

Incident ID	nAPP2316042324
District RP	
Facility ID	
Application ID	

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>>107</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 type="checkbox"/> Yes <input checked="" 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 not 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 ½-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.

Oil Conservation Division

Incident ID	nAPP2316042324
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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: Connor Walker Title: Sr. Engineer

Signature:  Date: 9/28/2023

email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2316042324
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Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Connor Walker

Title: Sr. Engineer

Signature: 

Date: 9/28/2023

email: cwalker@mewbourne.com

Telephone: (806)202-5281

OCD Only

Received by: _____

Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____

Title: _____

Remediation Summary & Soil Closure Request

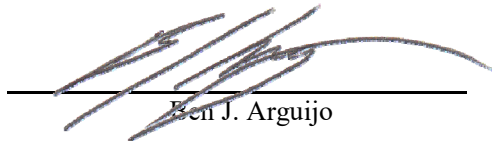
Mewbourne Oil Company Santo Nino SWD Riser

Eddy County, New Mexico
Unit Letter "E", Section 29, Township 18 South, Range 30 East
Latitude 32.7197124° North, Longitude 104.0013009° West
NMOCD Reference No. nAPP2316042324

Prepared By:

Etech Environmental & Safety Solutions, Inc.

6309 Indiana Ave, Ste. D
Lubbock, Texas 79413



Ben J. Arguijo



Lance Crenshaw



Midland • San Antonio • Lubbock • Hobbs • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Santo Nino SWD Riser. Details of the release are summarized below:

Location of Release Source

Latitude: 32.7197124° Longitude: -104.0013009°
 Provided GPS are in WGS84 format.

Site Name:	Santo Nino SWD Riser	Site Type:	Pipeline
Date Release Discovered:	5/31/2023	API # (if applicable):	N/A

Unit Letter	Section	Township	Range	County
"E"	29	18S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name _____)

Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 44	Volume Recovered (bbls) 15
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered
Cause of Release: A weld on a poly SWD line came apart.		

Initial Response

<input checked="" type="checkbox"/>	The source of the release has been stopped.
<input checked="" type="checkbox"/>	The impacted area has been secured to protect human health and the environment.
<input checked="" type="checkbox"/>	Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
<input checked="" type="checkbox"/>	All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the NMOCD Form C-141 are available in the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Santo Nino SWD Riser release site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	>107'	
Did the 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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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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
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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 not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Santo Nino SWD Riser release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
>107'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	20,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 REMEDIATION ACTIVITIES SUMMARY

On July 26, 2023, remediation activities commenced at the Santo Nino SWD Riser release site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. Olfactory/visual senses and/or a chloride test kit were utilized to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. The sidewalls and floors of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis.

On July 26, 2023, Etech collected seven (7) confirmation soil samples (NW 1, NW 2, SW 1, SW 2, FL 1 @ 2', FL 2 @ 2', and FL 5 @ 2') from the sidewalls and floor of the excavated area. The soil samples were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also less than the applicable laboratory method detection limit (MDL). Chloride concentrations ranged from 32.0 mg/kg in soil sample SW 1 to 352 mg/kg in soil sample FL 5 @ 2'.

On July 27, 2023, Etech collected 25 confirmation soil samples (NW 3 through NW 6, EW 1, SW 1, SW 3 through SW 7, WW 1, WW 2, FL 1 @ 2', FL 3 @ 3', FL 4 @ 3', and FL 6 @ 3' through FL 14 @ 4') from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL in each of the submitted soil samples. Chloride concentrations ranged from 32.0 mg/kg in soil sample NW 3 to 7,680 mg/kg in soil sample FL 13 @ 4'. The chloride concentration in soil sample NW 6 exceeded the NMOCD Reclamation Standard.

Pursuant to NMOCD regulations, a work plan or closure report was due for the release by August 31, 2023. On August 1, 2023, Etech submitted an extension request to the NMOCD asking for additional time to fully excavate the site, gather confirmation soil samples, backfill the excavation, and prepare a site closure request. The NMOCD subsequently granted an extension until September 29, 2023, with no added stipulations.

On August 7, 2023, based on laboratory analytical results, the excavation was further advanced in the area characterized by soil sample NW 6. Etech collected one (1) confirmation soil sample (NW 6C) from the sidewall of the excavated area. The soil sample was submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated the chloride concentration was 32.0 mg/kg and below the NMOCD Closure Criterion and NMOCD Reclamation Standard.

The final dimensions of the excavated area were approximately 294 feet in length, five (5) to 30 feet in width, and two (2) to four (4) feet in depth. During the course of remediation activities, Etech transported approximately 640 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 636 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

Soil sample locations and the extent of the excavated area are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data is provided in Appendix B. General photographs of the site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix E.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was compacted and contoured to achieve erosion control, stability, and preservation of surface water flow, to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture during the first favorable growing season following closure of the site.

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with NMOCD regulatory guidelines. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from confirmation soil samples indicate in-situ concentrations of BTEX, TPH, and chloride are below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Mewbourne Oil Company provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Santo Nino SWD Riser release site.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Mewbourne Oil Company. Use of the information contained in this report is prohibited without the consent of Etech and/or Mewbourne Oil Company.

8.0 DISTRIBUTION

Mewbourne Oil Company

*4801 Business Park Blvd.
Hobbs, NM 88240*

New Mexico Energy, Minerals and Natural Resources Department

*Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210*

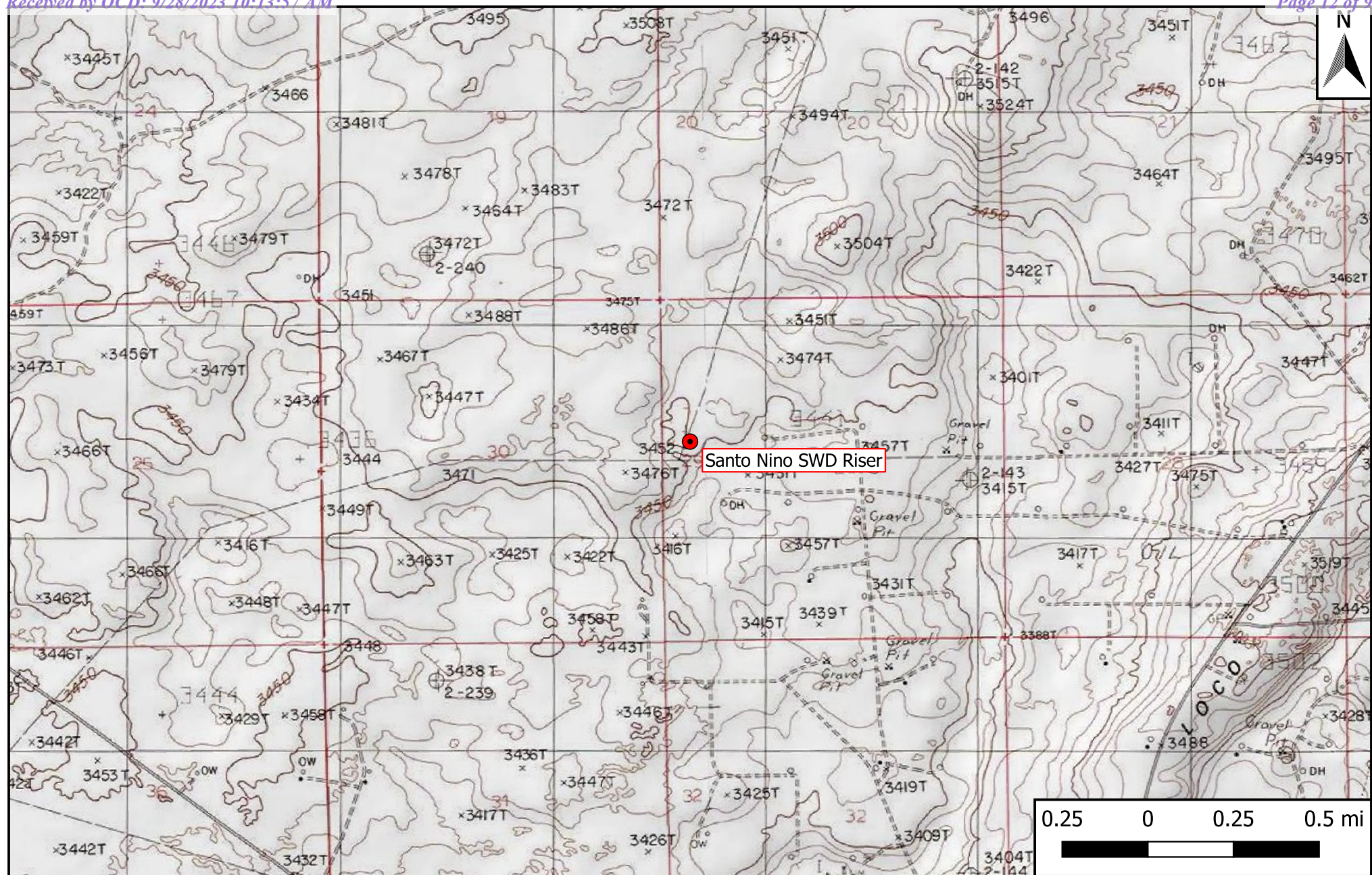
United States Department of the Interior

*Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220*

(Electronic Submission)

Figure 1

Topographic Map



Legend

- Site Location

Figure 1
 Topographic Map
 Mewbourne Oil Company
 Santo Nino SWD Riser
 GPS: 32.7197124, -104.0013009
 Eddy County

eTECH
 Environmental & Safety Solutions, Inc.

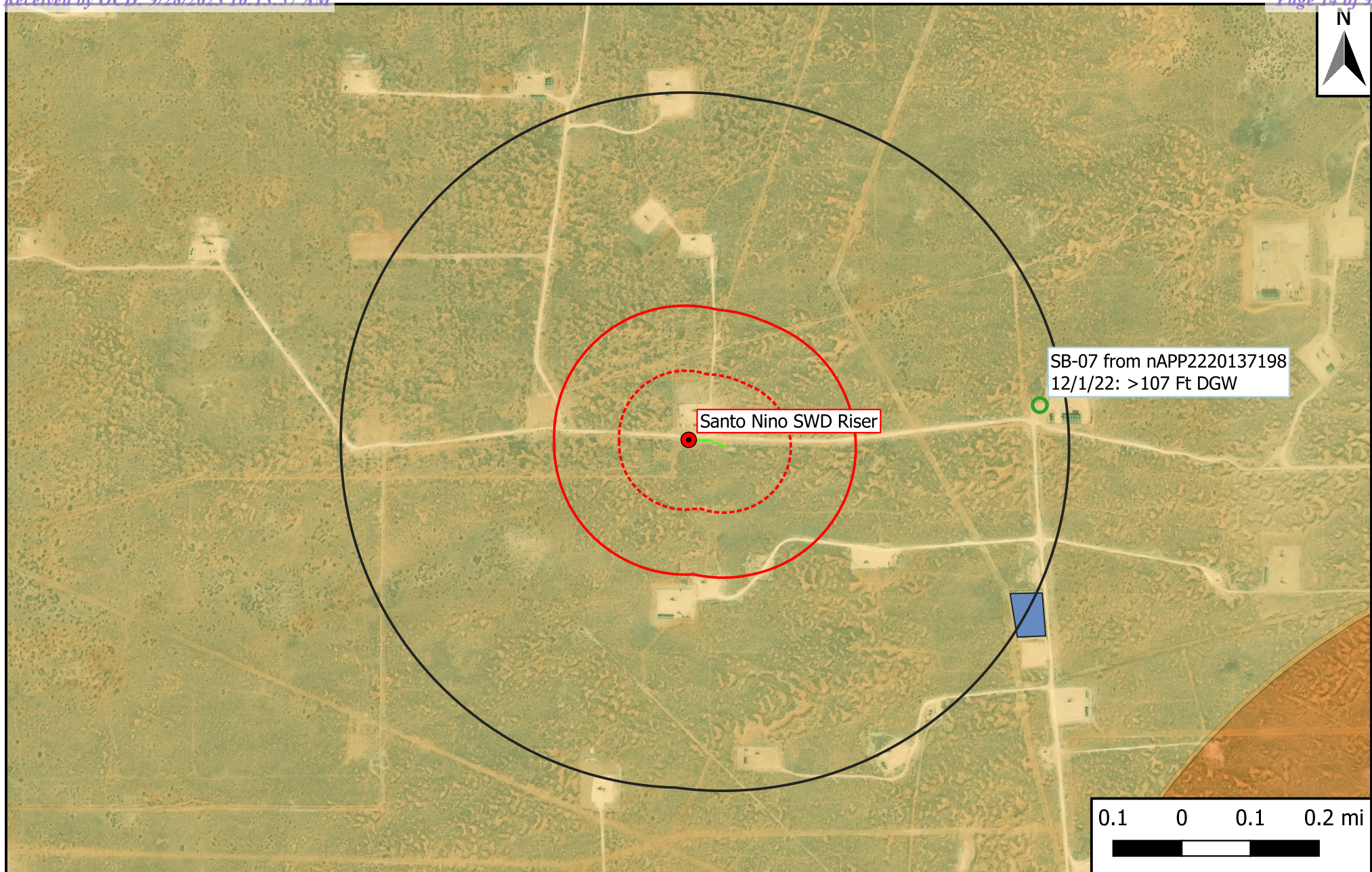
Drafted: bja

Checked: rlc

Date: 8/2/23

Figure 2

Site Characterization Map



Legend

- | | | |
|--|--|--|
| ● Site Location | 1% Annual Flood Chance | 500-Ft Radius |
| Affected Area | Emergent/Forested Wetlands | 1,000-Ft Radius |
| Well - NMOSE | Freshwater Pond/Lake | 0.5-Mi Radius |
| Well - USGS | Karst Potential (Low/Med./High) | Municipal Boundary |
| Well - Exploratory/Monitor | Riverine | Potash Mine Workings |

Figure 2
 Site Characterization Map
 Mewbourne Oil Company
 Santo Nino SWD Riser
 GPS: 32.7197124, -104.0013009
 Eddy County



Drafted: bja

Checked: lc

Date: 9/22/23

Figure 3

Site & Sample Location Map



Legend

- Excavation Extent
- Composite Floor Sample
- Composite Wall Sample

Figure 3
 Site & Sample Location Map
 Mewbourne Oil Company
 Santo Nino SWD Riser
 GPS: 32.7197124, -104.0013009
 Eddy County



Drafted: bja

Checked: IC

Date: 9/21/23

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company Santo Nino SWD Riser NMOCD Ref. #: nAPP2316042324											
NMOCD Closure Criteria				10	50	N/A	N/A	1,000	N/A	2,500	20,000
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
NW 1	7/26/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
NW 2	7/26/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW 3	7/27/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW 4	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	256
NW 5	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
NW 6	7/27/2023	0-4	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	720
NW 6C	8/7/2023	0-4	In-Situ	-	-	-	-	-	-	-	32.0
EW 1	7/27/2023	0-2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW 1	7/26/2023	0-2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW 1*	7/27/2023	0-2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW 2	7/26/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW 3	7/27/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW 4	7/27/2023	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
SW 5	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	448
SW 6	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	432
SW 7	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
WW 1	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
WW 2	7/27/2023	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 1 @ 2'	7/26/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FL 1 @ 2'*	7/27/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FL 2 @ 2'	7/26/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FL 3 @ 3'	7/27/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	400
FL 4 @ 3'	7/27/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 5 @ 2'	7/26/2023	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
FL 6 @ 3'	7/27/2023	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FL 7 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,580
FL 8 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	736
FL 9 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
FL 10 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,120
FL 11 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	976
FL 12 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,150
FL 13 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,680
FL 14 @ 4'	7/27/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,680

Dash (-): Sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

* Denotes duplicate sample.

Appendix A

Depth to Groundwater Information



SOIL BORE LOG SB-07

Note: Drilling log extracted from the "Closure Request", dated January 18, 2023, for NMOCD Incident ID #nAPP2220137198.

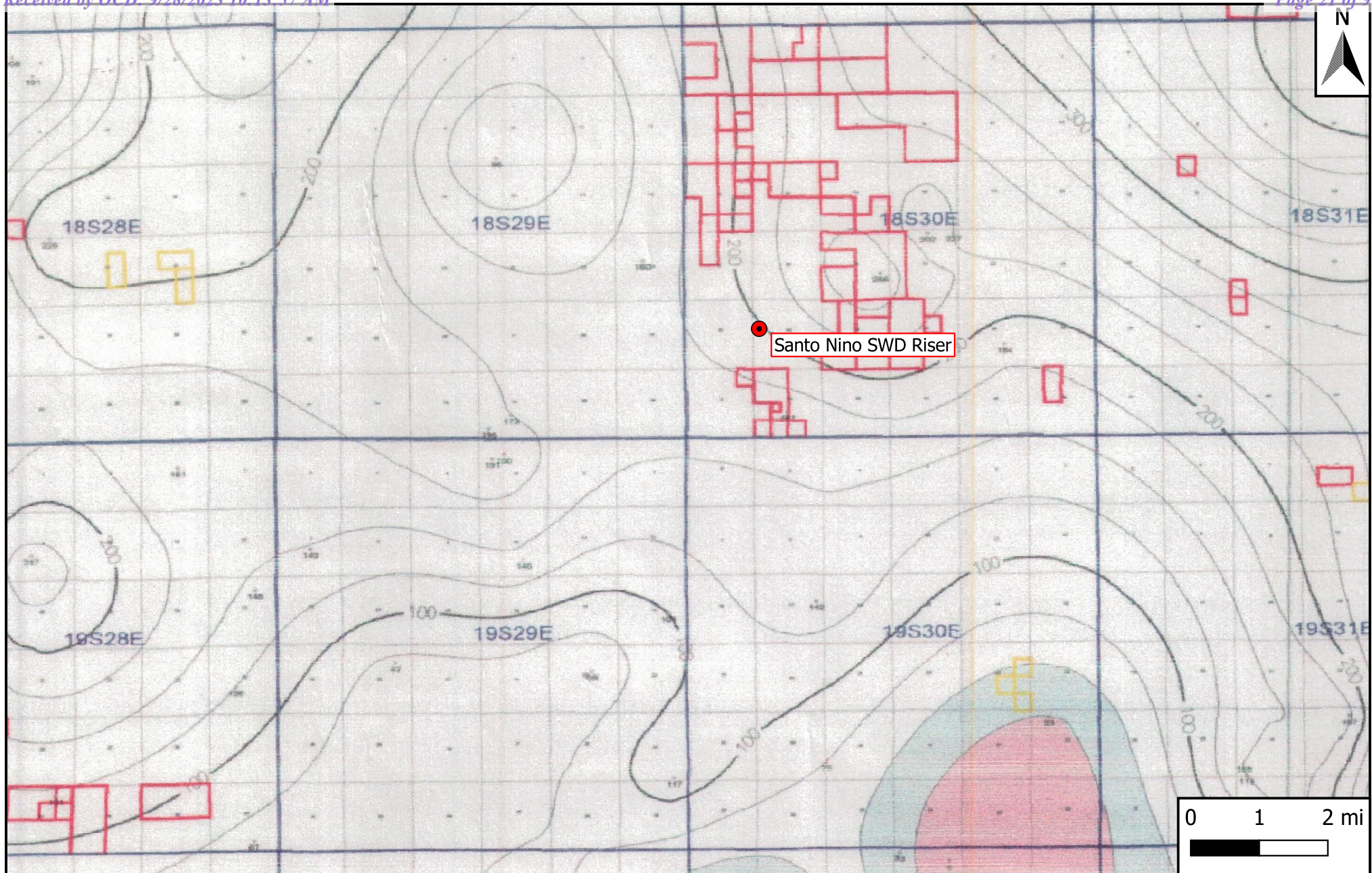
PROJECT NAME Santo Nino 29 SWD FED #1 **DRILLING DATE** 12/01/2022 **COORDINATES** 32.720377, -103.992512
CLIENT Mewbourne Oil Co. **TOTAL DEPTH** 107' **COORD SYS** NAD 83
ULSTR G-29-18S-30E
SURFACE ELEVATION 3455

COMMENTS Spud on the West Side of the Santo Nino 29 SWD FED #1 Well Pad. Bore Hole was observed to be dry after 72 hrs.

LOGGED BY CJ
CHECKED BY DD

Depth (ft)	Moisture	Material Description	Elevation (ft)
5	D	Reddish Yellow Sandy Clay Loam. Dry	3450
10		Yellowish Red Sandy Loam. Dry	3445
15		Light Red Sandy Clay Loam. Dry	3440
20		Yellowish Red Sandy Loam. Dry	3435
25		Red Sandy Clay. Dry	3430
30		Yellowish Red Sandy Clay Loam. Dry	3425
35		Yellowish Red Sandy Clay.	3420
40			3415
45			3410
50		Yellowish Red Sandy Loam. Dry	3405
55			3400
60			3395
65		Reddish Brown Sandy Clay. Dry	3390
70		Yellowish Red Sandy Loam. Dry	3385
75			3380
80			3375
85		Reddish Brown Sandy Clay. Dry	3370
90		Yellowish Red Sandy Clay Loam. Dry	3365
95			3360
100			3355
105			3350
110		Termination Depth at: 107 ft.	3345

Disclaimer This bore log is intended to evidence a depth to groundwater greater than 107'.



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
Mewbourne Oil Company
Santo Nino SWD Riser
GPS: 32.7197124, -104.0013009
Eddy County



Drafted: bja

Checked: lc

Date: 8/3/23



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

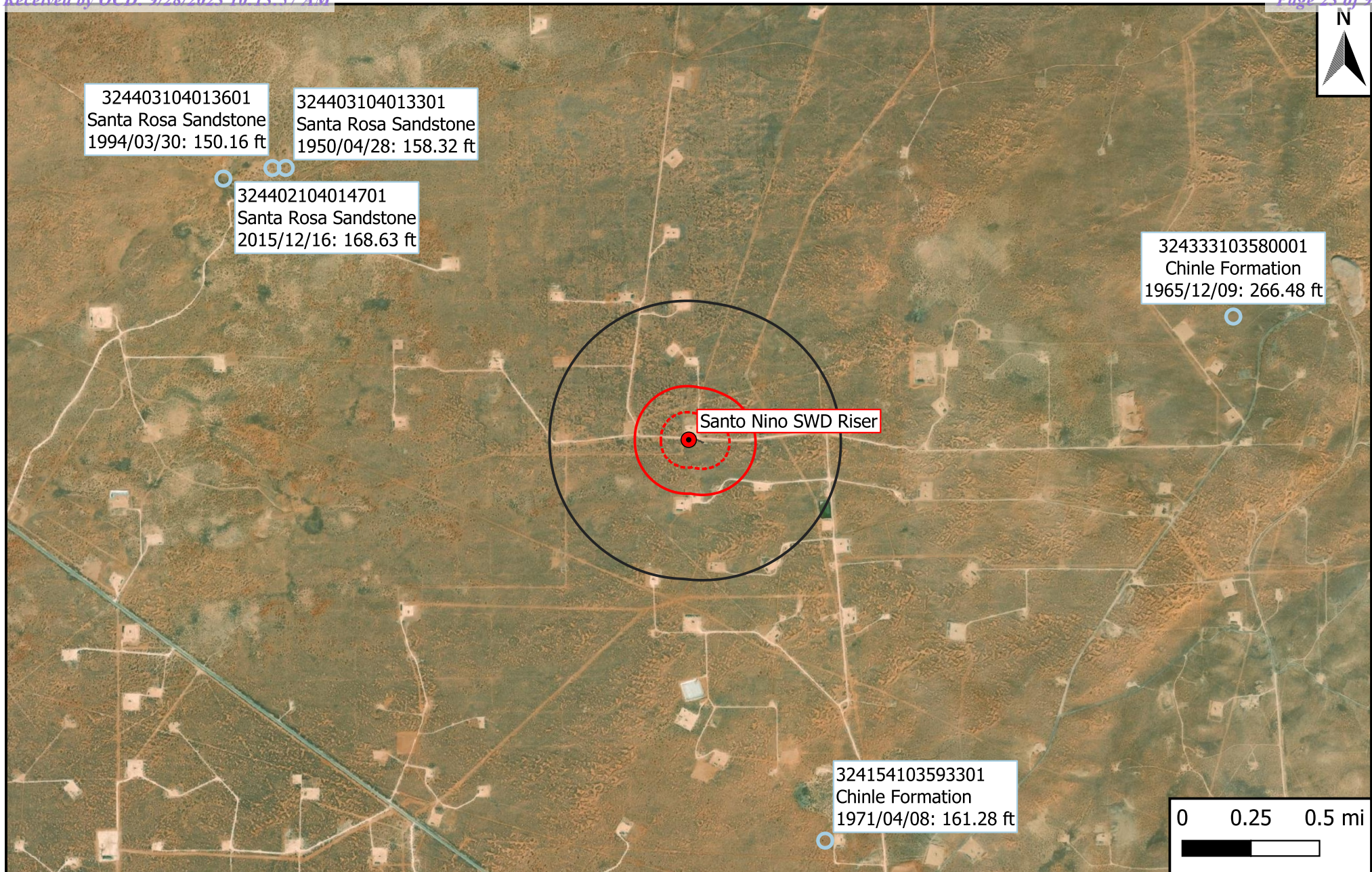
UTMNAD83 Radius Search (in meters):

Easting (X): 593590.15 Northing (Y): 3620655.81 Radius: 1610

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/27/23 1:37 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



Legend

- Site Location
- Well - USGS
- ⊞ 500-Ft Radius
- ⊞ 1,000-Ft Radius
- ⊞ 0.5-Mi Radius

Figure 5
USGS Well Proximity Map
Mewbourne Oil Company
Santo Nino SWD Riser
GPS: 32.7197124, -104.0013009
Eddy County



Drafted: bja

Checked: lc

Date: 8/3/23



National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:
Groundwater

Geographic Area:
United States

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 324154103593301

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 324154103593301 18S.30E.32.32422

Eddy County, New Mexico
Latitude 32°41'54", Longitude 103°59'33" NAD27
Land-surface elevation 3,374 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-08		D	72019	164.45			1	Z			A
1971-04-08		D	72019	161.28			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

GO



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Groundwater levels for the Nation



Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324333103580001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 324333103580001 18S.30E.21.4200

Eddy County, New Mexico

Latitude 32°43'33", Longitude 103°58'00" NAD27

Land-surface elevation 3,461 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1965-12-09		D	72019	266.48			1	Z			A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.28 0.24 nadww02




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Geographic Area:
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Groundwater levels for the Nation



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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324402104014701

Minimum number of levels = 1

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USGS 324402104014701 18S.29E.24.14413

Eddy County, New Mexico

Latitude 32°44'01.5", Longitude 104°01'48.9" NAD83

Land-surface elevation 3,441 feet above NAVD88

The depth of the well is 202.00 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1994-03-30		D	72019	159.96				S			A
2015-12-16	17:30 UTC	m	72019	168.63			1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status		The reported water-level measurement represents a static level
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.31 0.24 nadww02

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[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

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Groundwater levels for the Nation

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 324403104013301

Minimum number of levels = 1

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USGS 324403104013301 18S.29E.24.23314

Eddy County, New Mexico

Latitude 32°44'03", Longitude 104°01'33" NAD27

Land-surface elevation 3,446 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1950-04-28		D	72019	158.32			P	Z			A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	P	Pumping
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.29 0.24 nadww02

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Agency code = usgs

site_no list =

- 324403104013601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload**USGS 324403104013601 18S.29E.24.23313**

Eddy County, New Mexico

Latitude 32°44'03", Longitude 104°01'36" NAD27

Land-surface elevation 3,443 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1965-12-20		D	72019	147.54			P	Z			A
1968-03-08		D	72019	160.70			P	Z			A
1971-04-08		D	72019	160.20			P	Z			A
1976-05-28		D	72019	145.98			1	Z			A
1983-04-12		D	72019	155.85			1	Z			A
1986-06-03		D	72019	162.09			1	S			A

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1990-09-19		D	72019	153.24			1	S			A
1994-03-11		D	72019	174.41			1	S			A
1994-03-30		D	72019	150.16			1	S			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Appendix B

Field Data



Sample Log

Date: _____

Project: Santo Nino SWD Riser

Project Number: 18296

Latitude: 32.7197124

Longitude: -104.0013009

Lab.

Sample ID	PID/Odor	Chloride Conc.		GPS
FL1 @ 1'	—	4.0	604 192	
NW1a	—	4.0	604 576	
SW1a	—	1.2	< 124	
FL1 @ 2'	—	2.4	298	
FL2 @ 2'	—	1.8	152	
NW1	—	2.2	216	
SW1	—	1.0	< 124	
FL3 @ 2'	—	4.0	604 436	
FL4 @ 2'	—	4.6	776 1.4 112	
FL5 @ 2'	—	3.6	500	
NW2	—	0.8	< 124	
SW2	—	1.8	152	
FL6 @ 3'	—	1.4	112	
FL7 @ 4'	—	8.0	2512	
FL8 @ 4'	—	5.8	1148	
FL9 @ 4'	—	6.4	1411	
SW4	—	1.4	112	
SW3	—	1.6	136	
NW3	—	1.4	112	
SW4 NW4	—	3.0	356	
FL10 @ 4'	—	4.8	796	
FL11 @ 4'	—	6.0	1232	
FL12 @ 4'	—	4.4	4144	
FL13 @ 4'	—	4.4	4132	
SW5	—	3.6	480	
NW5	—	3.0	356	
SW6	—	4.0	576	
NW6	—	3.6	480 112	
WW2	—	1.8	164	
SW7	—	1.6	136	
EW1	—	1.4	112	
FL14 @ 4'	—	6.0	1232	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples = SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

Appendix C

Photographic Log

Photographic Log



Photo Number: 1	
Photo Direction: Southwest	
Photo Description: View of the affected area.	

Photo Number: 2	
Photo Direction: East	
Photo Description: View of the affected area.	

Photographic Log



Photo Number: 3	
Photo Direction: East	
Photo Description: View of the affected area.	

Photo Number: 4	
Photo Direction: Southeast	
Photo Description: View of the affected area.	


Photographic Log

Photo Number: 5	 <p>7/26/23, 10:41 AM +32.719713,-104.000848 NM, Artesia</p>
Photo Direction: West	
Photo Description: View of the affected area.	

Photo Number: 6	 <p>8/2/23, 7:30 AM +32.719667,-104.001397 NM, Artesia</p>
Photo Direction: Northeast	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 7	 <p>8/2/23, 7:32 AM +32.719555,-104.000655 NM,Artesia</p>
Photo Direction: West-Northwest	
Photo Description: View of the excavated area.	

Photo Number: 8	 <p>8/2/23, 7:35 AM +32.719658,-104.000662 NM,Artesia</p>
Photo Direction: West	
Photo Description: View of the excavated area.	

Photographic Log



Photo Number: 9	 <p>8/2/23, 7:35 AM +32.719658,-104.000662 NM,Artesia</p>
Photo Direction: Southeast	
Photo Description: View of the excavated area.	

Photo Number: 10	 <p>8/8/23, 10:40 AM +32.719814,-104.001002 NM,Artesia</p>
Photo Direction: Southeast	
Photo Description: View of the remediated area after backfill and regrading.	

Photographic Log



Photo Number: 11	
Photo Direction: South	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 12	
Photo Direction: Southwest	
Photo Description: View of the remediated area after backfill and regrading.	

Photographic Log



Photo Number: 13	<div>8/8/23, 10:40 AM +32.719814,-104.001129 NM,Artesia</div> 
Photo Direction: South	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 14	<div>8/8/23, 10:40 AM +32.719814,-104.001129 NM,Artesia</div> 
Photo Direction: Southeast	
Photo Description: View of the remediated area after backfill and regrading.	

Appendix D

Laboratory Analytical Reports



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

August 02, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: SANTO NINO SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 07/27/23 8:02.

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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FL 1 @ 2' (H233934-01)

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	08/01/2023	ND	2.04	102	2.00	3.24	
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34	
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14	
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32	
Total BTX	<0.300	0.300	08/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	112	16.0	07/31/2023	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	08/01/2023	ND	202	101	200	3.43	
DRO >C10-C28*	<10.0	10.0	08/01/2023	ND	203	102	200	3.18	
EXT DRO >C28-C36	<10.0	10.0	08/01/2023	ND					

Surrogate: 1-Chlorooctane 99.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FL 2 @ 2' (H233934-02)

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	08/01/2023	ND	2.04	102	2.00	3.24	
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34	
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14	
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32	
Total BTEX	<0.300	0.300	08/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	128	16.0	07/31/2023	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	08/01/2023	ND	202	101	200	3.43	
DRO >C10-C28*	<10.0	10.0	08/01/2023	ND	203	102	200	3.18	
EXT DRO >C28-C36	<10.0	10.0	08/01/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FL 5 @ 2' (H233934-03)

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	08/01/2023	ND	2.04	102	2.00	3.24	
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34	
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14	
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32	
Total BTEX	<0.300	0.300	08/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	352	16.0	07/31/2023	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	07/31/2023	ND	197	98.3	200	0.670	
DRO >C10-C28*	<10.0	10.0	07/31/2023	ND	223	112	200	2.51	
EXT DRO >C28-C36	<10.0	10.0	07/31/2023	ND					

Surrogate: 1-Chlorooctane 130 % 48.2-134

Surrogate: 1-Chlorooctadecane 143 % 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: NW 1 (H233934-04)

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	08/01/2023	ND	2.04	102	2.00	3.24	
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34	
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14	
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32	
Total BTEX	<0.300	0.300	08/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	160	16.0	07/31/2023	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	07/31/2023	ND	197	98.3	200	0.670	
DRO >C10-C28*	<10.0	10.0	07/31/2023	ND	223	112	200	2.51	
EXT DRO >C28-C36	<10.0	10.0	07/31/2023	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



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

Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: NW 2 (H233934-05)

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	08/01/2023	ND	2.04	102	2.00	3.24		
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34		
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14		
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32		
Total BTX	<0.300	0.300	08/01/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	48.0	16.0	07/31/2023	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	07/31/2023	ND	197	98.3	200	0.670	
DRO >C10-C28*	<10.0	10.0	07/31/2023	ND	223	112	200	2.51	
EXT DRO >C28-C36	<10.0	10.0	07/31/2023	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



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

Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 1 (H233934-06)

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	08/01/2023	ND	2.04	102	2.00	3.24		
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34		
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14		
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32		
Total BTX	<0.300	0.300	08/01/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	07/31/2023	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	08/01/2023	ND	197	98.3	200	0.670	
DRO >C10-C28*	<10.0	10.0	08/01/2023	ND	223	112	200	2.51	
EXT DRO >C28-C36	<10.0	10.0	08/01/2023	ND					

Surrogate: 1-Chlorooctane 121 % 48.2-134

Surrogate: 1-Chlorooctadecane 134 % 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/27/2023
 Reported: 08/02/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 07/26/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 2 (H233934-07)

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	08/01/2023	ND	2.04	102	2.00	3.24	
Toluene*	<0.050	0.050	08/01/2023	ND	2.04	102	2.00	7.34	
Ethylbenzene*	<0.050	0.050	08/01/2023	ND	1.99	99.6	2.00	2.14	
Total Xylenes*	<0.150	0.150	08/01/2023	ND	5.94	99.0	6.00	2.32	
Total BTEX	<0.300	0.300	08/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	64.0	16.0	07/31/2023	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	08/01/2023	ND	197	98.3	200	0.670	
DRO >C10-C28*	<10.0	10.0	08/01/2023	ND	223	112	200	2.51	
EXT DRO >C28-C36	<10.0	10.0	08/01/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 142 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 10 of 10

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST																	
Project Manager: Lance Crenshaw				P.O. #:				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (8015M)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (8021B)</div> </div>																	
Address: 2617 West Marland				Company: Etech																					
City: Hobbs State: NM Zip: 88240				Attn: Lance Crenshaw																					
Phone #: (575) 264-9884 Fax #:				Address:																					
Project #: 18296 Project Owner: Mewbourne				City:																					
Project Name: Santo Nino SWD Riser				State: NM Zip:																					
Project Location: Rural Eddy County, NM				Phone #:																					
Sampler Name: Matthew Grieco				Fax #:																					
FOR LAB USE ONLY						MATRIX		PRESERV.		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											
H233934																									
1	FL1 @ 2'	C	1		X					X			7/26/23		X	X	X								
2	FL2 @ 2'	C	1		X					X			7/26/23		X	X	X								
3	FL5 @ 2'	C	1		X					X			7/26/23		X	X	X								
4	NW1	C	1		X					X			7/26/23		X	X	X								
5	NW2	C	1		X					X			7/26/23		X	X	X								
6	SW1	C	1		X					X			7/26/23		X	X	X								
7	SW2	C	1		X					X			7/26/23		X	X	X								
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Relinquished By: <i>[Signature]</i>		Date: 7-27-23		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS:															
Relinquished By:		Time: 0802		Received By:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																	
Delivered By: (Circle One)		Time:		Received By:		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		CHECKED BY: (Initials)																	
Sampler - UPS - Bus - Other:		Date:		Time:		Sample Condition: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: (Initials)		Please email results and copy of CoC to pm@etechenv.com.															

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



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

August 07, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: SANTO NINO SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 07/28/23 10:40.

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". 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: SW 1 (H233983-01)

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	08/05/2023	ND	1.91	95.6	2.00	4.90	
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54	
Total BTEX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	64.0	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: SW 3 (H233983-02)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 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	80.0	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: SW 4 (H233983-03)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	112	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: SW 5 (H233983-04)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	448	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 91.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.7 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: SW 6 (H233983-05)

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	08/05/2023	ND	1.91	95.6	2.00	4.90	
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54	
Total BTX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	432	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 96.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 12 @ 4' (H233983-06)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	1150	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 96.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 11 @ 4' (H233983-07)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	976	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: WW 1 (H233983-08)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	272	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 3 @ 3' (H233983-09)

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	08/05/2023	ND	1.91	95.6	2.00	4.90		
Toluene*	<0.050	0.050	08/05/2023	ND	1.80	90.1	2.00	4.61		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.85	92.7	2.00	5.35		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.47	91.2	6.00	5.54		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	400	16.0	08/03/2023	ND	448	112	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	08/03/2023	ND	194	97.2	200	3.58	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	198	98.8	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 93.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: NW 3 (H233983-10)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/04/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/04/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/04/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/04/2023	ND	5.88	98.0	6.00	4.61		
Total BTEx	<0.300	0.300	08/04/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	08/03/2023	ND	448	112	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	08/02/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/02/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/02/2023	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 13 @ 4' (H233983-11)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	7680	16.0	08/03/2023	ND	448	112	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	08/02/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/02/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/02/2023	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 8 @ 4' (H233983-12)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	736	16.0	08/03/2023	ND	448	112	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	08/02/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/02/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/02/2023	ND					

Surrogate: 1-Chlorooctane 93.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: NW 4 (H233983-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEX	<0.300	0.300	08/05/2023	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	256	16.0	08/03/2023	ND	448	112	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	08/02/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/02/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/02/2023	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 4 @ 3' (H233983-14)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	144	16.0	08/03/2023	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	08/02/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/02/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/02/2023	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 6 @ 3' (H233983-15)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61		
Total BTEx	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 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	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 1 @ 2' (H233983-16)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	80.0	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 10 @ 4' (H233983-17)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61		
Total BTX	<0.300	0.300	08/05/2023	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	1120	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: NW 5 (H233983-18)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEx	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	176	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 92.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 7 @ 4' (H233983-19)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23		
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1580	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 84.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.3 % 49.1-148

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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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: NW 6 (H233983-20)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	720	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 91.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shari Cisneros

Sample ID: FL 9 @ 4' (H233983-21)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	2.11	106	2.00	3.23	
Toluene*	<0.050	0.050	08/05/2023	ND	2.04	102	2.00	4.12	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.96	98.1	2.00	4.00	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.88	98.0	6.00	4.61	
Total BTEX	<0.300	0.300	08/05/2023	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	592	16.0	08/03/2023	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	08/03/2023	ND	187	93.4	200	7.74	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	194	96.9	200	7.45	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Mewbourne Oil Company				BILL TO				ANALYSIS REQUEST																
Project Manager: Lance Crenshaw				P.O. #:																				
Address: 2617 W Marland BLVD				Company: Etach Environmental																				
City: Hobbs State: NM Zip: 88240				Attn: Lance Crenshaw																				
Phone #: 575-396-2378 Fax #: 575-396-1429				Address: 2617 W Marland BLVD																				
Project #: 18296 Project Owner: Mewbourne Oil Company				City: Hobbs																				
Project Name: Santo Nino SWD Riser				State: NM Zip: 88240																				
Project Location: UL/E Sec 29 T18S - R30E				Phone #: 575-396-2378																				
Sampler Name: Oviad Ontiveros				Fax #: 575-396-1429																				
FOR LAB USE ONLY				MATRIX		PRESERV.		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	Chloride	TPH	BTEX 8021							
H233983																								
1	SW 1	C	1			X					X		07/27/203		X	X	X							
2	SW 3	C	1			X					X		07/27/203		X	X	X							
3	SW 4	C	1			X					X		07/27/203		X	X	X							
4	SW 5	C	1			X					X		07/27/203		X	X	X							
5	SW 6	C	1			X					X		07/27/203		X	X	X							
6	FL 12 @ 4'	C	1			X					X		07/27/203		X	X	X							
7	FL 11 @ 4'	C	1			X					X		07/27/203		X	X	X							
8	WW 1	C	1			X					X		07/27/203		X	X	X							
9	FL 3 @ 3'	C	1			X					X		07/27/203		X	X	X							
10	NW 3	C	1			X					X		07/27/203		X	X	X							

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Relinquished By:	Date: 7/28/23 Time: 10:40	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: Add'l Fax #:
Relinquished By:	Date: Time:	Received By:	REMARKS: Email results to lance@etachenv.com	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:	Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Initials)		

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476
FORM-006 R 2.0



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Mewbourne Oil Company				BILL TO				ANALYSIS REQUEST																
Project Manager: Lance Crenshaw				P.O. #:																				
Address: 2617 W Marland BLVD				Company: Etch Environmental																				
City: Hobbs State: NM Zip: 88240				Attn: Lance Crenshaw																				
Phone #: 575-396-2378 Fax #: 575-396-1429				Address: 2617 W Marland BLVD																				
Project #: 18296 Project Owner: Mewbourne Oil Company				City: Hobbs																				
Project Name: Santo Nino SWD Riser				State: NM Zip: 88240																				
Project Location: UL/E Sec 29 T18S - R30E				Phone #: 575-396-2378																				
Sampler Name: Ovied Ontiveros				Fax #: 575-396-1429																				
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																
Lab I.D.	Sample I.D.	GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chloride	TPH	BTEX 8021							
H123983																								
11	FL 13 @ 4'	C	1			X				X			07/27/203		X	X	X							
12	FL 8 @ 4'	C	1			X				X			07/27/203		X	X	X							
13	NW 4	C	1			X				X			07/27/203		X	X	X							
14	FL 4 @ 3'	C	1			X				X			07/27/203		X	X	X							
15	FL 6 @ 3'	C	1			X				X			07/27/203		X	X	X							
16	FL 1 @ 2'	C	1			X				X			07/27/203		X	X	X							
17	FL 10 @ 4'	C	1			X				X			07/27/203		X	X	X							
18	NW 5	C	1			X				X			07/27/203		X	X	X							
19	FL 7 @ 4'	C	1			X				X			07/27/203		X	X	X							
20	NW 6	C	1			X				X			07/27/203		X	X	X							

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Relinquished By:	Date: 7/28/23	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
<i>[Signature]</i>	Time: 10:40	<i>[Signature]</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email results to lance@etchenv.com	
Delivered By: (Circle One)	Time:			
Sampler - UPS - Bus - Other:	Sample Condition	CHECKED BY:		
	Cool <input type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>[Signature]</i>		

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476
FORM-006 R 2.0



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Mewbourne Oil Company				BILL TO				ANALYSIS REQUEST														
Project Manager: Lance Crenshaw				P.O. #:																		
Address: 2617 W Marland BLVD				Company: Elch Environmental																		
City: Hobbs		State: NM		Zip: 88240		Attn: Lance Crenshaw																
Phone #: 575-396-2378		Fax #: 575-396-1429		Address: 2617 W Marland BLVD																		
Project #: 18296		Project Owner: Mewbourne Oil Company		City: Hobbs																		
Project Name: Santo Nino SWD Riser				State: NM Zip: 88240																		
Project Location: UL/ E Sec 29 T18S - R30E				Phone #: 575-396-2378																		
Sampler Name: Oviad Ontiveros				Fax #: 575-396-1429																		
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING														
Lab I.D.	Sample I.D.	(GIRAB OR (COMP. # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride	TPH	BTEX 8021						
H233983	FL 9 @ 4'	C 1			X					X		07/27/203		X	X	X						

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: <i>[Signature]</i>	Date: 7/28/23 Time: 15:40	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
			REMARKS: Email results to lance@etechenv.com	
Delivered By: (Circle One)		Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(initials)	

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FORM-006 R 2.0



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

August 07, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: SANTO NINO SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 07/28/23 13:18.

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". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WW 2 (H233994-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	1.97	98.7	2.00	5.01	
Toluene*	<0.050	0.050	08/05/2023	ND	1.87	93.7	2.00	7.48	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.86	93.0	2.00	8.14	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.59	93.2	6.00	8.15	
Total BTEX	<0.300	0.300	08/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	48.0	16.0	08/04/2023	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	08/03/2023	ND	166	83.2	200	3.48	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	176	87.8	200	0.831	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 7 (H233994-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	1.97	98.7	2.00	5.01		
Toluene*	<0.050	0.050	08/05/2023	ND	1.87	93.7	2.00	7.48		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.86	93.0	2.00	8.14		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.59	93.2	6.00	8.15		
Total BTEx	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	80.0	16.0	08/04/2023	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	08/03/2023	ND	166	83.2	200	3.48	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	176	87.8	200	0.831	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: EW 1 (H233994-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2023	ND	1.97	98.7	2.00	5.01	
Toluene*	<0.050	0.050	08/05/2023	ND	1.87	93.7	2.00	7.48	
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.86	93.0	2.00	8.14	
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.59	93.2	6.00	8.15	
Total BTEx	<0.300	0.300	08/05/2023	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	64.0	16.0	08/04/2023	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	08/03/2023	ND	166	83.2	200	3.48	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	176	87.8	200	0.831	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	ND					

Surrogate: 1-Chlorooctane 130 % 48.2-134

Surrogate: 1-Chlorooctadecane 145 % 49.1-148

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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:

Etech Environmental & Safety Solutions
 LANCE CRENSHAW
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 07/28/2023
 Reported: 08/07/2023
 Project Name: SANTO NINO SWD RISER
 Project Number: 18296
 Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 07/27/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FL 14 @ 4' (H233994-04)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2023	ND	1.97	98.7	2.00	5.01		
Toluene*	<0.050	0.050	08/05/2023	ND	1.87	93.7	2.00	7.48		
Ethylbenzene*	<0.050	0.050	08/05/2023	ND	1.86	93.0	2.00	8.14		
Total Xylenes*	<0.150	0.150	08/05/2023	ND	5.59	93.2	6.00	8.15		
Total BTEX	<0.300	0.300	08/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	3680	16.0	08/04/2023	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	08/03/2023	ND	166	83.2	200	3.48	
DRO >C10-C28*	<10.0	10.0	08/03/2023	ND	176	87.8	200	0.831	
EXT DRO >C28-C36	<10.0	10.0	08/03/2023	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

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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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

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Environics Environmental Services, Inc. Newbourn</u>				BILL TO				ANALYSIS REQUEST																															
Project Manager: <u>Lance Crenshaw</u>				P.O. #:				Chloride TPH (8015M) BTEX (8021B)																															
Address: <u>2801 3100 Plains Blvd</u>				Company: <u>Etech</u>																																			
City: <u>Lovington</u> State: <u>NM</u> Zip: <u>88260</u>				Attn: <u>Lance Crenshaw</u>																																			
Phone #: <u>(575) 396-2378</u> Fax #: <u>(575) 396-1429</u>				Address: <u>P.O. box 301</u>																																			
Project #: <u>18296</u> Project Owner: <u>Newbourn</u>				City: <u>Lovington</u>																																			
Project Name: <u>Santa Nino SWP Riser</u>				State: <u>NM</u> Zip: <u>88260</u>																																			
Project Location: <u>UL/B sec 29 T18S-R30E</u>				Phone #: <u>575-396-2378</u>																																			
Sampler Name: <u>Diced Outcrops</u>				Fax #: <u>575-396-1429</u>																																			
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																													
Lab I.D.		Sample I.D.		GRAB OR (COMP. # CONTAINERS)		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME													
<u>H233994</u>				<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>1/21/23</u>		<u>08:00</u>		<u>X</u>		<u>X</u>		<u>X</u>																	
<u>2</u>		<u>WW2</u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>1/21/23</u>		<u>08:30</u>		<u>X</u>		<u>X</u>		<u>X</u>																	
<u>3</u>		<u>SW7</u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>1/21/23</u>		<u>09:00</u>		<u>X</u>		<u>X</u>		<u>X</u>																	
<u>4</u>		<u>EW1</u>		<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>1/21/23</u>		<u>09:30</u>		<u>X</u>		<u>X</u>		<u>X</u>																	
<u>FL14 @ 4'</u>				<u>1</u>		<u>1</u>		<u>X</u>		<u>X</u>		<u>X</u>		<u>1/21/23</u>		<u>09:30</u>		<u>X</u>		<u>X</u>		<u>X</u>																	



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

August 08, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: SANTO NINO SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 08/07/23 15:49.

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". 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:

Etech Environmental & Safety Solutions
LANCE CRENSHAW
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received: 08/07/2023
Reported: 08/08/2023
Project Name: SANTO NINO SWD RISER
Project Number: 18296
Project Location: MEWBOURNE UL/E SEC29 T18S-R30E

Sampling Date: 08/07/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: NW 6C (H234185-01)**Chloride, SM4500Cl-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	08/08/2023	ND	400	100	400	0.00	

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

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Appendix E

Regulatory Correspondence

From: [Velez, Nelson, EMNRD](#)
To: [Lance Crenshaw](#)
Cc: [cwalker@mewbourne.com](#); [jbroom@mewbourne.com](#); [Ben Arguijo](#); [Matthew A. Grieco](#); [Bratcher, Michael, EMNRD](#); [Hamlet, Robert, EMNRD](#)
Subject: Extension request for projects: Santo Nino SWD Line (NMOCD Incident # nAPP2316042324) and the Mckamey Fed #1Y (nAPP2316627313)
Date: Wednesday, August 2, 2023 8:42:14 AM
Attachments: [Outlook-ol0aob5r.png](#)

Some people who received this message don't often get email from nelson.velez@emnrd.nm.gov. [Learn why this is important](#)

Good morning Lance,

Your 30-day (September 29, 2023) time extension request is approved. Remediation Due date has been updated for both incidents.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez • Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>



previous email submittal;

From: Lance Crenshaw <lance@etechenv.com>
Sent: Tuesday, August 1, 2023 10:48 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Connor Walker

<walker@mewbourne.com>; jlbroom@mewbourne.com

Cc: Ben Arguijo <bena@etechenv.com>; Matthew A. Grieco <matthewg@etechenv.com>

Subject: [EXTERNAL] Extension request for projects

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Dear NMOCD Environmental Bureau,

Mewbourne Oil Company (Mewbourne) has contracted Etech Environmental & Safety Solutions, Inc. (Etech), to conduct remediation activities for the releases known as the Santo Nino SWD Line (NMOCD Incident # nAPP2316042324) and the McKamey Fed #1Y (nAPP2316627313). Both are located in Eddy County. Pursuant to NMOCD regulations, a work plan or closure report is due for the Santo Nino release on **August 28, 2023 and on the McKamey release on August 31, 2023**. Etech has started excavation activities at the Santo Nino SWD Line and plans to move to the McKamey directly following the completion of remediation activities at the Santo Nino. We are also working another release for Mewbourne, the Chile Verde Water Transfer Line, which most of our crews are dedicated to. We just want to make sure we get everything done in a timely manner and are able to meet deadlines, with multiple crews working.

In consideration of this, Etech, on behalf of Mewbourne, requests a **30 day extension** until **Friday, September 29, 2023**, to allow us to fully excavate the sites, gather excavation confirmation samples, backfill the site and prepare a site closure request.

If you have any questions or need any additional information, please do not hesitate to contact me by phone or email.

Thank you for your time and consideration.

Lance Crenshaw
Etech Environmental & Safety Solutions
575-631-2532

From: [Lance Crenshaw](#)
To: [Enviro, OCD, EMNRD](#); [Ben Arguijo](#); jbroom@mewbourne.com; [Connor Walker](#)
Subject: Confirmation Sampling Notification
Date: Wednesday, July 26, 2023 4:36:57 PM

This email serves as notice that Etech intends to collect excavation confirmation soil samples on July 31, 2023, from the following locations/reportable release sites:

Mewbourne Oil Co – Jennings Battery- nAPP2316570980

Mewbourne Oil Co – Santo Nino SWD Line - nAPP2316042324

If you have any questions or need any additional information, please contact Lance Crenshaw by phone (575-631-2532) or email lance@etechenv.com

Lance Crenshaw
Etech Environmental & Safety Solutions
575-631-2532

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 270006

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 270006
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAPP2316042324 SANTO NINO SWD RISER, thank you. This Remediation Closure Report is approved. A report for reclamation and revegetation including pictures of the contoured backfilled excavation surface and a thorough discussion on reseeding mixture, vegetation ratio, timelines, etc., will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	2/14/2024