District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave , Artesia, NM 88210

District III

# 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

1000 Rio Brazos Rd , Aztec, NM 87410	Santa Fe, NM 87505	For permanent pits and exceptions submit to the Santa Fe
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		Environmental Bureau office and provide a copy to the appropriate NMOCD District Office
OO S	losed-Loop System, Below-Gr	ade Tank, or
Proposed A	Iternative Method Permit or Cl	osure Plan Application
Type of action: X Perm	nit of a pit, closed-loop system, below-grade	e tank, or proposed alternative method
Close	ure of a pit, closed-loop system, below-grad	de tank, or proposed alternative method
Mod	ification to an existing permit	
• • • • • • • • • • • • • • • • • • • •	ure plan only submitted for an existing perm w-grade tank, or proposed alternative metho	nitted or non-permitted pit, closed-loop system, od
Instructions: Please submit one application	ı (Form C-144) per individual pit, closed-	loop system, below-grade tank or alternative request
-		ns result in pollution of surface water, ground water or the able governmental authority's rules, regulations or ordinances
1 Operator: Burlington Resources Oil & Gas C	Company, LP	OGRID#: 14538
Address: PO Box 4298, Farmington, NM 87		
Facility or well name: San Juan 28-6 Unit 16		,
API Number: 30-039-306	OCD Permit Nui	mber:
U/L or Qtr/Qtr: P(SE/SE) Section: 4		6W County: Rio Arriba
Center of Proposed Design: Latitude:	36.358132°N Longitude:	107.279825°W NAD: X 1927 1983
· — —	tate Private Tribal Trust or Inc	
Temporary: Drilling Workover Permanent Emergency Cavitation Lined Unlined Liner type: String-Reinforced Liner Seams: Welded Factory	P&A           Thickness         mil         LLDPE           Other         Volume:	HDPE PVC Other  bbl Dimensions L x W x D
X Closed-loop System: Subsection H of 19 Type of Operation: P&A X Drilling a  X Drying Pad X Above Ground Steel Ta  X Lined Unlined Liner type:	a new well Workover or Drilling (Applies notice of intent)	s to activities which require prior approval of a permit or  HDPE PVD Other Told No. 2007
Liner Seams: X Welded X Factory	Other	) · • · · · · · · · · · · · · · · · · ·
Tank Construction material:  Secondary containment with leak detection	7.11 NMAC  ype of fluid:  Visible sidewalls, liner, 6-inch lift and a lible sidewalls only  HDPE  PVC  Other	HECEINED &
5 Alternative Method:		
Submittal of an exception request is required. Exce	eptions must be submitted to the Santa Fe Envir	ronmental Bureau office for consideration of approval.
	-F Sand of the bank to Dilli	and an analysis of the state of

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks)  Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)  Four foot height, four strands of barbed wire evenly spaced between one and four feet				
Alternate. Please specify				
Netting: Subsection E of 19 15.17.11 NMAC (Applies to permanem pits and permanent open top tanks)  Screen Netting Other  Monthly inspections (If netting or screening is not physically feasible)				
Signs: Subsection C of 19.15 17.11 NMAC  12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  X Signed in compliance with 19 15.3 103 NMAC				
9 Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19 15.17 NMAC for guidance.				
Please check a box if one or more of the following is requested, if not leave blank:				
Administrative approval(s) Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for cons (Fencing/BGT Liner)	ideration of ap	proval.		
Exception(s) Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.				
Siting Criteria (regarding permitting): 19.15.17.10 NMAC  Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.				
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes	No		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes	□No		
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	No		
(Applies to temporary, emergency, or cavitation pits and helow-grade tanks)	□NA			
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	_			
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  (Applied to permanent pits)	☐Yes ☐NA	No		
- 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 stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.	Yes	No		
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.				
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes	No		
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes	No		
Within the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	Yes	No		
Within an unstable area.	Yes	□No		
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	🗆 '**	<b>□</b> .,,		
Within a 100-year floodplain	Yes	No		

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.				
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				
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC				
Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC				
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC				
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of				
19.15.17.9 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				
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				
Previously Approved Operating and Maintenance Plan API				
Treviously Approved operating and triannelisance Frant				
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC				
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.				
Hydrogeologic Report - based upon the requirements of Paragraph (I) of Subsection B of 19.15.17.9 NMAC				
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC				
Climatological Factors Assessment				
Certified Engineering Design Plans - based upon the appropriate requirements of 19 15.17 11 NMAC				
Dike Protection and Structural Integrity Design based upon the appropriate requirements of 19.15 17.11 NMAC  Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC				
Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC				
Quality Control/Quality Assurance Construction and Installation Plan				
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17 12 NMAC				
Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17 11 NMAC				
Nuisance or Hazardous Odors, including H2S, Prevention Plan				
Emergency Response Plan				
Oil Field Waste Stream Characterization				
Monitoring and Inspection Plan				
Erosion Control Plan				
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15 17.9 NMAC and 19 15 17.13 NMAC				
14				
Proposed Closure: 19.15.17.13 NMAC				
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.				
Type. Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank X Closed-loop System  Alternative				
Proposed Closure Method: Waste Excavation and Removal				
X Waste Removal (Closed-loop systems only)				
On-site Closure Method (only for temporary pits and closed-loop systems)				
☐ In-place Burial ☐ On-site Trench				
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.				
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC				
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15 17.13 NMAC				
Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19 15.17 13 NMAC				
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC				
Ste Reclamation 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 St Instructions Please identify the facility or facilities for the disposal of liquids, drilln	teel Tanks or Haul-off Bins Only: (19 15.17.13 D NMAC)	facilines
are required		,
Disposal Facility Name: Envirotech	Disposal Facility Permit #: NM-01-0011	
Disposal Facility Name. Basın Dısposal Facility	Disposal Facility Permit # NM-01-005	
Will any of the proposed closed-loop system operations and associated activit  Yes (If yes, please provide the information  No		service and operations?
Required for impacted areas which will not be used for future service and operation.  Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subs  Site Reclamation Plan - based upon the appropriate requirements of Si	riate requirements of Subsection H of 19.15.17.13 NMA section I of 19.15 17.13 NMAC	AC
17  Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NM. Instructions Each siting criteria requires a demonstration of compliance in the closure plan. certain siting criteria may require administrative approval from the appropriate district offic for consideration of approval Justifications and/or demonstrations of equivalency are requi	. Recommendations of acceptable source material are provided bei ce or may be considered an exception which must be submitted to th	
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 of	btained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the bottom of the buried was	ste	Yes No
- NM Office of the State Engineer - (WATERS database search; USGS; Data ob		N/A
Ground water is more than 100 feet below the bottom of the buried waste.		Yes No
- NM Office of the State Engineer - (WATERS database search; USGS, Data ob	otained from nearby wells	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signi (measured from the ordinary high-water mark).	ificant 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 is - Visual inspection (certification) of the proposed site; Aerial photo; satellite image		Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less t purposes, or within 1000 horizontal fee of any other fresh water well or spring, in exist a NM Office of the State Engineer - iWATERS database; Visual inspection (certiwithin incorporated municipal boundaries or within a defined municipal fresh water pursuant to NMSA 1978, Section 3-27-3, as amended  - Written confirmation or verification from the municipality; Written approval of	istence at the time of the initial application.  (fication) of the proposed site  well field covered under a municipal ordinance adopted	Yes No
Within 500 feet of a wetland  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual in	, ,	Yes No
Within the area overlying a subsurface mine.		Yes No
- Written confirantion or verification or map from the NM EMNRD-Mining and	Mineral Division	
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & I	Mineral Resources; USGS; NM Geological Society,	Yes No
Topographic map Within a 100-year floodplain - FEMA map		Yes No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each by a check mark in the box, that the documents are attached.	h of the following items must bee attached to the closu	ıre plan. Please indicate,
Siting Criteria Compliance Demonstrations - based upon the appropria	ate requirements of 19.15.17.10 NMAC	
Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19 15 17 13 NMAC		
Construction/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 drying pad) - based upon the appropriate requirements of 19.15 17.11 NMAC		
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC		
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC		
Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)		
Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)   Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15 17.13 NMAC		
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC		
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC		

19
Operator Application Certification:  I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief
Name (Print):  Ethel Tally  Title:  Staff Regulatory Technician
e-mail address ethel tally@conocophillips@m Telephone 505-599-4027
20
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Spand Sell. Approval Date: 1-15.09
Title: Envirols pec OCD Permit Number:
21
Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC
Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure
report is required to be submitted to the division within 60 days of the completion of the closure activities Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed
Closure Completion Date:
Cosure Completion Date.
Classica Mathada
Closure Method:  Waste Excavation and Removal  On-site Closure Method  Alternative Closure Method  Waste Removal (Closed-loop systems only)
If different from approved plan, please explain.
I different from approved plan, please explain.
23 Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:
Instructions: Please identify the facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities
were utilized.
Disposal Facility Name: Disposal Facility Permit Number
Disposal Facility Name: Disposal Facility Permit Number
Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?  Yes (If yes, please demonstrate compliane to the items below)  No
Required for impacted areas which will not be used for future service and operations:
Site Reclamation (Photo Documentation)
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
24
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in
the box, that the documents are attached.  Proof of Closure Notice (surface owner and division)
Proof of Deed Notice (required for on-site closure)
Plot Plan (for on-site closures and temporary pits)
Confirmation Sampling Analytical Results (if applicable)
Waste Material Sampling Analytical Results (if applicable)
Disposal Facility Name and Permit Number
Soil Backfilling and Cover Installation
Re-vegetation Application Rates and Seeding Technique
Site Reclamation (Photo Documentation)
On-site Closure Location: Latitude: Longitude: NAD 1927 1983
25
Operator Closure Certification:  Thereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Talso certify that
the closure complies with all applicable closure requirements and conditions specified in the approved closure plan
Name (Print): Title:
Signature: Date:
e-mail address: Telephone

# Burlington Resources Oil & Gas Company, LP

### **Closed Loop Design:**

The closed loop design will not incorporate a temporary pit or below grade tank. The plan will utilize an above grade tank suitable for holding the cuttings and fluids generated during drilling operations. The volume of the tank shall be of a sufficient volume to maintain an adequate free board for periodic removal and disposal of cuttings and fluids.

Burlington Resources Oil & Gas Company, LP may incorporate the use of a 20 mil, string reinforced, LLDPE liner with factory welded seams to line the drying pad in order to minimize the volume of fluids to be disposed of. The drying pad will be designed to prevent contamination of fresh water, protect public health and the environment, and have sumps to facilitate the collection of liquids derived from drilling cuttings, as specified per subsection H of 19.15.17.11. The cuttings pad will be constructed above grade and containment will be through the use of earthen berms of sufficient height to contain the cuttings and prevent run-off of surface water or fluids. The drying pad area will replace the area of the drill site previously designated for the reserve pit. It will be signed in compliance with 19.15.3.103.NMAC. Frac tanks will be utilized on site for fresh water storage.

### **Closed Loop Operations and Maintenance:**

The closed loop system will be operated and maintained for solids and liquid containment to prevent ground water contamination as follows:

- Any free liquids will be recovered and reused or disposed of at the Basin Disposal Facility (Permit # NM-01-005). Reuse may include the relocating of liquids to be used in other permitted drilling operations.
- Drill solids will be recovered from location and hauled to a Envirotech (Permit #NM-01-0011) periodically as required to maintain a safe free board in the cuttings tank. No onsite trench burial of cuttings will occur.
- 3. In the event a drying pad is utilized, the cuttings will be picked up and transported to Basin Disposal Facility (Permit #NM-01-005). The liner will be disposed of at the San Juan County Landfill located on CR 3100. The drying pad will be closed within 6 months from the date that the drilling rig is released. Berms constructed from native materials will be bladed on site to the location's contour.
- 4. Any drilling materials or trash will be stored and disposed of appropriately.
- 5. The NMOCD will be notified within 48 hours of the discovery of compromised integrity of the closed loop containment. Any required repairs will commence immediately.

#### **Closed Loop Closure Plan:**

- Upon completion of the drilling operations, all solids and liquids will be removed and disposed of to Envirotech (Permit #NM-01-0011) and Basin Disposal Facility (Permit # NM-01-005). Equipment shall also be removed from location. In the event a drying pad is utilized, the solids contained on the pad shall remain on site to allow sufficient drying and will then be transported to Envirotech (Permit # NM-01-0011) within 6 months from the date that the drilling rig is released.
- 2. After the drying pad is removed the surface below will be visually inspected for any contamination. If contamination is discovered a five point composite sample will be taken of the drying pad area using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

Components	Tests Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	500

- 3. 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.
- 4. Notification will be sent to OCD when the reclaimed area is seeded.
- 5. BR shall seed the disturbed areas the first growing season after the operator closes the drying pad. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Туре	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS) = Purity X Germination/100 Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)

Source No. two (better quality)

Purity

50 percent

Purity

80 percent

Germination 40 percent Germination 63 percent
Percent PLS 20 percent Percent PLS 50 percent
Percent PLS 20 percent PLS 50 percent

5 lb. bulk seed required to make 2 lb. bulk seed required to make

1 lb. PLS 1 lb. PLS