District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210

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

1000 Rio Brazos Road, Aztec, NM 8741gUN 0 8 2012

District III

District IV

State of New Mexico HOBBS OCTENERGY 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
	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	k, 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.

Address:PO BOX 2107 - ROSWELL, NM 88202 Facility or well name:PECOS PUB STATE #1 API Number:3					
Facility or well name: PECOS PUB STATE #1 API Number: 30-025-40/010 OCD Permit Number: \$10-4725					
API Number: 30-025-40010 OCD Permit Number: 41-04725					
U/L or Qtr/Qtr J Section 27 Township _11 S Range 33 E County: LEA					
Center of Proposed Design: LatitudeN33 20' 05.85" LongitudeW103 36' 01.07" NAD: ☐1927 ☑ 1983					
Surface Owner: Federal State Private Tribal Trust or Indian Allotment					
2.					
Pit: Subsection F or G of 19.15.17.11 NMAC					
Temporary: Drilling Workover					
Permanent Emergency Cavitation P&A					
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other					
☐ String-Reinforced					
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D					
N. Character H. C. 10. 15.17.11. NMAC					
 \(\sum_{\text{Closed-loop System}} \): Subsection H of 19.15.17.11 NMAC \(\sum_{\text{System}} \): Subsection H of 19.15.17.11 NMAC \(\sum_{\text{System}} \): Operation: □ P&A \(\sum_{\text{Drilling a new well}} \) Drilling (Workover or Drilling (Applies to activities which require prior approval of a permit or notice of the content of the con					
intent)					
☐ Drying Pad ☐ Above Ground Steel Tanks ☒ Haul-off Bins ☐ Other					
Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other					
Liner Seams: Welded Factory Other					
-					
Below-grade tank: Subsection I of 19.15.17.11 NMAC					
Volume:bbl Type of fluid:					
Tank Construction material:					
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off					
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other					
Liner type: Thicknessmil					
s. Alternative Method:					

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					
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)					
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					
9.					
Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.					
Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau of the Santa Fe En	office for				
consideration of approval.	office for				
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 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)	☐ Yes ☐ No ☑ 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				
(Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	⊠ 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.	☐ Yes ☑ No				
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site					
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No				
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☑ No				
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☒ No				
Within an unstable area. - 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				

11.							
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)							
13. 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 H ₂ S, 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 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 G of 19.15.17.13 NMAC							

16. Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Instructions: Please indentify the facility or facilities for the disposal of liquids facilities are required.		
Disposal Facility Name: GANDY & MARLEY, INC	Disposal Facility Permit Number: NM	<u>и-01-0019</u>
Disposal Facility Name:	Disposal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities o ☐ Yes (If yes, please provide the information below) ☒ No	occur on or in areas that will not be used for	future service and operations?
Required for impacted areas which will not be used for future service and operati Soil Backfill and Cover Design Specifications based upon the appropriat Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	te requirements of Subsection H of 19.15.17. In I of 19.15.17.13 NMAC	.13 NMAC
17. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may requiconsidered an exception which must be submitted to the Santa Fe Environment demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC	ire administrative approval from the approp al Bureau office for consideration of appro	oriate district 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; Da	ata 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; Da	ata 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; Da	ata obtained from nearby wells	☐ Yes ☐ No ☐ NA
 Within 300 feet of a continuously flowing watercourse, or 200 feet of any other si lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	gnificant watercourse or lakebed, sinkhole, o	or playa Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or churc - Visual inspection (certification) of the proposed site; Aerial photo; Satelli		on.
Within 500 horizontal feet of a private, domestic fresh water well or spring that le watering purposes, or within 1000 horizontal feet of any other fresh water well or NM Office of the State Engineer - iWATERS database; Visual inspection	spring, in existence at the time of initial app	
Within incorporated municipal boundaries or within a defined municipal fresh wa adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written appro	•	inance Yes No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	ual 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-Minim	ng and Mineral Division	☐ Yes ☐ No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map 	gy & Mineral Resources; USGS; NM Geolog	gical 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 by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the a Construction/Design Plan of Temporary Pit (for in-place burial of a drying Protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate re Waste Material Sampling Plan - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	quirements of 19.15.17.10 NMAC of Subsection F of 19.15.17.13 NMAC appropriate requirements of 19.15.17.11 NM. pad) - based upon the appropriate requirements. 15.17.13 NMAC quirements of Subsection F of 19.15.17.13 NMAC f Subsection F of 19.15.17.13 NMAC drill cuttings or in case on-site closure stand. H of 19.15.17.13 NMAC of 10 of 19.15.17.13 NMAC	AC nts of 19.15.17.11 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): MIKE HANAGAN Title: MANAGING MEMBER	-				
Signature: Date:					
e-mail address: mike@manzanoenergy.com Telephone: 575-623-1996					
20. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)					
OCD Representative Signature:Approval Date:Approval Date:Approval Date:Approval Date:					
Title: PETROLEUM ENGINEER OCD Permit Number: P1-04725	<u>-</u> _				
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:					
12.	=				
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. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more that 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 compliance to the items below) No					
Required for impacted areas which will not be used for future service and operations: Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique					
24.	_				
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (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)					
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 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:					

STATE OF NEW MEXICO EMNRD - OCD

Closed-Loop Systems Permit Application Attachment – Pecos Pub State #1

Design Plan

A closed-loop system will be used while drilling the Pecos Pub state #1 in order to separate and contain all oil, water, drilling fluid, and drill cuttings. Returns from drilling operations will travel up the wellbore annulus, through a flowline at the surface, and into the closed-loop system. As the returning drilling fluid exits the flowline it will pass over two shakers with screens sized to more effectively separate liquids from solids. Liquids will be discharged into temporary above ground steel mud pits for reuse in drilling procedures. Solids will be shaken off into steel haul-off cuttings bins. Two centrifuges placed above the haul-off bins will have suction lines placed under the shaker with liquid discharge in the steel mud pits. The fluid suctioned here will pass through the centrifuges, dropping out any remaining solids into the steel haul-off bins used by the shaker discharge. Once a steel haul-off bin is adequately filled, it will be replaced by an empty bin and hauled away for disposal. This system will keep all drilling fluids and drill cuttings completely contained while waiting for re-use or until ready for disposal.

Operating and Maintenance Plan

The closed-loop system will be operated during all drilling, circulating, and drilling fluid-conditioning operations. The system will be monitored twenty four hours a day for the duration of drilling operations, and will contain only fluids and solids used or generated during drilling operations. Monitoring will include inspection of temporary steel pits, flowlines, solids control equipment, haul-off bins, mud-pump suction lines, and transfer lines between pits. Inspections will focus on leak prevention, detection, and remediation if leaks are found. Equipment condition and effectiveness will be closely monitored to ensure that no failures are encountered that would result in any foreign solids or fluids coming into contact with the ground. Flowlines and transfer lines will be checked regularly to ensure that no plugging is taking place.

Temporary steel pit levels will be monitored in order to keep at least two feet of freeboard as specified in subsection B of 19.15.17.12 NMAC in order to prevent overtopping. Haul-off bins containing solids will be monitored in order to prevent over filling or overflow of cuttings. All steel pits will be emptied and removed as soon as rig is released from location.

Closure Plan

The closed-loop system used on the Pecos Pub State #1 will use only above ground steel tanks for drilling fluids, and haul-off bins for drill cuttings. As soon as drilling operations are completed, the above ground tanks will be emptied of all drilling fluids, which will be disposed of at Gandy & Marley, Inc, facility permit number NM-01-0019. The drill cuttings generated during drilling operations will be removed from the location in haul-off bins and disposed of at the same disposal facility as drilling fluid. The cuttings will be removed from location as needed throughout drilling procedures. Once drilling is completed, any remaining bins containing cuttings will be transported to disposal facility, emptied, and cleaned thoroughly.