District I

1625 NaFrench Dr., Hobbs, NM 88240

District III

1301 W Grand Ave , Artesia, NM 88210

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

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

Form C-144

July 21, 2008

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

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# 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 hability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: ConocoPhillips Company OGRID#: 217817
Address: PO Box 4289, Farmington, NM 87499
Facility or well name: SAN JUAN 30-5 UNIT 47N
API Number: 30-039- 30952 OCD Permit Number
U/L or Qtr/Qtr: L(NW/SW) Section: 17 Township: 30N Range: 5W County: Rio Arriba  Center of Proposed Design: Latitude: 36.809159 °N Longitude: 107.385764 °W NAD: 1927 X 1983  Surface Owner: X Federal State Private Tribal Trust or Indian Allotment
Permanent
Type of Operation P&A X Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  X Drying Pad X Above Ground Steel Tanks Haul-off Bins Other  X Lined Unlined Liner type Thickness 20 mil X LLDPE HDPE PVD Other
Liner Seams X Welded X Factory Other
Below-grade tank: Subsection I of 19 15 17 11 NMAC  Volume
5  Alternative Method:  Submittal of an exception request is required Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Fencing: Subsection D of 19 15 17 11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks)		
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, inst	itution or church)	
Four foot height, four strands of barbed wire evenly spaced between one and four feet  Alternate. Please specify		
7		
Netting: Subsection E of 19 15 17 11 NMAC (Applies to permanent pits and permanent open top tanks)		
Screen Netting Other		
Monthly inspections (If netting or screening is not physically feasible)		
8 Signs: Subsection C of 19 15 17 11 NMAC		
12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers		
X Signed in compliance with 19 15 3.103 NMAC		
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 consi (Fencing/BGT Liner)	deration of approval	
Exception(s) Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval		
10 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.	Пуез Пло	
- NM Office of the State Engineer - iWATERS database search; USGS, Data obtained from nearby wells		
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).	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 at the time of initial application.	Yes No	
(Applies to temporary, emergency, or cavitation pits and below-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.	Yes No	
(Applied to permanent pits)  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	∐NA	
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	Yes No	
adopted pursuant to NMSA 1978, Section 3-27-3, as amended - Written confirmation or verification from the municipality; Written approval obtained from the municipality		
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map, Topographic map; Visual inspection (certification) of the proposed site	Yes 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		
Within a 100-year floodplain - FEMA map	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  Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
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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
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  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 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)
15
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
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC
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Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel T. Instructions Please identify the facility or facilities for the disposal of liquids, drilling flui			
facilities are required	as and arm canings—ose anderment if m	ore mun two	
Disposal Facility Name Envirotech / JFJ Landfarm % IEI Dis	posal Facility Permit # NM-01-0011	/ NM-01-0010B	
Disposal Facility Name Basin Disposal Facility Dis	posal Facility Permit # NM-01-005		
Will any of the proposed closed-loop system operations and associated activities o  Yes (If yes, please provide the information No	ocur on or in areas that will not be used	I for future service and	
Required for impacted areas which will not be used for future service and operations:  Soil Backfill and Cover Design Specification - based upon the appropriate in Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	n I of 19 15 17 13 NMAC	17 13 NMAC	
17 Siting Criteria (Regarding on-site closure methods only: 19 15 17 10 NMAC Instructions: Each sting criteria requires a demonstration of compliance in the closure plan Recertain sting criteria may require administrative approval from the appropriate district office or office for consideration of approval. Justifications and/or demonstrations of equivalency are required.	may be considered an exception which must b	e submitted to the Santa Fe Environmental Bureau	
Ground water is less than 50 feet below the bottom of the buried waste	16	Yes No	
- NM Office of the State Engineer - iWATERS database search, USGS Data obtained	i from nearby wens	∐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 obtained	from nearby wells		
Ground water is more than 100 feet below the bottom of the buried waste		Yes No	
- NM Office of the State Engineer - 1WATERS database search, USGS, Data obtained	from nearby wells	∐N/A	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant (measured from the ordinary high-water mark).	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 existence.  - Visual inspection (certification) of the proposed site, Aerial photo, satellite image.	ence 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 households use for domestic or stock watering purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence at the time of the initial application  - NM Office of the State Engineer - iWATERS database, Visual inspection (certification) of the proposed site			
Within incorporated municipal boundaries or within a defined municipal fresh water well five pursuant to NMSA 1978, Section 3-27-3, as amended  - Written confirmation or verification from the municipality, Written approval obtained	-	opted Yes No	
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map, Topographic map, Visual inspection	• •	Yes No	
Within the area overlying a subsurface mine.		Yes No	
- Written confiramtion or verification or map from the NM EMNRD-Mining and Miner	al Division		
Within an unstable area	I December LICCS, NM Coolessed Service	Yes No	
Engineering measures incorporated into the design; NM Bureau of Geology & Minera Topographic map	ir Resources, USGS; INM Geologicar Socie	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Within a 100-year floodplain FEMA map		Yes No	
On-Site Closure Plan Checklist: (19 15 17 13 NMAC) Instructions: Each of the	he following items must bee attached	to the closure plan. Please indicate,	
by a check mark in the box, that the documents are attached.			
Siting Criteria Compliance Demonstrations - based upon the appropriate re			
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 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			
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)			
Soil Cover Design - based upon the appropriate requirements of Subsection			
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			

Operator Application Certification:  I hereby certify that the information submitted with this application is application and complete to the best of my knowledge and belief.		
Name (Print)  Marie En Jaramillo  Title: Staff Regulatory Technician		
e-mail address: Vmarie e.jaramiflo@cohocophillips.com Telephone. 1 505-326-9865		
20		
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)		
OCD Representative Signature: 326 Sell Approval Date: 4-15-10		
Title: Enviro (spec OCD Permit Number:		
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:		
22		
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		
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 facility or 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)		
Required for impacted areas which will not be used for future service and operations.		
Ste Reclamation (Photo Documentation)		
Soil Backfilling and Cover Installation		
Re-vegetation Application Rates and Seeding Technique		
24 <u>Closure Report Attachment Checklist:</u> 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		
Operator Closure Certification:		
I hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. I also 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:		

## ConocoPhillips Company

#### **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.

ConocoPhillips Company 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) or JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B). Reuse may include the relocating of liquids to be used in other permitted drilling operations.
- 2. Drill solids will be recovered from location and hauled to Envirotech (Permit #NM-01-0011) or JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B) 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) or JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B). 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:**

1. Upon completion of the drilling operations, all solids and liquids will be removed and disposed of to Envirotech (Permit #NM-01-0011) and/or Basin Disposal Facility (Permit #NM-01-005) and/or JFJ Landfarm % Industrial Ecosystem Inc. (Permit #NM-01-0010B). 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) or JFJ Landfarm % Industrial Ecosystem Inc. (Permit #NM-01-0010B) 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. COP 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) 50 percent

Purity

Source No. two (better quality) 80 percent

**Purity** Germination

40 percent

Germination

63 percent

20 percent Percent PLS 5 lb. bulk seed required to make Percent PLS

50 percent

2 lb. bulk seed required to make

1 lb. PLS

1 lb. PLS