District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, 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 systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

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

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method				
Type of action: 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-gr	ade tank or alternative request			
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental a				
Operator:Koch Exploration Company, LLCOGRID #:1280	7			
Address:PO Box 489, Aztec, NM 87410				
Facility or well name:Bisti 2 1				
U/L or Qtr/QtrNE/NE Section2 Township24N Range13W County:				
Center of Proposed Design: Latitude36.3486226Longitude108.1876922				
Surface Owner: Federal State Private Tribal Trust or Indian Allotment	NAD. [1927 [1963			
Pit: Subsection F or G of 19.15.17.11 NMAC	RCVD MAY 3'13			
Temporary: Drilling Workover	OIL CONS. DIV.			
Permanent Emergency Cavitation P&A				
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other				
String-Reinforced	· .			
Liner Seams: Welded Factory Other Volume: Dimensions:				
3. Subsection H of 19.15.17.11 NMAC				
Type of Operation: P&A \(\sime\) Drilling a new well \(\subseteq\) Workover or Drilling (Applies to activities which require prior approval of a permit or notice of				
intent) * Depression Not to be used for fluid storage.				
□ Drying Pad ☑ Above Ground Steel Tanks □ Haul-off Bins □ Other _Steel Mud Tank 40' x 10' in a 2 ½" Depression				
☐ Lined ☐ Unlined Liner type: Thickness20mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other				
Liner Seams: Welded Factory Other				

bbl Type of fluid:

☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off

Tank Construction material: __

Below-grade tank: Subsection I of 19.15.17.11 NMAC

☐ Visible sidewalls and liner ☐ _____ ☐ Other _

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 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) 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 permanent pits and permanent open top tanks). NA 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 ☐ Signed in compliance with 19.15.16.8 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 or the Santa Fe Environmental Bureau consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for		
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. - 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 significant watercourse or 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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA		
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA		
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 feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No		
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. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS: NM Geological Society; Topographic map	☐ Yes ☐ No		
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 NMAC			
☐ 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 Number: or Permit Number:			
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.			
☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC			
Previously Approved Design (attach copy of design) API Number:			
Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use			
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)			
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 (1) 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 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 H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control 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			
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 Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial 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 Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC			

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13. Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if facilities are required.	D NMAC) more than two			
Disposal Facility Name:JFJ Landfarm, LLC Disposal Facility Permit Number:NM-01-0010				
Disposal Facility Name: _Basin Disposal, Inc. / Aqua Moss Disposal Disposal Facility Permit Number:NM-01-00				
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that <i>will not</i> be used for future ser \(\subseteq \text{ Yes} \) (If yes, please provide the information below) \(\subseteq \emptyset{ No} \)	vice and operations?			
Required for impacted areas which will not be used for future service and operations: 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				
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. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate disting considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	rict office or may be			
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 from nearby wells	Yes No			
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No			
Ground water is more than 100 feet below the bottom of the buried waste. - 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 significant watercourse or 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. - 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 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. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
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. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; 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 following items must be 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 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 19.15.17.13 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 I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC				

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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):Don Johnson Title:Senior Operations Manager	
Signature:	
e-mail address:johnso4d@kochind.com Telephone:(505) 334-9111	
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) See From OCD Representative Signature: Approval Date: 5/6/2013	
Title: Compliance Office 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 is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete form until an approved closure plan has been obtained and the closure activities have been completed.	
Closure Completion Date:	
Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop system) If different from approved plan, please explain.	tems only)
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment two facilities were utilized.	t if more than
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 <i>will not</i> be used for future service and operation Yes (If yes, please demonstrate compliance to the items below) No	S?
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, 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 (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	by a check
On-site Closure Location: LatitudeLongitudeNAD: \[\begin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	83
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowled belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.	dge and
Name (Print): Title:	
Signature: Date:	
e-mail address: Telephone:	

Attachment to Form C-144 Closed Loop System Permit Application Bisti 2 1

Design Specifications

Koch Exploration Company, LLC (KEC) will design a closed loop system without incorporating a temporary pit or drying pad. The steel mud tank will be placed in an excavated depression, approximately 2 ½ feet deep x 40 feet long x 10 feet wide so that mud can gravity drain to the tank. The tank will be placed on 20 mil, string reinforced, LLDPE liner with factory welded seams. The tank volume shall be sufficient enough to maintain an adequate free-board that allows for periodic removal and disposal of solids and liquids.

KEC will sign the well location in compliance with 19.15.3.103. Frac tanks will be utilized on location for fresh water storage or excess drill fluids.

Operational and Maintenance Requirements

KEC will operate and maintain the closed loop system to contain liquids and solids to prevent contamination of fresh water and protect public health and environment.

- KEC will conserve drilling fluids by transferring liquids to frac tanks to assist in moving the rig tanks, whenever possible. All other drilling fluids will be disposed at Basin Disposal Inc., OCD Permit NM-01-005 or, Aqua Moss, OCD Permit NM-01-009 or other OCD approved facility.
- 2. KEC will not discharge into or store any hazardous waste in the closed loop system.
- 3. Drilling solids will be recovered from the location and disposed at JFJ Landfarm, LLC (Permit # NM-01-0010), aka IEI, periodically as required to maintain a safe free board in the cuttings tank. No onsite burial of the cuttings will occur.
- **4.** In the event that the closed loop system should develop a leak, then KEC shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage immediately.

Closure Plan

- Upon completion of the drilling operations, KEC shall remove any remaining liquids and dispose of them at Basin Disposal Inc., OCD Permit NM-01-005 or Aqua Moss, OCD Permit NM-01-009 and any remaining solids will be disposed at JFJ Landfarm, LLC (Permit # NM-01-0010) or other OCD approved facilities.
- 2. After the mud tank and liner are removed, the soil within the depression will be sampled to verify the absence of contamination. A five point composite sample will be collected to demonstrate that the following parameters aren't exceeded:

Benzene	EPA SW-846 8021 B or 8260B	0.2 mg/kg
BTEX	EPA SW-846 8021 B or 8260B	50 mg/kg
TPH	EPA SW-846, 418.1	2500 mg/kg
GRO/DRO	EPA SW-846 8015M	500 mg/kg
Chloridae	EPA 300 1	Greater of 500 i

Chlorides EPA 300.1 Greater of 500 mg/kg or background

- 3. KEC shall reclaim the areas associated with the closed loop system that are not determined to be part of the well site work area to a safe and stable condition that blends with the surrounding undisturbed area. Recontouring of the closed loop system area will match fit, shape, line, form and texture of the surrounding area. Reshaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed where needed to prevent erosion on a large scale. Final recontour shall have a uniform appearance with smooth surface, fitting the natural landscape. A soil cover will be installed per 19.15.17.13(H) and revegetation will be done in accordance with 19.15.17.13.(I).
- 4. KEC will seed the disturbed areas the first growing season after closing the closed loop system. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or BIA stipulated seed mixes will be used on Tribal 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. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation. KEC will notify the division when seeding and planting is done and when re-vegetation is complete.