

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>73</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

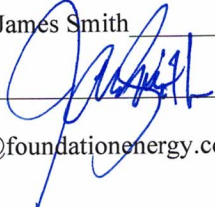
**Characterization Report Checklist:** Each of the following items must be included in the report.

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Incident ID	nOY1706630748
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: James Smith Title: HSE/Regulatory Supervisor  
Signature:  Date: 2/13/23  
email: JSmith@foundationenergy.com Telephone: 972-707-2595

**OCD Only**  
Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	10470662 Page 3 of 57
District RP	
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: James Smith Title: HSE-Regulatory Supervisor  
Signature:  Date: 2/13/2023  
email: [jsmith@foundationenergy.com](mailto:jsmith@foundationenergy.com) Telephone: 972-707-2595

**OCD Only**

Received by: Jocelyn Harimon Date: 02/13/2023

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature:  Date: 2/13/2023

**Work plan approved with the following conditions:**

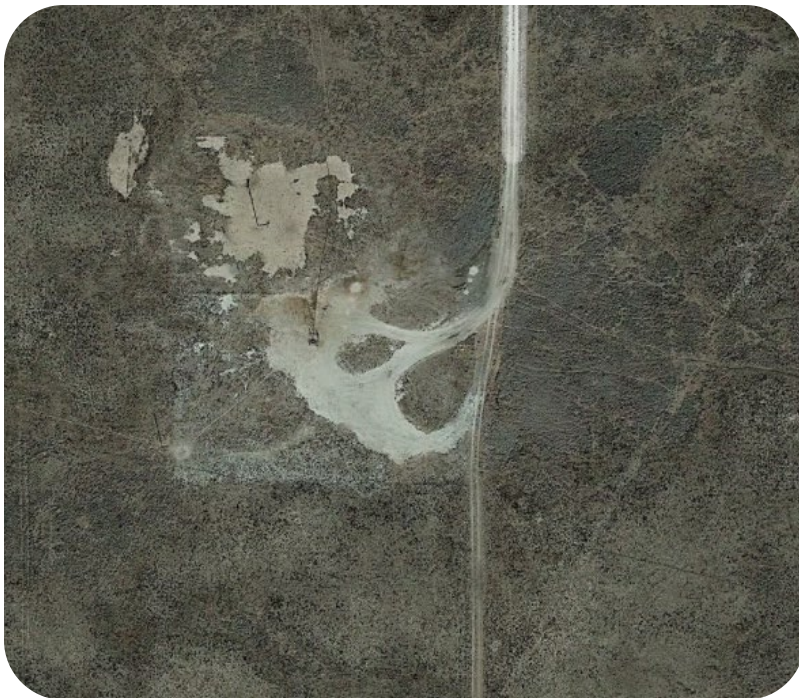
1. Confirmation samples must be representative of no more than 400 square feet.
2. The area of Backfill-1, HA-5, HA-6, and HA-7 must be remediated and reclaimed per 19.15.29 NMAC.



# CHALUPA #4 SWD – SOUTH RELEASE AREA Remediation Action Plan

NMOCD Incident No. nOY1706630747  
UL "M", Sec. 13, T14S, R33E  
33.0982437°, -103.5753937°  
Lea County, New Mexico

January 30, 2023



## PREPARED ON BEHALF OF

Foundation Energy  
Management  
1801 Broadway  
Suite 1500  
Denver, CO 80202



## PREPARED BY

Tasman, Inc.  
2620 W. Marland Blvd.  
Hobbs, NM 88240





January 30, 2023

Foundation Energy Management, LLC  
1801 Broadway, Suite 1500  
Denver, Colorado 80202

Attn: Mr. James Smith  
Email: [jsmith@foundationenergy.com](mailto:jsmith@foundationenergy.com)

Re: Remediation Action Plan  
Chalupa SWD #4 – South Release Area  
UL “M”, Section 13, Township 14 South, Range 33 East  
Lea County, New Mexico  
NMOCD Incident No. nOY1706630747  
Tasman Project No. 4952

Dear Mr. Smith,

Tasman, Inc. (Tasman) is pleased to submit this Remediation Action Plan for the above referenced site. Site assessment activities were executed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning the delineation of releases of produced water to the environment.

Tasman appreciates the opportunity to provide environmental services to Foundation Energy Management. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,  
**Tasman, Inc.**

Brett Dennis  
Senior Environmental Scientist  
[bdennis@tasman-geo.com](mailto:bdennis@tasman-geo.com)

Kyle Norman  
Regional Project Manager  
[knorman@tasman-geo.com](mailto:knorman@tasman-geo.com)

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### Appendix C – Certified Laboratory Analytical Reports

## 1.0 INTRODUCTION

Tasman, Inc. (Tasman) is pleased to submit this Remediation Action Plan for the Chalupa #4 SWD – South Release Area (Site) on behalf of Foundation Energy Management, LLC (FEM), documenting the results of field activities conducted in response to a release of natural gas and natural gas condensate to environmental media.

### 1.1 Site Description

The Site is located in Lea County, New Mexico in Unit Letter “M”, Township 14 South, Range 33 East and the approximate coordinates are 33.0982437, -103.5753937 (Figure 1). The Site is located approximately 0.3 miles south of State Highway 108 (Anderson Road) in a rural area on New Mexico State Trust Lands administered by the New Mexico State Land Office (NMSLO) and leased to Norman and Elwanda Hahn Ranches, LTD for agriculture use. The nearest town of Lovington, New Mexico is located approximately 16 miles southeast of the Site.

### 1.2 Site History

On March 2, 2017, FEM discovered a release of produced water at the Site from a leak that developed in the pipeline connecting FEM’s tank battery to the Chalupa #4 injection well. The release occurred at the Site as displayed on Figure 2, which is approximately 600-feet south of the tank battery location. Approximately 25 barrels (bbls) of saltwater were released to the ground surface and approximately 15 bbls were recovered.

On February 23, 2017, FEM discovered a release of produced water at the Site from a clamp securing a hose to the Chalupa #4 SWD wellhead that failed, releasing saltwater on the ground surface. The release occurred approximately 2,500-feet south of the tank battery location. Approximately 125 bbls of saltwater were released to the ground surface and approximately 25 bbls were recovered. On March 6, 2017, FEM submitted a Release Notification Corrective Action Form C-141 to the NMOCD for the release and the NMOCD established a maximum permissible chloride level in soil of 600 milligrams per kilogram (mg/kg). A copy of the form C-141 is attached as Appendix A. On behalf of FEM, Enviro Clean Cardinal, LLC (ECC) performed initial site investigation activities which included a walkover survey using an EM-38 electrical conductivity (EC) meter and soil boring activities to delineate the horizontal and vertical extents of chloride impacts. As presented in the Release Characterization Report that was submitted to the NMOCD on February 16, 2018, the lateral extent of chloride impacts at the Site covered approximately 0.64 acres and extended vertically to between 34 and 59 feet below ground surface (bgs).





Subsequent to the initial response and investigation activities described above, FEM retained Tasman to conduct additional Site assessment, remediation, and reclamation activities at the Site within the root zone of the SRA between the surface and 4 feet bgs as described in the Remediation Work Plan which was approved by the NMOCD on June 6, 2018, and by the NMSLO on June 8, 2018.

Between May 8 and 19, 2019, approximately 4,091 cubic yards (yd<sup>3</sup>) of chloride impacted soil were transported under waste manifest procedures to an approved off-Site disposal facility (Gandy Marley Inc.) located near Caprock, New Mexico. On May 20, 2019, prior to backfilling activities, a 20-millimeter thick linear low-density polyethylene (LLDPE) sealed liner manufactured by Raven Industries, Inc. was installed at the base of the excavation area. On May 22-23, 2019, approximately 3,422 yd<sup>3</sup> of clean sand were backfilled in the excavation to a depth of 18 inches bgs and approximately 1,315 yd<sup>3</sup> of clean topsoil was backfilled and compacted within the disturbed area to match the previous grade. Imported material, including sand and topsoil, was sourced from Gandy Marley, Inc. in Lea County, New Mexico.

On June 6, 2019, the NMSLO approved an amended seed mixture to be used at the Site and on September 11, 2019, prior to heavy precipitation events that were forecasted for the area, re-seeding activities were performed at the Site using a tractor with a drop seed tiller. During a Site visit on October 8, 2019 to observe vegetation re-growth at the Site, Tasman personnel observed sprouted seedlings throughout the disturbed area indicating that the re-seeding effort has successfully propagated vegetation at the site.

On December 23, 2019, FEM submitted a *Remediation and Reclamation Summary Report*, dated October 29, 2019, to the NMOCD summarizing remedial efforts at the Site.

On October 19, 2022, the NMOCD provided email notification to FEM indicating that the submitted Report was rejected and additional confirmation sampling was required for Site closure to be granted.

## 2.0 CONFIRMATION SOIL SAMPLING

On November 17, 2022, Tasman mobilized to the Site to collect confirmation soil samples in accordance with NMOCD email correspondence, dated October 31, 2022. Twenty-two (22) soil borings were advanced using a hand auger along the perimeter of the former excavation area. Soil samples were collected continuously to a depth of approximately 4 feet bgs. Composite soil samples were collected from each boring across a total area of 200 square feet. Additionally, four discrete soil samples were collected from the backfill material within the former excavation at a

depth of 3.5 feet bgs. Samples were collected above the liner to prevent damage. Sample locations are illustrated on Figure 2 and a photographic log is provided as Appendix B.

## 2.1 Soil Sampling Procedures for Laboratory Analysis

The collection of soil samples for laboratory analysis was conducted in accordance with NMOCD criteria and generally approved industry standards. Collected soil samples were placed in laboratory provided containers, properly labeled, and preserved on ice pending delivery under a chain of custody form to Cardinal Laboratory in Hobbs, New Mexico.

## 2.2 Soil Analytical Methods

Each soil sample was analyzed using Environmental Protection Agency (EPA) or other NMOCD-approved methods. Laboratory analytical methods are as follows:

- Chloride – EPA Method SM4500.
- Total petroleum hydrocarbons (TPH) – gasoline, diesel, and motor/lube oil range organics (GRO+DRO+MRO) – EPA Method 8015M Extended.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) – EPA Method 8021B.

## 2.3 Confirmation Sampling Data Evaluation

BTEX and TPH were not detected above laboratory sample detection limits (SDLs) in the soil samples submitted for analysis.

Concentrations of chlorides were detected above the NMOCD Action level of 600 mg/kg in one of the 22 confirmation wall samples and one of the four backfill samples. A concentration of 704 milligrams per kilogram (mg/kg) was detected in the confirmation wall sample CS-14 and 1,800 mg/kg was detected in the backfill sample BF-1.

Soil analytical data is summarized in Table 1 and laboratory reports are provided in Appendix C.

## 3.0 ADDITIONAL ASSESSMENT

Based on the analytical results of the confirmation sampling, Tasman mobilized to the site on December 30, 2022, to advance a total of seven soil borings in an attempt to delineate areas

exhibiting concentrations of chlorides above NMOCD criteria.

On December 30, 2022, Tasman mobilized to the Site to further delineate remaining chloride impacts in the area of exceedances observed during the November 2022 confirmation sampling even. A total of seven soil borings (HA-1 through HA-7) were advanced using a hand auger to a depth of 4 feet bgs or geologic refusal. Sample locations are illustrated on Figure 2.

### **3.1 Delineation Data Evaluation**

Boring locations HA-1 (8,240 mg/kg) and HA-2 (4,040 mg/kg) exhibited concentrations of chlorides above NMOCD criteria to their terminal depths of 1 foot bgs, due to geologic refusal.

Five soil borings were advanced into the backfill material. Hand augers HA-5 (1,310 mg/kg) and HA-6 (1,140 mg/kg) exhibited concentrations of chlorides above the NMOCD Action Level to their terminal depths of 3 feet bgs. The soil sample collected from HA-7 at 0.5 feet (880 mg/kg) exhibited a concentration of chlorides greater than the NMOCD Action Level and achieved vertical delineation with the sample collected from 3 feet bgs (368 mg/kg).

Soil analytical data is summarized in Table 1 and laboratory reports are provided in Appendix C.

## **4.0 PROPOSED ACTION PLAN**

Based on Site characterization data collected to date, as well as the directives provided by the NMOCD, Tasman has developed the following proposed action plan. It is recommended that this action plan is presented to the NMOCD prior to field mobilization to confirm that the proposed approach is sufficient and acceptable to achieve Site closure.

### **4.1 Delineation and Excavation**

Due to the success of the revegetation performed in 2019 demonstrated by current vegetative cover in the backfill area, and the presence of the existing liner, Tasman requests the NMOCD approval to leave the existing backfill material which exhibited elevated chloride concentrations within the former excavation area.

Tasman proposes to perform additional characterization of the areas surrounding soil borings CS-14, HA-1, and HA-2 advanced during the November and December 2022 assessment events. Due to challenging geologic conditions, delineation will be conducted by advancing vertical trenches



using mechanical equipment. The extent of remaining chloride impacts will be estimated using real-time chloride screening data, collected using a field titrations kit.

Once the approximate extent of remaining horizontal impacts are determined, Tasman will excavate the remaining chloride impacted soils to a depth of no greater than 4 feet bgs. If vertical delineation results indicate that chloride concentrations exceed NMOCD Action Levels at a depth of greater than 4 feet bgs, a 20-millimeter thick LLDPE sealed liner will be installed at the base of the excavation to inhibit the leachability of chlorides to groundwater. To the extent practical, the new liner will be attached to the existing liner installed in 2019.

Once the delineated area has been remediated Tasman will collect 5-point composite soil samples of the sidewalls not to represent more than 500 square feet. If extension of the existing liner is not warranted, 5-point composite samples will also be collected from the base of the excavation and not represent more than 500 square feet. Soil samples will be collected and submitted for laboratory analysis of chlorides by EPA method SM4500 in accordance with the sampling procedures in Section 2.

## 4.2 Reclamation and Revegetation

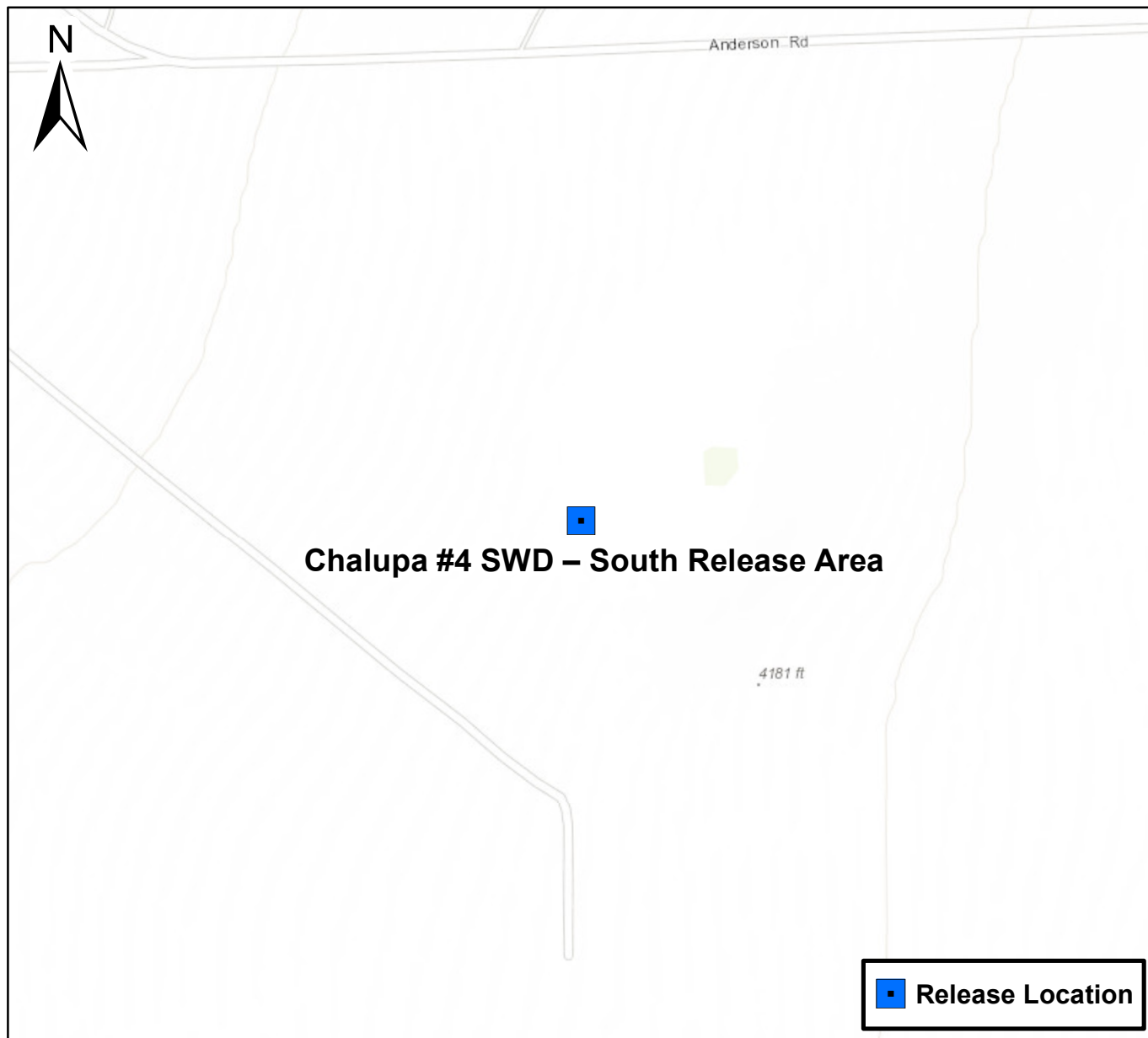
Once analytical data indicates remediation objectives have been met, the excavation area and any additional areas affected by the release will be restored to the condition which existed prior to disturbance to the maximum extent practical. The excavation will be backfilled with clean import material. Import material will be sampled prior to backfilling to confirm the absence of organic and inorganic impacts. The Site will be regraded to achieve erosion control, stability, and preservation of surface water flow to the extent practicable.

The NMSLO (surface owner) will be consulted for their preference in native seed mix. Upon NMSLO approval the area will be seeded using the approved seed mixture during the next favorable growing season. The seed mix will be broadcast at a rate two times the suggested amount to ensure the greatest likelihood for sufficient germination. The seed will be “set” using mechanical mean (e.g., screen or disc harrow) following the seeding event.

## 5.0 PROPOSED RECLAMATION AND REVEGETATION

Upon completion of remediation and sampling activities, a final summary report will be prepared and submitted to NMOCD requesting Site closure.

## **FIGURES**



0 750 1,500 Feet

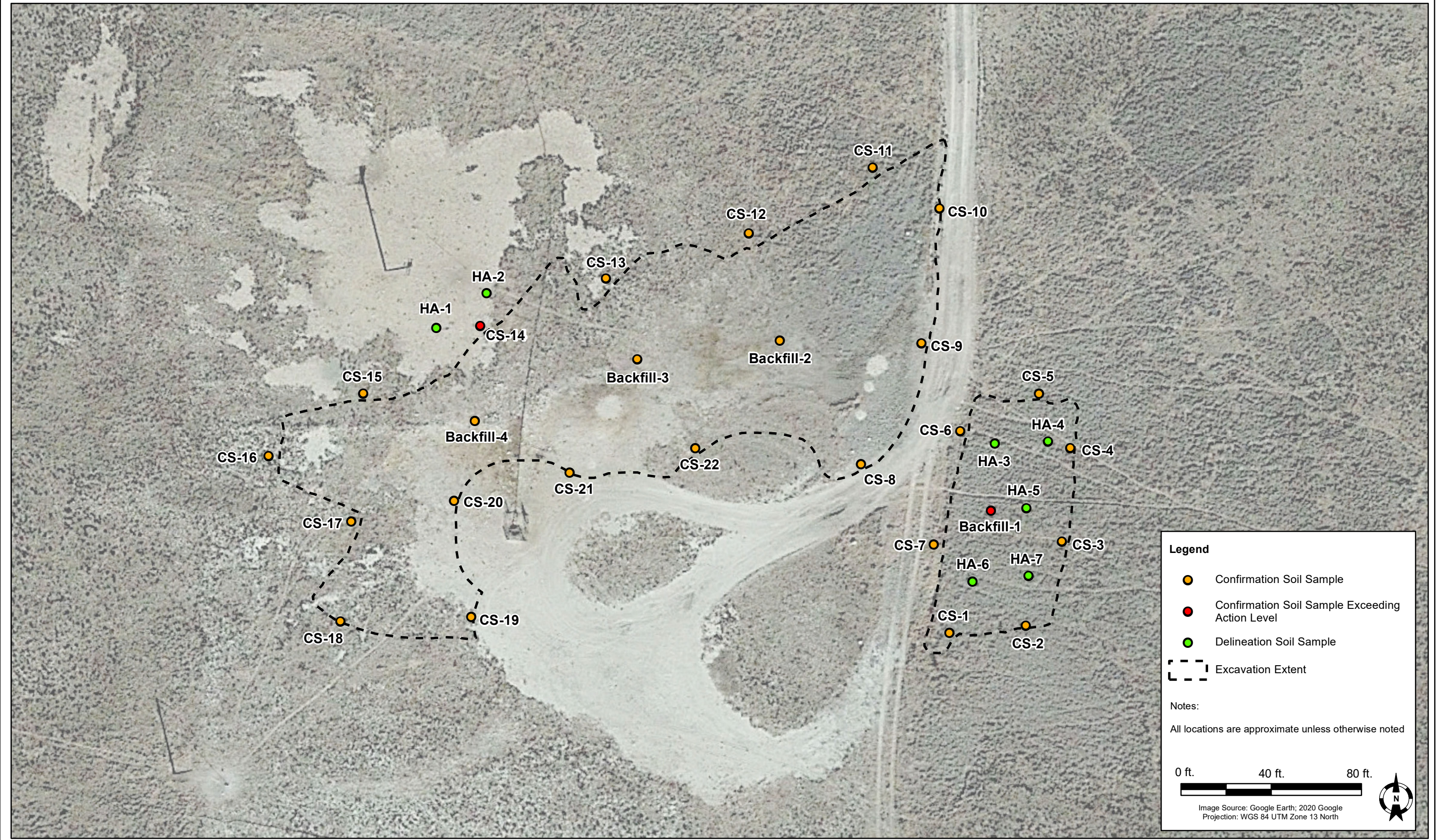
## Figure 1

Site Location Map  
Chalupa #4 SWD – South Release Area  
UL "M", S13, T14S, R33E  
Lea County, New Mexico



Drawn By: LR  
Date: 1/26/2023





DATE:	January 2023
DESIGNED BY:	B. Dennis
DRAWN BY:	L. Reed



Tasman, Inc.  
6855 W. 119th Ave  
Broomfield, CO 80020

**Foundation Energy Management**  
**Chalupa #4 SWD - South Release Area**  
UL "M", Section 13, Township 14 South, Range 33 East  
Lea County, New Mexico

Site Overview Map

Figure  
2



## **TABLES**

**TABLE 1**  
**CONFIRMATION SOIL ANALYTICAL SUMMARY - TPH, BTEX, AND CHLORIDES**  
**Foundation Energy Management, LLC**  
**Chalupa SWD #4 - South Release Area**

Sample ID	Sample Depth (bgs)	Sample Date	PID (ppm)	Field Chloride (mg/kg)	Benzene (mg/kg)	Total BTEX <sup>1</sup> (mg/kg)	TPH <sup>2</sup> (mg/kg)				Chloride <sup>3</sup> (mg/kg)
							GRO	DRO	MRO	TOTAL	
Confirmation Wall Soil Samples											
CS - 1	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	112
CS - 2	---	11/17/2022	---	---	---	---	---	---	---	---	240
CS - 3	---	11/17/2022	---	---	---	---	---	---	---	---	32.0
CS - 4	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	192
CS - 5	---	11/17/2022	---	---	---	---	---	---	---	---	576
CS - 6	---	11/17/2022	---	---	---	---	---	---	---	---	128
CS - 7	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
CS - 8	---	11/17/2022	---	---	---	---	---	---	---	---	32.0
CS - 9	---	11/17/2022	---	---	---	---	---	---	---	---	144
CS - 10	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	64.0
CS - 11	---	11/17/2022	---	---	---	---	---	---	---	---	32.0
CS - 12	---	11/17/2022	---	---	---	---	---	---	---	---	80.0
CS - 13	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
CS - 14	---	11/17/2022	---	---	---	---	---	---	---	---	704
CS - 15	---	11/17/2022	---	---	---	---	---	---	---	---	16
CS - 16	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
CS - 17	---	11/17/2022	---	---	---	---	---	---	---	---	16.0
CS - 18	---	11/17/2022	---	---	---	---	---	---	---	---	32.0
CS - 19	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
CS - 20	---	11/17/2022	---	---	---	---	---	---	---	---	16.0
CS - 21	---	11/17/2022	---	---	---	---	---	---	---	---	320
CS - 22	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	192
Backfill Soil Samples											
BF - 1*	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	1,800
BF - 2*	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
BF - 3 *	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
BF - 4*	---	11/17/2022	---	---	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	192
NMOCD Action Levels <sup>4</sup>			N/A	N/A	10	50	N/A			100	600

## Notes:

1. BTEX = Benzene, toluene, ethylbenzene, and total xylenes by EPA method 8021B
2. TPH = Total petroleum hydrocarbons analyzed by method EPA 8015M (GRO/DRO/MRO)
3. Chloride - Analyzed by EPA method 300
4. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (NMAC 19.15.29.12(N))

\* = Denotes discrete/grab sample. All other samples are five-point composites

N/A = Not applicable

**Bold** values denote concentrations above laboratory SDL

**Red** values denote concentrations above NMOCD Action Levels

BGS = Below ground surface

GRO = Gasoline range organics

DRO = Diesel range organics

PID = Photoionization detector

--- = Sample was not analyzed for this analyte

<SDL = The analyte was not detected above the laboratory sample detection limit (SDL)



**TABLE 2**  
**DELINEATION SOIL ANALYTICAL SUMMARY - CHLORIDES**  
**Foundation Energy Management, LLC**  
**Chalupa SWD #4 - South Release Area**

Sample ID	Sample Depth (bgs)	Sample Date	PID (ppm)	Field Chloride (mg/kg)	Chlr chloride <sup>1</sup> (mg/kg)
Delineation Soil Samples					
HA-1*	0-0.5	12/30/2022	---	4,588	---
	0.5-1		---	3,039	8,240
HA-2*	0-0.5	12/30/2022	---	3,234	---
	0.5-1		---	3,188	4,040
HA-3*	0-0.5	12/30/2022	---	58	---
	0.5-1		---	60	16.0
	1-2		---	62	---
	2-3		---	62	32.0
HA-4*	0-0.5	12/30/2022	---	60	---
	0.5-1		---	58	16.0
	1-2		---	59	---
	2-3		---	57	32.0
HA-5*	0-0.5	12/30/2022	---	59	---
	0.5-1		---	654	1,310
	1-2		---	1,148	---
	2-3		---	1,382	1,150
HA-6*	0-0.5	12/30/2022	---	58	---
	0.5-1		---	211	256
	1-2		---	612	---
	2-3		---	1,050	1,140
HA-7*	0-0.5	12/30/2022	---	618	880
	0.5-1		---	61	---
	1-2		---	298	368
NMOCD Action Levels <sup>2</sup>			N/A	N/A	600

Notes:

1. Chloride - Analyzed by EPA method 300

2. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (NMAC 19.15.29.12(N))

\* = Denotes discrete/grab sample. All other samples are five-point composites

N/A = Not applicable

--- = Sample was not analyzed for this analyte

**Bold** values denote concentrations above laboratory SDL

**Red** values denote concentrations above NMOCD Action Levels

**APPENDIX A – INITIAL FORM C-141 AND NMOCD NOTIFICATIONS**

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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Foundation Energy Management, LLC	Contact Rachel Grant
Address 16000 Dallas Parkway, Suite 875	Telephone No. 918-526-5592
Facility Name Chalupa SWD	Facility Type Salt water disposal well

Surface Owner	Mineral Owner	API No. 30-025-29184
---------------	---------------	----------------------

### LOCATION OF RELEASE

Unit Letter <b>M</b>	Section 13	Township 14S	Range 33E	Feet from the 330	North/South Line South	Feet from the 330	East/West Line West	County Lea
-------------------------	---------------	-----------------	--------------	----------------------	---------------------------	----------------------	------------------------	---------------

Latitude 33.0982437 Longitude -103.5753937

### NATURE OF RELEASE

Type of Release Saltwater	Volume of Release 125 bbls	Volume Recovered 25 bbls
Source of Release Injection hose came loose because of corroded clamps	Date and Hour of Occurrence	Date and Hour of Discovery 2/23/2017, 12pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu	
By Whom? Rachel Grant	Date and Hour 2/24/2017, 9am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.\* NA

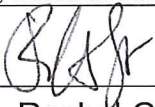

**RECEIVED**

By Olivia Yu at 8:15 am, Mar 07, 2017

Describe Cause of Problem and Remedial Action Taken.\* Vacuum truck was called out immediately to vacuum free-standing fluid on location. Roustabout service was called to replace the flexible hose with a new one and use hammer unions to connect the hose to the injection line to prevent future spills.

Describe Area Affected and Cleanup Action Taken.\* Working procedure for remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Rachel Grant	Approved by Environmental Specialist: 	
Title: HSE/Regulatory Manager	Approval Date: 3/7/2017	Expiration Date:
E-mail Address: regulatory@foundationenergy.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 3/6/17	Phone: 918-526-5592	

\* Attach Additional Sheets If Necessary

1RP-4632

pOY1706631065

nOY1706630747

## **ABBENDIX B – PHOTOGRAPHIC LOG**

Foundation Energy Management

Chalupa SWD #4 – South Release Area





Foundation Energy Management

Chalupa SWD #4 – South Release Area



Foundation Energy Management

Chalupa SWD #4 – South Release Area



## **APPENDIX C – CERTIFIED LABORATORY ANALYTICAL REPORTS**





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

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January 03, 2023

KYLE NORMAN

TASMAN GEOSCIENCES

6899 PECOS ST. UNIT C

DENVER, CO 80221

RE: 4952\_CHALUPA SOUTH

Enclosed are the results of analyses for samples received by the laboratory on 12/30/22 10:50.

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](http://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". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 12/30/2022  
 Reported: 01/03/2023  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: FOUNDATION

Sampling Date: 12/30/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: HA - 1 (0.5-1) (H226112-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8240	16.0	01/03/2023	ND	416	104	400	0.00	

**Sample ID: HA - 2 (0.5-1) (H226112-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4040	16.0	01/03/2023	ND	416	104	400	0.00	

**Sample ID: HA - 3 (0.5-1) (H226112-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/03/2023	ND	400	100	400	3.92	

**Sample ID: HA - 3 (2-3) (H226112-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/03/2023	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 12/30/2022  
 Reported: 01/03/2023  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: FOUNDATION

Sampling Date: 12/30/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: HA - 4 (0.5-1) (H226112-10)**

Chloride, SM4500Cl-B		mg / kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/03/2023	ND	400	100	400	3.92		

**Sample ID: HA - 4 (2-3) (H226112-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/03/2023	ND	400	100	400	3.92		

**Sample ID: HA - 5 (0.5-1) (H226112-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1310	16.0	01/03/2023	ND	400	100	400	3.92	

**Sample ID: HA - 5 (2-3) (H226112-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	01/03/2023	ND	400	100	400	3.92		

**Sample ID: HA - 6 (0.5-1) (H226112-18)**

Chloride, SM4500Cl-B		mg / kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	01/03/2023	ND	400	100	400	3.92	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 12/30/2022  
 Reported: 01/03/2023  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: FOUNDATION

Sampling Date: 12/30/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: HA - 6 (2-3) (H226112-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	01/03/2023	ND	400	100	400	3.92	

**Sample ID: HA - 7 (0-0.5) (H226112-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	880	16.0	01/03/2023	ND	400	100	400	3.92		

**Sample ID: HA - 7 (1-2) (H226112-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	01/03/2023	ND	400	100	400	3.92	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Tasman Geosciences				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>			
<b>Project Manager:</b> Kyle Norman				<b>P.O. #:</b>							
<b>Address:</b> 2620 W. Marland Blvd.				<b>Company:</b> Tasman Geo							
<b>City:</b> Hobbs				<b>State:</b> NM <b>Zip:</b> 88240				<b>Attn:</b> Kyle Norman			
<b>Phone #:</b> 575-318-5017				<b>Fax #:</b>				<b>Address:</b> 2620 W. Marland			
<b>Project #:</b> 4952								<b>City:</b> Hobbs			
<b>Project Name:</b> 4952_Chaluipa South								<b>State:</b> NM <b>zip:</b> 88240			
<b>Project Location:</b>								<b>Phone #:</b> 575-318-5017			
<b>Sampler Name:</b> Doug Pope				<b>Fax #:</b>							
FOR LAB USE ONLY											

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS								
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			ACID/BASE:	ICE / COOL	OTHER :	Chlorides	TPH 8015 M	BTEX	TPH TX1005	Complete Cations/Anions	TDS
HA-1 (0-0.5)	G 1	X																		
HA-1 (0.5-1)	G 1	X																		
HA-2 (0-0.5)	G 1	X																		
HA-2 (0.5-1)	G 1	X																		
HA-3 (0-0.5)	G 1	X																		
HA-3 (0.5-1)	G 1	X																		
HA-3 (1-2)	G 1	X																		
HA-3 (2-3)	G 1	X																		
HA-4 (0-0.5)	G 1	X																		
HA-4 (0.5-1)	G 1	X																		

LAB 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 analysis. No oral statement by Cardinal shall be admissible as evidence without written confirmation. Business interruptions, loss of sales or profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claims are based upon any of the above stated reasons or otherwise.

<b>Relinquished By:</b>		<b>Date:</b> 12/30/22	<b>Received By:</b>	<b>Time:</b> 1050	<b>REMARKS:</b>
		<b>Date:</b>			
		<b>Time:</b>			
<b>Relinquished By:</b>		<b>Date:</b>	<b>Received By:</b>	<b>Time:</b>	<b>REMARKS:</b>
		<b>Date:</b>			
		<b>Time:</b>			

<b>Delivered By:</b> (Circle One) Sampler - UPS - Bus - Other:	<b>Sample Condition Cool:</b> <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>CHECKED BY:</b> (Initials)
Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    Add'l Fax #: _____ <b>email results:</b> knorman@tasman-geo.com; bdennis@tasman-geo.com; dpope@tasman-geo.com;		



**ARDINAL LABORATORIES**  
 101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Tasman Geosciences		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
Project Manager: Kyle Norman		P.O. #:			
Address: 2620 W. Marland Blvd.		Company: Tasman Geo			
City: Hobbs		Attn: Kyle Norman			
Phone #: 575-318-5017		Address: 2620 W. Marland			
Fax #: 575-318-5017		City: Hobbs			
Project #: 4952		State: NM zip: 88240			
Project Name: 4952, Chalupe South		Phone #: 575-318-5017			
Project Location:		Fax #:			
Sampler Name: Doug Pope		PRESERV.		SAMPLING	
FOR LAB USE ONLY					
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER
HA-4 (1-2)	HA-4 (1-2)	G	1	X	
HA-4 (2-3)	HA-4 (2-3)	G	1	X	
HA-5 (0-0.5)	HA-5 (0-0.5)	G	1	X	
HA-5 (0.5-1)	HA-5 (0.5-1)	G	1	X	
HA-5 (1-2)	HA-5 (1-2)	G	1	X	
HA-5 (2-3)	HA-5 (2-3)	G	1	X	
HA-6 (0-0.5)	HA-6 (0-0.5)	G	1	X	
HA-6 (0.5-1)	HA-6 (0.5-1)	G	1	X	
HA-6 (1-2)	HA-6 (1-2)	G	1	X	
HA-6 (2-3)	HA-6 (2-3)	G	1	X	
DATE	TIME				
12/30/22	1005				
12/30/22	1008				
12/30/22	1011				
12/30/22	1013				
12/30/22	1016				
12/30/22	1019				
12/30/22	1025				
12/30/22	1027				
12/30/22	1030				
12/30/22	1033				
Relinquished By: <i>[Signature]</i>		Date: 12/30/22		Time: 1050	
Received By: <i>[Signature]</i>		Date: 12/30/22		Time: 1050	
Sample Condition Cool		Intact		CHECKED BY: <i>[Signature]</i>	
Sample - UPS - Bus - Other: -4.9/C.O.U.		Yes/No			
Sample - UPS - Bus - Other: -7.5E#113		Yes/No			
REMARKS: email results: knorman@tasman-geo.com; bdennis@tasman-geo.com; dpope@tasman-geo.com;					

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





**ORDINAL LABORATORIES**

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

---

November 22, 2022

KYLE NORMAN

TASMAN GEOSCIENCES

6899 PECOS ST. UNIT C

DENVER, CO 80221

RE: 4952\_CHALUPA SOUTH

Enclosed are the results of analyses for samples received by the laboratory on 11/18/22 13:58.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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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 "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 1 (H225463-01)**

BTX 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	11/22/2022	ND	1.93	96.6	2.00	7.52	
Toluene*	<0.050	0.050	11/22/2022	ND	2.11	105	2.00	7.62	
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.96	97.8	2.00	4.87	
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.87	97.8	6.00	5.83	
Total BTX	<0.300	0.300	11/22/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	11/21/2022	ND	416	104	400	3.77		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 99.3 % 45.3-161

Surrogate: 1-Chlorooctadecane 113 % 46.3-178

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 2 (H225463-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	11/21/2022	ND	416	104	400	3.77		

**Sample ID: CS - 3 (H225463-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	3.77		

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 4 (H225463-04)**

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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTEX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	11/21/2022	ND	416	104	400	3.77		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 90.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 97.7 % 46.3-178

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 5 (H225463-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	11/21/2022	ND	416	104	400	3.77		

**Sample ID: CS - 6 (H225463-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/21/2022	ND	416	104	400	3.77	

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 7 (H225463-07)**

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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTEx	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/21/2022	ND	416	104	400	3.77		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 100 % 45.3-161

Surrogate: 1-Chlorooctadecane 110 % 46.3-178

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 8 (H225463-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	3.77		

**Sample ID: CS - 9 (H225463-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/21/2022	ND	416	104	400	0.00	

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 10 (H225463-10)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 105 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 11 (H225463-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	0.00		

**Sample ID: CS - 12 (H225463-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/21/2022	ND	416	104	400	0.00		

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 13 (H225463-13)**

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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTEx	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 14 (H225463-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	704	16.0	11/21/2022	ND	416	104	400	0.00		

**Sample ID: CS - 15 (H225463-15)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00	

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**Analytical Results For:**

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 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 16 (H225463-16)**

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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTEx	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 107 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 46.3-178

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**Analytical Results For:**

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 DENVER CO, 80221  
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Received: 11/18/2022  
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 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 17 (H225463-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00		

**Sample ID: CS - 18 (H225463-18)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	0.00	

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 19 (H225463-19)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 20 (H225463-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00		

**Sample ID: CS - 21 (H225463-21)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/21/2022	ND	416	104	400	0.00	

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 22 (H225463-22)**

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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTEx	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 94.9 % 45.3-161

Surrogate: 1-Chlorooctadecane 103 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BF - 1 (H225463-23)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1800	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 98.7 % 45.3-161

Surrogate: 1-Chlorooctadecane 107 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BF - 2 (H225463-24)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 103 % 45.3-161

Surrogate: 1-Chlorooctadecane 112 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BF - 3 (H225463-25)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2022	ND	416	104	400	0.00	

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	11/21/2022	ND	196	97.9	200	3.95	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	185	92.5	200	2.79	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 97.2 % 45.3-161

Surrogate: 1-Chlorooctadecane 106 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TASMAN GEOSCIENCES  
 KYLE NORMAN  
 6899 PECOS ST. UNIT C  
 DENVER CO, 80221  
 Fax To:

Received: 11/18/2022  
 Reported: 11/22/2022  
 Project Name: 4952\_CHALUPA SOUTH  
 Project Number: 4952  
 Project Location: NONE GIVEN

Sampling Date: 11/17/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BF - 4 (H225463-26)**

BTX 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	11/22/2022	ND	1.73	86.4	2.00	13.5		
Toluene*	<0.050	0.050	11/22/2022	ND	1.93	96.7	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/22/2022	ND	1.80	89.8	2.00	11.9		
Total Xylenes*	<0.150	0.150	11/22/2022	ND	5.38	89.7	6.00	11.5		
Total BTX	<0.300	0.300	11/22/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	11/21/2022	ND	416	104	400	0.00		

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	11/21/2022	ND	192	96.0	200	0.902	
DRO >C10-C28*	<10.0	10.0	11/21/2022	ND	196	98.0	200	0.514	
EXT DRO >C28-C36	<10.0	10.0	11/21/2022	ND					

Surrogate: 1-Chlorooctane 68.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 69.1 % 46.3-178

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





Released to Imaging: 2/13/2023 2:45:00 PM

**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

\*2 of 3

Company Name: Tasman Geosciences		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																										
Project Manager: Kyle Norman		P.O. #:																												
Address: 2620 W. Marland Blvd.		Company: Tasman Geo																												
City: Hobbs		Attn: Kyle Norman																												
Phone #: 575-318-5017		Address: 2620 W. Marland																												
Fax #: Project Owner: Foundation Energy		City: Hobbs																												
Project #: 4952		State: NM Zip: 88240																												
Project Name: 4952 Chalupa South		Phone #: 575-318-5017																												
Project Location:		Fax #:																												
Sampler Name: Brett Dennis		PRESERV.																												
FOR LAB USE ONLY		SAMPLING																												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	TPH TX1005	Complete Cations/Anions	TDS	HOLD	24 Hour RUSH		
1	CS-11	C 1	X																11/17/22	1046	X									
12	CS-12	C 1	X																11/17/22	1058	X									
13	CS-13	C 1	X																11/17/22	1053	X	X								
14	CS-14	C 1	X																11/17/22	1102	X									
15	CS-15	C 1	X																11/17/22	1111	X									
16	CS-16	C 1	X																11/17/22	1116	X	X								
17	CS-17	C 1	X																11/17/22	1121	X									
18	CS-18	C 1	X																11/17/22	1210	X									
19	CS-19	C 1	X																11/17/22	1215	X	X								
20	CS-20	C 1	X																11/17/22	1220	X									

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Relinquished By:	Date: 1/18/22	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date: 1/358	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
REMARKS: email results: knorman@tasman-geo.com; bdennis@tasman-geo.com; cflores@tasman-geo.com				

Delivered By: (Circle One) ☒ UPS ☐ Bus ☐ Other: -7421 C-O-UC  
 Sampler - UPS - Bus - Other: -802 #113  
 Sample Condition Cool ☐ Intact ☒ Yes ☐ No  
 Checked By: (Initials) *OR*

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476





**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

W  
7  
W

Company Name: Tasman Geosciences		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																									
Project Manager: Kyle Norman		P.O. #:																											
Address: 2620 W. Marland Blvd.		Company: Tasman Geo																											
City: Hobbs		Attn: Kyle Norman																											
State: NM Zip: 88240		Address: 2620 W. Marland																											
Phone #: 575-318-5017		City: Hobbs																											
Fax #:		State: NM Zip: 88240																											
Project #: 4952		Phone #: 575-318-5017																											
Project Name: 4952, Chalupa South		Fax #:																											
Project Location:																													
Sample Name: Brett Dennis																													
FOR LAB USE ONLY																													
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING		Chlorides		TPH 8015 M		BTEX		TPH TX1005		Complete Cations/Anions		TDS		HOLD		24 Hour RUSH	
21		CS-21		C 1		X		GROUNDWATER		X		DATE		TIME		X													
22		CS-22		C 1		X		WASTEWATER		X		11/17/22		1228		X		X											
23		BF-1		C 1		X		SOIL		X		11/17/22		1237		X		X											
24		BF-2		C 1		X		OIL		X		11/17/22		1243		X		X											
25		BF-3		C 1		X		SLUDGE		X		11/17/22		1250		X		X											
26		BF-4		C 1		X		OTHER :		X		11/17/22		1256		X		X											
								ACID/BASE:																					
								ICE / COOL																					
								OTHER :																					
								</																					

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

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

CONDITIONS  
  
Action 185321

CONDITIONS

Operator: FOUNDATION ENERGY MANAGEMENT, LLC 5057 KELLER SPRINGS RD ADDISON, TX 75001	OGRID: 370740
	Action Number: 185321
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Confirmation samples must be representative of no more than 400 square feet.	2/13/2023
bhall	The area of Backfill-1, HA-5, HA-6, and HA-7 must be remediated and reclaimed per 19.15.29 NMAC.	2/13/2023