Form C-144 June 16, 2008

1625 N. French Dr., Hobbs, NM 88240 District II
1301 W. Grand Avenue, Artesia, NM 88210

District IV

District III

1220 S. St. Francis Dr., Santa Fe, NM 87505

1000 Rio Brazos Road, Aztec, NM 87410

Oil Conservation Division |||| 1 4 700220 South St. Francis Dr.

anta 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 appropriate appropriate NMOCD District Office.

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

State of New Mexico

Department

Minerals and Natural Resources

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 com-	ply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: COG OPERATING LLC	OGRID #:
Address: 550 WEST TEXAS, SUITE 1300 MIDLAND,	TX 79701
Facility or well name: ANDROMEDA FEDERAL #21	
	OCD Permit Number: P1-D0132
U/L or Qtr/Qtr ULFE Section 14 Township 15	S Range 31E County: CHAVES
Center of Proposed Design: Latitude N/A	
Surface Owner: 🛛 Federal 🔲 State 🔲 Private 🔲 Tribal Trust or Indian	Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC	☐ Closed-loop System: Subsection H of 19.15.17.11 NMAC
Temporary: Drilling Workover	☐ Drying Pad ☐ Tanks ☒ Haul-off Bins ☐ Other
☐ Permanent ☐ Emergency ☐ Cavitation	☐ Lined ☐ Unlined
☐ Lined ☐ Unlined	Liner type: Thicknessmil
Liner type: Thicknessmil	☐ Other
Other String-Reinforced	Seams: Welded Factory Other
Seams: Welded Factory Other	Volume:bblyd³
Volume: bbl Dimensions: L x W x D	Dimensions: Lengthx Width
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC
Volume:bbl	☐ Chain link, six feet in height, two strands of barbed wire at top
Type of fluid:	Four foot height, four strands of barbed wire evenly spaced between one and
Tank Construction material:	four fect
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other
☐ Visible sidewalls and liner	☐ Monthly inspections
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC
Other	12'x24', 2' lettering, providing Operator's name, site location, and
Liner type: Thicknessmil	emergency telephone numbers
Other	Signed in compliance with 19.15.3.103 NMAC
Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.
of approval.	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 office for
	consideration of approval. 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. (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 T
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 Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the dot 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. 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	9 NMAC
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 do attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 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:	19.15.17.9

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 de	ocuments 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 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 con	nsideration)
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.	
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 ☐ 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	☐ Yes ☐ No ☐ 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	☐ Yes ☐ No ☐ NA
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. - 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

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 Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facili
or facilities for the disposal of liquids, drilling fluids and drill cuttings.
Disposal Facility Name: CRI OR G M INC. Disposal Facility Permit Number: CRI (R9166) G M INC (711-019-001)
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 and Design of Burial Trench (if applicable) 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
Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.13.17.13 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 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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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): PHYLLIS A. EDWARDS Title: REGULATORY ANALYST
Signature: Dalles 1 - Edward Date: 7-1-08
e-mail address:
man waareoo.
OCD Approval: Permit Application (including closure plan) Closure Plan (only)
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Representative Signature: Approval Date: 7/15/08
OCD Representative Signature: Approval Date: 7/15/08 Title: OCD Permit Number: P1-00132
OCD Representative Signature: Approval Date:
OCD Representative Signature: Approval Date: 7/15/08 Title: Subsection OCD Permit Number: P OD 13 Closure Report (required within 60 days of closure completion): Subsection Subsection Closure Completion Date:
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Closed Loop Operation & Maintenance Procedure

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

Cuttings will be hauled to either:

CRI (permit number R9166) or GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

