Received by OCD: 9/17/2021 11:18:51 AM Distric I 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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-144 July 21, 2008

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 F

1220 S. St. Francis Dr., Santa Fe, NM 87505	midden of axis by I may turn a stranger	Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.
	Pit, Closed-Loop System, Belo	w-Grade Tank or
Propos	ed Alternative Method Permit or	Closure Plan Application
Type of action:	X Permit of a pit, closed-loop system, beld	ow-grade tank, or proposed alternative method
	Closure of a pit, closed-loop system, bei	ow-grade tank, or proposed alternative method ow-grade tank, or proposed alternative method
BGT 1	Modification to an existing permit	ow-grade tank, or proposed alternative method
BGTT		ing pormitted as a second
		ing permitted or non-permitted pit, closed-loop system,
Instructions: Please submit one ap	pplication (Form C-144) per individual pit	closed-loop system below
Please be advised that approval of environment. Nor does approval relie	this request does not relieve the operator of liability should	operations result in pollution of surface water, ground water or the
1	Transfer to comply with any other	operations result in pollution of surface water, ground water or the rapplicable governmental authority's rules, regulations or ordinances.
Operator: Burlington Resources Oil	& Gas Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington	, NM 87499	14336
Facility or well name: MCADAMS 3	R	
	04530163 OCD Perm	it Number
U/L or Qtr/Qtr: J Section		
Center of Proposed Design: Latitude:	36.60069°N Longitud	Jan
Surface Owner: X Federal		or Indian Allotment NAD: X 1927 1983
Lined Unlined Liner  String-Reinforced  Liner Seams: Welded Factor  Closed-loop System: Subsection Type of Operation: P&A D  Drying Pad Above Ground S  Lined Unlined Liner typ  Liner Seams: Welded Factor	ritation P&A  rtype: Thickness mil LLD  rtype: Thickness mil LLD  rtype: Thickness mil LLD  rty Other Volume:  H of 19.15.17.11 NMAC  rrilling a new well Workover or Drilling (Apnotice of intent)  Steel Tanks Haul-off Bins Other  pe: Thickness mil LLDPE  rty Other	PE HDPE PVC Other
X Below-grade tank: Subsection I of Volume: 120 bbl Tank Construction material: Secondary containment with leak detection Visible sidewalls and liner Liner Type: Thickness	Type of fluid: Produced Water  Metal	
Alternative Method: Submittal of an exception request is required	. Exceptions must be submitted to the Santa Fe E	invironmental Bureau office for consideration of approval

Oil Conservation Division

Page 1 of 5

12/22/2008

Form C-144

Oil Conservation Division

Page 2 of 5

Temporary Pits, En	nergency Pits and Below-grade Ton	den Dommitt 1					
Instructions: Each of the	nergency Pits and Below-grade Tan the following items must be attached to the	application. Plea	se indicate, by a check mark in	ist: Subsection B of 19.15.17.9 NMAC the box, that the documents are attached.			
	- based upon the appropriate requirements of 10 15 17 to 20 17						
	appropriate requiremen	nts of 19 15 17 11	NMAC				
A Operating and	Maintenance Plan - based upon the ap-	propriate require	ments of 10 15 17 12 NA	territorial de la companya de la co Companya de la companya de la compa			
X Closure Plan (F 19.15.17.9 NM	Please complete Boxes 14 through 18, IAC and 19.15.17.13 NMAC	if applicable) - ba	ased upon the appropriate re	quirements of Subsection C of			
Previously Approve	ed Design (attach copy of design)	API		or Down is			
Closed-loop Systems Instructions: Each of the Geologic and H Siting Criteria Co Design Plan - ba Operating and M Closure Plan (Pl NMAC and 19.1 Previously Approved Previously Approved Previously Approved Hydrogeologic Re Siting Criteria Co Climatological Fa Certified Enginee Dike Protection an Leak Detection De Liner Specification Quality Control/Q Operating and Ma Freeboard and Ove	Permit Application Attachment Charles following items must be attached to the appropriate requirement. Compliance Demonstrations (only for chased upon the appropriate requirement. Maintenance Plan - based upon the apprease complete Boxes 14 through 18, if 15.17.13 NMAC did Design (attach copy of design) did Operating and Maintenance Plan  15.17.13 NMAC did Design (attach copy of design) did Operating and Maintenance Plan  15.17.13 NMAC did Design (attach copy of design) did Operating and Maintenance Plan  16.17.18 Subsection following items must be attached to the design of the plan did Structural Integrity Design: based upon the appropriate requirements and Compatibility Assessment - based upon the appropriate requirements of the plan of t	propriate requirements of 19.15.	phased upon the appropriate repuirements of 19.15.17.12 NMAC ments of 19.15.17.12 NMAC ments of 19.15.17.12 NMAC ments of 19.15.17.12 NMAC ments of 19.15.17.11 NMAC repuirements of 19.15.17.11 NMAC reprirate requirements of 19.15.17.11 NMAC reprirate requirements of 19.15.17.11 NMAC reprirate requirements of 19.15.17.11 NMAC	the box, that the documents are attached.  NMAC  NMAC  NMAC  NMAC  NMAC  15.17.11 NMAC			
Oil Field Waste Str	ream Characterization						
Monitoring and Ins	spection Plan						
Erosion Control Pla	an						
Closure Fian - base	ed upon the appropriate requirements of	of Subsection C o	f 19.15.17.9 NMAC and 19.	15.17.13 NMAC			
Proposed Closure: 1919	5 17 13 NIMAC						
Instructions: Please complete	te the applicable boxes, Boxes 14 through	h 18, in regards to	the proposed closure plan				
brining W	orkover Emergency Cavitation	п ПР&А Г	Permanent Pit   Pelan a	rade Tank Closed-loop System			
Alternative			J. c. manein Fit [A] Below-gi	rade Tank Closed-loop System			
Proposed Closure Method:	X Waste Excavation and Removal Waste Removal (Closed-loop system)	tems only)	rade Tank)				
	On-site Closure Method (only for	temporary pits an	d closed-loop systems)				
	In-place Burial	On-site Trench					
	Alternative Closure Method (Exce	eptions must be su	bmitted to the Santa Fe Envir	Onmental Burgass for			
15							
Waste Excavation and Re	moval Closure Plan Checklist: (19.1	5.17.13 NMAC) I	astructions: Fach of the fall	ring items must be attached to the closure pi			
X Protocols and Proced	ark in the box, that the documents are at	ttached.	Luch of the follow	ing tiems must be attached to the closure pl	lan.		
X Confirmation Sampli	lures - based upon the appropriate required Plan (if a pull)	airements of 19.1	5.17.13 NMAC				
Commination Sample	ing Plan (if applicable) - based upon th	e approprieta		of 19.15.17.13 NMAC			
X Soil Backfill and Cov	me and Permit Number (for liquids, dr	illing fluids and o	drill cuttings)				
Duentin and Cov	ci Design specifications - based upon	the appropriate	requirements of Cubantin	H of 19.15.17.13 NMAC			
	The appropriate requirement	HIS OF Subsection	1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
one Reciamation Plan	n - based upon the appropriate requirer	ments of Subsecti	ion G of 19.15.17.13 NMAC				
		CONTRACTOR OF STREET					

16		
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Talinstructions: Please identify the facility or facilities for the disposal of liquids, drilling fluid are required.  Disposal Facility N.	ose unachment if more than two f	acilities
Disposal Facility Name: Dis	sposal Facility Permit #:	
D:		
Yes (If yes, please provide the information No	cur on or in areas that will not be used for future se	ervice and operations?
Re-vegetation Plan - based upon the appropriate requirements of Subsection  Site Reclamation Plan - based upon the appropriate requirements of Subsection	equirements of Subsection H of 19.15.17.13 NMAC	
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recomp for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please Communications of the consideration of approval.	nendations of acceptable source material are provided below be considered an exception which must be submitted to the S ase refer to 19.15.17.10 NMAC for guidance.	. Requests regarding changes to anta Fe Environmental Bureau office
Ground water is less than 50 feet below the bottom of the buried waste		
- NM Office of the State Engineer - iWATERS database search; USGS: Data obtained fi	rom nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried waste		∐N/A
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained fro		Yes No
Ground water is more than 100 foot below it.	om nearby wells	□N/A
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer, iWATERS 4 at 1		☐Yes ☐No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained fro	om nearby wells	□N/A
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse from the ordinary high-water mark).	tercourse 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 existence - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	e at the time of initial application.	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five he purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence at the NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of Within incorporated municipal houndaries or within a definition of the state of	ne time of the initial application.	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field of pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from Within 500 feet of a westland.	covered under a municipal ordinance adopted	Yes No
and a so leet of a welland	하고 살 바다는 아니는 하다는 아니라 아내려면 가는 아내는 아내는 아내는 아내는 아내는 아내는 아내는 아내는 아니는 아내는 아내는 아내는 아내는 아내는 아내는 아내는 아내는 아내는 아내	
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (co	ertification) of the proposed site	Yes No
are area overlying a substituace mine	사용 보고 있는 경기 등을 하는 것이 있다. 하는 이 전 사람들은 경기를 보고 있다면 하는 것이 되었다. 그는 사람들이 되었다면 하는 것이 없는데 없는데 하는데 되었다. 그렇게 되었다.	
Written confiramtion or verification or map from the NM EMNRD-Mining and Mineral Di Within an unstable area.	vision	∐Yes ∐No
Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Res Topographic map		Yes No
Within a 100-year floodplain.		
- FEMA map		∐Yes ∐No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the followy a check mark in the box, that the documents are attached.	lowing items must bee attached to the closure pla	n. Please indicate.
Siting Criteria Compliance Demonstrations - based upon the appropriate requirem		
Proof of Surface Owner Notice - based upon the appropriate requirements of Subs	ents of 19.15.17.10 NMAC	
Construction/Design Plan of Burial Trench (if applicable) based upon the appropr	ection F of 19.15.17.13 NMAC	
Construction/Design Plan of Temporary Pit (for in place buried of a design and but	late requirements of 19.15.17.11 NMAC	
Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - by Protocols and Procedures - based upon the appropriate requirements of 19.15.17.1	ased upon the appropriate requirements of 19.15.1	7.11 NMAC
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements Waste Material Sampling Plan, based upon the appropriate requirements.	3 NMAC	
Waste Material Sampling Plan - based upon the appropriate requirements of Subse	ection F of 10.15.17.13 NMAC	
Disposar I actively Name and Permit Number (for liquids drilling fluids and drill and		
		e achieved)
and the state of Cubacation I are		
Site Reclamation Plan - based upon the appropriate requirements of Subsection To 18	of 19.15.17.13 NMAC	

Operator Application I hereby certify that the	n Certification:			
I hereby certify that the				
	information submitted with this applicat	ion is true account	and and	
Name (Print):	Crystal Tafoya	is true, accurate a	ind complete to the be	
Signature:		. 0	Title:	Regulatory Technician
e-mail address:	Constal To	Jena	Date:	12/22/2008
c man address.	crystal tafoya@conocophillips	scom	Telephone:	505-326-9837
20				
20 OCD Approval:	Dommit A - U d d			
	Permit Application (including closur	re plan) Clo	osure Plan (only)	OCD Conditions (see attachment)
OCD Representative	Signature: CRWha	tohood		(see attachment)
			12 A 15 A 16	Approval Date: September 29, 202
litle: Environi	nental Specialist		OCD Permit	Number: BGT 1
			_ OCD FEITHE	Number: DG11
21				
losure Report (requi	red within 60 days of closure comp	pletion): Subsection K	-6.10.16.17.13.11.1	
enort is remined to be	re required to obtain an approved closur	re plan prior to imple	menting any closure	activities and submitting the closure report. The closure
pproved closure plan ha	band obtain I delivision within 60 days of	the completion of the	e closure activities. F	activities and submitting the closure report. The closure Please do not complete this section of the form until an
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			Closure Co	ompletion Date:
2				
losure Method:				
Waste Excavation	and Removal			
		re Method Alt	ternative Closure Met	hod Waste Removal (Closed-loop systems only)
in different from ap	proved plan, please explain.			(closed-toop systems only)
osure Report Regardin	Waste Removal Closure For Closed	loon Sustana Tru		
structions: Please identi	Waste Removal Closure For Closed- by the facility or facilities for where the	liquide drilling faci	dilize Above Ground	Steel Tanks or Haul-off Bins Only:
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Disposal Facility Name:			Disposal Facility Perm	
Disposal Facility Name:				iit Number:
			Disposal Facility D	
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Oil Conservation Division

Page 5 of 5

## New Mexico Office of the State Engineer POD Reports and Downloads

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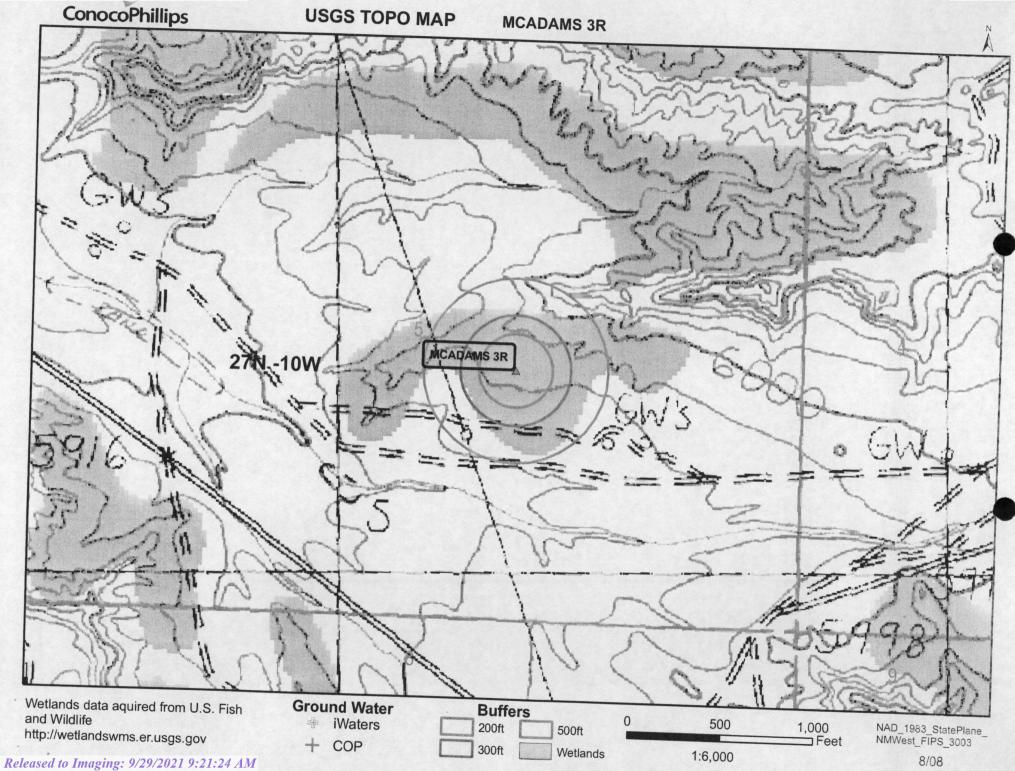
Record Count: 3

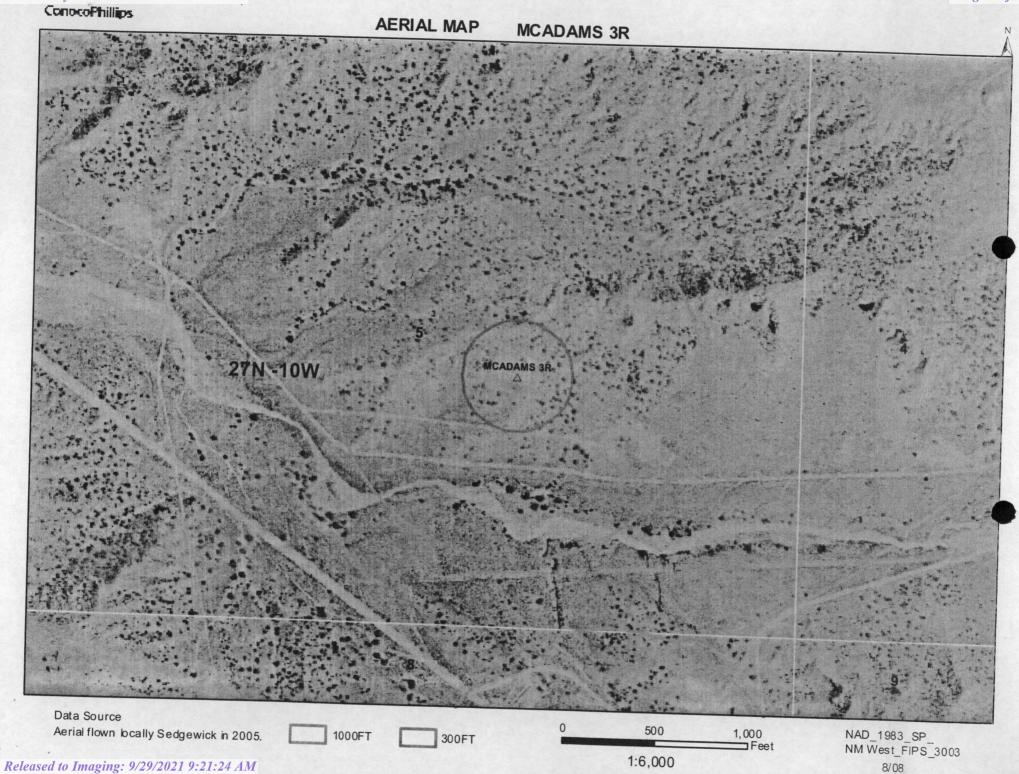
Page 1 of 1

## New Mexico Office of the State Engineer POD Reports and Downloads

Y Well Water Column			1 OD Weh	orts and Down	nloads				
County:  Basin:  Number:  Suffix:  Owner Name: (First)  (Last)  Non-Domestic Comestic All  POD/Surface Data Report  Avg Depth to Water Report  Water Column Report  Clear Form  iWATERS Menu  Help  WATER COLUMN REPORT 08/21/2008  (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest)  POD Number  Tws Rng Sec q q q Zone x y Well Water Column		Township: 28N	lange: 10W	Sections:					
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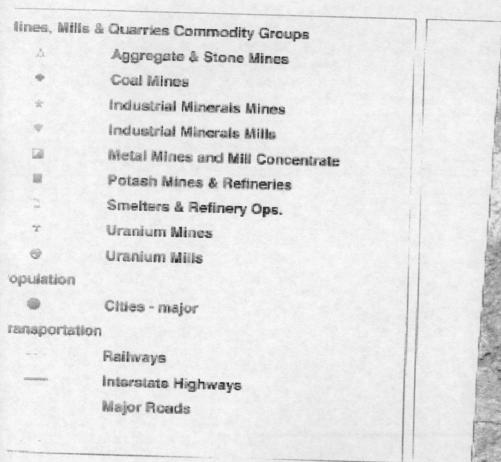


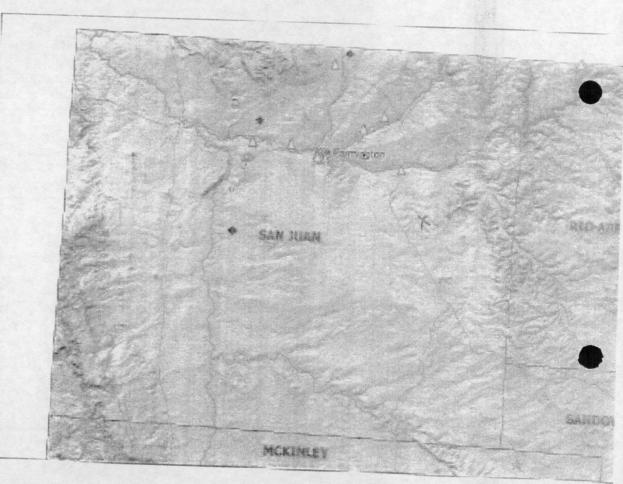


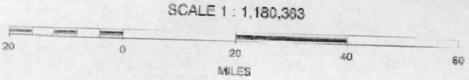
# Mines, Mills and Quarries Web Map

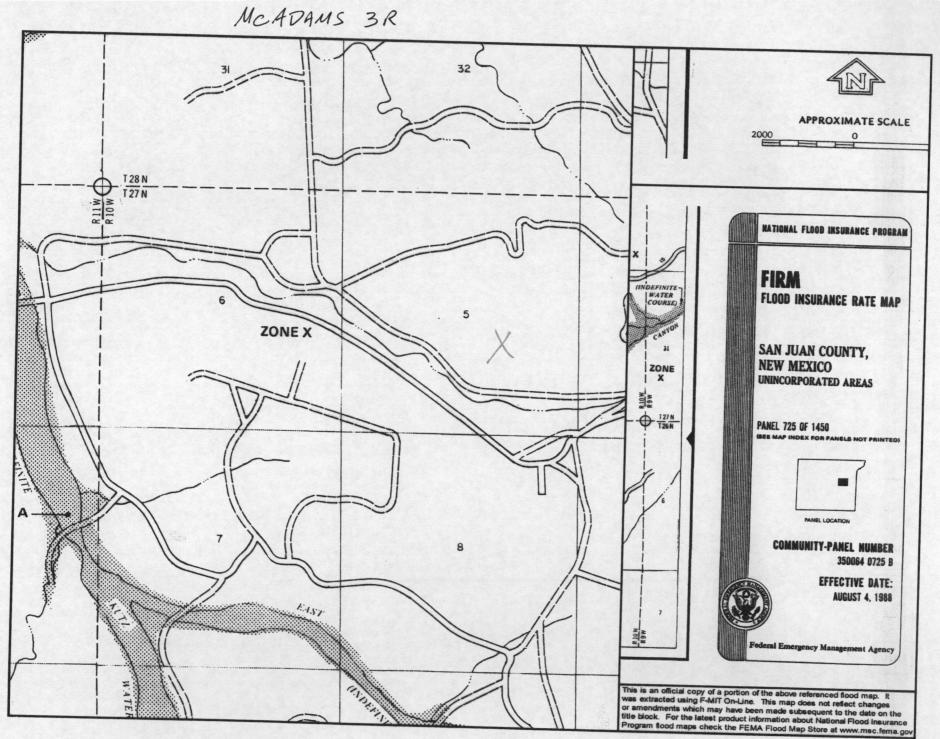
MCADAMS 3R

Unit Letter: J, Section: 05, Town: 027N, Range: 010W









## MCADAMS 3R

Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'MCADAMS 3R', which is located at 36.60069 degrees North latitude and 107.91443 degrees West longitude. This location is located on the East Fork Kutz Canyon 7.5' USGS topographic quadrangle. This location is in section 5 of Township 27 North Range 10 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 Bloomfield, located 8.6 miles to the northwest. The nearest large town (population greater than 10,000) is Farmington, located 18.6 miles to the northwest (National Atlas). The nearest highway is US Highway 550, located 4.7 miles to the southwest. The location is on BLM land and is 1,381 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Upper San Juan. Colorado. New Mexico, Sub-basin. This location is located 1816 meters or 5956 feet above sea level and receives 10.5 Woodland as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 37 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 764 feet to the southwest and is classified by the USGS as an intermittent stream. The nearest perennial stream is 6,059 feet to the northwest. The nearest water body is 2,355 feet to the south. It is classified by the USGS as an intermittent lake and is 0.1 acres in size. The nearest spring is 11,426 feet to the south. 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 2,343 feet to the south. The nearest wetland is a 659.0 acre Ravine located 5,066 feet to the west. The slope at this location is 4 degrees to the south 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 19.4 miles to the west 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

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 for the Animas or Nacimiento Formations is domestic and livestock supplies. There are no known aquifer tests 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

#### References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, eastcentral 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, 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 belowgrade 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 "Water-Hauling" Company indicating a high level 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 our compressor skids. The swab drain line is a manually operated drain and by 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.

### MANUAL OPERATION 1) PRODUCTION TANKS DRAINLINE 2) SWABLINE DRAIN LINE 3) ENVIROMENTAL DRAIN LINE FROM COMPRESSOR SKID DRAIN FROM SEPARATORS AUTOMATED OPERATION 1) VENT VALVE DRAIN LINE SWABLINE 2) DUMP LINE FROM SEPARATORS 3) AUTOMATIC SHUT OFF LSHH ACTIVATES AT 10' FROM TOP VENT LINE OF TANK ENVIROMENTAL DRAIN LINE 3" TRUCK LOADOUT CONNECTION TO RTU + SLOPE TO DRAIN TRUCK GROUND CONNECTION LAHH TO RTU 5 LAH EXPANDED METAL COVER DRAIN LINES FROM TANKS LSHH LI HINGED MANWAY 3' TRUCK LUAD LINE DRIGINAL GRADE CORROGATED RETAINING WALL 4" SLOTTED HEIGHT 56' 'SUPER MUFFLER' SA-36 3/16" PLATE SA-36 1/4" PLATE **DURASKRIM J45 IMPERMEABLE** 9 LINER FOR VISIBLE LEAK DETECTION PROPERLY CONSTRUCTED ' FOUNDATION VOID OF ANY SHARP DBJECTS

## ConocoPhillips

San Juan Business Unit

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

## DURA-SKRIM®

## J30, J36 & J45

PROPERTIES	TEST METHO	<b>)</b> ,	130BB	J	36BB		APPLICATION
40 (10) (10) (10) (10) (10) (10) (10) (10		Min. Roll Averages	Typical Roll Averages	Min. Roll	Typical Roll	MANAGEMENT OF THE PROPERTY OF	45BB Typical Roll
Appearance			ck/Black	Averages	Averages	Averages	Averages
Thickness	ASTM D 5199		T	Blac	ck/Black	Blad	ck/Black
Weight Lbs Per MSF		27 mil	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	168 lbs	189 lbs	210 lbs
Construction				(21.74)	(24.19)	(27.21)	(30.24)
Ply Adhesion	ASTM D 413	10 11	rusion laminate	with encapsul	ated tri-directio	nal scrim reinfo	rcement
	7.01111 0 413	10 IDS	20 lbs	19 lbs	24 lbs	25 lbs	31 lbs
1" Tensile Strength	ASTM D 7003	88 lbf MD 63 lbf DD	110 lbf MD 79 lbf DD	90 lbf MD 70 lbf DD	113 lbf MD 87 lbf DD	110 lbf MD 84 lbf DD	138 lbf MD 105 lbf DD
1" Tensile Elongation @ Break % (Film Break)	ASTM D 7003	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD	550 MD	750 MD
1" Tensile Elongation @ Peak % (Scrim Break)	ASTM D 7003	20 MD 20 DD	33 MD 33 DD	20 MD 20 DD	750 DD 30 MD	550 DD 20 MD	750 DD 36 MD
Tongue Tear Strength	ASTM D 5884	75 lbf MD 75 lbf DD	97 lbf MD 90 lbf DD	75 lbf MD 75 lbf DD	31DD 104 lbf MD	20 DD 100 lbf MD	36 DD 117 lbf MD
Grab Tensile	ASTM D 7004	180 lbf MD 180 lbf DD	218 lbf MD 210 lbf DD	180 lbf MD 180 lbf DD	92 lbf DD 222 lbf MD 223 lbf DD	100 lbf DD 220 lbf MD 220 lbf DD	118 lbf DD 257 lbf MD 258 lbf DD
Trapezoid Tear	ASTM D 4533	120 lbf MD 120 lbf DD	146 lbf MD 141 lbf DD	130 lbf MD 130 lbf DD	189 lbf MD 172 lbf DD	160 lbf MD	193 lbf MD
Dimensional Stability	ASTM D 1204	<1	<0.5			160 lbf DD	191 lbf DD
Puncture Resistance	ASTM D 4833	50 lbf		<1	<0.5	<1	<0.5
Maximum Use Temperature			64 lbf	65 lbf	83 lbf	80 lbf	99 lbf
linimum Use Temperature		180° F	180° F	180° F	180° F	180° F	180° F
= Machine Direction	IN THE STATE OF THE STATE OF	-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: RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF disclaims all liability for resulting loss or damage.

## 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** 

08/06

RAVEN

## 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

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 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 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 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:

- 1. 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
- 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 belowgrade 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.
- 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:

- 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 o f19.15.17.11 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 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 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BR shall notify the division of its results on form C-141.
- 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 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 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

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

QUESTIONS

Action 49745

#### **QUESTIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	49745
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

#### QUESTIONS

acility and Ground Water				
Please answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.				
Facility or Site Name	Not answered.			
Facility ID (f#), if known	Not answered.			
Facility Type	Below Grade Tank - (BGT)			
Well Name, include well number	Not answered.			
Well API, if associated with a well	Not answered.			
Pit / Tank Type	Not answered.			
Pit / Tank Name or Identifier	Not answered.			
Pit / Tank Opened Date, if known	Not answered.			
Pit / Tank Dimensions, Length (ft)	Not answered.			
Pit / Tank Dimensions, Width or Diameter (ft)	Not answered.			
Pit / Tank Dimensions, Depth (ft)	Not answered.			
Ground Water Depth (ft)	Not answered.			
Ground Water Impact	Not answered.			
Ground Water Quality (TDS)	Not answered.			

Below-Grade Tank		
Subsection I of 19.15.17.11 NMAC		
Volume / Capacity (bbls)	Not answered.	
Type of Fluid	Not answered.	
Pit / Tank Construction Material	Not answered.	
Secondary containment with leak detection	Not answered.	
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.	
Visible sidewalls and liner	Not answered.	
Visible sidewalls only	Not answered.	
Tank installed prior to June 18. 2008	Not answered.	
Other, Visible Notation. Please specify	Not answered.	
Liner Thickness (mil)	Not answered.	
HDPE (Liner Type)	Not answered.	
PVC (Liner Type)	Not answered.	
Other, Liner Type. Please specify (Variance Required)	Not answered.	

Fencing		
Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)		
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)  Not answered.		
Four foot height, four strands of barbed wire evenly spaced between one and four feet	Not answered.	
Alternate, Fencing. Please specify (Variance Required)	Not answered.	

Netting		
Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)		
Screen	Not answered.	
Netting	Not answered.	
Other, Netting. Please specify (Variance May Be Needed)	Not answered.	

#### Signs

Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)

12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	Not answered.
Signed in compliance with 19.15.16.8 NMAC	Not answered.

Variances and Exceptions		
Justifications and/or demonstrations ofequivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank:		
Variance(s):  Requests must be submitted to the appropriate division district for consideration of approval.	Not answered.	
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	Not answered.	

#### Siting Criteria (regarding permitting)

19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

Siting Criteria, General Siting		
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank	Not answered.	
NM Office of the State Engineer - iWATERS database search	Not answered.	
USGS	Not answered.	
Data obtained from nearby wells	Not answered.	

Siting Criteria, Below Grade Tanks		
Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark)	Not answered.	
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption	Not answered.	

Proposed Closure Method		
Below-grade Tank	Below Grade Tank - (BGT)	
Waste Excavation and Removal	Not answered.	
Alternate Closure Method. Please specify (Variance Required)	Not answered.	

Operator Application Certification	
Registered / Signature Date	Not answered.

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ACKNOWLEDGMENTS

Action 49745

#### **ACKNOWLEDGMENTS**

Operator:	OGRID:
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Houston, TX 77002	49745
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

#### **ACKNOWLEDGMENTS**

V	I acknowledge that I have received prior approval from the OCD to submit documentation of a legacy below-grade tank on behalf of my operator.
W.	I hereby certify that the information submitted with this documentation is true, accurate and complete to the best of my knowledge and belief.

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CONDITIONS

Action 49745

#### **CONDITIONS**

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#### CONDITIONS

Created By	Condition	Condition Date
cwhitehead	None	9/29/2021