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

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.  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.	Recycling Facility and/or Recycling Containment
Type of action:   Permit	· · · · · · · · · · · · · · · · · · ·
At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.  a dvised 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. or does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.  1. Operator: Solaris Midstream LLC OGRID #: 371643  Address: 981 Katty Freeway, Suite 900, Houston, TX, 77024  Facility or well name (include API# if associated with a well): Ouali Ranch Air Gap Above-Ground Storage Tank  OCD Permit Number: (For new facilities the permit number will be assigned by the district office)  U/L or Qir/Qir. A Section: 26 Township: 24S Range: 34E County: Lea  Surface Owner: Federal State Private Tribal Trust or Indian Allotment  2. Recycling Facility: THIS AST IS ON A PIPELINE AND FACILITATES RECYCLING AT NUMEROUS RECYCLING FACILITIES  Location of (if applicable): Latitude Longitude: (NAD83) (Various)  Proposed Use: Drilling* Completion* Production* Plugging **  **The reuse 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.  [Selucion of the publicable or additional recycling containment Activity permitted under 19.15.17 NMAC explain type Activity permitted under 19.15.36 NMAC explain type: Other explain of each containment  [Closure Report (required within 60 days of closure completion): Recycling Facility Closure Completion Date: NOT APPLICABLE  3. Recycling Containment:  [Closure Report (required within 60 days of closure completion): Secondary Office of each containment  [Closure Report (required within 60 days of closure completion): Secondary Office of each containment  [Closure Report (required within 60 days of closure completion): Seco	
At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.  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. or does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.  T. Operator:    Solaris Midstream LLC	Modification Extension
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 or does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.    Operator:	☐ Other (explain)
or does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.    Operator:	At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.
Operator: Solaris Midstream LLC OGRID #: 371643  Address: 9811 Katy Freeway, Suite 900, Houston, TX, 77024  Facility or well name (include API# if associated with a well): Quail Ranch Air Gap Above-Ground Storage Tank  OCD Permit Number: [For new facilities the permit number will be assigned by the district office)  U/L or Qtr/Qtr: A Section: 26 Township: 245 Range: 34E County: Lea  Surface Owner:   Federal   State   Private   Tribal Trust or Indian Allotment  2.	e 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. or does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
Facility or well name (include API# if associated with a well):    Quail Ranch Air Gap Above-Ground Storage Tank	
OCD Permit Number:	Address: 9811 Katy Freeway, Suite 900, Houston, TX, 77024
U/L or Qtr/Qtr: A Section: 26 Township: 24S Range: 34E County: Lea  Surface Owner:   Federal   State   Private   Tribal Trust or Indian Allotment  2.   Recveling Facility: THIS AST IS ON A PIPELINE AND FACILITATES RECVELING AT NUMEROUS RECYCLING FACILITIES Location of (if applicable): Latitude	Facility or well name (include API# if associated with a well): Quail Ranch Air Gap Above-Ground Storage Tank
2.   Recvcling Facility: THIS AST IS ON A PIPELINE AND FACILITATES RECYCLING AT NUMEROUS RECYCLING FACILITIES   Location of (if applicable): Latitude	OCD Permit Number:(For new facilities the permit number will be assigned by the district office)
Recycling Facility: THIS AST IS ON A PIPELINE AND FACILITATES RECYCLING AT NUMEROUS RECYCLING FACILITIES   Location of (if applicable): Latitude	U/L or Qtr/Qtr: A Section: 26 Township: 24S Range: 34E County: Lea
Location of (if applicable): Latitude Longitude: (NAD83) (Various)	Surface Owner:  Federal State Private Tribal Trust or Indian Allotment
Location of (if applicable): Latitude Longitude: (NAD83) (Various)	2.
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 \[ Activity permitted under 19.15.17 NMAC explain type \]  \[ Activity permitted under 19.15.36 NMAC explain type: \]  \[ Other explain \]  \[ For multiple or additional recycling containments, attach design and location information of each containment \]  \[ Closure Report (required within 60 days of closure completion): \]  \[ Recycling Facility Closure Completion Date: \]  NOT APPLICABLE \]  3.  \[ Recycling Containment: \]  \[ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)  Center of Recycling Containment (if applicable) Pond- Lat  32.1828308°N  Long  103.4416101°W  (approx.) \]  \[ For multiple or additional recycling containments, attach design and location information of each containment  \[ \] Lined \[ \] Liner type: Thickness  30 mil Primary, 30 mil Secondary  \]  \[ \] LLDPE \[ \] HDPE \[ \] PVC \[ \] Other	Recycling Facility: THIS AST IS ON A PIPELINE AND FACILITATES RECYCLING AT NUMEROUS RECYCLING FACILITIES
*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	Location of (if applicable): Latitude Longitude: (NAD83) (Various)
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	Proposed Use: ☐ Drilling* ☐ Completion* ☐ Production* ☐ Plugging *
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: _NOT APPLICABLE ☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)  Center of Recycling Containment (if applicable) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.) ☐ For multiple or additional recycling containments, attach design and location information of each containment  ☐ Lined ☐ Liner type: Thickness 30 mil Primary, 30 mil Secondary ☐ HDPE ☐ PVC ☐ Other  ☐ Other explain ☐ HDPE ☐ PVC ☐ Other	*The re-use of produced water may NOT be used until fresh water zones are cased and cemented
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   Recycling Facility Closure Completion Date: NOT APPLICABLE	Other, requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on
Above ground tanks	groundwater or surface water.
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: _NOT APPLICABLE	☐ Fluid Storage
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:_NOT APPLICABLE_   Recycling Containment:   Recycling Containment     Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)   Center of Recycling Containment (if applicable) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.)     For multiple or additional recycling containments, attach design and location information of each containment     Lined   Liner type: Thickness 30 mil Primary, 30 mil Secondary   LLDPE   HDPE   PVC   Other     Other   PVC   Other	☐ Above ground tanks ☐ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type
Closure Report (required within 60 days of closure completion): ☐ Recycling Facility Closure Completion Date:NOT APPLICABLE	Activity permitted under 19.15.36 NMAC explain type: Other explain
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) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.)   For multiple or additional recycling containments, attach design and location information of each containment   Lined   Liner type: Thickness 30 mil Primary, 30 mil Secondary   LLDPE   HDPE   PVC   Other	For multiple or additional recycling containments, attach design and location information of each containment
Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)  Center of Recycling Containment (if applicable) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.)  For multiple or additional recycling containments, attach design and location information of each containment  Lined Liner type: Thickness 30 mil Primary, 30 mil Secondary LLDPE HDPE PVC Other	Closure Report (required within 60 days of closure completion): Recycling Facility Closure Completion Date:NOT APPLICABLE
Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)  Center of Recycling Containment (if applicable) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.)  For multiple or additional recycling containments, attach design and location information of each containment  Lined Liner type: Thickness 30 mil Primary, 30 mil Secondary LLDPE HDPE PVC Other	
Center of Recycling Containment (if applicable) Pond- Lat 32.1828308°N Long 103.4416101°W (approx.)  ☐ For multiple or additional recycling containments, attach design and location information of each containment  ☐ Lined ☐ Liner type: Thickness 30 mil Primary, 30 mil Secondary ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other  ☐ Other	3.    Recycling Containment:
☐ For multiple or additional recycling containments, attach design and location information of each containment  ☐ Lined ☐ Liner type: Thickness 30 mil Primary, 30 mil Secondary ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other  ☐ Other	Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)
☐ Lined ☐ Liner type: Thickness 30 mil Primary, 30 mil Secondary ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other	Center of Recycling Containment (if applicable) Pond-Lat 32.1828308°N Long 103.4416101°W (approx.)
	For multiple or additional recycling containments, attach design and location information of each containment
String-Reinforced	☐ Lined ☐ Liner type: Thickness 30 mil Primary, 30 mil Secondary ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
	String-Reinforced
Liner Seams:   Welded ☐ Factory ☐ Other Volume:	-

Recycling Containment Closure Completion Date: \_\_April 20, 2021\_

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	s 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:	
2 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, he environment.	uman health, and
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 reques variance information on a separate page and attach it to the C-147 as part of the application.	ted, include the
If a Variance is requested, it must be approved prior to implementation. See Volume 2 for Variances	
8. Siting Criteria for Recycling Containment	
Instructions. The applicant must provide attachments that down natural compliance for each cities evitaria below as next of the applicant	ation Dotantial
Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application examples of the siting attachment source material are provided below under each criteria.	ation. Potential
General siting	
Ground water is less than 50 feet below the bottom of the Recycling Containment.	□ v □ v-
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells FIGURES 1-2	☐ 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 FIGURE 3	
Within the area overlying a subsurface mine.	
- Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division FIGURE 4	☐ Yes ☐ No
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	
Society; topographic map FIGURE 5	☐ Yes ☐ No
Within a 100-year floodplain. FEMA map FIGURE 6	☐ Yes ⊠ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa	☐ Yes ⊠ No
lake (measured from the ordinary high-water mark).  - Topographic map; visual inspection (certification) of the proposed site FIGURE 7	
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 FIGURE 8	☐ 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. FIGURES 1 and 7	☐ Yes ⊠ No
- NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	
Within 500 feet of a wetland. FIGURE 9	☐ Yes ⊠ No
- US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	

Recycling Facility and/or Containment Checklist:		
Instructions: Each of the following items must be attached to the application. It	naicate, by a ch	eck mark in the box, that the documents are attached.
<ul> <li>☑ Design Plan - based upon the appropriate requirements.</li> <li>☑ Operating and Maintenance Plan - based upon the appropriate requirements.</li> <li>☑ Closure Plan - based upon the appropriate requirements.</li> <li>☑ Site Specific Groundwater Data -</li> <li>☑ Siting Criteria Compliance Demonstrations -</li> <li>☑ Certify that notice of the C-147 (only) has been sent to the surface owner.</li> </ul>		
10.		
Operator Application Certification:		
I hereby certify that the information and attachments submitted with this application	on are true, acci	arate and complete to the best of my knowledge and belief.
Name (Print):	Title:	Operations Manager
Signature:	Date:	
e-mail addresstodd.carpenter@solarismidstream.com		Telephone: 432-413-0918
OCD Representative Signature:		Approval Date:

Name (Print):	Bradley Todd Carpenter	Title:	Operations Manager
Signature:		Date:	
e-mail address	todd.carpenter@solarismidstream.com		Telephone:432-413-0918
	ignature:		Approval Date:
Title: OCD Condition	S Conditions on Attachment	OCD Permit	t Number:
	Conditions on Affachment		

## R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996

November 16, 2021

Ms. Teena Robbins Solaris Water Midstream Via-Email

RE: Closure Report for Quail Ranch Air Gap AST (1RF-450)

Ms. Robbins:

This closure report is required by NMOCD Rule 34, which is reproduced below for your benefit with *emphasis* added.

## 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.

B. The operator shall close a recycling containment by first removing all fluids, contents and synthetic liners and transferring these materials to a division approved facility.

- C. <u>The operator shall test the soils beneath the containment for contamination with a five-point composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed in Table I below.</u>
- (1) If any contaminant concentration is higher than the parameters listed in Table I, the division may require additional delineation upon review of the results and the operator must receive approval before proceeding with closure.
- (2) If all contaminant concentrations are less than or equal to the parameters listed in Table I, then the operator can proceed to backfill with non-waste containing, uncontaminated, earthen material.
- **D.** Within 60 days of closure completion, the operator shall <u>submit a closure report on form C-147</u>, including required attachments, to document all closure activities <u>including sampling results</u> and the details on any backfilling, capping or covering, where applicable. The closure report shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in division rules or directives.

A description of the sampling protocol, the laboratory reports and a copy of the OCD approval are presented in Appendices A, B and C respectively.

The results of closure sampling are presented below. Because the depth to groundwater as provided in the permit application is about 230 feet (page 3 of Siting Criteria Demonstration, April 2020), we used the appropriate remediation standards for a depth to groundwater greater than 100 feet.

November 16, 2021

Page 2

	Depth	Chloride	Benzene	Total BTEX	GRO	DRO	extDRO
Sample ID	ft BGS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
5-pt comp.	0-4	<16	< 0.050	< 0.300	<10.0	<10.0	<10.0
5-pt comp.	4.2	16	< 0.050	< 0.300	<10.0	<10.0	<10.0
Table 1		20,000	10	50		2500	)

The test results show no evidence of any seepage, and the site meets the remediation standards of Table 1.

Solaris and OCD should be cognizant of the following:

- The Quail Ranch Air Gap location was permitted for 1 year from the submission date of the permit (April 30, 2020, as indicated in Appendix C). If Solaris elects to re-install an AST Containment on this location during the active period of the permit, we recommend:
  - 1. Submit a new C-147 Permit Form for approval by OCD
  - 2. Submit a revised Volume 1 of the original permit and substitute pages 16-35 with appropriate documents from the AST provider.
  - 3. Delete Pages 1-6
- The pad associated with the AST Containment permit is a working pad associated with the pipeline air gap. The pad remains active and is the subject an agreement with Quail Ranch LLC for restoration of the pad site.
- The AST and permit are closed. In our opinion, any existing closure bond for the original AST may be removed. If a new AST Containment is permitted, however, Solaris must provide evidence of bonding per Rule 34.

If you or OCD representatives have any questions regarding this closure report, please contact me.

Sincerely,

R.T. Hicks Consultants, LTD

Randall Hicks Principal

Attached:

Appendix A Description of the sampling protocol

Appendix B Laboratory reports

Appen.dix C OCD approval of C-147

## R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996

## Appendix A: Closure Sampling at Quail Ranch Air Gap

Tuesday, October 5, 2021

- B&M Welding is responsible as the excavator to ensure clearance from the NM811 "one-call" service for underground facilities location before any excavation begins.
- RT Hicks Consultants is responsible for the storage, integrity, and transport of all of the samples collected.

### **PROCEDURE**

The following procedure will be followed to collect samples at the former Telluride AST Containment using an auger mounted on a skid-steer:

- 1. Advance drill to 4 ft BGS and slowly remove auger from hole. Hicks Consultants will collect soil sample from stem of auger drill as a composite of the 0-4 ft depth interval.
- 2. Return to the hole and advance auger to approximately 4.3 ft BGS and slowly remove stem from hole. Hicks Consultants will collect soil sample from this interval.
- 3. Backfill hole with remaining cuttings using a shovel.
- 4. Repeat at each sample point marked by an "X" on the enclosed maps or as directed by Hicks Consultants on site.

### **LOCATION**

### QUAIL RANCH Air Gap AST

Auger 5 holes in "dice" pattern at site of former tank at N SE corner of pad to 4.3 ft BGS each.

The AST was approximately 140 ft in diameter as indicated in the image. Although the outline of the tank was not visible on the pad, directions from Solaris, the image to the right, and the size of the tank provide high confidence that all borings were within the tank footprint.





October 08, 2021

RANDALL HICKS

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: QUAIL RIDGE AST

Enclosed are the results of analyses for samples received by the laboratory on 10/06/21 10:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



10/05/2021

Soil

### Analytical Results For:

R T HICKS CONSULTANTS RANDALL HICKS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE NM, 87104 Fax To: NONE

A ... - L ... - - - I D. .. MC

Sampling Date:

Received: 10/06/2021 Reported: 10/08/2021

Sampling Type: Project Name: QUAIL RIDGE AST Sampling Condition: Cool & Intact Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: **SOLARIS** 

### Sample ID: 5PT. COMP @ 4.' (H212783-06)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2021	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	10/06/2021	ND	1.96	98.1	2.00	6.63	
Ethylbenzene*	<0.050	0.050	10/06/2021	ND	1.92	95.9	2.00	6.85	
Total Xylenes*	<0.150	0.150	10/06/2021	ND	5.83	97.2	6.00	6.04	
Total BTEX	<0.300	0.300	10/06/2021	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 69.9-14	0						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/07/2021	ND	432	108	400	0.00	
TPH 8015M mg/kg		Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/07/2021	ND	223	112	200	2.36	
DRO >C10-C28*	<10.0	10.0	10/07/2021	ND	222	111	200	0.599	
EXT DRO >C28-C36	<10.0	10.0	10/07/2021	ND					
Surrogate: 1-Chlorooctane	77.8	% 44.3-13	3						
Surrogate: 1-Chlorooctadecane	73.1	% 38.9-14	2						

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

#	· Report Composite as 5-pt comp. (a 4.	CHECKED BY: (Initials)	Sample Con Cool Inta	1.9c/C-ase	Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Delivered By:
	Kristin @rthicksconsult.com,	Email to	Received By:	fime Date:	By: Pape	Relinquished By:
	ss.	ces hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.  Te:  Received By:  Received By:	Received By:	formance of services hereunder by C.  Date:  18-6-21	rivice. In no event shall Caronial be sable for industrial or filliates or successors arising out of or related to the perform <b>Selinquished By:</b>	affiliates or successors arising Relinquished By:
	che he applicable vies,	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writings of uses, or loss of profits incurred by client, its subsidiaries,	y claim arising whether based in cont eemed waived unless made in writing	ity and client's exclusive remedy for an other cause whatsoever shall be d	and Damages. Cardinal's liabilituding those for negligence and a	PLEASE NOTE: Liability analyses. All claims incl
	10/4	7 8448	CIV	DO4,	5pt. Com	6
	-	X 2 1025	X	4.2 4	5050	5.0
	IN LAB	X /006	×	4.2 ft	5030	Cu2
	COMPOSITE	\$ 105-310948	××	4.2 ft	50100	
$\perp$	1	OTHE DATE	# CON GROU WAST SOIL OIL			H212783
	hloride BTEX	ER: /BASE: COOL	AB OR (C)OINTAINERS  JNDWATER  TEWATER	Sample I.D.	Samp	Lab I.D.
	801	PRESERV. SAMPLING				FOR LAB USE ONLY
	15			Data	Kristin	Sampler Name:
eline were entre		Phone #: 57/5-238-95/5		ige moi	Quail Kidge	Project Name:
	7		Solaris	Project Owner:		Project #:
		Address:		₹ Fax#:	5-6866-5004	Phone #: 50:
		Attn: Randy Hicks	Zip: 87/04	State: NM	KID Grande	City: A /bugue
-		Company OT Halis	CIII-3 : 1		* · · · ·	Project Manager:
		BO #:		Consultants	e: RT HICKS	Company Name:
	ANALYSIS REQUEST	0.5-11/6		FAX (5/5) 393-24/6	5/5) 393-2326	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Page 4 of 4



October 08, 2021

RANDALL HICKS R T HICKS CONSULTANTS 901 RIO GRANDE BLVD SUITE F-142 ALBUQUERQUE, NM 87104

RE: QUAIL RIDGE AST

Enclosed are the results of analyses for samples received by the laboratory on 10/06/21 10:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Celey D. Keine

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

R T HICKS CONSULTANTS
RANDALL HICKS
901 RIO GRANDE BLVD SUITE F-142
ALBUQUERQUE NM, 87104
Fax To: NONE

Received: 10/06/2021
Reported: 10/08/2021
Project Name: QUAIL RIDGE AST

Project Name: QUAIL RIDGE AST Project Number: NONE GIVEN Project Location: SOLARIS Sampling Date: 10/05/2021 Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

### Sample ID: 5PT. COMP @ 0-4' (H212782-06)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2021	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	10/06/2021	ND	1.96	98.1	2.00	6.63	
Ethylbenzene*	<0.050	0.050	10/06/2021	ND	1.92	95.9	2.00	6.85	
Total Xylenes*	<0.150	0.150	10/06/2021	ND	5.83	97.2	6.00	6.04	
Total BTEX	<0.300	0.300	10/06/2021	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 69.9-14	0						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/07/2021	ND	432	108	400	0.00	
TPH 8015M mg/kg		Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/07/2021	ND	223	112	200	2.36	
DRO >C10-C28*	<10.0	10.0	10/07/2021	ND	222	111	200	0.599	
EXT DRO >C28-C36	<10.0	10.0	10/07/2021	ND					
Surrogate: 1-Chlorooctane	76.0	% 44.3-13	3						
Surrogate: 1-Chlorooctadecane	72.1	% 38.9-14	2						

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(575) 393-2326 FAX (575) 393-2476 101 East Marland, Hobbs, NM 88240

Company Name: AT HICKS CONSULTANTS	B/LL 70	ANALYSIS REQUEST
Project Manager: Randy Hicks	P.O. #:	
Grande Blud NW, Suite F-14	2 Company: RT Hicks	
e State: MM Zip: 87/04	Attn: Randy HICH	
Phone #: (565) \$66-5004 Fax #:	Address:	
Project #: Project Owner: Solar \S	City:	
Project Name: Quail Ridge AST	State: Zip:	
	Phone #: 505-238-95/5	
Sampler Name: Kristin Papa	Fax #:	
	PRESERV. SAMPLING	
RS TER	1.	80
GRAB OR (G) # CONTAINER GROUNDWAY WASTEWATE SOIL OIL	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE	BTEY
250 100-4 ft CIX	× 16-5-21 0937 ×	CREATE 5- pint
S 5 P S D 0 - 4 + + C   X	10/4	Com po 5/7 E /N
6 Spt. Compe O4' C11	L 0937 V	10/6/21
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal whitin 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	tract or tort, shall be limited to the amount paid by the client for the and received by Cardinal within 30 days after completion of the applicons, loss of use, or loss of profits incurred by client, its subsidiaries,	able .
Relinquished By:    Date:   Date:   Received By:   Received By:   Particular   Receive	Phone Result: Fax Result: REMARKS: CEMAI 1	□ Yes □ No Add'I Phone #: □ Yes □ No Add'I Fax #:
Time:	kristin @	@ rthicks consult, com.
Cool Inta	CHECKED BY: (Initials)	11 11 11 11 11
1170 th/B   No	<u> </u>	Como as 5-ot Como (a) 0-4 ++

## **Appendix C**

### r@rthicksconsult.com

From: LucasKamat, Susan, EMNRD <Susan.LucasKamat@state.nm.us>

**Sent:** Friday, May 1, 2020 4:03 PM

**To:** 'Todd Carpenter'

**Cc:** 'Michael Incerto'; r@rthicksconsult.com; madison@rthicksconsult.com; Griswold, Jim, EMNRD;

Bratcher, Mike, EMNRD

Subject: RE: (Draft) Approval with Conditions, Solaris Midstream, Quail Ranch Air Gap AST Recycling

Containment (1RF-450), Section 26. T26S, R34E / Lea County, NM

### Dear Mr. Carpenter:

The New Mexico Oil Conservation Division (OCD) has reviewed the recycling containment permit application and related documents, submitted on behalf of Solaris Midstream LLC (Solaris) on April 29 and 30, 2020, for the proposed Quail Ranch Air Gap Above-Ground Storage Tank (AST) Recycling Containment in Lea County New Mexico.

Solaris requested variances from 19.15.34 NMAC for the Quail Ranch Air Gap AST Recycling Containment related to 19.15.34.12.A (2) NMAC containment side-slope requirements; 19.15.34.12.A (3) NMAC liner anchors and anchor trench requirements, 19.15.34.12 A (4) NMAC liner requirements, and 19.15.34.13 B (2) NMAC freeboard requirements. The following variances have been approved.

- The variance to 19.15.34.12.A (2) NMAC for the no side-slope requirement for a segmented steel tank with vertical walls for is approved.
- The variance to 19.15.34.12.A (3) NMAC for the liners to be anchored to the top of the steel walls with clips and no anchor trenches is approved.
- The variance to 19.15.34.12 A (4) NMAC for the installation of a 30-mil LLDPE non-reinforced primary liner and a 30-mil non-reinforced LLDPE secondary liner with a 200-mil geogrid drainage layer is approved for one (1) year of operation from date of permit approval.

The following variance has been denied.

• The variance to 19.15.34.13 B (2) NMAC for a 2-feet freeboard has been denied. The containment must operate with the 3-feet freeboard as specified by rule.

The Form C-147 form and supporting documents submitted for registering and permitting the Quail Ranch Air Gap AST Recycling Containment is approved with conditions of approval:

- Solaris will continue to construct, operate, maintain, close, and reclaim the Quail Ranch Air Gap AST
  Recycling Containment 1RF-450 in compliance with 19.15.34 NMAC, including, but not limited to, the
  performance of weekly inspections regardless of fluid levels in the containment; recording of detailed
  inspection reports; removal of debris, foreign objects and oil from the containment; and monthly
  reporting of recycling and reuse of produced water, drilling fluids, and liquid oil field waste via from C148. (C-148s are available for download at the OCD website at
  <a href="http://www.emnrd.state.nm.us/OCD/forms.html">http://www.emnrd.state.nm.us/OCD/forms.html</a>.)
- The Quail Ranch Air Gap AST Recycling Containment is approved for one (1) year of operation from the date of permit approval on May 1, 2020. The Quail Ranch Air Gap AST Recycling Containment permit expires on May 1, 2021. If Solaris wishes to extend operations past one (1) year, the recycling containment the primary and secondary liners must be replaced and bought into compliance with 19.15.34.12 A (4) NMAC. A permit renewal must be submitted using a form C-147 via email to OCD.Enviro@state.nm.us by April 1, 2021.

- Solaris will notify OCD when operations commence and cease at the Quail Ranch Air Gap AST.
- Solaris cannot receive produced water in the Quail Ranch Air Gap AST until after the original copy of the financial assurance has been accepted by OCD. The financial assurance bond should be mailed to the Oil Conservation Division; ATTN: Eva Mathes, Bonding and Compliance; 1220 South St Frances Drive; Santa Fe, NM 87505. OCD will notify you when the bond has been received and approved.
- A minimum of 3-feet freeboard must be maintained in the recycling containment at all times during operations.
- Solaris will provide OCD with the calculations for the operational total fluid capacity of the containment within 30 days of receiving produced water in the containment. The operational fluid capacity is the total volume of the containment, minus the volume not utilized due to the freeboard.
- If less than 20% of the total fluid capacity is utilized every six months, beginning from the first withdraw, operation of the facility is considered ceased and notification of cessation of operations should be sent electronically to <a href="https://occ.en.org/len.nus.com/occ.en.nus">OCD.Enviro@state.nm.us</a>. An extension to extend the cessation of operation, not to exceed six months, may be submitted using a C-147 form to <a href="https://occ.en.nus.com/occ.
- Solaris will comply with 19.15.29 NMAC Releases in the event of any release of produced water or produced water or other oil field wastes at Quail Ranch Air Gap AST. Solaris will comply with all other OCD rules.
- Solaris must perform weekly inspections of the containment and leak detection system, regardless of fluid levels in the containment. The weekly inspections should be submitted electronically on a monthly basis, along with the monthly C-148 report, to <a href="https://occupiercolors.org/le/basis/">OCD.Enviro@state.nm.us</a>.

The facility has been assigned OCD Administrative Order number 1RF-450. Please reference this permit number in all future communications, modifications, and notices related to Quail Ranch Air Gap AST Recycling Containment and for monthly reporting of recycling and reuse of produced water, drilling fluids and liquid oil field waste. A copy of the approved C-147 with conditions for 1RF-450 will uploaded to the OCD Imaging system at <a href="http://ocdimage.emnrd.state.nm.us/imaging//AEOrderFileView.aspx?appNo=pSL2011849240">http://ocdimage.emnrd.state.nm.us/imaging//AEOrderFileView.aspx?appNo=pSL2011849240</a> within 24 hours.

Notifications of the start and cessation of operations should be emailed to the OCD Environmental Bureau (<a href="https://ocp.enviro@state.nm.us">OCD.Enviro@state.nm.us</a>) with a cc to OCD District Manager Mike Bratcher (<a href="mailto:mike.bratcher@state.nm.us">mike.bratcher@state.nm.us</a>).

Please keep a copy of this electronic communication for your files, as no paper copy of the approval will be delivered. A copy of this electronic communication will be saved in 1RF-450 electronic file on OCD Imaging referenced above.

Thank you for your assistance and cooperation on this matter.

Please do not hesitate to contact me if you have further questions or concerns.

Regards,

### Susan A. Lucas Kamat

Environmental Scientist
Oil Conservation Division
Energy, Minerals, and Natural Resources Department

5200 Oakland Avenue, Suite 100 Albuquerque, New Mexico 87113 (505) 670-8745

Susan.LucasKamat@state.nm.us

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

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 63621

### **CONDITIONS**

	Operator:	OGRID:
	SOLARIS WATER MIDSTREAM, LLC	371643
	907 Tradewinds Blvd, Suite B	Action Number:
Midland, TX 79706		63621
		Action Type:
		[C-147] Water Recycle Long (C-147L)

### CONDITIONS

Created	Condition	Condition
Ву		Date
	NMOCD has reviewed the closure report submitted by [371643] SOLARIS WATER MIDSTREAM, LLC, on November 24, 2021, for 1RF-450 - Quail Ranch Air Gap Above-Ground Storage Tank	12/2/2021
	Recycling Containment Facility ID fSL2012541849 in A-26-24S-34E, Lea County, New Mexico. The closure report has been approved. Please note that according to 19.15.34.14.G: The re-	1
	vegetation and reclamation obligations imposed by federal, state trust land or tribal agencies on lands managed by those agencies shall supersede these provisions and govern the	1 1
	obligations of any operator subject to those provisions, provided that the other requirements provide equal or better protection of fresh water, human health and the environment. In	1 1
	accordance with 19.15.34.14.H, the operator shall notify the division when reclamation and re-vegetation are complete.	