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

Form C-147
Revised April 3, 2017

NMOCD
APR 08 2019
DISTRICT III

Recycling Facility and/or Recycling Containment

Type of Facility: ☒ Recycling Facility ☒ Recycling Containment*

Type of action: ☐ Permit ☐ Registration ☒ Modification ☐ Extension ☐ Closure ☐ Other (explain) pCS1826341898

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

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.

1.

Operator: Enduring Resources IV, LLC (For multiple operators attach page with information) OGRID #: 372286

Address: 200 Energy Court, Farmington, New Mexico 87401

Facility or well name (include API# if associated with a well): NEU 2207-16B Water Recycle Facility / Containment

OCD Permit Number: #3RF-28 (For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr NW/4 NE/4 Section 16 Township 22N Range 7W County: Sandoval

Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.

☒ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude 36.144262 Longitude -107.576376 NAD83

Proposed Use: ☒ Drilling* ☒ Completion* ☒ Production* ☒ Plugging *

The re-use of produced water may NOT be used until fresh water zones are cased and cemented

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☒ Fluid Storage

☒ Above ground tanks ☒ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type

☐ Activity permitted under 19.15.36 NMAC explain type: ☐ Other explain

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date:

3.

☒ **Recycling Containment:**

☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)

Center of Recycling Containment (if applicable): Latitude 36.144262 Longitude -107.576376 NAD83

☐ For multiple or additional recycling containments, attach design and location information of each containment

☒ Lined ☐ Liner type: Thickness 60 mil ☐ LLDPE ☒ HDPE ☐ PVC ☐ Other

☒ String-Reinforced

Liner Seams: ☒ Welded ☐ Factory ☐ Other Volume: 309,800 bbl Dimensions: L 360' x W 360' x D 20'

☐ Recycling Containment Closure Completion Date:

Smith, Cory, EMNRD

From: Smith, Cory, EMNRD
Sent: Wednesday, April 10, 2019 1:27 PM
To: Andrea Felix
Cc: Powell, Brandon, EMNRD; Billings, Bradford, EMNRD
Subject: 3RF-28 &29 Modification Request

Andrea,

OCD has received the modification request to change the liner size of the primary liner to 45mil LLDPE to a 60 mil HDPE OCD has approved the modification request with the following conditions of approval

- Enduring will notify OCD at least 48 hours prior to covering the leak detection systems
- Enduring will verify that both leak detection systems are DRY and there is no water in the geosynthetic or sumps prior to covering and starting operations.
    - IF there is water Enduring must remove all water prior to starting/covering

If you have any additional questions please call.

Thanks,

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

4.

Bonding:

☒ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☐ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $_____ **(work on these facilities cannot commence until bonding amounts are approved)**

☐ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify 8 foot chain link fence

6.

Signs:

☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting

Ground water is less than 50 feet below the bottom of the Recycling Containment. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
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 ☐ NA
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals 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
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 1000 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 spring or a fresh water well used for domestic or stock watering purposes, 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 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No

9.

Recycling Facility and/or Containment Checklist:

Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☒ Design Plan - based upon the appropriate requirements. *Attached design plan section modification*
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☐ Closure Plan - based upon the appropriate requirements.
- ☐ Site Specific Groundwater Data -
- ☐ Siting Criteria Compliance Demonstrations –
- ☒ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.

Operator Application Certification:

I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): Andrea Felix Title: Regulatory Manager

Signature: Date: 4-8-2019

e-mail address: afelix@enduringresources.com Telephone: 505-386-8205

11.

OCD Representative Signature: **Approval Date:** 4/10/19

Title: Environmental Spec **OCD Permit Number:** 3RF-28

- ☐ OCD Conditions
- ☒ Additional OCD Conditions on Attachment /Email.

Enduring Resources IV, LLC
NEU Unit 2207-16B Recycling Facility / Containment
#3RF-28
Modification

Introduction

- 3.A Liner

Modification to liner: Addition of a 60-mil HDPE liner to serve as the primary liner.

The containment will be comprised of a primary 60-mil HDPE liner, secondary (existing) 45-mil string reinforced LLDPE liner and then a third (existing) 45-mil string reinforced LLDPE liner. The liner is in compliance with 19.1.34.12.

- 4.A Primary Liner material

Modification to Primary Material: Addition of a 60-mil HDPE liner

The primary liner will be a 60-mil HDPE liner that is composed of materials that is resistant to ultraviolet light, petroleum hydrocarbons, salt solutions, acidic solutions and alkaline solutions. Liner compatibility meets the conductivity requirement of 1×10^{-9} cm/sec. The liner is in compliance with 19.1.34.12.

- 7. Leak Detection

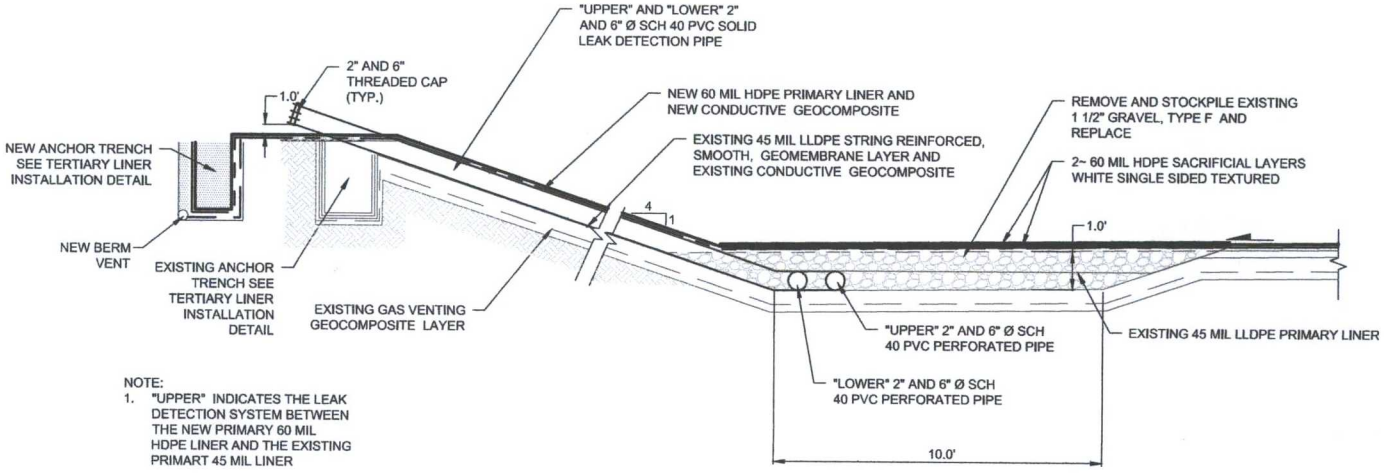
Modification to Leak Detection: Addition of a second leak detection system.

For reference there will be an upper and lower leak detection system in this containment.

Upper leak detection system: (New)
The leak detection system between the Primary (new) and the secondary (existing) lower geomembrane liner consists of a 200-mil geo net to facilitate drainage. The leak detection system consists of a properly designed drainage, collection and removal system placed above the secondary (existing) geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. A 3-foot-wide by 3-foot-long by 2-foot-deep depression will be constructed to allow for collection of any leaking liquid. A 2-inch and 6-inch PVC pipe will be installed in between the primary (new) and secondary (existing) liners from the top of the containment depression to allow for detection and removal of

liquid. The leak detection system is in compliance with 19.1.34.12

Lower leak detection system: (Existing)
The leak detection system between the secondary (existing old primary) and the third (existing prior secondary) lower geomembrane liner consists of a 200-mil geo net to facilitate drainage. The leak detection system consists of a properly designed drainage, collection and removal system placed above the third (existing prior secondary) geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. A 3-foot-wide by 3-foot-long by 2-foot-deep depression will be constructed to allow for collection of any leaking liquid. A 2-inch and 6-inch PVC pipe will be installed in between the secondary (existing old primary) and third liner (existing prior secondary) liners from the top of the containment depression to allow for detection and removal of liquid. The leak detection system is in compliance with 19.1.34.12



NOTE:

1. "UPPER" INDICATES THE LEAK DETECTION SYSTEM BETWEEN THE NEW PRIMARY 60 MIL HDPE LINER AND THE EXISTING PRIMART 45 MIL LINER
2. "LOWER" INDICATES THE LEAK DETECTION SYSTEM BETWEEN THE EXISTING PRIMARY 45 MIL LLDPE AND THE EXISTING SECONDARY 45 MIL LLDPE.

PRODUCED WATER PIT LEAK DETECTION

1 / C109

N.T.S.

INSTALLATION SEQUENCE

1. SLIT EXISTING PRIMARY LINER TO ACCESS GRAVEL FILLED SUMP AND INSTALL NEW LEAK DETECTION PIPING.
2. REMOVE 1 1/2" GRAVEL TYPE F AND STOCKPILE.
3. INSTALL "LOWER" LEAK DETECTION PIPING INTO SUMP.
4. PLACE 6" OF 1 1/2" GRAVEL TYPE F TO TOP OF "LOWER" LEAK DETECTION PIPING.
5. WELD EXISTING PIT LINER SLIT. PLACE EXISTING PRIMARY LINER OVER "LOWER" LEAK DETECTION PIPING AND GRAVEL.
6. INSTALL "UPPER" LEAK DETECTION PIPING.
7. PLACE 6" OF 1 1/2" GRAVEL, TYPE F TO TOP OF "UPPER" LEAK DETECTION PIPING PLUS 4".
8. PLACE NEW CONDUCTIVE GEOCOMPOSITE OVER SUMP AND EXISTING POND PRIMARY LINER. PLACE NEW 60 MIL HDPE PRIMARY LINER OVER SUMP AND OVER ENTIRE EXISTING PRIMARY LAYER.

NOTE:

1. "UPPER" INDICATES THE LEAK DETECTION SYSTEM BETWEEN THE NEW PRIMARY 60 MIL HDPE LINER AND THE EXISTING PRIMART 45 MIL LINER
2. "LOWER" INDICATES THE LEAK DETECTION SYSTEM BETWEEN THE EXISTING PRIMARY 45 MIL LLDPE AND THE EXISTING SECONDARY 45 MIL LLDPE.