degrees North latitude and 108.0853 degrees West longitude. This location is located on the Abode Downs Ranch 7.5' USGS topographic quadrangle. This location is in section 3 of Township 31 North Range 12 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 La Plata, located 6.0 miles to the west. The nearest large town (population greater than 10,000) is Farmington, located 15.2 miles to the southwest (National Atlas). The nearest highway is State Highway 574, located 1.2 miles to the southwest. The location is on Private land and is 292 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Middle San Juan. Arizona, Colorado, New Mexico, Subbasin. This location is located 1863 meters or 6110 feet above sea level and receives 13.5 inches of rain each year. The vegetation at this location is classified as Inter-Mountain Basins Mixed Salt Desert Scrub as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 51 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 373 feet to the south and is classified by the USGS as an intermittent stream. The nearest perennial stream is 6,022 feet to the southeast. The nearest water body is 884 feet to the northwest. It is classified by the USGS as an intermittent lake and is 0.7 acres in size. The nearest spring is 28,641 feet to the north. 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 1,567 feet to the southwest. There is no wetland data available for this area. The slope at this location is 2 degrees to the west 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 NACIMIENTO FORMATION--Shale and sandstone with a Shale dominated formations of all ages substrate. The soil at this location is 'Blancot-Notal association, gently sloping' and is well drained and not hydric with moderate erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 2.7 miles to the north as indicated on the Mines, Mills and Quarries Map of New Mexico provided.

Regional Geological context:

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone e al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones.

Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3.500 feet.

Hydraulic Properties:

Reported well yields for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conductive to runoff than retention of precipitation.

References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper 552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p. Levings, G.W., Craigg, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.

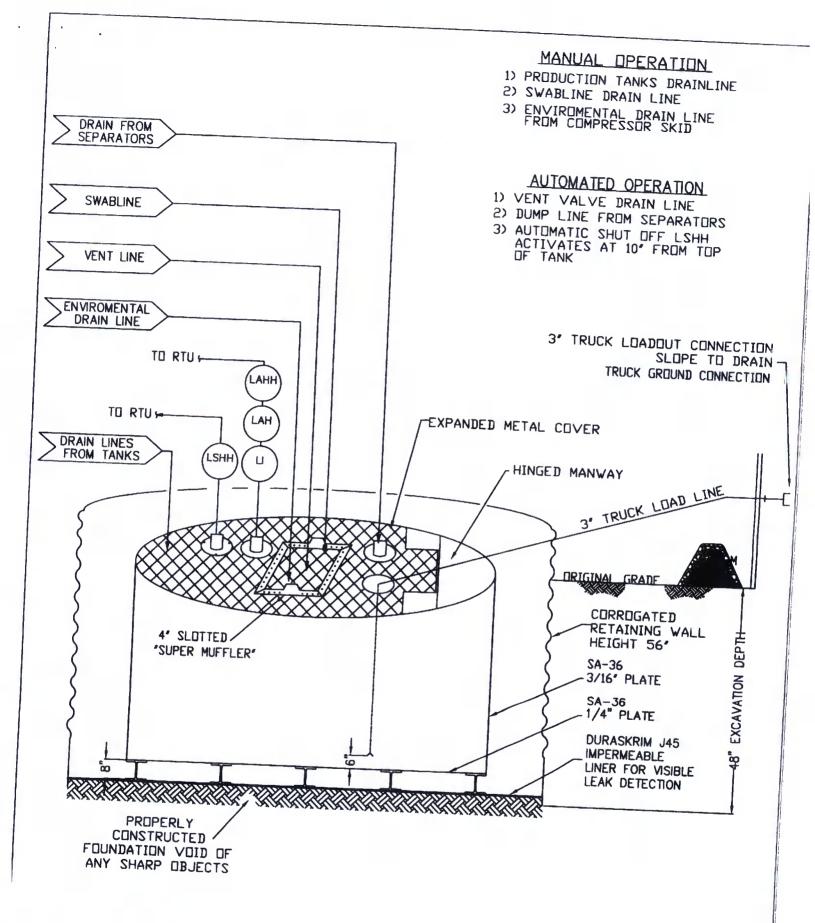
Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

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:

- 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.
- 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 personnel are not onsite.
- 4. BR will construct a screened, expanded metal covering, on the top of the BGT.
- 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.
- 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 belowleast 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.
- The general specification for design and construction are attached in the BR document.



ConocoPhillips

San Juan Business Unit

PRODUCED WATER PIT TANK OPEN TOP GRAVITY FLOW TANK INTERNALLY COATED WITH 12-14 MILS AMERON AMERCOAT 385

130, 136 a 145

PROPERTIES	TEST METHOD		30BB		36BB	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll	Min. Roll	Typical R
Appearance		Bla	ck/Black		Averages	Averages	Average
Thickness	ASTM D 5199	27 mil			k/Black	Blac	k/Black
Weight Lbs Per MSF			30 mil	32 mil	36 mil	40 mil	45 mil
(oz/yd²)	ASTM D 5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs (21.74)	168 lbs	189 lbs	210 lbs
Construction		**Evi			(24.19)	(27.21)	(30.24
Ply Adhesion	ASTM D 413	16 lbs	rusion laminated	with encapsul	ated tri-directio	nal scrim reinfor	cement
	1.01111.0 413	10 108	20 lbs	19 lbs	24 lbs	25 lbs	31 lbs
1" Tensile Strength	ASTM D 7003	88 lbf MD	110 lbf MD	90 lbf MD	113 lbf MD	110 lbf MD	+
1" Topolle Et	4	63 lbf DD	79 lbf DD	70 lbf DD	87 lbf DD	84 lbf DD	138 lbf M 105 lbf D
1" Tensile Elongation @ Break % (Film Break)	ASTM D 7003	550 MD	750 MD	550 MD	750 MD	550 MD	
1" Tensile Elongation @		550 DD	750 DD	550 DD	750 DD	550 DD	750 MD 750 DD
Peak % (Scrim Break)	ASTM D 7003	20 MD	33 MD	20 MD	30 MD	20 MD	
		20 DD	33 DD	20 DD	31DD	20 DD	36 MD 36 DD
Tongue Tear Strength	ASTM D 5884	75 lbf MD 75 lbf DD	97 lbf MD	75 lbf MD	104 lbf MD	100 lbf MD	117 lbf MI
		עט וטו פיי	90 lbf DD	75 lbf DD	92 lbf DD	100 lbf DD	118 lbf DE
Grab Tensile	ASTM D 7004	180 lbf MD	218 lbf MD	180 lbf MD	222 lbf MD	220 lbf MD	
		180 lbf DD	210 lbf DD	180 lbf DD	223 lbf DD	220 lbf DD	257 lbf MD 258 lbf DD
Trapezoid Tear	ASTM D 4533	120 lbf MD	146 lbf MD	130 lbf MD	189 lbf MD	160 440	
Dimongional Statilly		120 lbf DD	141 lbf DD	130 lbf DD	172 lbf DD	160 lbf MD 160 lbf DD	193 lbf MD 191 lbf DD
Dimensional Stability	ASTM D 1204	<1	<0.5	<1	<0.5	<1	
Puncture Resistance	ASTM D 4833	50 lbf	64 lbf	65 lbf			<0.5
Maximum Use Temperature		180° F	180° F		83 lbf	80 lbf	99 lbf
Minimum Use Temperature		-70° F		180° F	180° F	180° F	180° F
D = Machine Direction		-70 F	-70° F	-70° F	-70° F	-70° F	-70° F



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: RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and

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

AVEN INDUSTRIES

08/06

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. These dates will be updated prior 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

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 replacement of certain dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or determined that there is no claim under this Limited Warranty, Purchaser shall reimburse Raven Industries Inc. for its costs associated with the site inspection.

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 Industries 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 belowleast 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 oil from the fluid surface of a below-grade tank in an effort to prevent significant 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 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:

- 1. 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 of 19.15.17.11 NMAC within five years, if NMAC; b) permitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 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
- 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.
- 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; or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH 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 418.1 or other EPA method that the 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.
- 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, nonwaste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.
- 8. 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
 - 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 belowgrade 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