



November 5, 2019

Mike Bratcher  
Oil Conservation Division, District 2  
811 S First Street  
Artesia, NM 88210

Ryan Mann  
New Mexico State Land Office  
1001 S. Atkinson  
Roswell, NM 88230

**Closure Report:**

**SRO State Com #031H**  
**API#: 30-015-40256**  
**RP#: 2RP-5012**  
**DOR: September 28, 2018**  
**GPS: 32.0745621 -104.0905457**  
**Unit Letter G, Section 4, Township 26 South, Range 28 East**  
**Eddy County, New Mexico**

Mr. Bratcher/Mr. Mann,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the SRO State Com #031H. The release was located in Unit Letter G, Section 4, Township 26 South and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.0745621 North and -104.0905457 West.

**BACKGROUND**

The release was discovered on September 28, 2018. A C-141 report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO). The C-141 is presented in Appendix A. Following delineation of the site a remediation work plan was submitted to and subsequently approved by the NMOCD and NMSLO. The release was caused by valve failure resulting in the release of approximately 10 barrels (bbls) of oil. A vacuum truck was utilized to recover approximately 4.8 bbls of oil. All of the fluid remained on the well pad.

## GROUNDWATER AND REGULATORY FRAMEWORK

According to the United States Geological Survey (USGS) the nearest water well with measurement data (320309104020401) indicates that groundwater in the project vicinity is approximately one-hundred and forty (140) feet below ground surface (BGS). The water well information is shown in Appendix B.

A risk based evaluation and site determinations were performed in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization evaluation the release was in a medium karst potential area, no other receptors (water wells, playas, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

### GENERAL SITE CHARACTERIZATION AND GROUNDWATER:

Site Characterization	Average Groundwater Depth (ft.)
Medium Karst Potential	140 feet

### DELINEATION AND CLOSURE CRITERIA:

Table I Closure Criteria	
Chlorides	600 mg/kg
TPH (GRO and DRO and MRO)	100 mg/kg
TPH (GRO and DRO)	N/A
Benzene	10 mg/kg
Total BTEX	50 mg/kg

### Remedial Actions

- The impacted area was excavated to depths of two (2) to four (4) feet BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation soil samples were taken from the bottom and sidewalls of the excavated areas per NMAC 19.15.29.
- Upon receipt of acceptable analytical results from the confirmation soil sampling activities the excavation was backfilled with clean “like” material.

## **SITE RECLAMATION AND RESTORATION**

All of the fluid remained on the well pad. No reclamation activities will be required at this site.

## **CLOSURE REQUEST**

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the New Mexico State Land Office grant closure approval for the SRO State Com #031H incident that occurred on September 28, 2018.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,



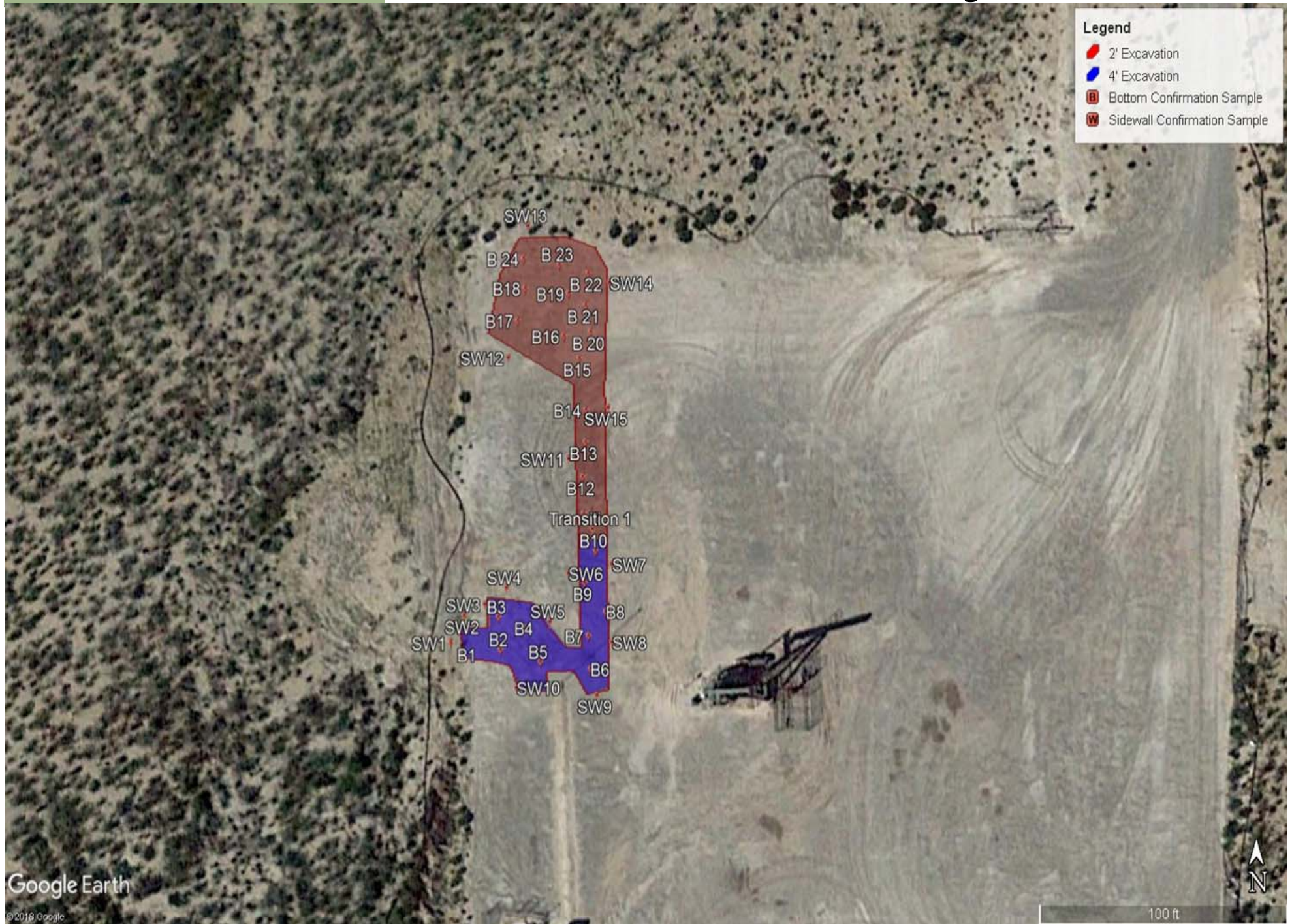
Sheldon L. Hitchcock  
HSE Coordinator  
[slhitchcock@concho.com](mailto:slhitchcock@concho.com)

# FIGURES



September 28, 2018

## SRO State Com #031H



# TABLES

**Table 1**  
**COG Operating LLC.**  
**SRO State Com #031H**  
**Eddy County, New Mexico**

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total			
NMOCD RRAL Limits (mg/kg)					-	-	-	100	10	50	600
SW 1	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	16
SW 2	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	ND
SW 3	N/A	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	240
SW 4	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	80
SW 5	N/A	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	48
SW 6	N/A	7/22/2019	X		<15.0	24.6	<15.0	24.6	<0.002	<0.002	32.1
SW 7	N/A	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	96
SW 8	N/A	7/10/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	80
SW 9	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	144
SW 10	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	ND
SW 11	N/A	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	166
SW 12	N/A	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	176
SW 13	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	ND
SW 14	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	48
SW 15	N/A	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	64
SW 16	N/A	7/10/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	192
SW 17	N/A	7/10/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	416
T 1	2	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	304
B 1	4	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	32
B 2	4	6/17/2019	X		<10.0	16.1	ND	16.1	<0.050	<0.300	80
B 3	4	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	304
B 4	4	6/17/2019	X		<10.0	23.8	<10.0	23.8	<0.050	<0.300	256
B 5	4	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	344
B 6	4	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	59.8
B 7	4	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	5.87
B8	4	7/8/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	256
B 9	4	6/17/2019	X		ND	66	12.7	78.7	<0.050	<0.300	192
B 10	4	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	64
B 11	2	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	<5.00
B 12	2	6/17/2019	X		<10.0	12.3	<10.0	12.3	<0.050	<0.300	32
B 13	2	7/22/2019	X		<15.0	25.7	<15.0	25.7	<0.002	<0.002	15.8
B 14	2	7/22/2019	X		<15.0	32.5	<15.0	32.5	<0.002	<0.002	80.3
B 15	2	7/22/2019	X		<15.0	<15.0	<15.0	0	<0.002	<0.002	327
B 16	2	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	32
B17	2	6/17/2019	X		<10.0	16.7	<10.0	16.7	<0.050	<0.300	384
B 18	2	6/17/2019	X		<10.0	24.3	<10.0	24.3	<0.050	<0.300	48
B 19	2	6/17/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	160
B 20	2	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	432
B 21	2	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	128
B 22	2	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	464
B 23	2	6/27/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	240
B 24	2	7/10/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.300	224

# APPENDIX A



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<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 (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Form C-141

State of New Mexico  
Oil Conservation Division

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Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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: _____	Title: _____
Signature: _____	Date: _____
email: _____	Telephone: _____
<b><u>OCD Only</u></b>  Received by: _____ Date: _____	

Form C-141

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State of New Mexico  
Oil Conservation Division

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**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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input 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 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 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 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 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 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 type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input 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.

Form C-141

State of New Mexico

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Oil Conservation Division

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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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Form C-141

State of New Mexico

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Oil Conservation Division

Incident ID	
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## Remediation Plan

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

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Form C-141

State of New Mexico

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Oil Conservation Division

Incident ID	
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Facility ID	
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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

### **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: \_\_\_\_\_

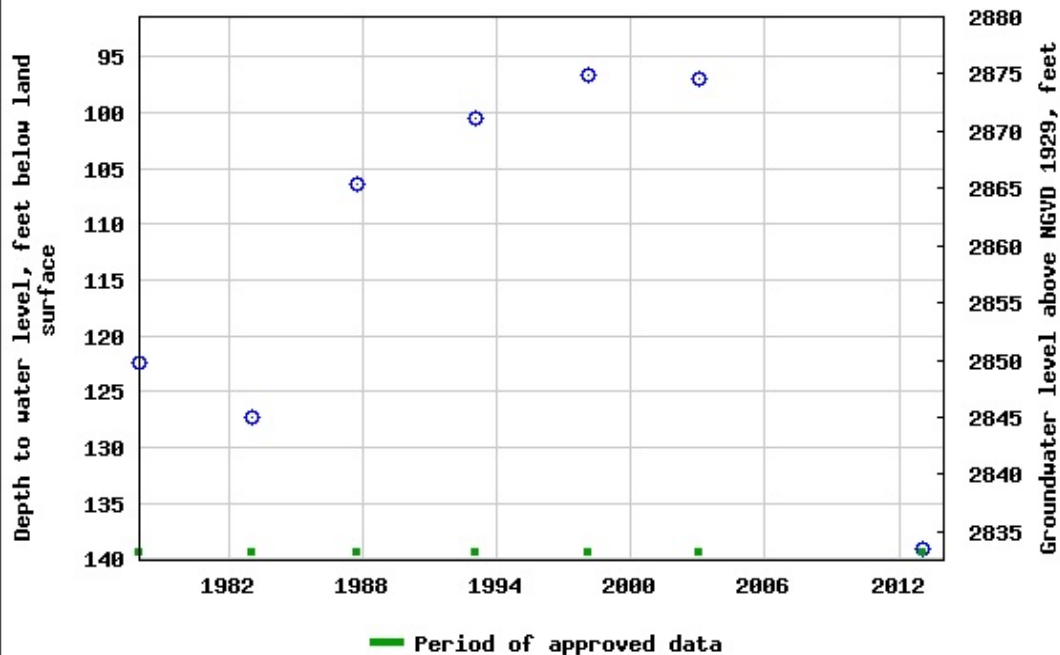
Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



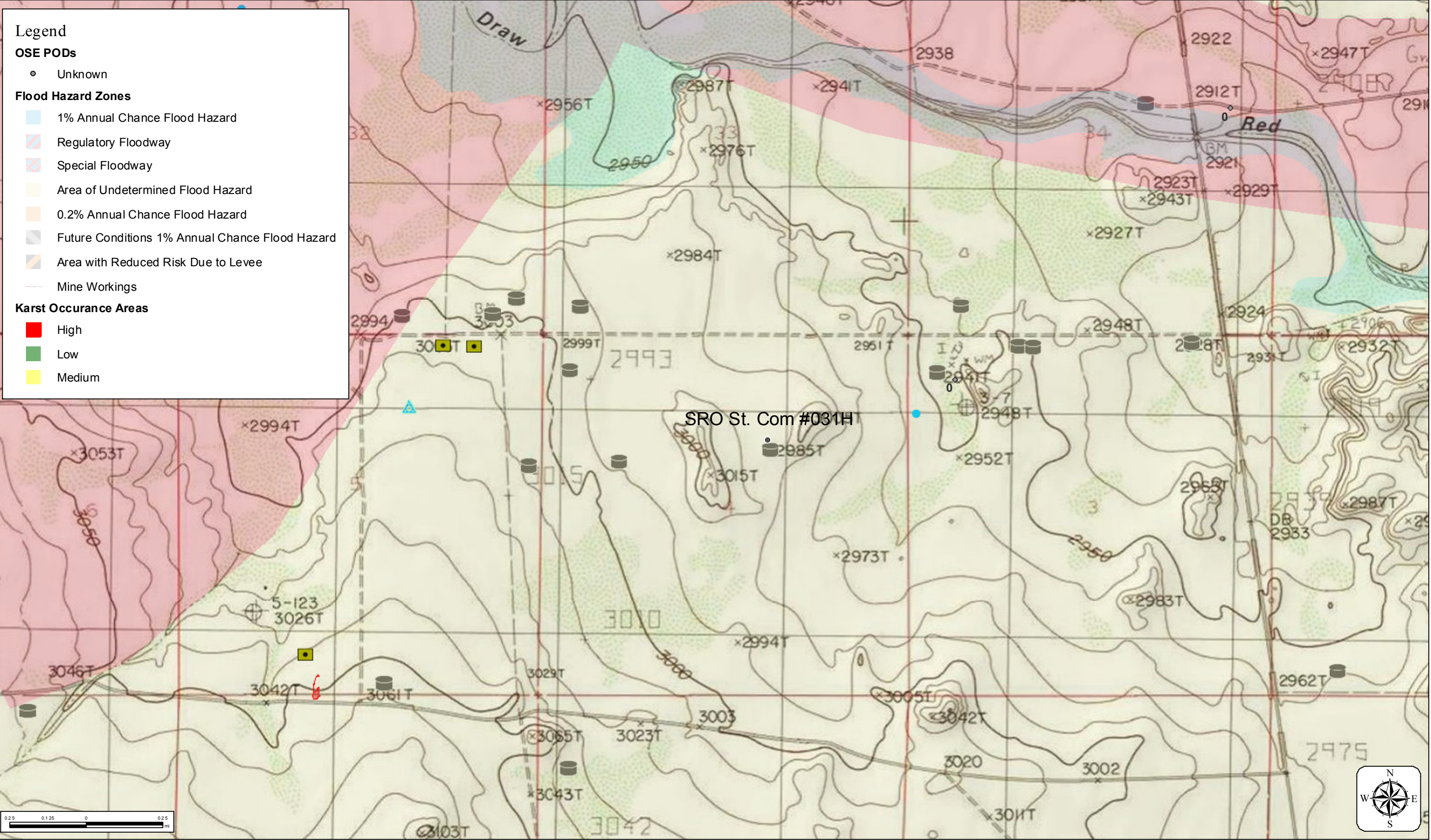
# APPENDIX B



## USGS 320309104020401 26S.28E.14.11111









# APPENDIX C



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

June 24, 2019

LUPE CARRASCO

MMX

2737 PECOS HWY

CARLSBAD, NM 88220

RE: SRO STATE COM #031H

Enclosed are the results of analyses for samples received by the laboratory on 06/18/19 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 1 (H902096-01)**

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	06/20/2019	ND	2.15	108	2.00	5.00		
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61		
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95		
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10		
Total BTEX	<0.300	0.300	06/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/20/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 2 (H902096-02)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 96.7 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 4 (H902096-03)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

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	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/18/2019  
 Reported: 06/24/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 6 (H902096-04)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

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	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.2	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	775	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	59.5	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 127 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 9 (H902096-05)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

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	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 99.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 10 (H902096-06)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 11 (H902096-07)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

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	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	883	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	97.2	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 126 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 13 (H902096-08)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/20/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 14 (H902096-09)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/21/2019	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 15 (H902096-10)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/21/2019	ND	400	100	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	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 97.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: T 1 (H902096-11)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/21/2019	ND	400	100	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	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 1 (H902096-12)**

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	06/20/2019	ND	2.15	108	2.00	5.00	
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2019	ND	400	100	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	06/19/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/19/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/19/2019	ND					

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/18/2019  
 Reported: 06/24/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 2 (H902096-13)**

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	06/20/2019	ND	2.15	108	2.00	5.00		
Toluene*	<0.050	0.050	06/20/2019	ND	2.15	108	2.00	6.61		
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.99	99.7	2.00	7.95		
Total Xylenes*	<0.150	0.150	06/20/2019	ND	6.05	101	6.00	7.10		
Total BTEX	<0.300	0.300	06/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	209	105	200	7.12	
DRO >C10-C28*	16.1	10.0	06/20/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 3 (H902096-14)**

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	06/21/2019	ND	2.13	107	2.00	3.01	
Toluene*	<0.050	0.050	06/21/2019	ND	2.11	105	2.00	0.289	
Ethylbenzene*	<0.050	0.050	06/21/2019	ND	2.00	100	2.00	1.24	
Total Xylenes*	<0.150	0.150	06/21/2019	ND	6.03	101	6.00	1.36	
Total BTEX	<0.300	0.300	06/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	209	105	200	7.12	
DRO >C10-C28*	<10.0	10.0	06/20/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 4 (H902096-15)**

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	06/21/2019	ND	2.13	107	2.00	3.01	
Toluene*	<0.050	0.050	06/21/2019	ND	2.11	105	2.00	0.289	
Ethylbenzene*	<0.050	0.050	06/21/2019	ND	2.00	100	2.00	1.24	
Total Xylenes*	<0.150	0.150	06/21/2019	ND	6.03	101	6.00	1.36	
Total BTEX	<0.300	0.300	06/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>256</b>	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	209	105	200	7.12	
<b>DRO &gt;C10-C28*</b>	<b>23.8</b>	10.0	06/20/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 5 (H902096-16)**

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	06/21/2019	ND	2.13	107	2.00	3.01		
Toluene*	<0.050	0.050	06/21/2019	ND	2.11	105	2.00	0.289		
Ethylbenzene*	<0.050	0.050	06/21/2019	ND	2.00	100	2.00	1.24		
Total Xylenes*	<0.150	0.150	06/21/2019	ND	6.03	101	6.00	1.36		
Total BTEX	<0.300	0.300	06/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	209	105	200	7.12	
DRO >C10-C28*	120	10.0	06/20/2019	ND	174	86.9	200	9.86	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 6 (H902096-17)**

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	06/21/2019	ND	2.13	107	2.00	3.01		
Toluene*	<0.050	0.050	06/21/2019	ND	2.11	105	2.00	0.289		
Ethylbenzene*	<0.050	0.050	06/21/2019	ND	2.00	100	2.00	1.24		
Total Xylenes*	<0.150	0.150	06/21/2019	ND	6.03	101	6.00	1.36		
Total BTEX	<0.300	0.300	06/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	209	105	200	7.12	
<b>DRO &gt;C10-C28*</b>	<b>798</b>	10.0	06/20/2019	ND	174	86.9	200	9.86	
<b>EXT DRO &gt;C28-C36</b>	<b>105</b>	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 125 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 7 (H902096-18)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	QR-03
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	194	97.0	200	5.17	
DRO >C10-C28*	555	10.0	06/20/2019	ND	183	91.4	200	3.53	
EXT DRO >C28-C36	118	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.1 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 9 (H902096-19)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>192</b>	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	194	97.0	200	5.17	
<b>DRO &gt;C10-C28*</b>	<b>66.0</b>	10.0	06/20/2019	ND	183	91.4	200	3.53	
<b>EXT DRO &gt;C28-C36</b>	<b>12.7</b>	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 11 (H902096-20)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	147	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	36.9	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 78.6 % 41-142

Surrogate: 1-Chlorooctadecane 83.7 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 12 (H902096-21)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	12.3	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 81.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.8 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 13 (H902096-22)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	616	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	155	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 84.4 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 14 (H902096-23)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	1290	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	277	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 15 (H902096-24)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	113	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	29.2	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 77.4 % 41-142

Surrogate: 1-Chlorooctadecane 80.7 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 17 (H902096-25)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66		
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19		
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41		
Total BTEX	<0.300	0.300	06/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	16.7	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 85.5 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 18 (H902096-26)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	24.3	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 89.5 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/18/2019	Sampling Date:	06/17/2019
Reported:	06/24/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 19 (H902096-27)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/21/2019	ND	400	100	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	06/20/2019	ND	206	103	200	1.41	
DRO >C10-C28*	<10.0	10.0	06/20/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/20/2019	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

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\*=Accredited Analyte

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**Notes and Definitions**

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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---

Celey D. Keene, Lab Director/Quality Manager





ANALYSIS REQUEST

[illegible]

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
---------------	------------------------------	-----------------------------	----------------

Email: lypeminxinc@gmail.com



XVII

[illegible]

Relinquished By:

Date:

Received By:

Relinquished By:

Date:

Received By:

Delivered By: (Circle One)

Sample Condition

**CHECKED BY:**

**Sampler - UPS - Bus - Other:**

507

☒ Yes ☒ Yes

(initials)

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			

REMARKS:

15

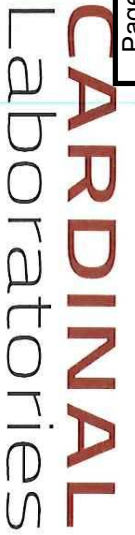
13

1997

4. **Prüfung:**

Email: [lypennixinc@gmail.com](mailto:lypennixinc@gmail.com)





164

$$MMX$$
[illegible]



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

July 08, 2019

LUPE CARRASCO

MMX

2737 PECOS HWY

CARLSBAD, NM 88220

RE: SRO STATE COM #031H

Enclosed are the results of analyses for samples received by the laboratory on 06/28/19 13:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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,

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 20 (H902237-01)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	07/02/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 99.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 21 (H902237-02)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

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	07/02/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 79.9 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 22 (H902237-03)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494	
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 23 (H902237-04)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 24 (H902237-05)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494	
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: B 8 (H902237-06)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494	
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

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	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 10 (H902237-07)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

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	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 16 (H902237-08)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

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	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 3 (H902237-09)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494	
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 5 (H902237-10)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494	
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

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	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 99.8 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received: 06/28/2019  
 Reported: 07/08/2019  
 Project Name: SRO STATE COM #031H  
 Project Number: NONE GIVEN  
 Project Location: COG

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 7 (H902237-11)**

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	07/01/2019	ND	1.62	81.0	2.00	0.494		
Toluene*	<0.050	0.050	07/01/2019	ND	1.67	83.4	2.00	2.24		
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.58	78.8	2.00	1.31		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	4.91	81.9	6.00	0.0507		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 8 (H902237-12)**

BTEX 8021B			mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/01/2019	ND	1.64	82.1	2.00	2.95		
Toluene*	<0.050	0.050	07/01/2019	ND	1.73	86.7	2.00	2.30	GC-NC	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.66	83.2	2.00	1.93		
Total Xylenes*	<0.150	0.150	07/01/2019	ND	5.07	84.5	6.00	1.75		
Total BTEX	<0.300	0.300	07/01/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 129 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	07/02/2019	ND	400	100	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	07/01/2019	ND	177	88.5	200	0.842	
DRO >C10-C28*	<10.0	10.0	07/01/2019	ND	181	90.7	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	07/01/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

MMX  
 LUPE CARRASCO  
 2737 PECOS HWY  
 CARLSBAD NM, 88220  
 Fax To: (575) 236-6201

Received:	06/28/2019	Sampling Date:	06/27/2019
Reported:	07/08/2019	Sampling Type:	Soil
Project Name:	SRO STATE COM #031H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

**Sample ID: SW 12 (H902237-13)**

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2019	ND	1.64	82.1	2.00	2.95	
Toluene*	<0.050	0.050	07/01/2019	ND	1.73	86.7	2.00	2.30	
Ethylbenzene*	<0.050	0.050	07/01/2019	ND	1.66	83.2	2.00	1.93	
Total Xylenes*	<0.150	0.150	07/01/2019	ND	5.07	84.5	6.00	1.75	
Total BTEX	<0.300	0.300	07/01/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	07/02/2019	ND	400	100	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	07/02/2019	ND	197	98.5	200	5.34	
DRO >C10-C28*	<10.0	10.0	07/02/2019	ND	193	96.3	200	3.48	
EXT DRO >C28-C36	<10.0	10.0	07/02/2019	ND					

Surrogate: 1-Chlorooctane 69.7 % 41-142

Surrogate: 1-Chlorooctadecane 74.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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 cursive script, reading "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <b>PLMx</b>		P.O. #:		<b>BILL TO</b> <small>ANALYSIS REQUEST</small>										
Project Manager: <b>Lupo Canas</b>		Company: <b>CAG</b>												
Address:		Attn: <b>Sheldin</b>												
City: <b>State: Zip:</b>		Address:												
Phone #: <b>Fax #:</b>		City: <b>State: Zip:</b>												
Project #: <b>Project Owner:</b>		Phone #: <b>Fax #:</b>												
Project Name: <b>SLD Skate Cam #0314</b>														
Project Location:														
Sampler Name: <b>Artic</b>														
FOR LAB USE ONLY														
Lab I.D. <b>Sample I.D.</b>		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX					PRESERV.		SAMPLING	
						GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :
1902237		B20		1							DATE		TIME	
2		B21									6/27/19		3:00pm	
3		B22									2:50pm		X	
4		B23									2:49:17		X	
5		B24									2:49:17		X	
6		B25									2:49:17		X	
7		B26									2:49:17		X	
8		B27									2:49:17		X	
9		B28									2:49:17		X	
10		B29									2:49:17		X	
11		B30									2:49:17		X	
12		B31									2:49:17		X	
13		B32									2:49:17		X	
14		B33									2:49:17		X	
15		B34									2:49:17		X	
16		B35									2:49:17		X	
17		B36									2:49:17		X	
18		B37									2:49:17		X	
19		B38									2:49:17		X	
20		B39									2:49:17		X	
21		B40									2:49:17		X	
22		B41									2:49:17		X	
23		B42									2:49:17		X	
24		B43									2:49:17		X	
25		B44									2:49:17		X	
26		B45									2:49:17		X	
27		B46									2:49:17		X	
28		B47									2:49:17		X	
29		B48									2:49:17		X	
30		B49									2:49:17		X	
31		B50									2:49:17		X	
32		B51									2:49:17		X	
33		B52									2:49:17		X	
34		B53									2:49:17		X	
35		B54									2:49:17		X	
36		B55									2:49:17		X	
37		B56									2:49:17		X	
38		B57									2:49:17		X	
39		B58									2:49:17		X	
40		B59									2:49:17		X	
41		B60									2:49:17		X	
42		B61									2:49:17		X	
43		B62									2:49:17		X	
44		B63									2:49:17		X	
45		B64									2:49:17		X	
46		B65									2:49:17		X	
47		B66									2:49:17		X</	







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

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July 15, 2019

LUPE CARRASCO

MMX

2737 PECOS HWY

CARLSBAD, NM 88220

RE: SRO STATE COM #031H

Enclosed are the results of analyses for samples received by the laboratory on 07/10/19 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:**MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201Reported:  
15-Jul-19 09:48

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW 8	H902359-01	Soil	10-Jul-19 09:40	10-Jul-19 14:20
SW 16	H902359-02	Soil	10-Jul-19 10:00	10-Jul-19 14:20
SW 17	H902359-03	Soil	10-Jul-19 11:15	10-Jul-19 14:20
B 24	H902359-04	Soil	10-Jul-19 10:45	10-Jul-19 14:20

Sample ID for -04 changed from B23 to B24 as per Lupe 07/15/19. This is the revised report and will replace the one sent on 07/11/19.

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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

**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**SW 8**  
**H902359-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	80.0		16.0	mg/kg	4	9071110	AC	11-Jul-19	4500-Cl-B	

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9071007	ms	11-Jul-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			109 %	73.3-129		9071007	ms	11-Jul-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9071006	MS	10-Jul-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9071006	MS	10-Jul-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9071006	MS	10-Jul-19	8015B	

Surrogate: 1-Chlorooctane			121 %	41-142		9071006	MS	10-Jul-19	8015B	
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Surrogate: 1-Chlorooctadecane			127 %	37.6-147		9071006	MS	10-Jul-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**SW 16**  
**H902359-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Chloride	192		16.0	mg/kg	4	9071110	AC	11-Jul-19	4500-Cl-B	

**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9071007	ms	11-Jul-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			111 %	73.3-129		9071007	ms	11-Jul-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	

Surrogate: 1-Chlorooctane			120 %	41-142		9071006	MS	11-Jul-19	8015B	
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Surrogate: 1-Chlorooctadecane			122 %	37.6-147		9071006	MS	11-Jul-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**SW 17**  
**H902359-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>416</b>		16.0	mg/kg	4	9071110	AC	11-Jul-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9071007	ms	11-Jul-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		110 %	73.3-129		9071007	ms	11-Jul-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>		113 %	41-142		9071006	MS	11-Jul-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>		117 %	37.6-147		9071006	MS	11-Jul-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**B 24**  
**H902359-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>224</b>		16.0	mg/kg	4	9071110	AC	11-Jul-19	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Toluene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	9071007	ms	11-Jul-19	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	9071007	ms	11-Jul-19	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		109 %		73.3-129	9071007	ms	11-Jul-19	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	9071006	MS	11-Jul-19	8015B	

<i>Surrogate: 1-Chlorooctane</i>		119 %		41-142	9071006	MS	11-Jul-19	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>		124 %		37.6-147	9071006	MS	11-Jul-19	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9071110 - 1:4 DI Water</b>										
<b>Blank (9071110-BLK1)</b>				Prepared & Analyzed: 11-Jul-19						
Chloride	ND	16.0	mg/kg							
<b>LCS (9071110-BS1)</b>				Prepared & Analyzed: 11-Jul-19						
Chloride	416	16.0	mg/kg	400		104	80-120			
<b>LCS Dup (9071110-BSD1)</b>				Prepared & Analyzed: 11-Jul-19						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**Volatile Organic Compounds by EPA Method 8021 - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9071007 - Volatiles****Blank (9071007-BLK1)**

Prepared: 10-Jul-19 Analyzed: 11-Jul-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							

Surrogate: 4-Bromofluorobenzene (PID) 0.103 mg/kg 0.100 103 73.3-129

**LCS (9071007-BS1)**

Prepared: 10-Jul-19 Analyzed: 11-Jul-19

Benzene	2.09	0.050	mg/kg	2.00		105	72.2-131			
Toluene	2.09	0.050	mg/kg	2.00		104	71.7-126			
Ethylbenzene	1.98	0.050	mg/kg	2.00		98.9	68.9-126			
Total Xylenes	5.96	0.150	mg/kg	6.00		99.3	71.4-125			

Surrogate: 4-Bromofluorobenzene (PID) 0.0964 mg/kg 0.100 96.4 73.3-129

**LCS Dup (9071007-BSD1)**

Prepared: 10-Jul-19 Analyzed: 11-Jul-19

Benzene	2.08	0.050	mg/kg	2.00		104	72.2-131	0.678	6.91	
Toluene	2.13	0.050	mg/kg	2.00		107	71.7-126	2.09	7.12	
Ethylbenzene	1.99	0.050	mg/kg	2.00		99.5	68.9-126	0.643	7.88	
Total Xylenes	6.00	0.150	mg/kg	6.00		99.9	71.4-125	0.617	7.46	

Surrogate: 4-Bromofluorobenzene (PID) 0.100 mg/kg 0.100 100 73.3-129

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

MMX  
2737 PECOS HWY  
CARLSBAD NM, 88220

Project: SRO STATE COM #031H  
Project Number: NONE GIVEN  
Project Manager: LUPE CARRASCO  
Fax To: (575) 236-6201

Reported:  
15-Jul-19 09:48

**Petroleum Hydrocarbons by GC FID - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 9071006 - General Prep - Organics****Blank (9071006-BLK1)**

Prepared &amp; Analyzed: 10-Jul-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	41-142			
Surrogate: 1-Chlorooctadecane	57.7		mg/kg	50.0		115	37.6-147			

**LCS (9071006-BS1)**

Prepared &amp; Analyzed: 10-Jul-19

GRO C6-C10	202	10.0	mg/kg	200		101	76.5-133			
DRO >C10-C28	202	10.0	mg/kg	200		101	72.9-138			
Total TPH C6-C28	404	10.0	mg/kg	400		101	78-132			
Surrogate: 1-Chlorooctane	64.3		mg/kg	50.0		129	41-142			
Surrogate: 1-Chlorooctadecane	64.0		mg/kg	50.0		128	37.6-147			

**LCS Dup (9071006-BSD1)**

Prepared &amp; Analyzed: 10-Jul-19

GRO C6-C10	188	10.0	mg/kg	200		93.9	76.5-133	7.22	20.6	
DRO >C10-C28	192	10.0	mg/kg	200		96.0	72.9-138	5.24	20.6	
Total TPH C6-C28	380	10.0	mg/kg	400		94.9	78-132	6.22	18	
Surrogate: 1-Chlorooctane	59.9		mg/kg	50.0		120	41-142			
Surrogate: 1-Chlorooctadecane	58.3		mg/kg	50.0		117	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager



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### 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 that reads "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: <u>MMX</u>		P.O. #:		<b>BILL TO</b>																																							
Project Manager: <u>Lepe Carrasco</u>		Company: <u>CCE</u>		<b>ANALYSIS REQUEST</b>																																							
Address:		Attn: <u>Sheldon</u>																																									
City:		Address:																																									
State:		City:																																									
Zip:		State:																																									
Phone #:		Zip:																																									
Fax #:		Phone #:																																									
Project #:		Project Owner:																																									
Project Name: <u>SRO State Con #0314</u>		City:																																									
Project Location:		State:																																									
Sample Name: <u>Pan M.</u>		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															
H902359		Sud 8		1		1		1		1		1		1		1		1		1		1		1		1		1		1													
1		Sud 16		1		1		1		1		1		1		1		1		1		1		1		1		1		1													
2		Sud 17		1		1		1		1		1		1		1		1		1		1		1		1		1		1													
3		B-25 B 24 *		1		1		1		1		1		1		1		1		1		1		1		1		1		1													
4																																											

PLEASE NOTE: Liability and Damages. Cardinal's liability and clients' exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Pan M. Date: 7-10-19 Received By: Sheldon Date: 11-15-19

Reinquinished By: Sheldon Date: 11-15-19 Received By: Sheldon Date: 11-15-19

Delivered By: (Circle One) UPS 5:00 #497 Sample Condition ☒ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No

Sampler - UPS - Bus - Other: 5:00 #497 Sample Condition ☒ Cool ☐ Intact ☐ Yes ☐ No ☐ Yes ☐ No

CHECKED BY: Sheldon (Initials)

REMARKS: Sample to be changed as per type. 7/15/19

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

lupemurine@gmail.com

# Analytical Report 631641

for  
MMX

**Project Manager: Lupe Carrasco**

**SRO #31**

**24-JUL-19**

Collected By: Client



**1211 W. Florida Ave  
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



24-JUL-19

Project Manager: **Lupe Carrasco**

**MMX**

PO Box 1120

Carlsbad, NM 88220

Reference: XENCO Report No(s): **631641**

**SRO #31**

Project Address:

**Lupe Carrasco:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 631641. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 631641 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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**Sample Cross Reference 631641****MMX, Carlsbad, NM****SRO #31**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SW6	S	07-19-19 10:00		631641-001
SW11	S	07-19-19 10:02		631641-002
B5	S	07-19-19 10:05		631641-003
B6	S	07-19-19 10:06		631641-004
B7	S	07-19-19 10:10		631641-005
B11	S	07-19-19 10:15		631641-006
B13	S	07-19-19 10:17		631641-007
B14	S	07-19-19 10:00		631641-008
B15	S	07-19-19 10:30		631641-009



## CASE NARRATIVE

*Client Name: MMX*

*Project Name: SRO #31*

Project ID:

Work Order Number(s): 631641

Report Date: 24-JUL-19

Date Received: 07/22/2019

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**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3096317 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analysis Summary 631641

MMX, Carlsbad, NM

Project Name: SRO #31



Project Id:

Contact: Lupe Carrasco

Project Location:

Date Received in Lab: Mon Jul-22-19 09:00 am

Report Date: 24-JUL-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631641-001	631641-002	631641-003	631641-004	631641-005	631641-006
	<i>Field Id:</i>	SW6	SW11	B5	B6	B7	B11
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-19-19 10:00	Jul-19-19 10:02	Jul-19-19 10:05	Jul-19-19 10:06	Jul-19-19 10:10	Jul-19-19 10:15
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jul-22-19 14:20	Jul-22-19 14:20	Jul-22-19 14:20	Jul-22-19 14:20	Jul-22-19 14:20	Jul-22-19 14:20
	<i>Analyzed:</i>	Jul-23-19 12:14	Jul-23-19 12:34	Jul-23-19 04:53	Jul-23-19 01:14	Jul-23-19 03:12	Jul-23-19 03:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10
	<i>Analyzed:</i>	Jul-22-19 14:32	Jul-22-19 14:48	Jul-22-19 14:53	Jul-22-19 14:59	Jul-23-19 09:23	Jul-22-19 15:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		32.1 4.98	166 5.01	344 49.9	59.8 49.5	5.87 5.02	<5.00 5.00
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Jul-22-19 17:00	Jul-22-19 17:00	Jul-22-19 17:00	Jul-22-19 17:00	Jul-22-19 17:00	Jul-22-19 17:00
	<i>Analyzed:</i>	Jul-22-19 22:40	Jul-22-19 23:52	Jul-23-19 00:16	Jul-23-19 00:40	Jul-23-19 01:04	Jul-23-19 01:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		24.6 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		24.6 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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*Jessica Kramer*

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 631641

MMX, Carlsbad, NM

Project Name: SRO #31



Project Id:

Contact: Lupe Carrasco

Project Location:

Date Received in Lab: Mon Jul-22-19 09:00 am

Report Date: 24-JUL-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	631641-007	631641-008	631641-009			
	<i>Field Id:</i>	B13	B14	B15			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jul-19-19 10:17	Jul-19-19 10:00	Jul-19-19 10:30			
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jul-22-19 14:20	Jul-22-19 14:20	Jul-22-19 14:20			
	<i>Analyzed:</i>	Jul-23-19 03:53	Jul-23-19 04:13	Jul-23-19 04:33			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
Toluene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
m,p-Xylenes		<0.00397 0.00397	<0.00398 0.00398	<0.00399 0.00399			
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
Total BTEX		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200			
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jul-22-19 13:10	Jul-22-19 13:10	Jul-22-19 13:10			
	<i>Analyzed:</i>	Jul-23-19 09:29	Jul-22-19 15:31	Jul-22-19 15:36			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		15.8 4.96	80.3 49.8	327 49.7			
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Jul-22-19 17:00	Jul-22-19 17:00	Jul-22-19 17:00			
	<i>Analyzed:</i>	Jul-23-19 01:51	Jul-23-19 02:15	Jul-23-19 02:39			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		25.7 15.0	32.5 15.0	<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Total TPH		25.7 15.0	32.5 15.0	<15.0 15.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.0%

*Jessica Kramer*

Jessica Kramer  
Project Assistant



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **SQL** Sample Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation





## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096146

Sample: 631641-001 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 22:40

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 3096146

Sample: 631641-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 23:52

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 3096146

Sample: 631641-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 00:16

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.7	100	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 3096146

Sample: 631641-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 00:40

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.9	99	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 3096146

Sample: 631641-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 01:04

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	47.7	49.9	96	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096317

Sample: 631641-004 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 01:14

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3096146

Sample: 631641-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 01:27

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.4	99.7	99	70-135	
o-Terphenyl	44.4	49.9	89	70-135	

Lab Batch #: 3096146

Sample: 631641-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 01:51

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	88.0	99.9	88	70-135	
o-Terphenyl	42.1	50.0	84	70-135	

Lab Batch #: 3096146

Sample: 631641-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 02:15

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3096146

Sample: 631641-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 02:39

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.7	99.8	95	70-135	
o-Terphenyl	42.2	49.9	85	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096317

Sample: 631641-005 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 03:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3096317

Sample: 631641-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 03:32

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0336	0.0300	112	70-130	

Lab Batch #: 3096317

Sample: 631641-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 03:53

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3096317

Sample: 631641-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 04:13

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0365	0.0300	122	70-130	

Lab Batch #: 3096317

Sample: 631641-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 04:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	70-130	
4-Bromofluorobenzene	0.0341	0.0300	114	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096317

Sample: 631641-003 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 04:53

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0211	0.0300	70	70-130	

Lab Batch #: 3096317

Sample: 631641-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 12:14

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0351	0.0300	117	70-130	

Lab Batch #: 3096317

Sample: 631641-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/23/19 12:34

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3096317

Sample: 7682524-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 11:53

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3096146

Sample: 7682556-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 21:28

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096317

Sample: 7682524-1-BKS / BKS

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 10:04

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3096146

Sample: 7682556-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 21:52

**SURROGATE RECOVERY STUDY**

<b>TPH by SW8015 Mod</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 3096317

Sample: 7682524-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 10:24

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

Lab Batch #: 3096146

Sample: 7682556-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 07/22/19 22:16

**SURROGATE RECOVERY STUDY**

<b>TPH by SW8015 Mod</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	56.0	50.0	112	70-135	

Lab Batch #: 3096317

Sample: 631641-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 10:44

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0309	0.0300	103	70-130	
4-Bromofluorobenzene	0.0386	0.0300	129	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: SRO #31

Work Orders : 631641,

Lab Batch #: 3096146

Sample: 631641-001 S / MS

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 23:04

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	55.9	49.9	112	70-135	

Lab Batch #: 3096317

Sample: 631641-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 11:04

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0379	0.0300	126	70-130	

Lab Batch #: 3096146

Sample: 631641-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/22/19 23:28

### SURROGATE RECOVERY STUDY

TPH by SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.8	94	70-135	
o-Terphenyl	52.0	49.9	104	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## BS / BSD Recoveries



Project Name: SRO #31

Work Order #: 631641

Project ID:

Analyst: FOV

Date Prepared: 07/22/2019

Date Analyzed: 07/22/2019

Lab Batch ID: 3096317

Sample: 7682524-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.105	105	0.100	0.0983	98	7	70-130	35	
Toluene	<0.00200	0.100	0.102	102	0.100	0.0963	96	6	70-130	35	
Ethylbenzene	<0.00200	0.100	0.115	115	0.100	0.110	110	4	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.236	118	0.200	0.226	113	4	70-130	35	
o-Xylene	<0.00200	0.100	0.110	110	0.100	0.110	110	0	70-130	35	

Analyst: CHE

Date Prepared: 07/22/2019

Date Analyzed: 07/22/2019

Lab Batch ID: 3096128

Sample: 7682537-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	247	99	250	243	97	2	90-110	20	

Relative Percent Difference RPD =  $200 * [(C-F)/(C+F)]$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: SRO #31

Work Order #: 631641

Project ID:

Analyst: ARM

Date Prepared: 07/22/2019

Date Analyzed: 07/22/2019

Lab Batch ID: 3096146

Sample: 7682556-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1130	113	1000	1120	112	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1130	113	1000	1130	113	0	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes





## Form 3 - MS / MSD Recoveries



Project Name: SRO #31

Work Order #: 631641

Project ID:

Lab Batch ID: 3096317

QC- Sample ID: 631641-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/22/2019

Date Prepared: 07/22/2019

Analyst: FOV

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0933	93	0.100	0.0862	86	8	70-130	35	
Toluene	<0.00200	0.100	0.0909	91	0.100	0.0827	83	9	70-130	35	
Ethylbenzene	<0.00200	0.100	0.106	106	0.100	0.0963	96	10	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.200	0.197	99	10	70-130	35	
o-Xylene	<0.00200	0.100	0.105	105	0.100	0.0951	95	10	70-130	35	

Lab Batch ID: 3096128

QC- Sample ID: 631641-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/22/2019

Date Prepared: 07/22/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	32.1	249	287	102	249	284	101	1	90-110	20	

Lab Batch ID: 3096128

QC- Sample ID: 631643-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/22/2019

Date Prepared: 07/22/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	9.95	251	267	102	251	265	102	1	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



# Form 3 - MS / MSD Recoveries



Project Name: SRO #31

Work Order #: 631641

Project ID:

Lab Batch ID: 3096146

QC- Sample ID: 631641-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/22/2019

Date Prepared: 07/22/2019

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	9.01	997	1040	103	998	993	99	5	70-135	20	
Diesel Range Organics (DRO)	24.6	997	1080	106	998	1020	100	6	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



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

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

03/04

[illegible]



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: MMX

Date/ Time Received: 07/22/2019 09:00:00 AM

Work Order #: 631641

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6* Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

**\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 07/22/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/22/2019

# APPENDIX D



SE

S

SW

150

180

210

240

☉ 195°S (T) ● 32°4.457', -104°5.410' ±16ft ▲ 2996ft



**CONCHO**

COG Operating LLC

SRO STATE UNIT #31H  
UNIT G, SEC. 4-T26S-R28E  
1580' FNL & 2120' FEL  
EDDY COUNTY, NEW MEXICO  
API #30-015-40256

15 Oct 2019, 15:00:38





☀ 236°SW (T) ● 32°4.482', -104°5.423' ±16ft ▲ 2986ft



