



JUL - 1 2008

Form C-144
June 24, 2008

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

OCD-ARTESIA

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
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

Operator: <u>Chesapeake Operating, Inc.</u>	OGRID #: <u>147179</u>
Address <u>P.O. Box 18496 OKLAHOMA CITY, OK 73154-0496</u>	
Facility or well name: <u>LOTOS 14 Federal #1</u>	
API Number: <u>30-015-36069</u>	OCD Permit Number: _____
U/L or Qtr/Qtr <u>E</u> Section <u>14</u> Township <u>24S</u> Range <u>3/E</u> County: <u>Eddy</u>	
Center of Proposed Design: Latitude <u>32.218161</u> Longitude <u>-103.753472</u> NAD: <input checked="" type="checkbox"/> 1927 <input type="checkbox"/> 1983	
Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment	

<input type="checkbox"/> Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: <input type="checkbox"/> Drilling <input type="checkbox"/> Workover <input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> Steel Pit <input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ <input type="checkbox"/> String-Reinforced Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____	<input checked="" type="checkbox"/> Closed-loop System: Subsection H of 19.15.17.11 NMAC <input type="checkbox"/> Drying Pad <input type="checkbox"/> Tanks <input checked="" type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____ <input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____ Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: _____ bbl _____ yd ³ Dimensions: Length _____ x Width _____
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<input type="checkbox"/> Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: _____ bbl Type of fluid: _____ Tank Construction material: _____ <input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off <input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____ Liner type: Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	<input type="checkbox"/> Fencing: Subsection D of 19.15.17.11 NMAC <input type="checkbox"/> Chain link, six feet in height, two strands of barbed wire at top <input type="checkbox"/> Four foot height, four strands of barbed wire evenly spaced between one and four feet <input type="checkbox"/> Netting: Subsection E of 19.15.17.11 NMAC <input type="checkbox"/> Screen <input type="checkbox"/> Netting <input type="checkbox"/> Other _____ <input type="checkbox"/> Monthly inspections <input type="checkbox"/> Signs: Subsection C of 19.15.17.11 NMAC <input type="checkbox"/> 12"x24", 2' lettering, providing Operator's name, site location, and emergency telephone numbers <input type="checkbox"/> Signed in compliance with 19.15.3.103 NMAC
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<input type="checkbox"/> Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	<input type="checkbox"/> Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. <i>Please check a box if one or more of the following is requested, if not leave blank:</i> <input type="checkbox"/> Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. <input type="checkbox"/> Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
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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 - 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 (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations (required 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 - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

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
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

Proposed Closure: 19.15.17.13 NMAC

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ 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)

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 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. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

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| 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 | <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> NA |
| 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 | <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> NA |
| 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 | <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> NA |
| 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 | <input type="checkbox"/> Yes <input type="checkbox"/> 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 | <input type="checkbox"/> Yes <input type="checkbox"/> 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 | <input type="checkbox"/> Yes <input type="checkbox"/> 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 | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within 500 feet of a wetland.
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within the area overlying a subsurface mine.
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within an unstable area.
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Within a 100-year floodplain.
- FEMA map | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) <i>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.</i>	
<input type="checkbox"/> Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC <input type="checkbox"/> Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC <input checked="" type="checkbox"/> Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) <input type="checkbox"/> Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC <input type="checkbox"/> Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC <input type="checkbox"/> 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 Haul-off Bins Only: (19.15.17.13.D NMAC) <i>Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.</i>	
Disposal Facility Name: _____	Disposal Facility Permit Number: _____
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) <i>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.</i>	
<input type="checkbox"/> Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC <input type="checkbox"/> Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC <input type="checkbox"/> Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC <input type="checkbox"/> Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC <input type="checkbox"/> Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC <input type="checkbox"/> Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC <input type="checkbox"/> Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) <input type="checkbox"/> Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC <input type="checkbox"/> Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC <input type="checkbox"/> 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 true, accurate and complete to the best of my knowledge and belief.	
Name (Print) <u>Barbara J. Bale</u>	Title: <u>Sr. Regulatory Analyst</u>
Signature: <u>Barbara J. Bale</u>	Date: <u>06/30/08</u>
e-mail address: <u>bbale@chkenergy.com</u>	Telephone: <u>(405) 848-8000 Ext. 9112</u>
OCD Approval: <input checked="" type="checkbox"/> Permit Application (including closure plan) <input type="checkbox"/> Closure Plan (only)	
OCD Representative Signature: <u>Jim W. Gunn</u>	Approval Date: <u>7/2/08</u>
Title: <u>District II Supervisor</u>	OCD Permit Number: <u>020832</u>
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC <input type="checkbox"/> Closure Completion Date: _____	
Closure Method: <input type="checkbox"/> Waste Excavation and Removal <input type="checkbox"/> On-Site Closure Method <input type="checkbox"/> Alternative Closure Method <input type="checkbox"/> If different from approved plan, please explain.	
Closure Report Attachment Checklist: <i>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.</i>	
<input type="checkbox"/> Proof of Closure Notice <input type="checkbox"/> Proof of Deed Notice (if applicable) <input type="checkbox"/> Plot Plan <input type="checkbox"/> Confirmation Sampling Analytical Results <input type="checkbox"/> Waste Material Sampling Analytical Results <input type="checkbox"/> Disposal Facility Name and Permit Number <input type="checkbox"/> Soil Backfilling and Cover Installation <input type="checkbox"/> Re-vegetation Application Rates and Seeding Technique <input type="checkbox"/> Site Reclamation (Photo Documentation) On-site Closure Location: Latitude _____ Longitude _____ NAD: <input type="checkbox"/> 1927 <input type="checkbox"/> 1983	
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 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: _____



JUL - 1 2008
OCD-ARTESIA

Regulatory Department

**Chesapeake Operating, Inc.'s Closed Loop System
Lotos 14 Federal # 1
Unit E-Sec. 14, T-24S R-31E
Eddy Co., NM
API # 30-015-36069**

Equipment & Design:

Chesapeake Operating, Inc. is to use a closed loop system with roll-off steel pits.

- (2) Dual Motion "King Cobra" Shale Shakers
- (2) 250 bbl per/minute "Derrick DE" centrifuges
- (1) 500 bbl "frac" tank' for fresh water
- (1) 500 bbl "frac tank" brine water

Operations & Maintenance:

During each and every tour, the rig's drilling crew will inspect and monitor closely the drilling fluids contained within the steel pits and visually monitor any spill which may occur.

Within 48 hours should a spill, release or leak occur, the NMOCD District II office in Artesia (575-748-1283) will be notified. Please note that notifications may be made earlier to the district office should a greater release occur.

This is in keeping with the reporting requirements of NMOCD's rule 116.

Closure:

During and after drilling operations, liquids (which apply), all drill cuttings and drilling fluids will be hauled and disposed to the Controlled Recovery, Inc.'s location.

The permit number for the Lotos 14 Federal # 1 is: R9166