

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 March 31, 2015

Recycling Facility and/or Recycling Containment

Type of Facility: Recycling Facility Recycling Containment*
Type of action: Permit Registration
 Modification Extension
 Closure Other (explain) _____

* 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: Devon Energy Production Company, L.P. (For multiple operators attach page with information) OGRID #: 6137
Address: 333 W. Sheridan, Oklahoma City, OK 73102-8260
Facility or well name (include API# if associated with a well): Hackberry 16 Recycling Containments and Facility API# Not Applicable
OCD Permit Number: 2RF-102 (For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr M Section 16 Township 19S Range 31E County: Eddy
Surface Owner: Federal State Private Tribal Trust or Indian Allotment

2.
 Recycling Facility:
Location of recycling facility (if applicable): Latitude 32° 39' 15.84" N Longitude 103° 52' 53.72" W NAD: 1927 1983
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 32° 39' 16.96" N Longitude 103° 52' 54.76" W NAD: 1927 1983
 For multiple or additional recycling containments, attach design and location information of each containment
 Lined Liner type: Thickness two 30_mil (Primary) one 40-mil (Secondary) LLDPE HDPE PVC Other _____
 String-Reinforced
Liner Seams: Welded Factory Other _____ Volume: 41,000 each_bbl Dimensions: diameter 158 ft, height 12 ft
 Recycling Containment Closure Completion Date: _____

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 ___ See previously-approved variance _____

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. <i>See Figures 1 and 2</i> NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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. <i>See Figure 5</i> - Written confirmation or verification from the municipality; written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within the area overlying a subsurface mine. <i>See Figure 7</i> - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. <i>See Figure 8</i> - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. FEMA map <i>See Figure 9</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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). <i>See Figure 3</i> - Topographic map; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. <i>See Figure 4</i> - Visual inspection (certification) of the proposed site; aerial photo; satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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. <i>See Figures 1 and 2</i> - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. <i>See Figure 6</i> - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.

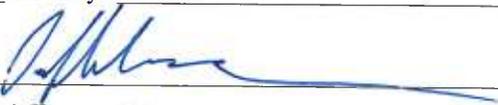
- Design Plan - based upon the appropriate requirements. *Appendix B*
- Operating and Maintenance Plan - based upon the appropriate requirements. *Appendix D*
- Closure Plan - based upon the appropriate requirements. *Appendix E*
- Site Specific Groundwater Data -
- Siting Criteria Compliance Demonstrations -
- 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): Jeff Sawyer Title: Water Management Engineer

Signature:  Date: March 31, 2015

e-mail address: jeff.sawyer@dvn.com Telephone: (405) 228-3066

11.

OCD Representative Signature: _____ Approval Date: 5/26/2015

Title: Environmental Specialist OCD Permit Number: 2RF-102

- OCD Conditions Remit monthly C-148 to the District II office
- Additional OCD Conditions on Attachment

[See attachment for Variance Request Response](#)



New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez

Governor

David Martin

Cabinet Secretary

Brett F. Woods, Ph.D.

Deputy Cabinet Secretary

David Catanach

Director, Oil Conservation Division



May 26, 2015

Mr. Jeff Sawyer
Devon Energy Corporation
333 W. Sheridan Ave.
Oklahoma City, Oklahoma 73102

RE: Variance Requests Associated with the Hackberry 16 Modular Containments for Recycling of Produced Water; Section 16 of Township 19 South, Range 31 East NMPM in Lea County, New Mexico

Jeff,

The Oil Conservation Division (OCD) has reviewed the Form C-147 registration package for the abovementioned produced water recycling facility submitted on Devon's behalf by R.T. Hicks Consultants, Ltd. and dated March 31, 2015. Within that registration, a number of variances to the recently revised regulations for the re-use of produced water (19.15.34 NMAC, otherwise referred to as "Part 34") are requested. The OCD has come to a decision on each of these variance requests which we be individually discussed below.

Part 34 requires "*The operator shall construct the containment in a levee with an inside grade no steeper than two horizontal feet to one vertical foot (2H:1V).*" (19.15.34.12 A. (2) NMAC) The proposed containments are aboveground having vertical sidewalls made of steel. This variance request is approved with the following conditions:

- Construction of the containment structures must be in accordance to the plans provided in the C-147 package by Rockwater Energy Solutions and Beck Engineering, Ltd.
- Temporary shoring during construction is the responsibility of Devon and their contractors.
- Panel Visual Inspection Check Sheets are the responsibility of Devon and must be retained for OCD inspection, if requested.
- Full sized engineered drawings must be electronically provided to the OCD.

Part 34 requires "*The top of the levee shall be wide enough to install an anchor trench...*" (19.15.34.12 A. (2) NMAC) The primary liners are to be anchored in place using mechanical clamps around the perimeter. This variance request is approved.

The primary liner system of the modular containments is to be comprised of two layers of 30-mil LLDPE rather than the "*...30-mil flexible PVC, 45-mil LLDPE string reinforced or 60-mil HDPE liners.*" cited in 19.15.34.12 A. (4) NMAC. It is OCD's understanding that the need for such a variance is that the single liner thickness cited in Part 34 is not sufficiently flexible and will not properly install within the vertically walled containment structure. As such, two thinner liners with a combined thickness equal to or greater than otherwise required is requested. This variance request is approved with the following conditions:

- If the modular containment is to remain in use for a time period of greater than two years, the primary liners must be removed and replaced with two new 30-mil liners.
- Devon must affirm the friction/slippage between the two primary liners will not degrade their functionality within the 2 year operational life.



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Part 34 requires fencing or enclosure to deter wildlife and human access (19.15.34.12 D. NMAC). Devon has requested that no fencing be required. This variance request is denied as no good cause was shown nor was an alternative provided.

Part 34 requires an operator to design and construct containments to prevent overtopping due to wave action or rainfall (19.15.34.12 A. (1) NMAC) and to maintain a minimum freeboard of three feet in any containment during operation (19.15.34.13 B. (2) NMAC). Devon has requested that they be allowed to operate these containments with minimum freeboard of 2 feet to allow for more liquid storage. This variance request is also denied as the analysis provided was somewhat qualitative, more centered on sidewall stability rather than overtopping, and did not account for potentially increased windspeeds at height or possible turbulence caused by multiple adjacent aboveground structures.

If you have any questions, please feel free to contact me at (505) 476-3465 or by email at jim.griswold@state.nm.us.

Respectfully,



Jim Griswold
Environmental Bureau Chief

cc: Randy Hicks, RT Hicks Consultants
Mike Bratcher and Heather Patterson, OCD District 2
Brad Billings, OCD