

**2RF-161 -  
MYOX AST -  
Facility Number  
[fVV2113850290]  
C-147/Cessation of  
Operations/  
Conditions of Approval.**

**[371643] SOLARIS WATER  
MIDSTREAM, LLC  
05/12/2023**

State of New Mexico  
Energy Minerals and Natural Resources  
Department Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
<https://www.emnrd.nm.gov/ocd/ocd-e-permitting/>

Form C-147  
Revised October 11, 2022

## Recycling Facility and/or Recycling Containment

**Type of Facility:**    ☒ Recycling Facility    ☒ Recycling Containment\*

**Type of action:**    ☐ Permit    ☐ Registration  
                               ☐ Modification    ☒ Extension    extension of cessation of operation,  
                               ☐ Closure    ☒ Other (explain) request from May 2023 thru October 2023

**\* 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: Solaris Water Midstream, LLC (For multiple operators attach page with information) OGRID #: 371643  
 Address: 9811 Katy Freeway, Suite 900, Houston Texas 77024  
 Facility or well name (include API# if associated with a well): Myox AST  
 OCD Permit Number: fVV2113850290 (For new facilities the permit number will be assigned by the district office)  
 U/L or Qtr/Qtr NE 1/4 of SE 1/4 Section 32 Township 25S Range 28E County: Eddy  
 Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.

☐ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude 32.1218301 Longitude -104.0707176 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 32.084813 Longitude -104.113231 NAD83

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

☒ Lined ☒ Liner type: Thickness 40 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other white smooth

☐ String-Reinforced

Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D 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 \_\_\_\_\_

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.

☐ Yes ☒ No  
☐ NA

- Written confirmation or verification from the municipality; written approval obtained from the municipality

Within the area overlying a subsurface mine.

☐ Yes ☒ No

- Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division

Within an unstable area.

☐ Yes ☒ No

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map

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).

☐ Yes ☒ No

- Topographic map; visual inspection (certification) of the proposed site

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

☐ Yes ☒ No

- Visual inspection (certification) of the proposed site; aerial photo; satellite image

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.

☐ Yes ☒ No

- NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site

Within 500 feet of a wetland.

☐ Yes ☒ No

- US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site

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.
- ☒ 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): Chad Gallagher Title: Permit Agent  
Signature: *Chad Gallagher* Date: 5-4-2023  
e-mail address: chad.gallagher@ariswater.com Telephone: (575)444-9786

11.

OCD Representative Signature: *Victoria Venegas* Approval Date: 05/12/2023

Title: Environmental Specialist OCD Permit Number: 2RF-161

- ☒ OCD Conditions \_\_\_\_\_
- ☒ Additional OCD Conditions on Attachment \_\_\_\_\_



May 7th, 2023

## Statement Explaining Why the Applicant Seeks a Variance for Monitoring and Closure of Myox 2RF-161 Above Ground Storage Tank (AST) Containment

The prescriptive mandates of the Rule that are the subject of this variance request are the following subsections of NMAC 19.15.34.12.

### *19.15.34.13 OPERATIONAL REQUIREMENTS FOR RECYCLING CONTAINMENTS:*

*A. The operator shall 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.*

*C. A recycling 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 must 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.*  
*[19.15.34.13 NMAC - N, 3/31/15]*

### *19.15.34.14 CLOSURE AND SITE RECLAMATION REQUIREMENTS FOR RECYCLING CONTAINMENTS:*

*A. Once the operator has ceased operations, the operator shall remove all fluids within 60 days and close the containment within six months from the date the operator ceases operations from the containment for use. The division district office may grant an extension for the removal of all fluids not to exceed two months. The division district office may grant an extension to close the containment not to exceed six months. If the operator wants to use the containment for a purpose other than recycling then the operator must have that use approved or permitted by the division in accordance with the appropriate rules.*

*19.15.34.9.E. The operator of a recycling facility shall 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.*

With respect to storage of produced water for use in lieu of fresh water, Rule 34 is written for earthen, lined pits, not free-standing modular open top tanks that employ liners as their primary fluid containment system. The authors of the Rule, and some OCD staff, considered these large



ASTs as process tanks, not storage “containments.” Yet, the definition of a “containment” caused regulation of these ASTs under the Rule. No Rule is perfect.

With respect to this request for a variance:

- A modular impoundment does not exceed a capacity of 60,000 bbls.
- The exposed liquid surface area that is subject to evaporation is small.
- AST Containments are used for
  - produced water treatment prior to recycling in hydraulic stimulation or other processes,
  - pressure/flow equalization for
    - short pipelines used in hydraulic stimulation of oil/gas wells or
    - large pipelines that produced water for treatment/recycling
- After E&P processes that employ ASTs are complete, the AST is typically
  - Removed and closed or
  - Placed in many operators “standby” with minimal residual fluid to keep the liner in place for future use

The applicant requests that the Myox 2RF-161 AST Containment that is not in use but will be used during the next scheduled well stimulation that is planned for Q2 of 2023 be exempt from *19.15.34.13 A and C, 19.15.34.14.A and 19.15.34.9.E provided that every six months between 3-17-2023 and the hydraulic stimulation event, the applicant submits a C-148 to OCD that shows:*

1. a measurement of the fluid level in the AST Containment
2. a measurement of fluid in the leak detection system

**Demonstration That the Variance Will Provide Equal or Better Protection of Fresh Water, Public Health, and the Environment**

During what some call a standby period, the residual fluid in the AST is small compared to the volume of fluid stored in above-ground containments, for which the Rule is written. Semi-annual monitoring of the leak detection system at an AST Containment with 1-2 feet of standing fluid to identify a loss of integrity of the primary liner provides equal protection of fresh water versus weekly or monthly monitoring of a large in-ground containment. Fewer trips to monitor the leak detection system of a nearly empty AST minimizes travel, thereby providing better protection of public health (fewer road accidents) and the environment (less emissions). With only 1-2 feet of fluid in the AST

The small surface area of the AST relative to an inground containment allows minimal evaporation. Thus, allowing the AST to remain in standby for months/years does not constitute disposal of produced water.

Pond or AST	Date	Operator Name	Tear in Liner (Y/N)?	Break in Berms and run-on storm water (Y/N)?	Dead Wildlife (Y/N)?	Oil on fluid (Y/N)?	Leak Detection Working (Y/N)?	Freeboard Fluid Level (ft)	Pond Level (ft)	Created By
Fritchey AST	12/6/2022	Ricardo Lara	FALSE	FALSE	FALSE	FALSE	TRUE	6.00	6.00	Ricardo Lara
Fritchey AST	12/13/2022	Ricardo Lara	FALSE	FALSE	FALSE	FALSE	TRUE	6.00	6.00	Ricardo Lara
Fritchey AST	2/6/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.00	Bradley Webb
Fritchey AST	1/4/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	2/12/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	2/26/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	3/9/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	10/2/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	10/9/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	10/16/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	10/23/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	10/30/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	11/7/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	11/14/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	11/21/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	11/28/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	1/11/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	12/20/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	12/27/2022	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	1/17/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	1/24/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	1/31/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	3/6/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	5.60	6.60	Bradley Webb
Fritchey AST	3/17/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	3/23/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	3/31/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	4/7/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	4/14/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	4/21/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	4/28/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb
Fritchey AST	5/5/2023	Bradley Webb	FALSE	FALSE	FALSE	FALSE	TRUE	7.00	5.00	Bradley Webb



**Venegas, Victoria, EMNRD**

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**From:** Venegas, Victoria, EMNRD  
**Sent:** Friday, May 12, 2023 2:30 PM  
**To:** 'Chad Gallagher'; Michael Incerto; 'Todd Carpenter'  
**Subject:** 2RF-161 - MYOX AST - Facility Number [fVV2113850290]  
**Attachments:** C-147 2RF-161 - MYOX AST - Facility Number [fVV2113850290].pdf

**2RF-161 - MYOX AST - Facility Number [fVV2113850290]**

Mr. Gallagher,

NMOCD has reviewed the extension of the cessation of operations request and related documents, submitted by [371643] SOLARIS WATER MIDSTREAM, LLC on 05/07/2023 Application ID 211982, for 2RF-161 - MYOX AST - Facility Number [fVV2113850290] in Unit Letter K, Section 32, Township 25S, Range 28E, Eddy County, New Mexico. The cessation for operations extension request is approved with the following conditions of approval:

- 2RF-161 - MYOX AST - Facility Number [fVV2113850290] permit expires on June 28, 2024.
- Per NMAC 19.15.34.13.C extensions are considered for a maximum length of six months. 2RF-161 - MYOX AST - Facility Number [fVV2113850290] extension of cessation of operations is approved from May 1, 2023, through October 31, 2023. **However, if after this 6-month period, the containment was not utilized at a minimum of 20% fluid capacity, no additional extensions would be granted, and the operator would be directed to remove all fluids and proceed with the closure requirements.**
- [[371643] SOLARIS WATER MIDSTREAM, LLC will maintain a liquid level in the containment that is at least equal to the weight of the liner plus 20%. [371643] SOLARIS WATER MIDSTREAM, LLC may maintain a higher liquid level if they choose.
- [371643] SOLARIS WATER MIDSTREAM, LLC will provide written notice to OCD, at least 72 hours, but no more than one week, prior to the recommencement of operations. Recommencement of recycling operations means that the operator plans to resume moving fluids through the containment and discharging fluids from the containment.
  - At the resumption of recycling operations, [371643] SOLARIS WATER MIDSTREAM, LLC is required to perform an incremental fluid level test for containment liquid levels above the minimum liquid level.
  - [371643] SOLARIS WATER MIDSTREAM, LLC will fill the containment. [371643] SOLARIS WATER MIDSTREAM, LLC will pause filling operations at every 10% of total fluid capacity above the minimum level.
  - [371643] SOLARIS WATER MIDSTREAM, LLC will maintain the liquid level for each 10% volume increase for 24 hours and inspect the leak detection system at the end of the 24-hour period.
  - If there are no liquids present in the leak detection system, [371643] SOLARIS WATER MIDSTREAM, LLC may proceed to fill the next 10% volume and repeat the process until the containment full design capacity minus the 3-feet of freeboard is reached.
  - If liquids are present, [371643] SOLARIS WATER MIDSTREAM, LLC should immediately cease the incremental fill test and perform a liner inspection. [371643] SOLARIS WATER MIDSTREAM, LLC should provide written notice of the fluid detection and liner inspection findings using a C-147 (long form) with the "Other" box checked and "Notice of fluid detection" written as the explanation of "Other."
  - If the detected fluid is confirmed to be produced water, [371643] SOLARIS WATER MIDSTREAM, LLC must comply with 19.15.34.13 NMAC. [371643] SOLARIS WATER MIDSTREAM, LLC must provide written notification to NMOCD on the actions taken to comply with 19.15.34.13 NMAC.
  - [371643] SOLARIS WATER MIDSTREAM, LLC must submit copies of the detailed containment inspection records for the prior three months and a report detailing the incremental fluid level test process and results through the [OCD Online](#) system using a C-147 (long form) with the "Other" box checked. "Recommencement of Operations - Incremental Fluid Level Test" should be written as the explanation of "Other." Form C-147 must be completed and include information in sections 1 General Information, 2 Recycling Facility, 3



Recycling Containment, 4 Bonding, and 10 Operator Application Certification. Section 9 Recycling Facility and/or Containment Checklist may also need to be partially completed. Operators should verify that the resumption of operations notification does not result in any changes to the recycling containment operating and maintenance plan or the closure plan. If the recommencement of operations will affect the operating and maintenance plan or closure plan, operators should check those boxes in section 9 and provide updated plans or plan addendums as attachments to the C-147.

- [371643] SOLARIS WATER MIDSTREAM, LLC will continue to operate, maintain, and close the 2RF-161 - MYOX AST - Facility Number [fVV2113850290] in compliance with 19.15.34 NMAC, to include but not limited detailed inspection records, removal of trash/oil from containment, and monthly C-148 reporting (even if there is zero activity).
- A minimum of 3-feet freeboard must always be maintained in the recycling containment during operations.
- [371643] SOLARIS WATER MIDSTREAM, LLC shall inspect the recycling containment and associated leak detection systems weekly while it contains fluids. [371643] SOLARIS WATER MIDSTREAM, LLC shall maintain a current log of such inspections and make the log available for review by the division upon request as per 19.15.34.13.A.
- NMOCD policy is to approve an extension to the cessation of operations for only a 6-month period. No additional extensions would be granted if during the approved extension period the containment was not utilized at a minimum of 20% total fluid capacity.

**All requested variances have been denied. Please note that a "standby mode" variance will not be approved. 19.15.34 NMAC and NMOCD policy does not allow for approving extensions/variances of recycling containments based on "standby mode."**

**Victoria Venegas** • Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

(575) 909-0269 | [Victoria.Venegas@emnrd.nm.gov](mailto:Victoria.Venegas@emnrd.nm.gov)

<https://www.emnrd.nm.gov/ocd/>



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 214334

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 214334
	Action Type: [C-147] Water Recycle Long (C-147L)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	None	5/12/2023