

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 October 11, 2022

https://www.emnrd.nm.gov/ocd/ocd-e-permitting/

Recycling Facility and/or Recycling Containment

Type of Facility: [] Recycling Facility [X] Recycling Containment*
Type of action: [] Permit [X] Modification [] Registration [] Extension [] Closure [X] Other (explain) Closure request for the AST only

* 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 700, Houston TX, 77024
Facility or well name (include API# if associated with a well): Longhorn Water Treatment and Reuse Facility
OCD Permit Number: 1V/2111958376 (For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr A Section 07 Township 26S Range 35E County: Lea
Surface Owner: [X] Federal [] State [X] Private [] Tribal Trust or Indian Allotment

2. [X] Recycling Facility:
Location of recycling facility (if applicable): Latitude 32.0635060°N Longitude -103.3993863°W 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
[] 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. [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 32.0635259°N Longitude -103.3994541°W NAD83
[X] For multiple or additional recycling containments, attach design and location information of each containment
[X] Lined [X] Liner type: Thickness 60 mil [] LLDPE [X] HDPE [] PVC [] Other please see drawings
[] String-Reinforced
Liner Seams: [] Welded [] Factory [] Other please see drawings Volume: bbl Dimensions: L x W x D
[] 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 8 ft chain link

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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; aerial photo; satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

9.

Recycling Facility and/or Containment Checklist:

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

- Design Plan - based upon the appropriate requirements.
- 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: 6-23-2023

e-mail address: chad.gallagher@ariswater.com Telephone: (575)444-9786

11.

OCD Representative Signature: *Victoria Venegas* Approval Date: 07/10/2023

Title: Environmental Specialist OCD Permit Number: 1RF-466

OCD Conditions _____

Additional OCD Conditions on Attachment

R. T. HICKS CONSULTANTS, LTD.

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

July 20, 2023

Ms. Victoria Venegas
 NMOCD - Permitting
 Via E-Mail

RE: Solaris Water Midstream Longhorn AST Containment Closure Report
 Section 7 T26S R35E, Lea County

Dear Ms. Venegas:

On behalf of Solaris Water Midstream, R.T. Hicks Consultants submits the above-referenced closure report. Solaris will upload the document to OCD via the OCD Online portal. In addition to this transmittal letter that summarizes the results of closure sampling, please find attached:

1. Our compliance checklist for closure.
2. The description of the sampling protocol. Note we elected to submit all samples to the laboratory rather than hold samples as suggested in the protocol.
3. Site Photos
4. Laboratory reports from Cardinal Laboratory.

Table 1 provides sample results for chloride, the only constituent that exceeded laboratory detection limits. Laboratory analyses did not detect petroleum hydrocarbons. There is no evidence of a release from the AST and the sampling program clearly demonstrates compliance with Table 1 criteria for closure.

The Longhorn RF and AST Containment was on a pad constructed by Solaris adjacent to the proposed in-ground containment that was never constructed. Pad reclamation will proceed according to the agreements and policies of the BLM prior to the expiry date of the bond, August 3, 2023.

Sincerely,
 R.T. Hicks Consultants



Randall T. Hicks PG
 Principal

Copy: Solaris Water Midstream
 BLM

Table 1 - Laboratory Results Above Detection		
	Chloride(mg/kg)	Depth (ft.)
NWS1	16	4.25
NES2	32	4.25
SES3	128	4.25
SWS4	32	4.25
CS5	16	4.25
NWS1	ND	0-4
NES2	ND	0-4
SES3	16	0-4
SWS4	32	0-4
CS5	ND	0-4

Compliance Checklist

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.

Solaris removed the AST from the location and the treatment facility. Solaris complied with Section A and B

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. 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.

Transmittal letter and attachment provide evidence of compliance with Section C

(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 submit a closure report on form C-147, including required attachments, to document all closure activities including sampling results 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.

E. Once the operator has closed the recycling containment, the operator shall reclaim the containment's location to a safe and stable condition that blends with the surrounding undisturbed area. Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area shall then be reseeded in the first favorable growing season following closure of a recycling containment. The operator shall substantially restore the impacted surface area to the condition that existed prior to the construction of the recycling containment.

F. Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.

G. The re-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 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.

H. The operator shall notify the division when reclamation and re-vegetation are complete.

While the AST is closed, the pad upon which it stood will be reclaimed by Solaris and provide evidence of reclamation in accordance with BLM mandates. Solaris will notify OCD when reclamation is complete, complying with Sections E, F, G, & H.

R. T. HICKS CONSULTANTS, LTD.

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Closure Sampling SOP

- Flex Services 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 collection, storage, integrity, and transport of all of the samples.

PROCEDURE

The following procedure will be followed to collect samples using an auger mounted on a skid-steer, bobcat or equivalent:

1. Advance drill to 4 ft BGS and slowly remove auger from hole. Hicks Consultants will collect representative soil sample from stem of auger drill from
 - a. 0-4 ft depth interval
 - b. 0-2 foot depth
 - c. 2-4 foot depth.
2. Clean out boring and then return clean auger to the hole. 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.

SAMPLE MANAGEMENT

Obtain coolers and sample vials, etc. from Cardinal Labs in Hobbs.

Chain of Custody #1 should list only the following samples

- 5 samples of the depth interval 0-4 feet - 1 for each boring
- 5 samples of the 4.25 depth - 1 from each boring
- All 10 samples should be analyzed for Chloride, BTEX and GRO/DRO/MRO

Chain of Custody #2 should be for the second group of samples that will be “HELD FOR POSSIBLE ANALYSIS” and will include

- 5 samples of the depth interval 0-2 feet - one from each boring and
- 5 samples of the depth interval 2-4 feet - one from each boring
- All 10 samples should be analyzed for chloride only

Deliver samples on ice to Cardinal Labs in Hobbs.

SITE PHOTOGRAPHS – LONGHORN AST CLOSURE



Location of images -



Sample #1 NW

SITE PHOTOGRAPHS – LONGHORN AST CLOSURE



Sample #2 NE



Sample #3 SE

SITE PHOTOGRAPHS – LONGHORN AST CLOSURE



Sample #4 SW



Sample #5 Center

SITE PHOTOGRAPHS – LONGHORN AST CLOSURE

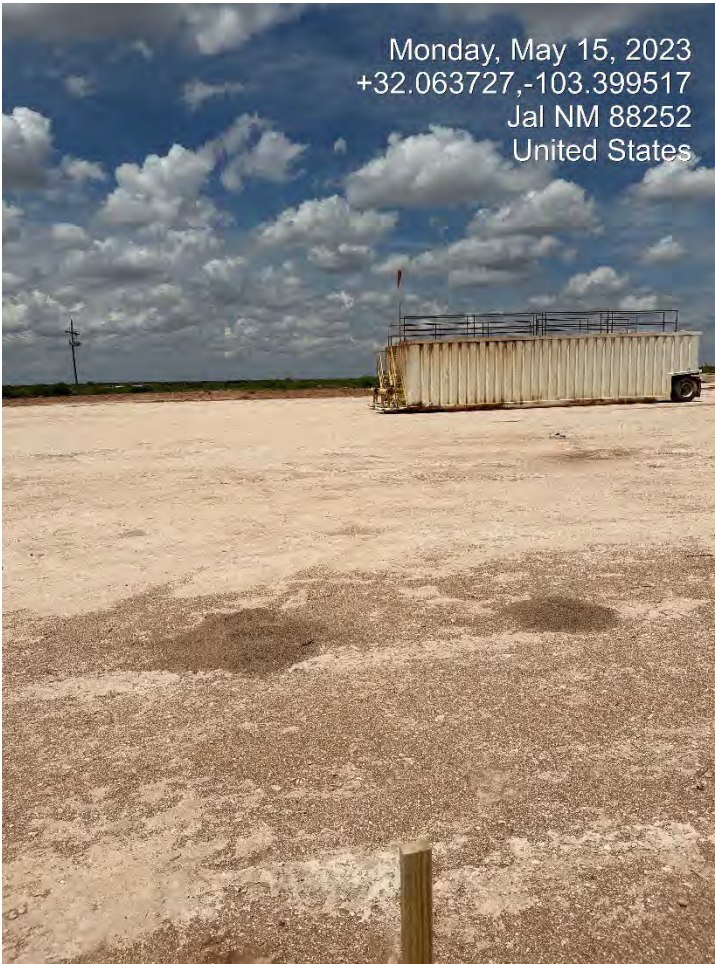


Image showing pad where AST was erected.



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 18, 2023

RANDALL HICKS

R T HICKS CONSULTANTS

901 RIO GRANDE BLVD SUITE F-142

ALBUQUERQUE, NM 87104

RE: SOLARIS WATER MIDSTREAM, LLC

Enclosed are the results of analyses for samples received by the laboratory on 05/15/23 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. 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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NWS 1 0-2 (H232423-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2023	ND	2.38	119	2.00	6.10	
Toluene*	<0.050	0.050	05/16/2023	ND	2.37	119	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.31	115	2.00	5.91	
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.01	117	6.00	5.14	
Total BTEX	<0.300	0.300	05/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868	
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2	
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NWS 1 2-4 (H232423-02)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.38	119	2.00	6.10		
Toluene*	<0.050	0.050	05/16/2023	ND	2.37	119	2.00	6.29		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.31	115	2.00	5.91		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.01	117	6.00	5.14		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 135 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NWS 1 0-4 (H232423-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.38	119	2.00	6.10		
Toluene*	<0.050	0.050	05/16/2023	ND	2.37	119	2.00	6.29		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.31	115	2.00	5.91		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.01	117	6.00	5.14		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NWS 1 4.25 (H232423-04)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2023	ND	2.38	119	2.00	6.10	
Toluene*	<0.050	0.050	05/16/2023	ND	2.37	119	2.00	6.29	
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.31	115	2.00	5.91	
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.01	117	6.00	5.14	
Total BTEX	<0.300	0.300	05/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868	
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2	
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NES 2 0-2 (H232423-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 130 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NES 2 2-4 (H232423-06)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868	
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2	
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NES 2 0-4 (H232423-07)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	186	93.1	200	0.868		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	166	82.9	200	13.2		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 124 % 48.2-134

Surrogate: 1-Chlorooctadecane 138 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: NES 2 4.25 (H232423-08)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 128 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SES 3 0-2 (H232423-09)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SES 3 2-4 (H232423-10)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 125 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SES 3 0-4 (H232423-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SES 3 4.25 (H232423-12)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/16/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/16/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/16/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/16/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/16/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/16/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/16/2023	ND						

Surrogate: 1-Chlorooctane 126 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SWS 4 0-2 (H232423-13)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SWS 4 2-4 (H232423-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SWS 4 0-4 (H232423-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/16/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 141 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: SWS 4 4.25 (H232423-16)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND						

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 141 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: CS 5 0-2 (H232423-17)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

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	05/16/2023	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS							S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72			
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11			
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND							

Surrogate: 1-Chlorooctane 135 % 48.2-134

Surrogate: 1-Chlorooctadecane 149 % 49.1-148

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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: CS 5 2-4 (H232423-18)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND						

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 144 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: CS 5 0-4 (H232423-19)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75		
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86		
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64		
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77		
Total BTEX	<0.300	0.300	05/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	05/16/2023	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72		
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11		
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND						

Surrogate: 1-Chlorooctane 127 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/15/2023	Sampling Date:	05/15/2023
Reported:	05/18/2023	Sampling Type:	Soil
Project Name:	SOLARIS WATER MIDSTREAM, LLC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LONGHORN AST		

Sample ID: CS 5 4.25 (H232423-20)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2023	ND	2.44	122	2.00	9.75	
Toluene*	<0.050	0.050	05/17/2023	ND	2.43	122	2.00	9.86	
Ethylbenzene*	<0.050	0.050	05/17/2023	ND	2.36	118	2.00	9.64	
Total Xylenes*	<0.150	0.150	05/17/2023	ND	7.15	119	6.00	8.77	
Total BTEX	<0.300	0.300	05/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	05/16/2023	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/17/2023	ND	217	109	200	2.72	
DRO >C10-C28*	<10.0	10.0	05/17/2023	ND	203	101	200	6.11	
EXT DRO >C28-C36	<10.0	10.0	05/17/2023	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RT Hicks Project Manager: Randy Hicks Address: 901 Rio Grande Blvd, NW City: Albuquerque State: NM Zip: 87104 Phone #: 505-266-5004 Fax #: Project #: Project Name: Salaries Water Midstream, LLC Project Location: Longhorn AST Sampler Name: Aaron Garcia		P.O. #: Company: RT Hicks Attn: Address: City: State: Zip: Phone #: Fax #:							
BILL TO									
ANALYSIS REQUEST									
<small>FOR LAB USE ONLY</small>									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	ANALYSIS
H030423	NWS1	G	1	SOIL	✓		5-15-23	12:59	Chloride
	NWS1			SOIL				12:40	TPH
	NWS1			SOIL				12:41	B-TEX
	NWS1			SOIL				12:45	
	NWS1			SOIL				12:51	
	NES2			SOIL				12:52	
	NES2			SOIL				12:53	
	NES2			SOIL				12:56	
	SES3			SOIL				1:05	
	SES3			SOIL				1:06	

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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature] **Date:** 5-15-23 **Received By:** [Signature] **Date:** 5-15-23 **Time:** 3:30 pm

Relinquished By: [Signature] **Date:** [] **Received By:** [Signature] **Date:** [] **Time:** []

Delivered By: (Circle One) UPS Bus Other: [] **Observed Temp. °C:** 0.2 **Corrected Temp. °C:** 0.8

Sample Condition: Intact Cool Yes No Yes No

Checked By: [Signature] **Turnaround Time:** Standard Rush Bacteria (only) Cool Intact Yes No Yes No **Sample Condition:** Observed Temp. °C Corrected Temp. °C

REMARKS:

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: **RT HICKS**
 Project Manager: **Randy Hicks**
 Address: **901 Rio Grande Blvd, NW**
 City: **Albuquerque** State: **NM** Zip: **87104**
 Phone #: **505-266-5004** Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: **Salaris Water Masterstream, LLC**
 Project Location: **Longhorn AST**
 Sampler Name: **Aaron Garcia**
 P.O. #: _____ Company: _____
 Attn: _____ Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
11	SES 3	G	1			<input checked="" type="checkbox"/>				5-15-23	1:07	Chloride
12	SES 3										1:10	TPH
13	SES 4										1:16	B-TEX
14	SES 4										1:17	
15	SES 4										1:18	
16	SES 4										1:21	
17	SES 5										1:29	
18	SES 5										1:30	
19	SES 5										1:31	
20	SES 5										1:35	

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 analysis. 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: _____ Date: **5-15-23**
 Received By: _____ Date: **5-15-23**
 Time: **3:30pm**
 Turnaround Time: _____ Standard Rush
 Thermometer ID #113 Correction Factor -0.6°C
 Bacteria (only) Sample Condition
 Cool Intact Observed Temp. -C
 Yes No
 Corrected Temp. °C

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other : _____
 Observed Temp. °C **0.2c**
 Corrected Temp. °C **0.8c**
 Sample Condition Cool Intact
 Checked By: (Initials) **AS**
 Remarks: _____
 Verbal Result: Yes No Add'l Phone #: _____
 All Results are emailed. Please provide Email address: _____
 Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinalabsnm.com

Venegas, Victoria, EMNRD

From: Venegas, Victoria, EMNRD
Sent: Monday, July 10, 2023 11:13 AM
To: 'Chad Gallagher'
Subject: 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376]
Attachments: Modification. C-147 1RF-466 - Longhorn Water Treatment and Reuse Facility ID fVV2111958376.pdf

1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376].

Good morning Mr. Gallagher,
NMOCDD has reviewed the permit modification request for 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376] submitted by SOLARIS WATER MIDSTREAM, LLC [371643] on 07/06/2023, Application ID 236572. This modification request is approved with the following conditions of approval:

- The modification to close out the AST, which is part of permit 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376], is approved. The total fluid capacity of permit 1RF-466, consisting of one (1) inground containment, is 290,000 BBL.

SOLARIS WATER MIDSTREAM, LLC [371643] will comply with all conditions previously approved for permit 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376]. No changes to the operations procedures, maintenance, and monitoring procedures, or closing procedures will be made aside from closure of the AST. The 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376] must operate as originally permitted.

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

Victoria Venegas • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave. Artesia, NM 88210
(575) 909-0269 | Victoria.Venegas@emnrd.nm.gov
<https://www.emnrd.nm.gov/ocd/>



District I
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 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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 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 236572

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 236572
	Action Type: [C-147] Water Recycle Long (C-147L)

CONDITIONS

Created By	Condition	Condition Date
venegas	<ul style="list-style-type: none"> The modification to close out the AST, which is part of permit 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376], is approved. The total fluid capacity of permit 1RF-466, consisting of one (1) inground containment, is 290,000 BBL. SOLARIS WATER MIDSTREAM, LLC [371643] will comply with all conditions previously approved for permit 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376]. No changes to the operations procedures, maintenance, and monitoring procedures, or closing procedures will be made aside from closure of the AST. The 1RF-466 - LONGHORN WATER TREATMENT AND REUSE FACILITY ID [fVV2111958376] must operate as originally permitted. 	7/10/2023