ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil conservation Division
506 W. Texas Ave.
Artesia, New Mexico 88210

Re: Request for Permit Modification to Add an AST and Commercialization to an Approved C-147 Containment and Recycle Facility (2RF-103) in Eddy County, New Mexico

Ms. Venegas,

Devon Energy (OGRID #6137) would like to request permission to modify the permit issued for their Trionyx Containment and Recycle Facility (2RF-103). This is a request for a permit modification to add an Above Ground Storage Tank (AST) to the facility as well as add a bonding component to allow this facility to operate commercially. Devon will file a bond for the amount calculated on the Closure Cost Estimate that is included in this submittal once approved.

Enclosed in this package are all the necessary documents that were affected by the addition of an AST containment and the commercialization of this facility.

- C-147 Form with the Modification Box Checked for the Existing Containment
- C-147 Form with the Modification Box Checked for the Additional AST
- Variance requests for the AST containment
- Design and Construction Plan
- Operations and Maintenance Plan
- AST Leak Detection Plan
- Closure Cost Estimate Stamped by an Engineer Licensed in the State of New Mexico

A bond in the amount estimated will be filed accordingly once approved.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,
Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

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

Recycling Facility and/or Recycling Containment

Type of Facility: [X] Recycling Facility [X] Recycling Containment*

Type of action: [X] Permit [X] Modification [ ] Closure [ ] Registration [ ] Extension [ ] 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, LP (For multiple operators attach page with information) OGRID #: 6137

Address: 333 West Sheridan, Oklahoma City, Oklahoma 737102-8260

Facility or well name (include API# if associated with a well): Trionyx Containment and Recycling Facility

OCD Permit Number: 2RF-103 (For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr _____ Section 2 Township 25 South Range 31 East County: Eddy

Surface Owner: [ ] Federal [X] State [ ] Private [ ] Tribal Trust or Indian Allotment

2.

[X] **Recycling Facility:**

Location of recycling facility (if applicable): Latitude 32.154854 Longitude -103.741236 NAD83

Proposed Use: [X] Drilling* [X] Completion* [X] Production* [X] 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.***

[X] Fluid Storage

[X] Above ground tanks [X] 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.

[X] **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 32.154854 Longitude -103.741236 NAD83

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

[X] Lined [X] Liner type: Thickness _____ mil [X] LLDPE [X] HDPE [ ] PVC [X] Other 30-mil LLDPE Secondary

[X] String-Reinforced 60-mil HDPE Primary

Liner Seams: [X] Welded [X] Factory [X] Other Field Welds Volume: 295,000 bbl (usable) Dimensions: L 400 x W 400 x D 20

[ ] 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 $606,137.00 **(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 7-ft. Chain Link Fence w/ barbed wire

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.

- [X] Design Plan - based upon the appropriate requirements.
- [X] Operating and Maintenance Plan - based upon the appropriate requirements.
- [X] Closure Plan - based upon the appropriate requirements.
- [X] Site Specific Groundwater Data -
- [X] Siting Criteria Compliance Demonstrations –
- [X] **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): Josh Bruening Title: Supervisor

Signature: Josh Bruening Date: 6-10-2025

e-mail address: josh.bruening@dvn.com Telephone: 405-552-7882

11.
OCD Representative Signature: Victoria Venegas **Approval Date:** 06/17/2025

Title: Environmental Specialist **OCD Permit Number:** 2RF-103

- [X] OCD Conditions
- [X] Additional OCD Conditions on Attachment

District I
1625 N. French Dr., Hobbs, NM 88240
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Form C-147
Revised April 3, 2017

Recycling Facility and/or Recycling Containment

Type of Facility: [X] Recycling Facility [X] Recycling Containment*

Type of action: [X] Permit [X] Modification [ ] Closure [ ] Registration [ ] Extension [ ] Other (explain) _____

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1.

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Address: 333 West Sheridan, Oklahoma City, Oklahoma 737102-8260

Facility or well name (include API# if associated with a well): Trionyx Containment and Recycling Facility AST

OCD Permit Number: 2RF-103 (For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr _____ Section 2 Township 25 South Range 31 East County: Eddy

Surface Owner: [ ] Federal [X] State [ ] Private [ ] Tribal Trust or Indian Allotment

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Location of recycling facility (if applicable): Latitude 32.154854 Longitude -103.741236 NAD83

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

3.

[X] **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 32.153847 Longitude -103.741185 NAD83

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

[X] Lined [ ] Liner type: Thickness 40/40 mil [X] LLDPE [ ] HDPE [ ] PVC [ ] Other _____

[ ] String-Reinforced

Liner Seams: [X] Welded [ ] Factory [X] Other _____ Volume: 22,000 bbl Dimensions: L _____ x W 115 x D 12.33

[ ] Recycling Containment Closure Completion Date: _____

4.

Bonding:

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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
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e-mail address: Josh.bruening@dvn.com Telephone: 405-552-7882

11.
OCD Representative Signature: Victoria Venegas **Approval Date:** 06/17/2025

Title: Environmental Specialist **OCD Permit Number:** 2RF-103

- [x] OCD Conditions
- [x] Additional OCD Conditions on Attachment

ENVIROTECH
ENGINEERING
2500 N. Eleventh Street Enid, OK 73701 ● 580.234.8780 ● envirotechconsulting.com
P.E. #29736 - Expiration Date: 12-31-2026

SITE OVERVIEW

TRIONYX CONTAINMENT AND RECYCLING FACILITY
DEVON ENERGY CORP.
EDDY COUNTY, NEW MEXICO

devon

Project No.
025143-00

Figure 1

4/24/2025 9:24:12 AM
X:\Projects\2025\025143-00-000 Devon Trionyx Facility AST and Commercialization Permit\Trionyx Facility Permit Modification\Devon Trionyx Facility Site Overview.dwg

ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil Conservation Division

RE: Rule 34 Variance Request –Produced Water Recycling Containment

Ms. Venegas:

Devon is requesting a variance to Rule 34 Part 12(A)(3) requiring "The edges of all liners shall be anchored in the bottom of a compacted earth-filled trench."

Devon is requesting approval to use an Above Ground Storage Tank (AST) as a containment structure at the Devon Trionyx Containment and Recycling Facility. Based on our experience AST's work well for this purpose, they are structurally sound and easy to maintain. Clips will be used at the top of the steel walls to secure the liner. These clips are specifically designed to hold the AST liner in place and provide the same type of liner security as an anchor trench. It should also be noted that this variance has been granted on past sites.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,

Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil Conservation Division

RE: Rule 34 Variance Request –Produced Water Recycling Containment

Ms. Venegas:

Devon is requesting a variance to Rule 34 Part 12(A)(2) requiring *"…The levee shall have an outside grade no steeper than three horizontal feet to one vertical foot (3H:1V)."*

Devon is requesting approval to use an Above Ground Storage Tank (AST) as a containment structure at the Devon Trionyx Facility. Based on our experience AST's work well for this purpose, they are structurally sound and easy to maintain. This AST will have vertical walls on both interior and exterior sides and thus requires a variance for use. The AST will, however, be double lined like other containments to limit the risk of leakage. It should also be noted that this variance has been granted on past sites.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,

Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil Conservation Division

RE: Rule 34 Variance Request –Produced Water Recycling Containment

Ms. Venegas:

Devon is requesting a variance to Rule 34 Part 12(A)(2) requiring "… *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).*"

Devon is requesting approval to use an Above Ground Storage Tank (AST) as a containment structure at the Devon Trionyx Containment and Recycling Facility. Based on our experience AST's work well for this purpose, they are structurally sound and easy to maintain. This AST's will have vertical walls on both interior and exterior sides and thus requires a variance for use. The AST's will, however, be double lined like other containments to limit the risk of leakage. It should also be noted that this variance has been granted on past sites.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,

Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil Conservation Division

RE: Rule 34 Variance Request –Produced Water Recycling Containment Primary Liner

Ms. Venegas:

Devon is requesting a variance to Rule 34 Part 12(A)(4) requiring primary liners to be 45-mil string reinforced LLDPE. Devon is requesting approval to use 40-mil LLDPE in place of the specified material in an above ground storage tank (AST). Based on our experience, we feel that the requested material will allow us to provide equal environmental protection in our impoundments.

Due to the construction of the 45-mil reinforced LLDPE material, nondestructive QA/QC testing cannot be performed. The proposed 40-mil LLDPE will be seamed in a manner that will allow nondestructive pressure testing of the seams to ensure proper sealing.

The proposed LLDPE is appropriate material for the proposed use in the impoundment and is compatible with the material that will be stored. This material will provide equal or better environmental protection as the specified 45-mil reinforced LLDPE.

The proposed new liner system for the AST cross-section is as follows: prepare subgrade, 10 oz. geotextile, 40-mil LLDPE, 200 mil geonet, 40-mil LLDPE. This will replace the cross-section required by the current rule. It should also be noted that this variance has been granted on past sites.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,

Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

ENVIROTECH
ENGINEERING

May 7, 2025

Ms. Victoria Venegas
New Mexico EMNRD
Oil Conservation Division

RE: Rule 34 Variance Request –Produced Water Recycling Containment Secondary Liner

Ms. Venegas:

Devon is requesting a variance to Rule 34 Part 12(A)(4) requiring secondary liners to be 30-mil string reinforced LLDPE. Devon is requesting approval to use 40-mil LLDPE Liner in the proposed AST. Based on our experience, we feel that the requested material will allow us to provide equal environmental protection in our impoundments.

Due to the construction of the 30-mil reinforced LLDPE material, nondestructive QA/QC testing cannot be performed. The proposed 40-mil LLDPE will be seamed in a manner that will allow nondestructive pressure testing of the seams to ensure proper sealing.

The proposed LLDPE is appropriate material for the proposed use in the impoundment and is compatible with the material that will be stored. This material will provide equal or better environmental protection as the specified 30-mil reinforced LLDPE.

The proposed new liner system cross-section for the AST is as follows: prepared subgrade, 10 oz. geotextile, 40-mil LLDPE, 200-mil geonet, 40-mil LLDPE. This will replace the cross-section required by the current rule. It should also be noted that this variance has been granted on past sites.

Should you have any questions or require additional information, please contact me by phone at 580-234-8780 or by email at mratke@envirotechconsulting.com at your convenience.

Thank you for your consideration.
Best regards,

Envirotech Engineering & Consulting, Inc.

Mitchell Ratke, P.E.
Senior Project Engineer, Energy Infrastructure

Devon Energy is proposing to add one (1) Above Ground Storage Tank (AST) in Section 2, Township 25 South, Range 31 East, Eddy County, New Mexico. The Trionyx Containment and Recycling Facility will consist of two containments with a total operational volume of approximately 317,000-bbl.

OPERATION AND MAINTENANCE PROCEDURES

Applicable mandates in Rule 34 are underlined. This plan addresses construction of an above ground storage tank. Devon intends to operate the AST the same way as an earthen containment.

Field conditions may create the need for minor modification of the containment design (e.g. changing the length, width, or depth.)

Dike Protection and Structural Integrity

Design elements are addressed in the section of this submission containing the foundation recommendations. The recommendations are based on site-specific data. The operator, engineer, and selected contractor will review the recommendations prior to beginning the earthwork and adhere to the specific recommendations.

The design and operation provide for the confinement of produced water to prevent releases and to prevent overtopping due to wave action or rainfall. Additionally, the design prevents run-on of surface water as the containment is constructed by placement of steel panels.

Stockpile Topsoil

Where topsoil is present, prior to constructing [AST], the operator will strip and stockpile the topsoil for use as the final cover or fill at the time of closure. The topsoil will be stockpiled adjacent to perimeter fence surrounding the containment or incorporated into the levee.

Signage

The design calls for an upright sign no less than 12-in by 24-in with lettering not less than two inches in height in a conspicuous place on the fence surrounding the [AST]. The sign is posted in a manner and location such that a person can easily read the legend. The sign will provide the following information:

1. The operator's name,
2. The location of the site by quarter-quarter or unit letter, section, township and range, and
3. Emergency telephone numbers.

Fencing

The design provides for a fence to enclose the Recycling Containment in a manner that deters unauthorized wildlife and human access. The design calls for a 7-ft tall chain linked fence and barb wired fence around the containment to exclude wildlife. This fence provides greater wildlife (and human) deterrence than the minimum required barbed wire fence with four strands evenly spaced in the interval between one foot and four feet above ground level. The fence will be gated to provide access for maintenance and placement of pumps and other necessary equipment. As stated in the O&M plan, the operator will ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.

Netting and Protection of Wildlife

The game fence around the containment will be effective in excluding antelope, deer, coyotes, and most other terrestrial wildlife.

The Recycling Containment is otherwise protective of wildlife, including migratory birds. The containment will contain treated produced water that has not shown to be a material threat to birds due to hydrogen sulfide gas or floating, free-phase hydrocarbons. The O&M plan calls for the operator to inspect for and, within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency ad to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

The AST will have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. Geotextile may be placed under the liner when needed to reduce localized stress-strain or protuberances that otherwise may compromise the liner's integrity.

Field conditions may create the need for changes to the design. Any changes to the construction or grade requirements due to unforeseen conditions will be reviewed and approved prior to initiating installation of the liner system. Any design change that does not conform to the NMOCD Rule will be the subject of a variance request and will be submitted **to the OCD for review and approval.**

LINER AND DRAINAGE GEOTEXTILE INSTALLATION

The AST has a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions.

The primary (upper) liner is a geomembrane liner composed of an impervious, synthetic material that is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. It is 40-mil LLDPE. The secondary liner is 40-mil LLDPE. Liner compatibility meets or exceeds a subsequent relevant publication to EPA SW-846 method 9090A.

The Recycling Containment design has a leak detection system between the upper and lower geomembrane liners of 200-mil geonet to facilitate drainage. The leak detection system consists of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. The containment floor design calls for a slope toward the sump. This slope, combined with the highly transmissive geonet drainage layer, provides for the earliest possible leak detection.

The liners and drainage material will be installed consistent with the manufacture's specifications. In addition to any specifications of the manufacturer, protocols for liner installation include measures to:

1. Minimize liner seams and orient them up and down, not across, a slope of the levee.
2. Use factory welded seams where possible.
3. Field seams in geosynthetic material are thermally seamed; prior to field seaming, overlap liner four to six inches.
4. Minimize the number of field seams and corners and irregularly shaped areas.
5. Provide for no horizontal seams within five feet of the slope's toe.
6. Use qualified personnel to perform field welding and testing.
7. Avoid excessive stress-strain on the liner.

At points of discharge into the AST, the pipe configuration effectively protects the liner from excessive hydrostatic force or mechanical damage during filling. The design shows that at any point of discharge into or suction from the recycling containment, the liner is protected from excessive hydrostatic force or mechanical damage. External discharge or suction lines do not penetrate the liner.

Pumping from the containment to hydraulic fracturing operations is the responsibility of stimulation contractors. Typically, numerous lines are permanently placed in the containment with floats attached to prevent damage to the liner system. The containment may be equipped with permanent HDPE stinger (supported by a sacrificial liner or geotextile) for withdrawal of fluid during operations, if the owner deems necessary. External discharge or suction lines do not penetrate the liner.

LEAK DETECTION AND FLUID REMOVAL SYSTEM INSTALLATION

The leak detection system, contains the following design elements:

1. The 200-mil geonet drainage material between the primary and secondary liner is sufficiently permeable to allow the transport of fluids to the observation ports (*Appendix C*).
2. The containment floor, sloped towards the monitoring riser pipe, facilitates the earliest possible leak detection of the containment bottom. A pump may be placed in an observation port to provide for fluid removal.
3. Piping will withstand chemical attack from any seepage, structural loading from stresses and disturbances from overlying water, cover materials, equipment operation, and expansion or contraction.
4. The slope of the interior subgrade should be great enough to facilitate drainage.

Devon Energy is proposing to add one (1) Above Ground Storage Tank (AST) in Section 2, Township 25 South, Range 31 East, Eddy County, New Mexico. The Trionyx Containment and Recycling Facility will consist of two containments with a total operational volume of approximately 317,000-bbl.

OPERATION AND MAINTENANCE PROCEDURES

In this plan, the underlined text represents the language of the Rule.

The operator will operate and maintain the AST to contain liquids and solids (blow sand and minimal precipitates from the treated produced water) and maintain the integrity of the liner system in a manner that prevents contamination of fresh water and protects public health and the environment as described below. The purpose of the AST is to facilitate recycling, reuse, and reclamation of produced water derived from nearby oil and gas wells. During periods when water for E&P operations is not needed, produced water will discharge to one of the injection wells in the operator's SWD system. The containment will not be used for the disposal of produced water or other oilfield waste.

The operation of the Recycling Containment is summarized below:

1. Via pipeline, produced water generated from nearby oil and gas wells is delivered to a treatment system located as indicated in the C-147.
2. After treatment, the produced water discharges into the containment.
3. When required, treated produced water is removed from the containment for E&P operations. At this time, treated produced water will be used for drilling beneath the fresh water zones (beneath surface casing), for well stimulation (e.g. hydraulic fracturing) and other E&P uses as approved by OCD.
4. Whenever the maximum fluid capacity of the containment is reached, treatment and discharge to the containment ceases (see Freeboard and Overtopping Plan, below).
5. The operator will keep accurate records and shall report monthly to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.
6. The operator will maintain accurate records that identify the sources and disposition of all recycled water that shall be made available for review by the division upon request.
7. The containment shall be deemed to have ceased operations if less than 20 % of the total fluid capacity is used every six months following the first withdrawal of produced water for use. The operator will report cessation of operations to the appropriate division district office. The appropriate division district office may grant an extension to this determination of cessation of operations not to exceed six months.

The operation of the AST will follow the mandates listed below:

1. The operator will not discharge into or store any hazardous waste (as defined by 40 CFR 261 and NMAC 19.15.2.7.H.3) in the containments.
2. If the containment's primary liner is compromised above the fluid's surface, the operator will repair the damage or initiate replacement of the primary liner within 48 hours of discovery or seek an extension of time from the Division District office.

3. If the primary liner is compromised below the fluid's surface, the operator will remove all fluid above the damage or leak within 48 hours of discover, notify the division district office, and repair the damage or replace the primary liner.
4. If any penetration of the containment liner is confirmed by sampling of fluid in the leak detection system (see Inspection and Monitoring Plan), the operator will:
    a. Begin and maintain fluid removal from the leak detection/pump-back system,
    b. Notify the District office within 48 hours (phone or email) of the discovery,
    c. Identify the location of the leak, and
    d. Repair the damage or, if necessary, replace the containment liner.
5. The operator will install, or maintain onsite, an oil absorbent boom or other device to contain an unanticipated release and the operator will remove any visible layer of oil from the surface of the recycling containment.
6. The operator will report releases of fluid in a manner consistent with NMAC 19.15.29.
7. The containment will be operated to prevent the collection of surface water run-on.
8. The operator will maintain the containment free of miscellaneous solid waste or debris.
9. The operator will maintain at least 3-ft of freeboard for the containment and will use a welded ladder gauge to allow easy determination of the required 3-ft of freeboard.
10. As described in the design/construction plan, the injection or withdrawal of fluids from the containment is accomplished through hardware that prevents damage to the liner by erosion, fluid jets, or impact from installation and removal of hoses or pipes.
11. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
12. The operator will maintain the fences in good repair.

MONITORING, INSPECTION, AND REPORTING PLAN

The operator will inspect the recycling containment and associated leak detection systems weekly while it contains fluids. The operator shall maintain a current log of such inspections and make the log available for review by the division upon request.

Weekly inspections consist of:

1. Reading and recording the fluid height of staff gauges,
2. Recording any evidence that the AST surface shows visible oil,
3. Visually inspecting the containment's exposed liners, and
4. Checking the leak detection system for any evidence of a loss of integrity of the primary liner.

As stated above, if a liner's integrity is compromised, or if any penetration of the liner occurs above the water surface, then the operator will notify the District office within 48 hours (phone or email).

Monthly, the operator will:

1. Inspect foundation around the AST to check for erosion and collection of surface water run-on.
2. Inspect the leak detection system for evidence of damage or malfunction and monitor for leakage.
3. Inspect the containment for migratory birds and other wildlife. Within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency

and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

4. Report to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.
5. Record sources and disposition of all recycled water.

The operator will maintain a log of all inspections and make the log available for the appropriate Division District office's review upon request.

FREEBOARD AND OVERTOPPING PREVENTION PLAN

The method of operation of the containment allows for maintaining freeboard with very few potential problems. When the capacity of the containment is reached (3-ft of freeboard), the discharge of treated produced water ceases and the produced water generated by nearby oil and gas wells is managed by disposing of fluid at a local injection well.

If rising water levels suggest that 3-ft of freeboard will not be maintained, the operator will implement one or more of the following options:

1. Cease discharging treated produced water to the AST.
2. Accelerate re-use of the treated produced water for purposes approved by the Division.
3. Transfer treated produced water from the AST to a Division approved injection well.

The reading of the staff gauge typically occurs daily when treatment operations are ongoing and weekly when discharge to the AST is not occurring.

PROTOCOL FOR LEAK DETECTION MONITORING, FLUID REMOVAL, AND REPORTING

The leak detection system includes a monitoring system. Any fluid released from the primary liner will flow to the collection sump, where fluid level monitoring is possible at the monitoring riser pipe associated with the leak detection system.

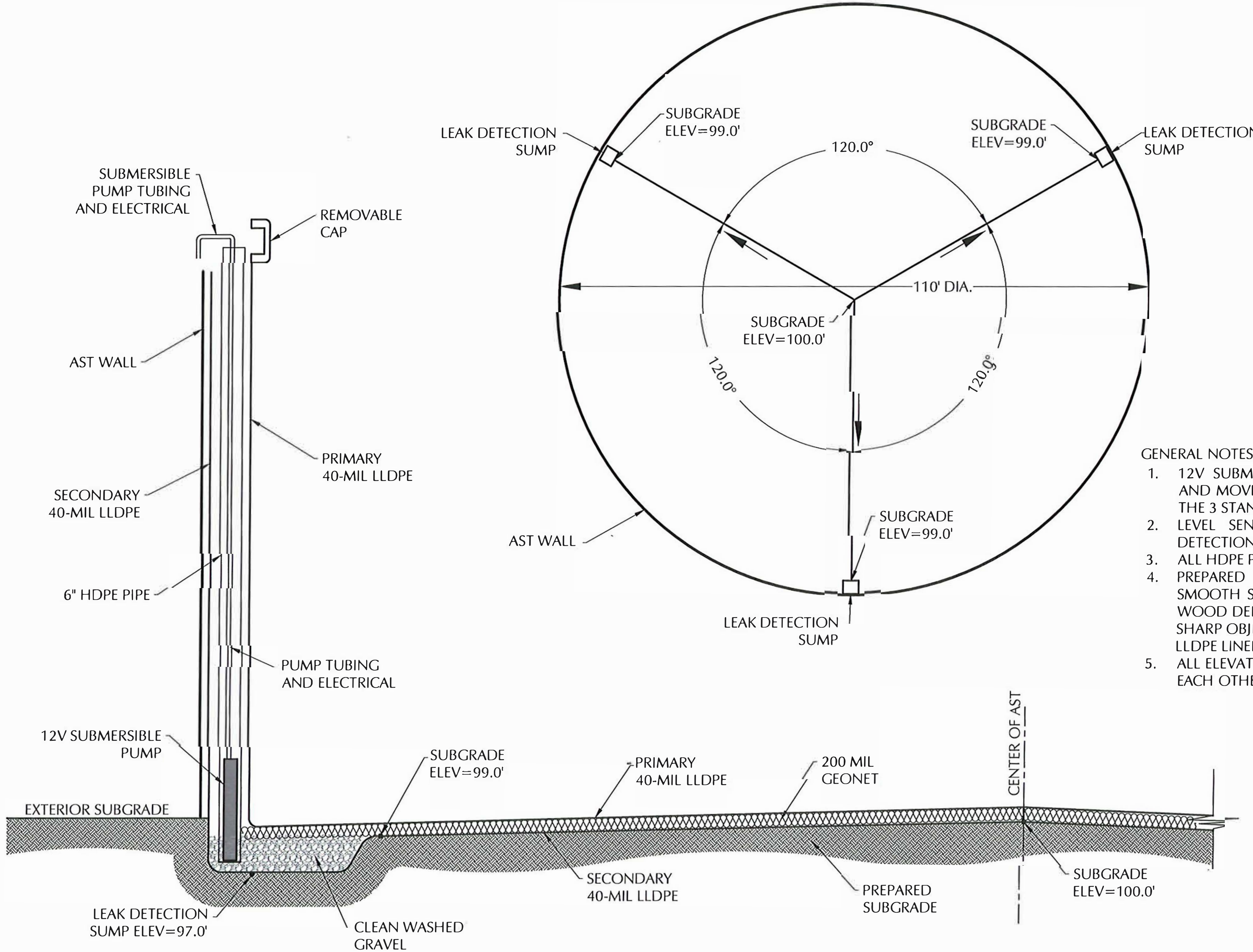
Staff may employ a portable electronic water level meter to determine if fluid exists in the monitoring riser pipe. Obtaining accurate readings of water levels in a sloped pipe beneath a containment can be a challenge. An electrician's wire snake may be required to push the probe to the bottom of the port and the probe may be fixed in a 2-in pipe "dry housing" to avoid false readings due to water condensation on the pipe. There are many techniques to determine the existence of water in the sumps, including low-flow pumps and a simple small bailer affixed to an electrician's snake. The operator will use the method that works best for this containment.

If seepage from the containment into the leak detection system is suspected by a positive fluid level measurement, the operator will:

1. Re-measure fluid levels in the monitoring riser pipe on a daily basis for one week to determine the rate of seepage.
2. Collect a water sample from the monitoring riser pipe to confirm the seepage is treated produced water from the containment via field conductivity and chloride measurements.

3. Notify NMOCD of a confirmed positive detection in the system within 48 hours of sampling (initial notification).
4. Install a pump into the monitoring riser pipe sump to continually (manually on a daily basis or via automatic timers) remove fluids from the leak detection system into the containment until the liner is repaired or replaced.
5. Dispatch a liner professional to inspect the portion of the containment suspected of leakage during a "low water" monitoring event.
6. Provide NMOCD a second report describing the inspection and/or repair within 20 days of the initial notification.

If the point of release is obvious from a low water inspection, the liner professional will repair the loss of integrity. If the point of release cannot be determined by the inspection, the liner professional will develop a more robust plan to identify the point(s) of release. The inspection plan and schedule will be submitted to OCD with the second report. The operator will implement the plan upon OCD approval.



GENERAL NOTES:

1. 12V SUBMERSIBLE PUMP SHALL BE MOBILE AND MOVED AS NEEDED BETWEEN EACH OF THE 3 STANDPIPES AS NEEDED
2. LEVEL SENSOR PROBE IN 1 OF 3 LEAK DETECTION PIPES
3. ALL HDPE PIPING SHALL BE SDR 17
4. PREPARED SUBGRADE MEANS COMPACTED SMOOTH SUBGRADE FREE OF ROCK, ROOTS, WOOD DEBRIS, CONCRETE RUBBLE AND ANY SHARP OBJECTS THAT MIGHT PUNCTURE THE LLDPE LINER.
5. ALL ELEVATIONS SHOWN ARE RELATIVE TO EACH OTHER BUT ARBITRARY IN NATURE.

AST LEAK DETECTION SYSTEM DETAIL
NOT TO SCALE

MITCHELL JOSEPH RATKE
NEW MEXICO
29736
PROFESSIONAL ENGINEER

5-7-2025

ENVIROTECH ENGINEERING
2500 North Eleventh Street
Enid, Oklahoma
580.234.8780
P.E. # 23735 - Expiration Date 12-31-2026

NO.	DATE	DESCRIPTION

devon

AST LEAK DETECTION PLAN
TRIONYX RECYCLING FACILITY
DEVON ENERGY CORP.
EDDY COUNTY, NEW MEXICO

DATE:	APRIL 2025
SCALE:	NOT TO SCALE
DESIGNED BY:	R. MOHAN
DRAWN BY:	R. MOHAN
CHECKED BY:	M. RATKE
PROJECT NO.	025143-00
SHEET NO.	FIGURE 1

Devon Energy
Trionyx Containment and Recycling Facility
Closure Cost Estimate

	Item	Units	Quanity	$/Unit	Estimate Cost
	Facility Closure				
1	Fluid removal				
	Tryonyx Recycle Pit (295K bbls)	bbls	295,674	$ 0.50	$ 147,837.00
	Tryonyx Recycle AST (22K bbls)	bbls	22,000	$ 0.50	$ 11,000.00
2	Vac truck (final fluid removal)	hrs	16	$ 125.00	$ 2,000.00
3	Liner removal (fold-in-place)				
	Covers removal and disposal	SF	950,000	$ 0.22	$ 209,000.00
4	Equipment removal				
	Pit clean-out and residue haul-off	LS	1	$ 7,500.00	$ 7,500.00
	Equipment removal (tanks, gun barrel, FWKO)	LS	1	$ 5,000.00	$ 5,000.00
	Electrical decomissioning (pumps and panels)	LS	1	$ 1,500.00	$ 1,500.00
	Misc equipment clean-up and removal	hr	120	$ 125.00	$ 15,000.00
	Removal of AST	LS	1	$ 75,000.00	$ 75,000.00
5	Site Restoration				
	Dozer - push in berms (bid) and final grading of the site	CY	30,000	$ 4.25	$ 127,500.00
	Re-vegetation	ea	1	$ 4,800.00	$ 4,800.00
	Estimated Total				**$ 606,137.00**

Assumptions

- No Remediation will be necessary
- Pit is full at time of closure
- Pit berms above natural grade will be used to fill voids below natural grade

5-7-2025

Venegas, Victoria, EMNRD

From: Venegas, Victoria, EMNRD
Sent: Tuesday, June 17, 2025 11:31 AM
To: Bruening, Josh
Subject: 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120].
Attachments: C-147 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120] 06.17.2025.pdf

2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120]

Good morning Mr. Bruening.

The NMOCD has reviewed the recycling containment permit modification and related documents, submitted by [6137] DEVON ENERGY PRODUCTION COMPANY, LP on 6/12/2025, Application ID **473484** for 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120].
[6137] DEVON ENERGY PRODUCTION COMPANY, LP has requested a permit modification to add a 22,000 barrel Above Ground Storage Tank (AST) to 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120], as well as a permit modification to allow 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120] to be used to deliver fluids to wells not owned or operated by [6137] DEVON ENERGY PRODUCTION COMPANY, LP.

[6137] DEVON ENERGY PRODUCTION COMPANY, LP requested variances from 19.15.34 NMAC for the additional AST at 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120]. The following variances have been approved:

- The variance to 19.15.34.12.A.(2) NMAC for the no side-slope requirement for the AST containments with vertical walls is approved.
- The variance to 19.15.34.12.A.(3) NMAC for the liners to be anchored to the top of the ASTs steel walls and no anchor trenches is approved.
- The variance to 19.15.34.12.A.(4) NMAC for the installation on the AST containment of a 40-mil non-reinforced LLDPE secondary liner is approved.
- The variance to 19.15.34.12.A.(4) NMAC for the installation on the AST containment of a 40-mil non-reinforced LLDPE primary liner is approved. The proposed new liner system cross-section for the ASTs is as follows: prepare subgrade, 10 oz. geotextile, 40-mil LLDPE primary liner, 200-mil geonet, 40-mil LLDPE secondary liner.

The modification request to add a 22,000-barrel AST to 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120], as well as a permit modification to allow 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120] to be used to deliver fluids to wells not owned or operated by [6137] DEVON are approved with following conditions of approval:

- 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120] will operate as originally permitted.
- [6137] DEVON ENERGY PRODUCTION COMPANY, LP will comply with all conditions previously approved for permit 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120].
- No changes to the operations procedures, maintenance, and monitoring procedures, or closing procedures will be made aside from the requested modification to add one (1) 22,000.00 bbl AST to permit 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120].

- The closure cost estimated provided in the modification request in the amount of $606,137.00 meets the requirements of NMAC 19.15.34.15.A.(1).
- The financial assurance should be mailed to: **EMNRD - Oil Conservation Division, Administration & Compliance Bureau Attn: Bond Administrator 1220 S. St. Francis Drive | Santa Fe, NM 87505**.
- [6137] DEVON ENERGY PRODUCTION COMPANY, LP shall comply with 19.15.29 NMAC Releases in the event of any release of produced water or other oil field waste at 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120].

Please let me know if you have any additional questions.
Best regards,

Victoria Venegas ● Environmental Specialist Advanced
EMNRD - Oil Conservation Division
506 W. Texas Ave. Artesia, NM 88210
575.909.0269 | **Victoria.Venegas@emnrd.nm.gov**

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https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 473484

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 473484
	Action Type: [C-147] Water Recycle Long (C-147L)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	The modification request to add a 22,000-barrel AST to 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120], as well as a permit modification to allow 2RF-103 - TRIONYX CONTAINMENT AND RECYCLING FACILITY ID [fAB1526137120] to be used to deliver fluids to wells not owned or operated by [6137] DEVON are approved. • The closure cost estimated provided in the modification request in the amount of $606,137.00 meets the requirements of NMAC 19.15.34.15.A.(1). • The financial assurance should be mailed to: EMNRD - Oil Conservation Division, Administration & Compliance Bureau Attn: Bond Administrator 1220 S. St. Francis Drive | Santa Fe, NM 87505. • [6137] DEVON ENERGY PRODUCTION COMPANY, LP shall comply with 19.15.29 NMAC Releases in the event of any release of produced water.	6/17/2025