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SITE ASSESSMENT SUMMARY

AND

PROPOSED VARIANCE AND REMEDIATION WORK PLAN

COG Operating, LLC Willow A State #003 Eddy County, New Mexico Unit Letter "J", Section 03, Township 25 South, Range 28 East Latitude 32.15890° North, Longitude 104.07183° West NMOCD Reference No. NRM1935157445

Prepared For:

COG Operating, LLC 600 W Illinois Avenue Midland, Texas 79701

Prepared By:

TRC Environmental Corporation 10 Desta Drive, Suite 150E Midland, Texas 79705

July 2020

Jared E. Stoffel, PG Project Manager

Curt Stanley Senior Project Manager



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INTRODUCTION & BACKGROUND INFORMATION

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Site Assessment Summary and Proposed Variance and Remediation Work Plan* for the Release Site known as the Willow A State #003 (the Site). The legal description of the Site is Unit Letter "J", Section 03, Township 25 South, Range 28 East, in Eddy County, New Mexico. The subject property is owned by the State of New Mexico and administered by New Mexico State Land Office (NMSLO). The GPS coordinates for the Site are N 32.15890°, W 104.07183°. A topographic map is provided as **Figure 1**. Photographs are provided in the photolog as **Appendix C**.

On October 17, 2019, COG discovered a produced water release had occurred at the Site. The Release was attributed to a third-party contractor line-strike. On the discovery date, COG notified the New Mexico Oil Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO) of the Release. The Release was assigned an NMOCD Reference number of NRM1935157445. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. On October 28, 2019, the initial Release Notification and Corrective Action (Form C-141) was submitted to the NMOCD. The Form C-141 indicated twenty (20) barrels (bbls) of produced water was released and eighteen (18) bbls of produced water was recovered during initial response activities. The Release affected an area measuring approximately 2.200 square feet (sq. ft.). The affected area to the east is characterized as a right-of-way for above-ground poly flowlines. The flowlines turn to the west, and run down into an approximately eight (8) foot road bore excavation. At the base of the western terminus of the excavation begins a road bore in which the flowlines run underneath the US 285 highway (US 285). The terminus of the road bore excavation is located at the lease-US 285 right-of-way boundary. The C-141 indicated the impacted area was located in pastureland. A copy of the submitted Form C-141 for the Release is provided in Appendix A. The site location is depicted in Figure 1 and Figure 2. The affected area is depicted in Figure 4.

Two (2) produced water releases, 2RP-1541 (2013) and 2RP-3105 (2015), previously closed with concurrence from the NMOCD, are located in the immediate vicinity of affected area. The northern and eastern boundaries of the Release area are immediately adjacent to and overlapping with the closed Release Sites. 2RP-1541 appears to overlap with the easternmost extent of the affected area. The southern extent of the remediation associated with 2RP-3105 appears to be immediately adjacent to the northern boundary of the affected area. Both produced water releases were remediated by removing the top approximately four (4) feet of contaminated soil and installation of a synthetic liner over deeper impacted soils, and soils below four (4) feet bgs in the underlying areas are expected to have elevated chloride concentrations. The approximate locations of the synthetic liners from the previous releases are depicted in **Figure 4**.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 03, Township 25 South, Range 28 East. The nearest well recorded in the NMOSE groundwater database is located approximately 0.65 miles west of the Site and has a depth to groundwater of approximately fifty (50) feet below ground surface (bgs). No water wells were observed within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand (1,000) feet of the soil investigation (BH-3) was advanced to approximately thirty (30) feet bgs as part of the soil investigation activities. The boring log is provided as **Appendix D**. Water was not encountered before the termination of the boring. In addition, one (1) soil boring was advanced by COG approximately



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60 feet to the northwest of BH-3 in 2015, in association with 2RP-3105, and one (1) soil boring in association with 2RP-1541 was advanced approximately 25 feet to the northwest of BH-3, each to a depth of approximately forty (40) feet bgs. Water was not encountered prior to termination of either boring.

Based on the inferred depth to groundwater at the Willow A State #003 Release Site, the NMOCD *Closure Criteria for Soils Impacted by a Release* may not warrant the most stringent closure criteria listed, due to the lack of definitive depth to groundwater data. However, the Willow A State #003 is located in the 'high karst' area as outlined in Bureau of Land Management (BLM) publicly available Karst Potential Map, and is provided as **Figure 3**. The NMOCD stance on the regulation of releases in 'high karst' areas is unclear, consequently COG will utilize the most stringent NMOCD Closure Criteria for Soils Impacted by a Release for the Willow A State #003 as follows:

- Benzene 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) –100 mg/kg
- Chloride 600 mg/kg

SOIL INVESTIGATION SUMMARY

On December 3, 2019, an initial soil investigation was conducted at the Release Site. During the investigation, two (2) investigation augerholes (AH-1 and AH-2) were advanced within the Release area, utilizing a hand auger to characterize the vertical extent of the impacted area. In addition, one (1) horizontal boring (Wall) was advanced into the terminal sidewall of the road bore excavation utilizing a hand auger to characterize the lateral extent of the Release area into the US 285 right-of way. Five (5) soil samples (AH-1 @ 0-0.5', AH-1 @ 1', AH-1 @ 2', AH-1 @ 3', AH-1 (2), 4', and AH-1 (2), 5') were collected from soil sample location AH-1, which was advanced at the base of the road bore excavation. Four (4) soil samples (AH-2 @ 0-0.5', AH-2 @ 1', AH-2 (a) 2', AH-2 (a) 3', and AH-2 (a) 4') were collected from soil sample location AH-2, which was advanced near the release point, located in the right of way outside the road bore excavation. Six (6) soil samples (Wall, Wall @ 1', Wall @ 2', Wall @ 3', Wall @ 4', and Wall @ 5') were collected from horizontal boring location "Wall". Collected soil samples were submitted to Xenco Laboratories for chloride and/or TPH and BTEX analyses by EPA E300, EPA 8015B, and EPA 8021B, respectively. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited concentrations below the laboratory reporting limit (RL). The analytical data indicated each soil sample submitted for chloride analysis exhibited chloride concentrations above the NMOCD regulatory guidelines.

On May 7 and 8, 2020, a secondary soil investigation was conducted at the Release site. The road bore excavation was benched to accommodate delineation utilizing a backhoe. Two (2) trenches (TT-1 and TT-2) were advanced within the road bore excavation. Trench TT-1 was advanced laterally into the west sidewall of the road bore excavation to determine the lateral extent of the Release area into the US 285 right-of-way. Trench TT-2 was advanced vertically at the base of the road bore excavation to determine the vertical extent of the impacted area within the road bore excavation. Six (6) soil samples (TT-1 @ 0-0.5', TT-1 @ 1', TT-1 @ 2', TT-1 @ 3', TT-1 @ 4',



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and TT-1 @ 5') were collected from trench TT-1. Seven (7) soil samples (TT-2 @ 0-0.5', TT-2 @ 1', TT-2 @ 2', TT-2 @ 3', TT-2 @ 4', TT-2 @ 5', and TT-2 @ 6') were collected from trench TT-2. Additionally, three (3) soil samples (NSW, SSW, and ESW) from outside the impacted area were collected to determine the lateral extent of the impact outside the road bore excavation. Collected soil samples were submitted to the laboratory for chloride and/or TPH and BTEX analyses. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited concentrations below the laboratory RL. The analytical data indicated each soil sample submitted for chloride analysis exhibited chloride concentrations above NMOCD regulatory guidelines with the exception of soil samples TT-1 @ 1', TT-1 @ 4', TT-1 @ 5', TT-2 @ 6', NSW, SSW, and ESW.

On May 28, 2020, a final soil investigation was conducted at the Release site. One (1) soil boring (BH-3) was advanced in the middle of the Release Site, outside the road bore excavation, to determine vertical delineation of the Release area outside the existing excavation. The soil boring was advanced to approximately thirty (30) feet bgs. Groundwater was not encountered prior to terminating the boring at approximately thirty (30) feet bgs. Nine (9) soil samples (BH-3 @ 0-1', BH-3 @ 2-3', BH-3 @ 4-5', BH-3 @ 6-7', BH-3 @ 8-9', BH-3 @ 14-15', BH-3 @ 19-20', BH-3 @ 24-25', and BH-3 @ 29-30') were collected from the soil boring and were submitted to the laboratory for chloride and/or TPH and BTEX analyses. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited concentrations below the laboratory RL. The analytical data indicated each soil sample submitted for chloride analysis exhibited chloride concentrations above NMOCD regulatory guidelines with the exception of soil samples BH-3 @ 24-25' and BH-3 @ 29-30'. The sample locations are presented as **Figure 4**. The analytical data is summarized in **Table 1**. The laboratory analytical packets are presented as **Appendix E**.

PROPOSED VARIANCE AND REMEDIATION PLAN

Based on the laboratory analytical results from the soil samples collected in December 2019 and May 2020, the Release Site does not appear to be impacted above NMOCD regulatory guidelines by TPH or BTEX constituents. In addition, based on laboratory analytical results of soil samples collected in December 2019 and March 2020, chloride impact above NMOCD regulatory guidelines appear to have been vertically and horizontally delineated. Full excavation and removal of the impacted soils would pose potential safety risks to onsite personnel and environmental risks to the flowlines located within the footprint of the Release area, due to the depth of impact. COG proposes an approximately four (4) foot excavation below the current grade of the road bore excavation represented by soil sample locations AH-1 and TT-2 to remove the majority of the impacted area and allow for installation of a liner below the flowlines. However, if the sandy sidewalls of the excavation begin collapsing, COG will install the liner two (2) feet below the base of the current road bore excavation to prevent potential sidewall stability concerns while installing the synthetic liner. COG proposes an approximately nine (9) foot excavation below the current grade of the area outside the road bore excavation represented by soil sample locations AH-2 and BH-3. Additionally, excavation activities will not be advanced further north or east if either of the liners associated with releases 2RP-1541 or 2RP-3105 are encountered in order to preserve the integrity of those liners. The area outside the road bore excavation will be backfilled to four (4) feet below the current grade with locally sourced, non-impacted 'like' material. At the base of each excavation, COG proposes the installation of 20 mil polyethylene liners, which will be below



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any flowlines crossing the Release area. The excavated areas will then be backfilled to the initial grade, which will maintain the current infrastructure of surface flowlines running to a lower elevation and entering the road bore at the current location. Two (2) sidewall confirmation soil samples will be collected, one (1) soil sample from the south sidewall and one (1) soil sample from the west sidewall. North and east sidewalls will not be collected as the sidewalls in these areas overlap with previously risk-based closures (2RP-1541 and 2RP-3105) with known elevated chloride concentrations. No floor confirmation soil samples will be collected, as the liner will be installed over the entire footprint of the Release area. The proposed area of excavation and liner location are depicted in **Figure 4**.

COG is prepared to begin the activities outlined in this *Site Assessment Summary and Proposed Variance and Remediation Work Plan* following NMOCD and NMSLO approval. On completion of remediation activities, a Remediation Summary and Closure Report will be prepared detailing field activities and laboratory analytical results from confirmation soil samples.

If you have any questions, or need any additional information, please feel free to contact myself or Ike Tavarez by phone or email.

LIMITATION

TRC has prepared this Site Assessment Summary and Proposed Variance and Remediation Work Plan to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or COG Operating, LLC.

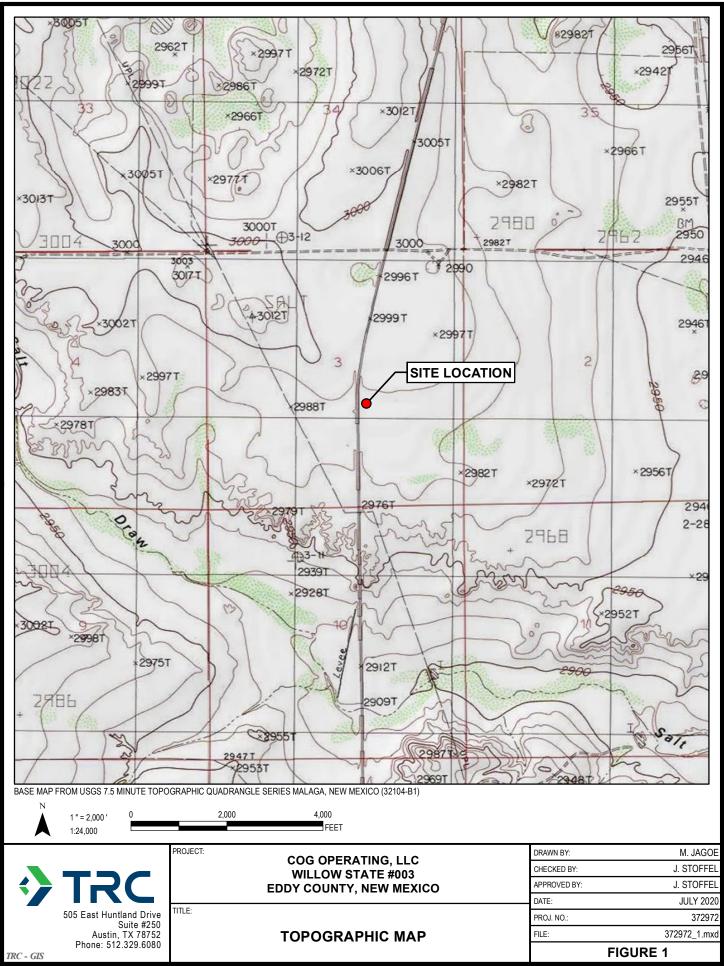


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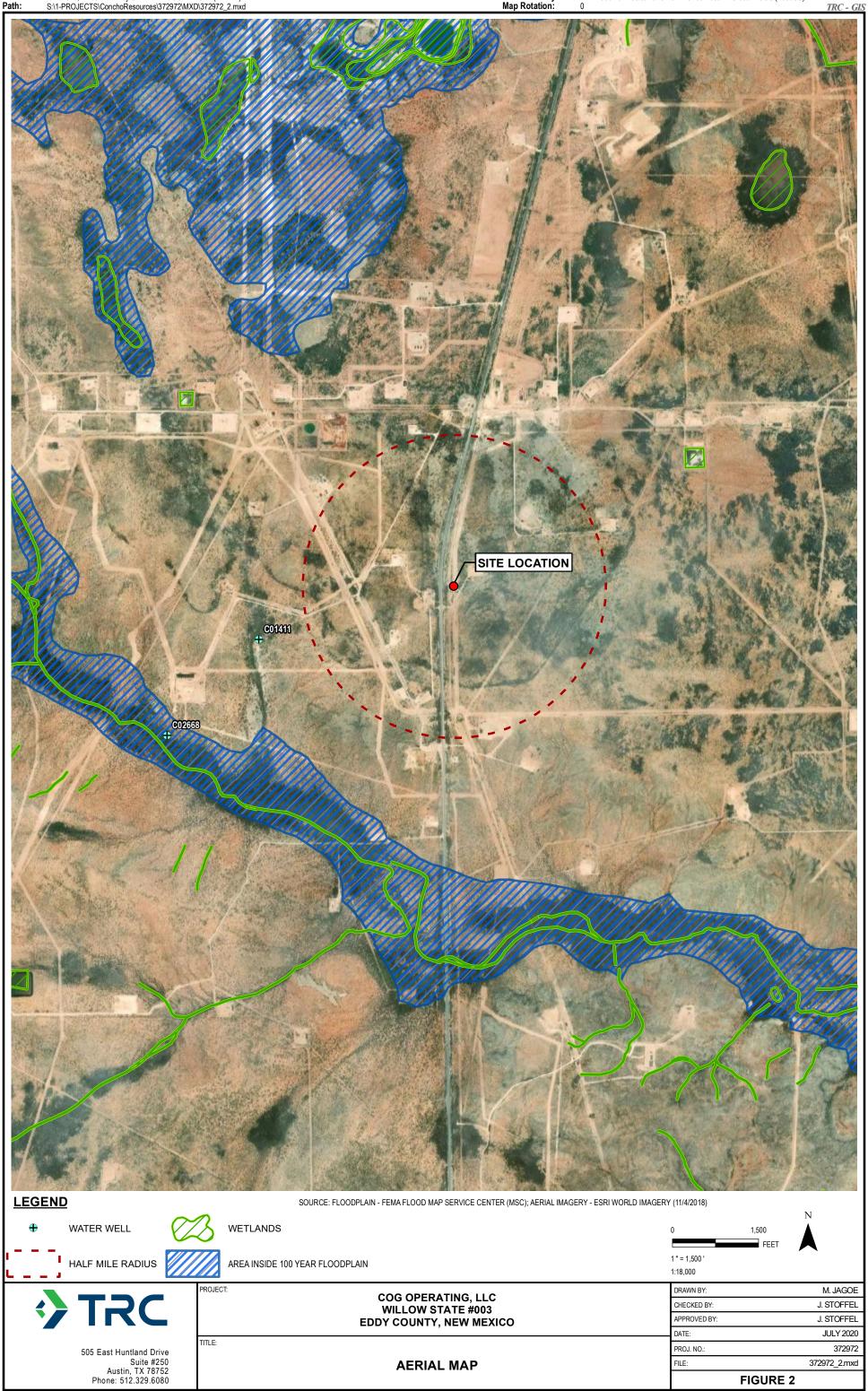
DISTRIBUTION

Copy 1:	Mike Bratcher
	New Mexico Energy, Minerals and Natural Resources Department
	Oil Conservation Division, District 2
	811 S. First Street
	Artesia, NM 88210
Copy 2:	Ryan Mann

- Copy 2: Ryan Mann New Mexico State Land Office 914 N. Liman Street Hobbs, NM 88240
- Copy 3: Ike Tavarez COG Operating, LLC 600 W. Illinois Avenue Midland, Texas 79701
- Copy4: TRC Environmental Corporation 10 Desta Dr STE 150E Midland, TX 79705

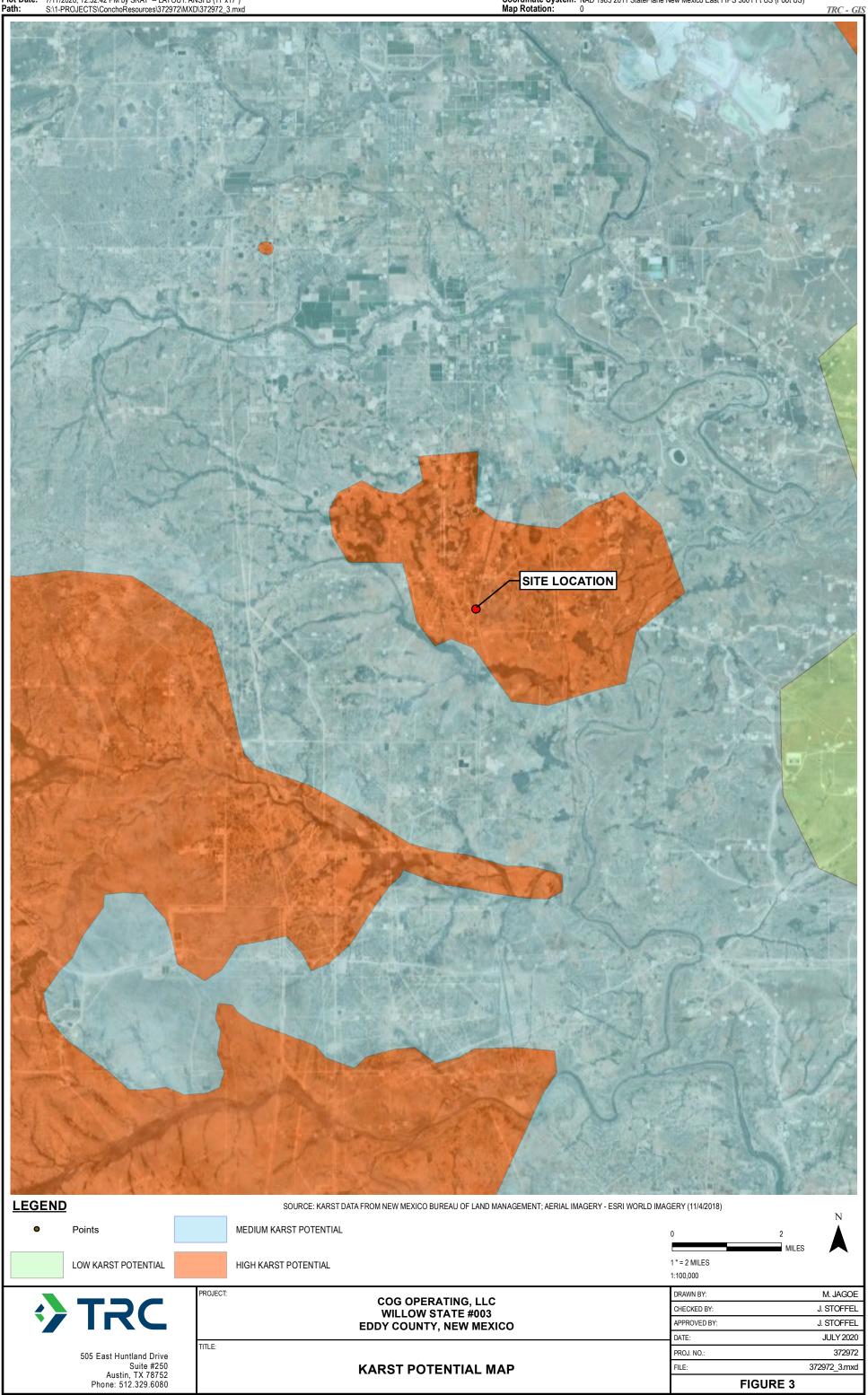


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2.........

- DELINEATION SAMPLE
 - RELEASE AREA
 - PROPOSED SHALLOWER LINER LOCATION
 - PROPOSED DEEPER LINER LOCATION
 - CURRENT EXCAVATION
 - APPROXIMATE LINER LOCATION 2RP-1541
 - APPROXIMATE LINER LOCATION 2RP-3105

SOURCE: AERIAL IMAGERY - ESRI WORLD IMAGERY (CLARITY)

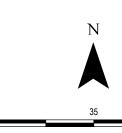
36" SURFACE POLY GAS LINE

RYX MIDSTREAM SERVIES LINE

US 285 RIGHT OF WAY PROPERTY BOUNDARY

COG FLOWLINE

PLAINS BURIED LINE



COG OPERATING, LLC WILLOW STATE #003 EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION, PROPOSED EXCAVATION, AND PROPOSED LINER MAP

DRAWN BY:	M. JAGOE	PROJ NO.: 372972
CHECKED BY:	J. STOFFEL	
APPROVED BY:	J. STOFFEL	FIGURE 4
DATE:	JULY 2020	
✓ T	RC	505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512 329.6080 www.trcsolutions.com

70 1 " = 35 '

1:420

372972_4.mxd

	TABLE 1											
	Summary of Sampling Analytical Results (Delineation Samples)											
	Concentrations of BTEX, TPH, and/or Chloride in Soil											
				Vertical or	SW 846	8021B	SW 846 8015M Ext.					E 300
Sample ID	Date	Depth	Proposed Soil Status	Horizontal Delineation Sample	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ .C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)
			Rc	ad Bore Excavati	on Samples							
AH-1 @ 0-0.5'	12/3/19	0-0.5'	Excavate	Vertical	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	6,920
AH-1 @ 1'	12/3/19	1'	Excavate	Vertical	-	-	-	-	-	-	-	14,600
AH-1 @ 2'	12/3/19	2'	Excavate	Vertical	-	-	-	-	-	-	-	13,100
AH-1 @ 3'	12/3/19	3'	Excavate	Vertical	-	-	-	-	-	-	-	7,270
AH-1 @ 4'	12/3/19	4'	Excavate	Vertical	-	-	-	-	-	-	-	10,100
AH-1 @ 5'	12/3/19	5'	Under Liner	Vertical	-	-	-	-	-	-	-	3,330
Wall	12/3/19	-	Excavate	Horizontal	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	11,300
Wall @ 1'	12/3/19	-	Excavate	Horizontal	-	-	-	-	-	-	-	10,900
Wall @ 2'	12/3/19	-	Excavate	Horizontal	-	-	-	-	-	-	-	9,060
Wall @ 3'	12/3/19	-	Excavate	Horizontal	-	-	-	-	-	_	- 1	8,360
Wall @ 4'	12/3/19	-	Excavate	Horizontal	-	-	-	-	-	_	- 1	9,650
Wall @ 5'	12/3/19	-	Excavate	Horizontal	-	-	-	-	-	_	- 1	12,400
TT-2 @ 0-0.5'	5/8/20	0-0.5'	Excavate	Vertical	<0.00200	<0.002	<50.0	<50.0	<50.0	<50.0	<50	2,780
TT-2 @ 1'	5/8/20	1'	Excavate	Vertical	-	-	-	-	-	_	- 1	3,660
TT-2 @ 2'	5/8/20	2'	Excavate	Vertical	-	-	-	-	-	_	-	4,020
TT-2 @ 3'	5/8/20	3'	Excavate	Vertical	-	-	-	-	-	_	-	5,410
TT-2 @ 4'	5/8/20	4'	Excavate	Vertical	-	-	-	-	-	_	-	2,200
TT-2 @ 5'	5/8/20	5'	Under Liner	Vertical	_	_	_	_	_	_	_	607
TT-2 @ 6'	5/8/20	6'	Under Liner	Vertical	_	-	_	-	_	_	-	199
TT-1 @ 0-0.5'	5/7/20	_	Excavate	Horizontal	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	4,510
TT-1 @ 1'	5/7/20	-	Excavate	Horizontal	-	-	-	-	-	-	-	449
TT-1 @ 2'	5/7/20	-	Excavate	Horizontal	-	-	-	-	-	_	-	1.050
TT-1 @ 3'	5/7/20	-	Excavate	Horizontal	_	_	_	_	_	_	_	1,780
TT-1 @ 4'	5/7/20	-	In-Situ	Horizontal	_	_	_	_	_	_	_	17.3
TT-1 @ 5'	5/7/20	-	In-Situ	Horizontal	-	-	-	-	-	-	-	70.3
	D Closure Criteria	a			10	50	-	-	-	-	100	600

Proposed Soil Status - Excavate

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Proposed Soil Status - Under Liner

Proposed Soil Status - Excavate and Backfill Prior to Setting Liner

	Summary of Sampling Analytical Results (Delineation Samples) Concentrations of BTEX, TPH, and/or Chloride in Soil											
	SW 846 8015M Ext. E 300										F 300	
Sample ID	Date	Depth	Proposed Soil Status	Vertical or Horizontal Delineation Sample	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ .C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)
				Right-of-Way S	amples							
AH-2 @ 0-0.5'	12/3/19	0-0.5'	Excavate	Vertical	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	8,460
AH-2 @ 1'	12/3/19	1'	Excavate	Vertical	_	_	_	_	_	_	_	6,450
AH-2 @ 2'	12/3/19	2'	Excavate	Vertical	-	-	-	-	-	-	-	7,150
AH-2 @ 3'	12/3/19	3'	Excavate	Vertical	-	-	-	-	-	-	-	7,230
AH-2 @ 4'	12/3/19	4'	Excavate	Vertical	-	-	-	-	-	-	-	7,730
BH-3 @ 0-1'	5/28/20	0-1'	Excavate	Vertical	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	14,600
BH-3 @ 2-3'	5/28/20	2-3'	Excavate	Vertical	-	-	-	-	-	-	-	16,800
BH-3 @ 4-5'	5/28/20	4-5'	Excavate	Vertical	-	-	-	-	-	-	-	13,200
BH-3 @ 6-7'	5/28/20	6-7'	Excavate	Vertical	-	-	-	-	-	-	-	13,400
BH-3 @ 8-9'	5/28/20	8-9'	Excavate	Vertical	-	-	-	-	-	-	-	9,420
BH-3 @ 14-15'	5/28/20	14-15'	Under Liner	Vertical	-	-	-	-	-	-	-	2,650
BH-3 @ 19-20'	5/28/20	19-20'	Under Liner	Vertical	-	-	-	-	-	-	-	1,190
BH-3 @ 24-25'	5/28/20	24-25'	Under Liner	Vertical	-	-	-	-	-	-	-	302
BH-3 @ 29-30'	5/28/20	29-30'	Under Liner	Vertical	-	-	-	-	-	-	-	77.7
NSW	5/8/20	-	In-Situ	Horizontal	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	299
SSW	5/8/20	-	In-Situ	Horizontal	<0.00200	<0.002	<49.9	<49.9	<49.9	<49.9	<49.9	28.1
ESW	5/8/20	-	In-Situ	Horizontal	<0.00200	<0.002	<50.0	<50.0	<50.0	<50.0	<50	13.9
NMOC	Closure Criteria	l			10	50	-	-	-	-	100	600

Proposed Soil Status - Excavate

Proposed Soil Status - Under Liner

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Proposed Soil Status - Excavate and Backfill Prior to Setting Liner

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10 Desta Dr., Suite 150E Midland, TX 79705 **T** 432.520.7720 TRCcompanies.com

Appendix A – Release Notification and Corrective Action (Form C-141)

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

Longitude

Latitude	

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

(NAD 83 in decimal degrees to 5 decimal places)

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)

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Page	2
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Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate n	otice 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

The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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 Nar	Title:
Signature:	Date:
email:	Telephone:
OCD Only	
Received by:	Date:

Received by OCD: 7/17/2020 2:35:47 PM Form C-141 State of New Mexico

Oil Conservation Division

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>≈50 (</u> ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 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)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 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?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🛛 Yes 🗌 No

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

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

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

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

Page 3

Received by OCD: 7/17/2 Form C-141 Page 4	020 2:35:47 PM State of New Mexico Oil Conservation Divisi		Di	cident ID strict RP cility ID	Page 18 of 133
				plication ID	
regulations all operators ar public health or the environ failed to adequately invest addition, OCD acceptance and/or regulations.	Formation given above is true and complete to required to report and/or file certain release imment. The acceptance of a C-141 report by gate and remediate contamination that poses of a C-141 report does not relieve the operate the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the context of a C-141 report does not relieve the operate the context of a C-141 report does not relieve the context of a C-141 report does not re	e notifications and the OCD does not a threat to ground or of responsibility Title:	perform correct relieve the oper vater, surface way for compliance <u>Senio</u> /17/2020	ive actions for rele rator of liability sho ater, human health with any other feo r HSE Superviso	ases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only					
Received by:		Da	te:		

Received by OCD: 7/17/2020 2:35:47 PM State of New Mexico

Detailed description of proposed remediation technique

Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Scaled sitemap with GPS coordinates showing delineation points \bowtie 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: <u>Senior HSE</u> Supervisor Ike Tavarez _____ Date: 07/17/2020 Signature: < email: <u>itavarez@concho.com</u> Telephone: (432) 685-2573 OCD Only Date: Received by: Approved Approved with Attached Conditions of Approval Denied Deferral Approved Signature: Date:

Page 5

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Appendix B – Groundwater Database Results



New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

Range: 28E

PLSS Search:

Section(s): 3

Township: 25S

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



(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	been O=orp	DD has replace bhanec file is d)	ed, I,	· ·					2=NE 3	3=SW 4) AD83 UTM in me	eters)	(In feet)	
POD Number	Code	POD Sub-	Count		Q 16		Sec	Tws	Rna		х	Y	Distance	-	-	Water Column
C 01411 POD2		С	ED		2			25S		5863		3558036 🌍	1211	90	50	40
<u>C 01411</u>	R	С	ED	4	4	2	04	25S	28E	5862	89	3558522* 🌍	1235	69	35	34
												Avera	ge Depth to	Water:	42	feet
													Minimum	Depth:	35	feet
													Maximum	Depth:	50	feet
Record Count: 2																

UTMNAD83 Radius Search (in meters):

Easting (X): 587520.75

Northing (Y): 3558426.13

Radius: 1610

*UTM location was derived from PLSS - see Help

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

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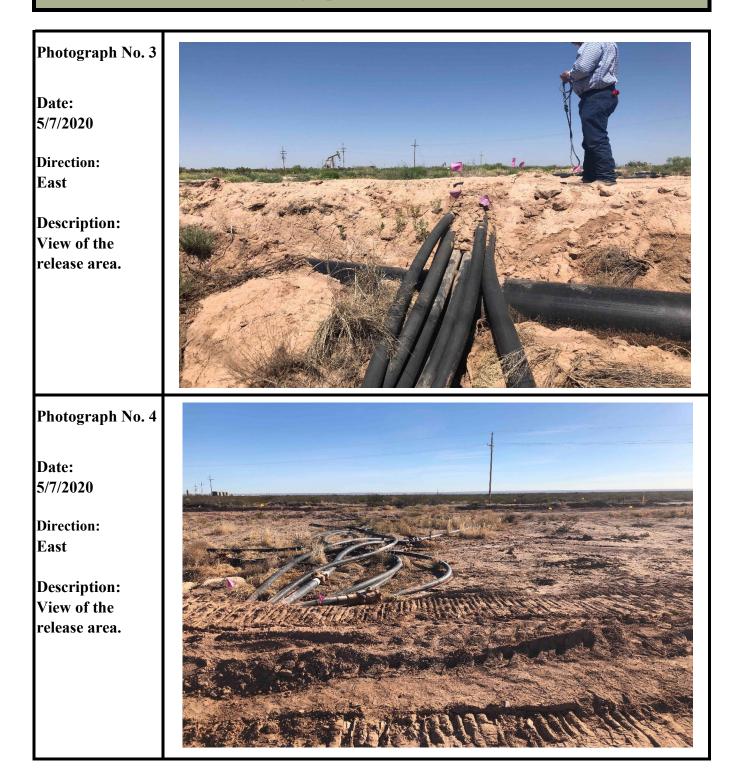
Appendix C – General Photographs

COG- Willow State #003 Date: 6/18/2020

Photographic Documentation Photograph No. 1 Date: 5/7/2020 Direction: West **Description:** View of the release area. Photograph No. 2 Date: 5/7/2020 Direction: West **Description:** View of release area.

COG- Willow State #003 Date: 6/18/2020

Photographic Documentation



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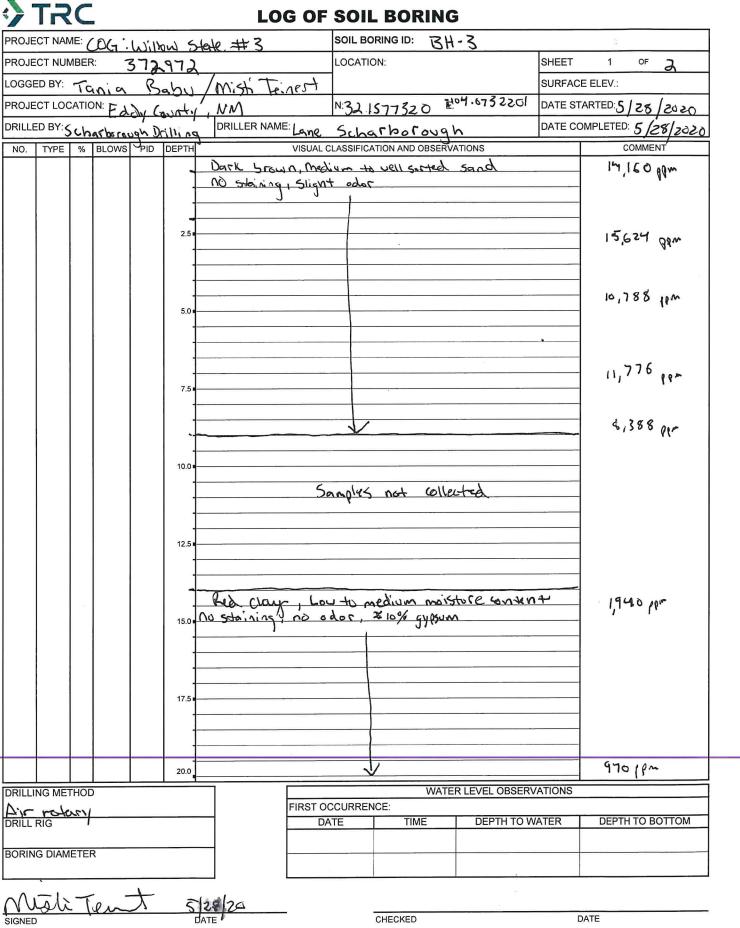
.



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Appendix D – Soil Boring Log

LOG OF SOIL BORING



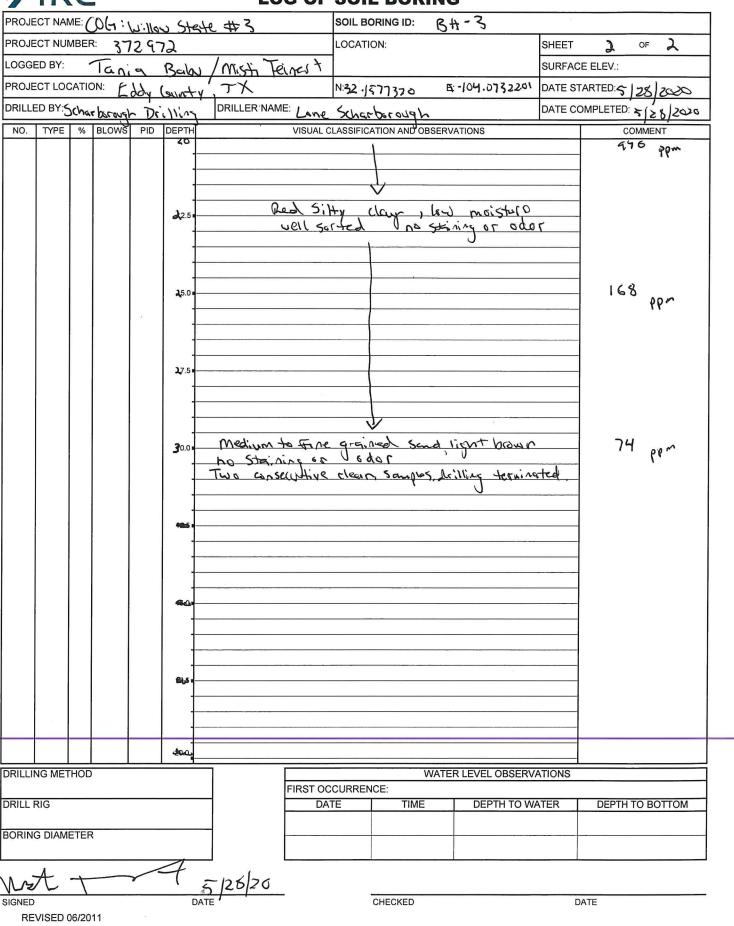
REVISED 06/2011

Received by OCD: 7/17/2020 2:35:47 PM



PAGE _ 2 OF _ 2

LOG OF SOIL BORING



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Appendix E – Laboratory Analytical Report



Project Id:Contact:Jared StoffelProject Location:New Mexico

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX Project Name: Willow State 003



Date Received in Lab:Wed Dec-04-19 09:04 amReport Date:05-DEC-19Project Manager:Jessica Kramer

	Lab Id:	644960-0	001	644960-0	02	644960-0	03	644960-0	04	644960-0	05	644960-0	06
An alusia De au ested	Field Id:	AH-1 @ 0	-0.5'	AH-1 @	1'	AH-1 @	2'	AH-1 @	3'	AH-1@	4'	AH-1 @	5'
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-03-19	09:00	Dec-03-19 0	9:05	Dec-03-19 0	9:10	Dec-03-19 (9:15	Dec-03-19 ()9:20	Dec-03-19 (9:25
BTEX by EPA 8021B	Extracted:	Dec-04-19	10:00										
	Analyzed:	Dec-04-19	13:45										
	Units/RL:	mg/kg	RL										
Benzene		< 0.00199	0.00199										
Toluene		< 0.00199	0.00199										
Ethylbenzene		< 0.00199	0.00199										
m,p-Xylenes		< 0.00398	0.00398										
o-Xylene		< 0.00199	0.00199										
Total Xylenes		< 0.00199	0.00199										
Total BTEX		< 0.00199	0.00199										
Chloride by EPA 300	Extracted:	Dec-04-19	13:00	Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:00	
	Analyzed:	Dec-04-19	16:24	Dec-04-19 1	6:34	Dec-04-19 17:02		Dec-04-19 17:11		Dec-04-19 17:20		Dec-04-19 17:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6920	49.9	14600	248	13100	101	7270	100	10100	99.6	3330	49.5
TPH by SW8015 Mod	Extracted:	Dec-04-19	11:00										
	Analyzed:	Dec-04-19	16:04										
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8										
Diesel Range Organics (DRO)		<49.8	49.8										
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8										
Total TPH		<49.8	49.8										

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.%

fession kramer

Jessica Kramer Project Assistant



Project Id:Contact:Jared StoffelProject Location:New Mexico

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX Project Name: Willow State 003



Date Received in Lab:Wed Dec-04-19 09:04 amReport Date:05-DEC-19Project Manager:Jessica Kramer

	Lab Id:	644960-0	007	644960-0	08	644960-0	09	644960-0)10	644960-0	11	644960-0	012
Amaluaia Dogwootod	Field Id:	AH-2 @ 0)-0.5'	AH-2 @	1'	AH-2 @ 2'		AH-2 @ 3'		AH-2 @ 4'		Wall	
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	Dec-03-19	09:30	Dec-03-19 0	9:35	Dec-03-19 (09:40	Dec-03-19	09:45	Dec-03-19 ()9:50	Dec-03-19	09:55
BTEX by EPA 8021B	Extracted:	Dec-04-19	10:00									Dec-04-19	10:00
	Analyzed:	Dec-04-19	14:05									Dec-04-19	14:25
	Units/RL:	mg/kg	RL									mg/kg	RL
Benzene		< 0.00199	0.00199									< 0.00200	0.00200
Toluene		< 0.00199	0.00199									< 0.00200	0.00200
Ethylbenzene		< 0.00199	0.00199									< 0.00200	0.00200
m,p-Xylenes		< 0.00398	0.00398									< 0.00399	0.00399
o-Xylene		< 0.00199	0.00199									< 0.00200	0.00200
Total Xylenes		< 0.00199	0.00199									< 0.002	0.002
Total BTEX		< 0.00199	0.00199									< 0.002	0.002
Chloride by EPA 300	Extracted:	Dec-04-19	13:00	Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:35		Dec-04-19 13:35		Dec-04-19 13:35	
	Analyzed:	Dec-04-19	17:39	Dec-04-19 1	7:48	Dec-04-19	17:57	Dec-04-19	22:17	Dec-04-19 2	22:26	Dec-04-19	22:36
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8460	99.4	6450	49.6	7150	50.0	7230	99.2	7730	101	11300	253
TPH by SW8015 Mod	Extracted:	Dec-04-19	11:00		ĺ							Dec-04-19	11:00
	Analyzed:	Dec-04-19	16:23									Dec-04-19	16:41
	Units/RL:	mg/kg	RL									mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9									<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9									<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9									<49.9	49.9
Total TPH		<49.9	49.9									<49.9	49.9

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Version: 1.%

fession Vramer

Jessica Kramer Project Assistant



Project Id:Contact:Jared StoffelProject Location:New Mexico

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX Project Name: Willow State 003



Date Received in Lab:Wed Dec-04-19 09:04 amReport Date:05-DEC-19Project Manager:Jessica Kramer

	Lab Id:	644960-0	13	644960-0	014	644960-0	15	644960-0	16	644960-0)17	
Analysis Requested	Field Id:	Wall @	Wall @1'		Wall @2'		Wall @3'		1'	Wall @5'		
Analysis Kequestea	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Dec-03-19	Dec-03-19 10:00		Dec-03-19 10:05		0:10	Dec-03-19 10:15		Dec-03-19 10:20		
Chloride by EPA 300	Extracted:	Dec-04-19	Dec-04-19 13:35		Dec-04-19 13:35		3:35	Dec-04-19 13:35		Dec-04-19 14:00		
	Analyzed:	Dec-04-19 22:45		Dec-04-19 2	22:54	Dec-04-19 23:03		Dec-04-19 23:13		Dec-05-19 00:24		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		10900	99.6	9060	99.2	8360	100	9650	99.0	12400	253	

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.%

fession kenner

Jessica Kramer Project Assistant

Analytical Report 644960

for TRC Solutions, Inc

Project Manager: Jared Stoffel

Willow State 003

05-DEC-19

Collected By: Client





1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)





05-DEC-19

Project Manager: **Jared Stoffel TRC Solutions, Inc** 2057 Commerce Midland, TX 79703

Reference: XENCO Report No(s): 644960 Willow State 003 Project Address: New Mexico

Jared Stoffel:

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) 644960. 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. 644960 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,

Jessica Vramer

Jessica Kramer Project Assistant

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Sample Cross Reference 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 @ 0-0.5'	S	12-03-19 09:00		644960-001
AH-1 @ 1'	S	12-03-19 09:05		644960-002
AH-1 @ 2'	S	12-03-19 09:10		644960-003
AH-1 @ 3'	S	12-03-19 09:15		644960-004
AH-1 @ 4'	S	12-03-19 09:20		644960-005
AH-1 @ 5'	S	12-03-19 09:25		644960-006
AH-2 @ 0-0.5'	S	12-03-19 09:30		644960-007
AH-2 @ 1'	S	12-03-19 09:35		644960-008
AH-2 @ 2'	S	12-03-19 09:40		644960-009
AH-2 @ 3'	S	12-03-19 09:45		644960-010
AH-2 @ 4'	S	12-03-19 09:50		644960-011
Wall	S	12-03-19 09:55		644960-012
Wall @1'	S	12-03-19 10:00		644960-013
Wall @2'	S	12-03-19 10:05		644960-014
Wall @3'	S	12-03-19 10:10		644960-015
Wall @4'	S	12-03-19 10:15		644960-016
Wall @5'	S	12-03-19 10:20		644960-017

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Client Name: TRC Solutions, Inc Project Name: Willow State 003

Project ID: Work Order Number(s): 644960 Report Date: 05-DEC-19 Date Received: 12/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109384 BTEX by EPA 8021B

Lab Sample ID 644960-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 644960-001, -007, -012.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 0-0.5'		Matrix:	Soil		Date Received:12.	04.19 09.04	4
Lab Sample Id: 644960-001		Date Collec	cted: 12.03.19 09.00				
Analytical Method: Chloride by EPA	300				Prep Method: E30)0P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	12.04.19 13.00		Basis: We	t Weight	
Seq Number: 3109421							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6920	49.9	mg/kg	12.04.19 16.24		10

Analytical Method: TPH by SW8015 Mod Prep Method: S								
Tech: DVM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 12.04	.19 11.00	В	Basis: We	t Weight	
Seq Number: 3109353								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	12.04.19 16.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	12.04.19 16.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	12.04.19 16.04	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	12.04.19 16.04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	102	%	70-135	12.04.19 16.04		
o-Terphenyl		84-15-1	101	%	70-135	12.04.19 16.04		



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 0-0.5' Lab Sample Id: 644960-001	Matrix: Soil Date Collected: 12.03.19 09.00	Date Received:12.04.19 09.04
Analytical Method: BTEX by EPA 8021B	Date Concerca. 12.05.17 07.00	Drap Mathady SW5020D
Tech: KTL		Prep Method: SW5030B % Moisture:
Analyst: KTL	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109384		

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.04.19 13.45	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.04.19 13.45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	70-130	12.04.19 13.45		
1,4-Difluorobenzene		540-36-3	97	%	70-130	12.04.19 13.45		



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 1' Lab Sample Id: 644960-002		Matrix: Date Collec	Soil cted: 12.03.19 09.05]	Date Received:12.	04.19 09.04	4
Analytical Method: Chloride by EPA Tech: CHE	. 300				Prep Method: E30 % Moisture:	00P	
Analyst: CHE		Date Prep:	12.04.19 13.00			t Weight	
Seq Number: 3109421							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14600	248	mg/kg	12.04.19 16.34		50



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 2' Lab Sample Id: 644960-003		Matrix: Date Collec	Soil cted: 12.03.19 09.10	1	Date Received:12.0	04.19 09.04	4
Analytical Method: Chloride by EPA Tech: CHE	A 300				Prep Method: E3(% Moisture:)0P	
Analyst: CHE Seq Number: 3109421		Date Prep:	12.04.19 13.00]	Basis: We	t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13100	101	mg/kg	12.04.19 17.02		20

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 3' Lab Sample Id: 644960-004		Matrix: Date Collec	Soil cted: 12.03.19 09.15]	Date Received:12.	04.19 09.0	4
Analytical Method: Chloride by EPA	x 300				Prep Method: E3	00P	
Tech: CHE				Q	% Moisture:		
Analyst: CHE		Date Prep:	12.04.19 13.00]	Basis: We	t Weight	
Seq Number: 3109421							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7270	100	mg/kg	12.04.19 17.11		20



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 4' Lab Sample Id: 644960-005		Matrix: Date Collec	Soil cted: 12.03.19 09.20	1	Date Received:12.0	04.19 09.04	1
Analytical Method: Chloride by EPA Tech: CHE Analyst: CHE Seg Number: 3109421	. 300	Date Prep:	12.04.19 13.00	Q	Prep Method: E30 % Moisture: Basis: Wet	00P t Weight	
Parameter Chloride	Cas Number	Result 10100	RL 99.6	Units mg/kg	Analysis Date	Flag	Dil

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-1 @ 5' Lab Sample Id: 644960-006		Matrix: Date Collec	Soil cted: 12.03.19 09.25	Ι	Date Received:12.0	04.19 09.0	4
Analytical Method: Chloride by EP Tech: CHE	A 300				Prep Method: E30 % Moisture:)0P	
Analyst: CHE		Date Prep:	12.04.19 13.00	I	Basis: We	t Weight	
Seq Number: 3109421		Dek					5.0
Parameter Chloride	Cas Number 16887-00-6	Result 3330	RL 49.5	Units mg/kg	Analysis Date 12.04.19 17.29	Flag	Dil 10

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	AH-2 @ 0-0.5'		Matrix:	Soil		Date Received:12.	04.19 09.04	1
Lab Sample	ld: 644960-007		Date Collec	cted: 12.03.19 09.30				
Analytical M	ethod: Chloride by EPA	300				Prep Method: E30	00P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Prep:	12.04.19 13.00		Basis: We	t Weight	
Seq Number:	3109421							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	8460	99.4	mg/kg	12.04.19 17.39		20

Analytical Method: TPH by SW8015	5 Mod				Р	rep Method: SW	/8015P	
Tech: DVM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 12.04	.19 11.00	В	asis: We	t Weight	
Seq Number: 3109353								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	12.04.19 16.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	12.04.19 16.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	12.04.19 16.23	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	12.04.19 16.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	101	%	70-135	12.04.19 16.23		
o-Terphenyl		84-15-1	99	%	70-135	12.04.19 16.23		



Seq Number: 3109384

Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	AH-2 @ 0-0.5'	Matrix:	Soil	Date Received	:12.04.19 09.04
Lab Sample Id: 6	644960-007	Date Collected	: 12.03.19 09.30		
Analytical Metho	od: BTEX by EPA 8021B			Prep Method:	SW5030B
Tech: K	XTL			% Moisture:	
Analyst: K	XTL .	Date Prep:	12.04.19 10.00	Basis:	Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.04.19 14.05	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.04.19 14.05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	97	%	70-130	12.04.19 14.05		
4-Bromofluorobenzene		460-00-4	98	%	70-130	12.04.19 14.05		



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Lab Sample Id	AH-2 @ 1' d: 644960-008		Matrix: Date Colle	Soil cted: 12.03.19 09.35	1	Date Received:12.0)4.19 09.04	4
2	ethod: Chloride by EPA	. 300				Prep Method: E30	OP	
Tech: Analyst:	CHE CHE		Date Prep:	12.04.19 13.00		% Moisture: Basis: Wet	Weight	
Seq Number:	3109421							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	6450	49.6	mg/kg	12.04.19 17.48		10

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-2 @ 2' Lab Sample Id: 644960-009		Matrix: Date Collect	Soil ed: 12.03.19 09.40]	Date Received:12.0)4.19 09.04	4
Analytical Method: Chloride by EPA	300]	Prep Method: E30	0P	
Tech: CHE				0	% Moisture:		
Analyst: CHE		Date Prep:	12.04.19 13.00]	Basis: Wet	Weight	
Seq Number: 3109421							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7150	50.0	mg/kg	12.04.19 17.57		10

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-2 @ 3' Lab Sample Id: 644960-010		Matrix: Date Collec	Soil cted: 12.03.19 09.45	1	Date Received:12.	04.19 09.0	4
Analytical Method: Chloride by EPA Tech: CHE	A 300				Prep Method: E30 % Moisture:	90P	
Analyst: CHE Seq Number: 3109422		Date Prep:	12.04.19 13.35]	Basis: We	t Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7230	99.2	mg/kg	12.04.19 22.17		20

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: AH-2 @ 4' Lab Sample Id: 644960-011		Matrix: Date Collec	Soil cted: 12.03.19 09.50]	Date Received:12.	04.19 09.04	4
Analytical Method: Chloride by EPA Tech: CHE	A 300				Prep Method: E30 % Moisture:)0P	
Tech: CHE Analyst: CHE		Date Prep:	12.04.19 13.35			t Weight	
Seq Number: 3109422							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7730	101	mg/kg	12.04.19 22.26		20



o-Terphenyl

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Wall Lab Sample Id: 644960-012		Matrix: Date Collec	Soil ted: 12.03.19 09.55	1	Date Received:12.0	04.19 09.0	4
Analytical Method: Chloride by EPA	300				Prep Method: E30	00P	
Tech: CHE Analyst: CHE		Date Prep:	12.04.19 13.35		% Moisture: Basis: We	t Weight	
Seq Number: 3109422							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11300	253	mg/kg	12.04.19 22.36		50

Analytical Method: TPH by SW801	5 Mod				Р	rep Method: SW	/8015P	
Tech: DVM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 12.04	.19 11.00	В	asis: We	t Weight	
Seq Number: 3109353								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	12.04.19 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	12.04.19 16.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	12.04.19 16.41	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	12.04.19 16.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	108	%	70-135	12.04.19 16.41		

106

%

70-135

12.04.19 16.41

84-15-1



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	Wall	Matrix:	Soil	Date Receive	d:12.04.19 09.04				
Lab Sample Id: 644960-012 Date Collected: 12.03.19 09.55									
Analytical Me	thod: BTEX by EPA 8021B			Prep Method:	: SW5030B				
Tech:	KTL			% Moisture:					
Analyst:	KTL	Date Prep:	12.04.19 10.00	Basis:	Wet Weight				

KTL Analyst: Seq Number: 3109384

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Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	12.04.19 14.25	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	12.04.19 14.25	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	12.04.19 14.25	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	12.04.19 14.25	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	12.04.19 14.25	U	1
Total Xylenes	1330-20-7	< 0.002	0.002		mg/kg	12.04.19 14.25	U	1
Total BTEX		< 0.002	0.002		mg/kg	12.04.19 14.25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	95	%	70-130	12.04.19 14.25		
1,4-Difluorobenzene		540-36-3	99	%	70-130	12.04.19 14.25		



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Wall @1' Lab Sample Id: 644960-013		Matrix: Date Collec	Soil cted: 12.03.19 10.00	1	Date Received:12.0	04.19 09.04	4
Analytical Method: Chloride by EPA	A 300			1	Prep Method: E30	00P	
Tech: CHE				ç	% Moisture:		
Analyst: CHE		Date Prep:	12.04.19 13.35]	Basis: We	t Weight	
Seq Number: 3109422							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10900	99.6	mg/kg	12.04.19 22.45		20

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Lab Sample I	Wall @2' d: 644960-014		Matrix: Date Colle	Soil cted: 12.03.19 10.05	I	Date Received:12.0)4.19 09.04	1
Analytical Mo Tech:	ethod: Chloride by EPA CHE	300				Prep Method: E30 % Moisture:	00P	
Analyst:	CHE		Date Prep:	12.04.19 13.35			t Weight	
Seq Number:	3109422							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	9060	99.2	mg/kg	12.04.19 22.54		20

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Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Lab Sample Id	Wall @3' d: 644960-015		Matrix: Date Collec	Soil cted: 12.03.19 10.10	Ι	Date Received:12.	04.19 09.04	ļ.
Analytical Me Tech:	ethod: Chloride by EPA CHE	300				Prep Method: E30 % Moisture:)0P	
Analyst:	CHE		Date Prep:	12.04.19 13.35	I	Basis: We	t Weight	
Seq Number: Parameter	3109422	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	8360	100	mg/kg	12.04.19 23.03	0	20



Certificate of Analytical Results 644960



TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Wall @4' Lab Sample Id: 644960-0		Matrix: Date Collec	Soil ted: 12.03.19 10.15	Date Received:12.	04.19 09.04	4	
Analytical Method: Chlor	ride by EPA 300				Prep Method: E3	00P	
Tech: CHE Analyst: CHE		Date Prep:	12.04.19 13.35		% Moisture: Basis: We	t Weight	
Seq Number: 3109422		Ĩ					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9650	99.0	mg/kg	12.04.19 23.13		20

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Certificate of Analytical Results 644960



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TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id: Lab Sample Id	Wall @5' d: 644960-017		Matrix: Date Colle	Soil cted: 12.03.19 10.20	1	04.19 09.04	4	
2	ethod: Chloride by EPA	. 300				Prep Method: E30	00P	
Tech:	CHE				Ģ	% Moisture:		
Analyst:	CHE		Date Prep:	12.04.19 14.00	I	Basis: We	t Weight	
Seq Number:	3109426							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	12400	253	mg/kg	12.05.19 00.24		50

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Flagging Criteria



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank						
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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



BORATORIES



TRC Solutions, Inc

Willow State 003

Seq Number:	Chloride by EPA 300 3109421)		Matrix:	Solid 7691651-	LBKS		Prep Method: E300 Date Prep: 12.04 LCSD Sample Id: 76916	.19
MB Sample Id:	7691651-1-BLK	6		•			T ::4	•	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Limit Units	Analysis Flag Date
Chloride	<5.00	250	255	102	255	102	90-110	0 20 mg/kg	12.04.19 13:19
Analytical Method:	Chloride by EPA 300)						Prep Method: E300	Р
Seq Number:	3109422			Matrix:	Solid			Date Prep: 12.04	.19
MB Sample Id:	7691652-1-BLK		LCS Sar	nple Id:	7691652-	I-BKS		LCSD Sample Id: 76916	552-1-BSD
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Limit Units	Analysis Flag Date
Chloride	7.37	250	253	101	253	101	90-110	0 20 mg/kg	12.04.19 18:44
Analytical Method:	Chloride by EPA 300)						Prep Method: E300	Р
Seq Number:	3109426			Matrix:				Date Prep: 12.04	
MB Sample Id:	7691653-1-BLK		LCS Sar	nple Id:	7691653-	I-BKS		LCSD Sample Id: 76916	553-1-BSD
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD RPD Limit Units	Analysis Flag Date
Chloride	<5.00	250	254	102	252	101	90-110	1 20 mg/kg	12.04.19 23:48
·	Chloride by EPA 300 3109421)		Motuire	Seil			Prep Method: E300	
Seq Number:	5109421			Matrix:	5011	25.0		Date Prep: 12.04	19 00.005.0D

Parent Sample Id:	644709-005	MS Sar	MS Sample Id: 644709-005 S				MSD Sample Id: 644709-005 SD					
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD R	PD Limit	Units	Analysis Date	Flag
Chloride	3.14	248	253	101	252	100	90-110	0	20	mg/kg	12.04.19 13:56	

Analytical Method:	Chloride by EPA 30)0						P	rep Meth	od: E30	0P	
Seq Number:	3109421			Matrix:	Soil				Date Pr	ep: 12.0	4.19	
Parent Sample Id:	644958-002		MS Sar	nple Id:	644958-00	02 S		MS	D Sample	e Id: 644	958-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	46.8	253	306	102	300	100	90-110	2	20	mg/kg	12.04.19 16:06	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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Analytical Method: Chloride by EPA 300

QC Summary 644960

Prep Method: E300P

TRC Solutions, Inc

Willow State 003

Seq Number:	3109422			Matrix:	Soil			Date Pre	ep: 12.0	4.19	
Parent Sample Id:	644958-003		MS San	nple Id:	644958-00)3 S		MSD Sample	Id: 6449	958-003 SD	
Parameter	Parent Result		MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD RPD Limi	t Units	Analysis Date	Flag
Chloride	135	250	376	96	367	93	90-110	2 20	mg/kg	12.04.19 19:11	
Analytical Method:	=	300			a 11			Prep Metho			
Seq Number: Parent Sample Id:	3109422 644958-013			Matrix:	Soil 644958-01	13.5		Date Pre MSD Sample	-		
•	Parent	Spike	MS	MS	MSD	MSD	Limits	%RPD RPD Limi		Analysis	
Parameter	Result	-	Result	%Rec	Result	%Rec	Linits		t emis	Date	Flag
Chloride	185	250	434	100	432	99	90-110	0 20	mg/kg	12.04.19 21:21	
Analytical Method: Seq Number:	Chloride by EPA 3109426	300		Matrix:	Soil			Prep Metho Date Pre			
Parent Sample Id:	644440-010				644440-0	10 S		MSD Sample	-		
-	Parent	Spike	MS	MS	MSD	MSD	Limits	%RPD RPD Limi		Analysis	Flag
Parameter	Result		Result	%Rec	Result	%Rec				Date	Flag
Chloride	37.0	250	296	104	295	103	90-110	0 20	mg/kg	12.05.19 00:10	
Amelatical Mathed	Chlorido by EDA	200						Dran Matha	d: E30	ΩÞ	
								Prep Metho	II: LJU	01	
Analytical Method: Seq Number:		500		Matrix:	Soil			Date Pre		4.19	
Analytical Method: Seq Number: Parent Sample Id:	3109426 644597-002	500		Matrix: nple Id:	Soil 644597-00)2 S		Date Pre MSD Sample	ep: 12.0		
Seq Number: Parent Sample Id:	3109426 644597-002 Parent	Spike	MS San MS	nple Id: MS	644597-00 MSD	MSD	Limits		ep: 12.0 Id: 6445	597-002 SD Analysis	Flag
Seq Number: Parent Sample Id: Parameter	3109426 644597-002 Parent Result	Spike Amount	MS San MS Result	nple Id: MS %Rec	644597-00 MSD Result	MSD %Rec		MSD Sample	ep: 12.0 Id: 6445 t Units	597-002 SD Analysis Date	Flag
Seq Number: Parent Sample Id:	3109426 644597-002 Parent	Spike Amount	MS San MS	nple Id: MS	644597-00 MSD	MSD	Limits 90-110	MSD Sample	ep: 12.0 Id: 6445	597-002 SD Analysis	Flag
Seq Number: Parent Sample Id: Parameter	3109426 644597-002 Parent Result	Spike Amount	MS San MS Result	nple Id: MS %Rec	644597-00 MSD Result	MSD %Rec		MSD Sample	ep: 12.0 Id: 6445 t Units	597-002 SD Analysis Date	Flag
Seq Number: Parent Sample Id: Parameter	3109426 644597-002 Parent Result 127	Spike Amount 249	MS San MS Result	nple Id: MS %Rec	644597-00 MSD Result	MSD %Rec		MSD Sample %RPD RPD Limi 0 20	p: 12.0 Id: 6445 t Units mg/kg	597-002 SD Analysis Date	Flag
Seq Number: Parent Sample Id: Parameter Chloride	3109426 644597-002 Parent Result 127	Spike Amount 249	MS San MS Result 375	nple Id: MS %Rec 100 Matrix:	644597-00 MSD Result 374	MSD %Rec 99		MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre	 p: 12.0 Id: 6445 t Units mg/kg d: SW8 p: 12.0 	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19	Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method:	3109426 644597-002 Parent Result 127 TPH by SW8015	Spike Amount 249	MS San MS Result 375	nple Id: MS %Rec 100 Matrix:	644597-00 MSD Result 374	MSD %Rec 99		MSD Sample %RPD RPD Limi 0 20 Prep Method	 p: 12.0 Id: 6445 t Units mg/kg d: SW8 p: 12.0 	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19	Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3109426 644597-002 Parent Result 127 TPH by SW8015 1 3109353 7691630-1-BLK MB	Spike Amount 249 Mod Spike	MS San MS Result 375 LCS San LCS	MS %Rec 100 Matrix: nple Id: LCS	644597-00 MSD Result 374 Solid 7691630- LCSD	MSD %Rec 99		MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre	p: 12.0 Id: 644 t Units mg/kg d: SW8 p: 12.0 Id: 769	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19	Flag Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: MB Sample Id:	3109426 644597-002 Parent Result 127 TPH by SW8015 3109353 7691630-1-BLK MB Result	Spike Amount 249 Mod Spike Amount	MS San MS Result 375 LCS San	nple Id: MS %Rec 100 Matrix: nple Id:	644597-00 MSD Result 374 Solid 7691630-	MSD %Rec 99	90-110	MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre LCSD Sample	p: 12.0 Id: 644 t Units mg/kg d: SW8 p: 12.0 Id: 769	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19 1630-1-BSD Analysis	-
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: MB Sample Id: Parameter	3109426 644597-002 Parent Result 127 TPH by SW8015 3109353 7691630-1-BLK MB Result oons (GRO) <15.0	Spike Amount 249 Mod Spike Amount 0 1000	MS San MS Result 375 LCS San LCS Result	Matrix: Matrix: nple Id: KCS %Rec	644597-00 MSD Result 374 Solid 7691630- LCSD Result	MSD %Rec 99 1-BKS LCSD %Rec	90-110 Limits	MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre LCSD Sample %RPD RPD Limi	p: 12.0 Id: 644 t Units mg/kg od: SW8 p: 12.0 Id: 769 t Units	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19 1630-1-BSD Analysis Date	-
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: MB Sample Id: Parameter Gasoline Range Hydrocarb	3109426 644597-002 Parent Result 127 TPH by SW8015 3109353 7691630-1-BLK MB Result oons (GRO) <15.0 (DRO) <15.0	Spike Amount 249 Wod Spike Amount 1000 1000 MB	MS San MS Result 375 LCS San LCS Result 1100 1020 L	Matrix: Matrix: nple Id: %Rec 110 102 CS	644597-00 MSD Result 374 Solid 7691630- LCSD Result 1060 997 LCS	MSD %Rec 99 1-BKS LCSD %Rec 106 100 LCSI	90-110 Limits 70-135 70-135 D LCS	MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre LCSD Sample %RPD RPD Limi 4 20 2 20 D Limits	p: 12.0 Id: 644 t Units mg/kg d: SW8 p: 12.0 Id: 769 t Units mg/kg	597-002 SD Analysis Date 12.05.19 01:51 8015P 4.19 1630-1-BSD Analysis Date 12.04.19 10:26 12.04.19 10:26 12.04.19 10:26	-
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: MB Sample Id: Parameter Gasoline Range Hydrocarb Diesel Range Organics	3109426 644597-002 Parent Result 127 TPH by SW8015 I 3109353 7691630-1-BLK MB Result ons (GRO) <15.0 (DRO) <15.0	Spike Amount 249 Wod Spike Amount 1000 0 1000 0 MB Flag	MS San MS Result 375 LCS San LCS Result 1100 1020 L %	Matrix: Matrix: nple Id: %Rec 110 102 CS	644597-00 MSD Result 374 Solid 7691630- LCSD Result 1060 997	MSD %Rec 99 1-BKS LCSD %Rec 106 100	90-110 Limits 70-135 70-135 C LCS c Fla	MSD Sample %RPD RPD Limi 0 20 Prep Metho Date Pre LCSD Sample %RPD RPD Limi 4 20 2 20 D Limits	p: 12.0 Id: 644 t Units mg/kg d: SW8 p: 12.0 Id: 769 t Units mg/kg mg/kg	597-002 SD Analysis Date 12.05.19 01:51 3015P 4.19 1630-1-BSD Analysis Date 12.04.19 10:26 12.04.19 10:26	-

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method:	TPH by SW8015 Mod		
Seq Number:	3109353	Matrix:	Solid
		MB Sample Id:	7691630-1-BLK
Parameter		MB Result	
Motor Oil Range Hydrocar	bons (MRO)	<50.0	

Prep Method: SW8015P Date Prep: 12.04.19

Units	Analysis Date	Flag
mg/kg	12.04.19 10:08	

Motor Oi	l Range Hydro	ocarbons (MRO)

Analytical Method:					I	Prep Metho	1: SW8	3015P					
Seq Number:	3109353			Matrix: Soil				Date Prep: 12.04.19					
Parent Sample Id:	Sample Id: 644955-001				MS Sample Id: 644955-001 S					MSD Sample Id: 644955-001 SD			
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD) RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<15.0	997	1120	112	1150	115	70-135	3	20	mg/kg	12.04.19 11:24	
Diesel Range Organics ((DRO)	30.6	997	1050	102	1090	106	70-135	4	20	mg/kg	12.04.19 11:24	
Surrogate					1S Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
1-Chlorooctane				1	27		129		7	70-135	%	12.04.19 11:24	
o-Terphenyl				1	13		114		7	70-135	%	12.04.19 11:24	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3109384 7691602-1-BLK	1B	LCS San	Matrix: nple Id:		1-BKS			Prep Metho Date Pre CSD Sample	p: 12.0	5030B 4.19 1602-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	D RPD Limi	t Units	Analysis Date	Flag
Benzene	< 0.000385	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	12.04.19 11:45	
Toluene	< 0.000456	0.100	0.0992	99	0.102	102	70-130	3	35	mg/kg	12.04.19 11:45	
Ethylbenzene	< 0.000565	0.100	0.0965	97	0.0996	100	70-130	3	35	mg/kg	12.04.19 11:45	
m,p-Xylenes	< 0.00101	0.200	0.194	97	0.201	101	70-130	4	35	mg/kg	12.04.19 11:45	
o-Xylene	< 0.000344	0.100	0.0961	96	0.103	103	70-130	7	35	mg/kg	12.04.19 11:45	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
1,4-Difluorobenzene	92		ç	92		97			70-130	%	12.04.19 11:45	
4-Bromofluorobenzene	95		1	01		116			70-130	%	12.04.19 11:45	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec





QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3109384 644960-001	1B	MS San	Matrix: nple Id:	Soil 644960-00	01 S		Prep Method: SW5030B Date Prep: 12.04.19 MSD Sample Id: 644960-001 SD				
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	ORPD Limit	Units	Analysis Date	Flag
Benzene	< 0.000384	0.0998	0.0809	81	0.0924	92	70-130	13	35	mg/kg	12.04.19 12:25	
Toluene	0.00104	0.0998	0.0718	71	0.0881	87	70-130	20	35	mg/kg	12.04.19 12:25	
Ethylbenzene	< 0.000564	0.0998	0.0610	61	0.0830	83	70-130	31	35	mg/kg	12.04.19 12:25	Х
m,p-Xylenes	0.00133	0.200	0.121	60	0.168	83	70-130	33	35	mg/kg	12.04.19 12:25	Х
o-Xylene	0.000996	0.0998	0.0610	60	0.0845	84	70-130	32	35	mg/kg	12.04.19 12:25	Х
Surrogate				1S Rec	MS Flag	MSD %Ree		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			ç	95		98		-	70-130	%	12.04.19 12:25	
4-Bromofluorobenzene			1	06		111		-	70-130	%	12.04.19 12:25	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Revised Date 022619 Rev. 2019.1	6 .	- POP			0
y: (Signature) Received by: (Signature) Date/Time	Relinquished by: (Signature)	U I I G	(Signature)	;; (Signature)	Relinquispédroy: (Signature)
assigns standard terms and conditions due to circumstances beyond the control proed unless previously negotiated.		y to Xenco, its affiliates enses incurred by the e anco, but not analyzed.	alid purchase order from client compan any responsibility for any losses or exp le of \$5 for each sample submitted to X	or Service. Signature or this document and relinquishment or samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Notice: Signature of this of service. Xenco will be of Xenco. A minimum ch
u Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn Mo Ni Se Ag Tl U 1631/245.1/7470 /7471 : Hg	1 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni	Al Sb As Ba Be Sb As Ba Be Cd (8RCRA 13PPM Texas 11 TCLP / SPLP 6010: 8RCRA S	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed TC	Total 200.7 / 6010 Circle Method(s) &
	*	×	0945	4	AH-2 Q.3
		×	0940		0
	×		09355		0
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Sample Comments		TP BT CLI	Time Depth Numb	Matrix Date Sampled	ample Ide
received by the lab, if received by the lab, if	0 C	H FX		Yes No CALLA	Sample Custody Seals:
TAT storte the Jack start in the last store when the last is		(80	d	Υe	Cooler Custody Seals:
		215 211 (F	Thermometer+D	C AN ANY	Temperature (°C):
HCL: HL		B)	Wet Ice: (es No g	IPT Temp Blank: Yes To	SAMPLE RECEIPT
H2S04: H2		>)			PO #
HNO3: HN					Sampler's Name:
None: NO			2941	2	Project Location
MeOH			Routine Pres.		Project Number:
LYSIS REQUEST Preservative Codes	ANALY		Turn Around	INS 285 Direct Bace	Project Name:
Deliverables: EDD ADaPT Other:			Email: JACK, IKC	432-238-	Phone:
Reporting:Level II CLevel III PST/UST TRRP Level IV			City, State ZIP:	- TURNER CONTRACTOR	City, State ZIP:
State of Project:			Address:	to Distr Dr STE 150	Address:
Program: UST/PST PRP Brownfields RRC Superfund		COG	Company Name:	TRC	Company Name:
Work Order Comments	122	Ik Taracez	Bill to: (If different)	Jurez Josfer	Project Manager:
nm (432) / 04-5440 ach, FL (561) 689-6701 www.xenco.com Page of	X (806) / 94-1296 Crasibad, 3) 620-2000 West Palm Bea	585-3443 Lubbock, I -8800 Tampa,FL (81:	miulariu, i X (432) 704-9440 EL Paso, i X (913) 989-9443 LubbocK, i X (80b) 794-1286 Crasibad, NM (432) 704-9440 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701		
) San Antonio,TX (210) 509	las,TX (214) 902-0300	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	VBORATORIES	
Work Order No:	ustody	Chain of Custody	C		X

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Ustody Work Order No 9 San Anomol, TX (210) 509-334 Work Order A0 9 Sco-2000 West Paim Beach, FL (561) 589-6701 Work Order Company Incr<2 Program: UST/PST PRP Brown Incr<2 Program: UST/PST PRP Brown Incr<2 Program: UST/PST PRP Brown Incr<2 Nork Order Company Incr<2 Program: UST/PST PRP Brown Incr<2 Nork Order Company Incr<2 Nork Order Company	red by OCD: 7/ Refinquished by: (Signature)	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client constructers. Xenco will be lable only for the cost of samples and shall not assume any responsibility for any losses of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submittee.	1 1 (8)	Wall @ 1	Mall 97.11/2	ample Identification Matrix Samp	Project Location N-C Mc X i C Sampler's Name: 3. 3 To F(1) PO #: Quoi SAMPLE RECEIPT Temperature (°C): 3 John Blank: Yes Received Intact: (Yes No Cooler Custody Seals: Yes No (NA Sample Custody Seals: Yes No (NA	Project Name: US ZSS Wittly Batt	10 Desta De STE Mizhane, TX 79- 432-238-3003	Company Name: TAL	
Work Order No	ived by: (Signature) IRIYII	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be B Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Bc Cd Cr Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and s and saume any responsibility for any losses or expenses incurred by the client i of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client i of Xenco. Amount of the sech project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These	* *	× ×	× ×	Sampled Depth Numbe	No Wet Ice: Oue Date: Thermometer N_0 Total Containers: $Vet N_0$ Pr of Containers $Vet N_0$ PH (\$015) EX (80218) No $Vet N_0$	Routine) E Address: City, State ZIP: Email: Jいひ, J と	Bill to: (If different) Ild Ta vare Company Name: (Old	Chain of Cust Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (80) hoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620
	Relinquished by: (Signature) Received by: (Signature)	K Se Ag SiO2					None: NO HNO3: HN H2S04: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn received by the lab, if received by 4:00pm		State of Project: Reporting:Level II Deliverables: EDD ADaPT Other:	Work Order Comments Program: UST/PST PRP Brownfields RI	

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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 12/04/2019 09:04:00 AM Temperature Measuring device used : R8 Work Order #: 644960 Comments Sample Receipt Checklist 3.3 #1 *Temperature of cooler(s)? #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)? N/A #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: Brianna Teel

Date: 12/04/2019

Checklist reviewed by:

Jession Vermer

Jessica Kramer

Date: 12/05/2019



Certificate of Analysis Summary 661472

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

Project Id:

Contact: Jared Stoffel

Project Location:

 Date Received in Lab:
 Wed 05.13.2020 14:32

 Report Date:
 05.18.2020 14:34

Project Manager: Jessica Kramer

	Lab Id:	661472-0	01	661472-00	02	661472-00	03	661472-0	04	661472-00	05	661472-00	06
Analysis Requested	Field Id:	TT-1 @ 0-0).5'	TT-1 @	1'	TT-1 @ 2'		TT-1 @ 3	'	TT-1 @ 4'		TT-1 @ 5'	
Analysis Kequestea	Depth:	0- ft		1- ft		2- ft		3- ft		4- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.07.2020	16:10	05.07.2020	16:20	05.07.2020	16:30	05.07.2020	16:40	05.07.2020	16:50	05.07.2020 1	17:00
BTEX by EPA 8021B	Extracted:	05.15.2020	17:30										
	Analyzed:	05.18.2020 (04:00										
	Units/RL:	mg/kg	RL										
Benzene			0.00199										
Toluene		< 0.00199	0.00199										
Ethylbenzene			0.00199										
m,p-Xylenes			0.00398										
o-Xylene			0.00199										
Total Xylenes			0.00199										
Total BTEX		<0.00199 0.00199											
Chloride by EPA 300	Extracted:	05.15.2020	13:25	05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25	
	Analyzed:	05.15.2020	16:27	05.15.2020	16:33	05.15.2020 16:38		05.15.2020 16:44		05.16.2020 11:51		05.15.2020 17:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4510	50.4	449	25.2	1050	25.1	1780	25.0	17.3	5.02	70.3	25.3
TPH by SW8015 Mod	Extracted:	05.14.2020	11:00										
	Analyzed:	05.14.2020	12:45										
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9										
Diesel Range Organics (DRO)		<49.9	49.9										
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9										
Total TPH		<49.9	49.9										

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jession KRAMER

Jessica Kramer Project Manager

Final 1.000



Certificate of Analysis Summary 661472

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

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Project Id:

Contact: Jared Stoffel

Project Location:

 Date Received in Lab:
 Wed 05.13.2020 14:32

 Report Date:
 05.18.2020 14:34

Project Manager: Jessica Kramer

	Lab Id:	661472-0	07	661472-00	10	661472-00	00	661472-0	10	661472-0	11	661472-0	10
									-				
Analysis Requested	Field Id:	TT-2 @ 0-0).5'	TT-2 @	1'	TT-2 @ 2'		TT-2 @ 3	'	TT-2 @ 4	'	TT-2 @ 5'	
	Depth:	0- ft		1- ft		2- ft		3- ft		4- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.08.2020	10:00	05.08.2020	10:10	05.08.2020	10:20	05.08.2020	10:30	05.08.2020	10:40	05.08.2020	10:50
BTEX by EPA 8021B	Extracted:	05.15.2020	17:30										
	Analyzed:	05.18.2020 0	04:20										
	Units/RL:	mg/kg	RL										
Benzene		< 0.00200	0.00200										
Toluene		< 0.00200	0.00200										
Ethylbenzene			0.00200										
m,p-Xylenes		< 0.00400	0.00400										
o-Xylene			0.00200										
Total Xylenes		< 0.002	0.002										
Total BTEX		< 0.002	0.002										
Chloride by EPA 300	Extracted:	05.15.2020	13:25	05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25		05.15.2020 13:25	
	Analyzed:	05.15.2020	17:24	05.15.2020	17:30	05.15.2020 17:36		05.15.2020 21:02		05.15.2020 21:07		05.15.2020 21:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2780	25.0	3660	25.0	4020	24.8	5410	50.3	2220	50.2	607	4.98
TPH by SW8015 Mod	Extracted:	05.14.2020	11:00										
	Analyzed:	05.14.2020	13:49										
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0										
Diesel Range Organics (DRO)		<50.0	50.0										
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0										
Total TPH		<50	50										

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jession VRAMER

Jessica Kramer Project Manager

Chloride by EPA 300



Contact:

Chloride

Certificate of Analysis Summary 661472

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

Date Received in Lab: Wed 05.13.2020 14:32 **Project Id:** Jared Stoffel Report Date: 05.18.2020 14:34 Project Manager: Jessica Kramer **Project Location:** Lab Id: 661472-013 Field Id: TT-2 @ 6' Analysis Requested Depth: 6- ft

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Matrix:

Sampled:

Extracted: Analyzed:

Units/RL:

SOIL

05.08.2020 11:00

05.15.2020 13:25

05.15.2020 18:39 mg/kg

199

RL

Jessica Vramer

Jessica Kramer Project Manager



Analytical Report 661472

for

TRC Solutions, Inc

Project Manager: Jared Stoffel

Willow State #003

05.18.2020

Collected By: Client



1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483) Received by OCD: 7/17/2020 2:35:47 PM



05.18.2020 Project Manager: Jared Stoffel TRC Solutions, Inc 2057 Commerce Midland, TX 79703

Reference: XENCO Report No(s): 661472 Willow State #003 Project Address:

Jared Stoffel:

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) 661472. 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. 661472 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,

Jession Vermer

Jessica Kramer Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @ 0-0.5'	S	05.07.2020 16:10	0 ft	661472-001
TT-1 @ 1'	S	05.07.2020 16:20	1 ft	661472-002
TT-1 @ 2'	S	05.07.2020 16:30	2 ft	661472-003
TT-1 @ 3'	S	05.07.2020 16:40	3 ft	661472-004
TT-1 @ 4'	S	05.07.2020 16:50	4 ft	661472-005
TT-1 @ 5'	S	05.07.2020 17:00	5 ft	661472-006
TT-2 @ 0-0.5'	S	05.08.2020 10:00	0 ft	661472-007
TT-2 @ 1'	S	05.08.2020 10:10	1 ft	661472-008
TT-2 @ 2'	S	05.08.2020 10:20	2 ft	661472-009
TT-2 @ 3'	S	05.08.2020 10:30	3 ft	661472-010
TT-2 @ 4'	S	05.08.2020 10:40	4 ft	661472-011
TT-2 @ 5'	S	05.08.2020 10:50	5 ft	661472-012
TT-2 @ 6'	S	05.08.2020 11:00	6 ft	661472-013
TT-2 @ 7'	S	05.08.2020 11:10	7 ft	Not Analyzed
TT-2 @ 8'	S	05.08.2020 11:20	8 ft	Not Analyzed
TT-2 @ 9'	S	05.08.2020 11:30	9 ft	Not Analyzed
TT-2 @ 10'	S	05.08.2020 11:40	10 ft	Not Analyzed





CASE NARRATIVE

Client Name: TRC Solutions, Inc Project Name: Willow State #003

Project ID: Work Order Number(s): 661472 Report Date: 05.18.2020 Date Received: 05.13.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Received by OCD: 7/17/2020 2:35:47 PM



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-1 @ 0-0.5 '		Matrix:	Soil		Date Received	1:05.13.2020 14	4:32
Lab Sample Id: 661472-001		Date Coll	ected: 05.07.2020 16:10)	Sample Depth	:0 ft	
Analytical Method: Chloride by EPA	x 300				Prep Method:	E300P	
Tech: SPC					% Moisture:		
Analyst: SPC		Date Prep	: 05.15.2020 13:25		Basis:	Wet Weight	
Seq Number: 3126147							
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride	16887-00-6	4510	50.4	mg/kg	05.15.2020 16	5:27	10

Analytical Method: TPH by SW801	5 Mod					Prep Method: S	W8015P	
Tech: DVM						% Moisture:		
Analyst: ARM		Date P	rep: 05	5.14.2020 11:00		Basis: W	Vet Weight	
Seq Number: 3126065								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	05.14.2020 12:4	5 U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	05.14.2020 12:4	5 U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	05.14.2020 12:4	5 U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	05.14.2020 12:4	5 U	1
Surrogate		Cas Number	% Recover	y Units	Limits	Analysis Da	te Flag	
1-Chlorooctane		111-85-3	95	%	70-130	05.14.2020 12	:45	
o-Terphenyl		84-15-1	102	%	70-130	05.14.2020 12	:45	



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

1	TT-1 @ 0-0.5' d: 661472-001	Matrix: Date Collected	Soil d: 05.07.2020 16:10	Date Received:05.13.2020 14:32 Sample Depth: 0 ft			
Analytical M Tech:	ethod: BTEX by EPA 8021B KTL			Prep Method: % Moisture:	SW5035A		
Analyst: Seq Number:	KTL 3126205	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight		

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	05.18.2020 04:00	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	05.18.2020 04:00	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	113	%	70-130	05.18.2020 04:00		
1,4-Difluorobenzene		540-36-3	112	%	70-130	05.18.2020 04:00		



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-1 @ 1'		Matrix:	Soil		Date Received		.0 14:32	
Lab Sample Id: 661472-002		Date Collected: 05.07.2020 16:20			Sample Depth: 1 ft			
Analytical Method: Chloride by EPA	300				Prep Method:	E300P		
Tech: SPC					% Moisture:			
Analyst: SPC		Date Prep:	05.15.2020 13:25		Basis:	Wet Weig	ght	
Seq Number: 3126147								
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Fla	ıg Dil	

Chloride

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16887-00-6 **449**

25.2

05.15.2020 16:33



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-1 @ 2' Lab Sample Id: 661472-003			Matrix: Soil Date Collected: 05.07.2020 16:30				Date Received:05.13.2020 14:32 Sample Depth: 2 ft			
•	od: Chloride by EPA 3 PC	00					Prep Method: % Moisture:	E300	Р	
Analyst: SI	PC		Date Prep	:	05.15.2020 13:25		Basis:	Wet V	Weight	
Seq Number: 31	126147									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil

Chloride

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16887-00-6 **1050**

25.1

05.15.2020 16:38



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: Lab Sample Id	TT-1 @ 3' d: 661472-004		Matrix: Date Colle	Matrix: Soil Date Collected: 05.07.2020 16:40			Date Received:05.13.2020 14:32 Sample Depth: 3 ft			
Analytical Me Tech: Analyst:	ethod: Chloride by EPA 3 SPC SPC	300	Dete Prov	_	05.15.2020 13:25		Prep Method: % Moisture: Basis:		P Weight	
Seq Number:			Date Prep):	03.13.2020 15:23		Dasis.	wei	weight	
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil

Chloride

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16887-00-6 **1780**

25.0

05.15.2020 16:44



Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-1 @ 4' Lab Sample Id: 661472-005		Matrix:	Soil ed: 05.07.2020 16:50		Date Received Sample Depth		14:32
Lab Sample Id. 661472-005		Date Collecto	20:05.07.2020 16:50		Sample Depu	1.411	
Analytical Method: Chloride by EPA	300				Prep Method:	E300P	
Tech: SPC					% Moisture:		
Analyst: SPC		Date Prep:	05.15.2020 13:25		Basis:	Wet Weigh	t
Seq Number: 3126147							
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil

Chloride

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16887-00-6 **17.3**

5.02

mg/kg 05.16.2020 11:51

1

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TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-1 @ 5' Lab Sample Id: 661472-006			Matrix: Soil Date Collected: 05.07.2020 17:00				Date Received:05.13.2020 14:32 Sample Depth: 5 ft			
Analytical Me Tech:	thod: Chloride by EPA 3	300					Prep Method: % Moisture:	E3001	Р	
Analyst:	SPC		Date Prep):	05.15.2020 13:25		Basis:	Wet V	Weight	
Seq Number:	3126147									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil

Chloride

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16887-00-6 **70.3**

25.3

mg/kg 05.15.2020 17:07



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Chloride		16887-00-6	2780	25.0	mg/kg	05.15.2020 17:	:24	5	
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil	
Seq Number:	3126147								
Analyst:	SPC		Date Pre	p: 05.15.2020	13:25	Basis:	Wet Weight		
Tech:	SPC					% Moisture:			
Analytical M	ethod: Chloride by EPA	A 300				Prep Method:	E300P		
Lab Sample I	d: 661472-007		Date Col	llected: 05.08.2020	10:00	0 Sample Depth: 0 ft			
Sample Id:	ample Id: TT-2 @ 0-0.5' ab Sample Id: 661472-007			Soil		Date Received:05.13.2020 14:3			

Analytical Method: TPH by SW801	5 Mod					Prep Method: S	W8015P	
Tech: DVM						% Moisture:		
Analyst: ARM		Date Pr	rep: 05	5.14.2020 11:00		Basis: W	/et Weight	
Seq Number: 3126065								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	05.14.2020 13:49	9 U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0		mg/kg	05.14.2020 13:49	9 U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0		mg/kg	05.14.2020 13:49	9 U	1
Total TPH	PHC635	<50	50		mg/kg	05.14.2020 13:49	9 U	1
Surrogate		Cas Number	% Recover	y Units	Limits	Analysis Da	te Flag	
1-Chlorooctane		111-85-3	98	%	70-130	05.14.2020 13	:49	
o-Terphenyl		84-15-1	104	%	70-130	05.14.2020 13	:49	



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 0-0.5' Lab Sample Id: 661472-007		Matrix: Date Collecte	Soil d: 05.08.2020 10:00	Date Received:05.13.2020 14:3 Sample Depth: 0 ft		
Analytical M Tech:	ethod: BTEX by EPA 8021B KTL			Prep Method: % Moisture:	SW5035A	
Analyst: Seq Number:	KTL 3126205	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight	

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.18.2020 04:20	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.18.2020 04:20	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.18.2020 04:20	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	05.18.2020 04:20	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.18.2020 04:20	U	1
Total Xylenes	1330-20-7	< 0.002	2 0.002		mg/kg	05.18.2020 04:20	U	1
Total BTEX		< 0.002	0.002		mg/kg	05.18.2020 04:20	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	115	%	70-130	05.18.2020 04:20		
4-Bromofluorobenzene		460-00-4	124	%	70-130	05.18.2020 04:20		



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 1' Lab Sample Id: 661472-008			Matrix: Soil Date Collected: 05.08.2020 10:10				Date Received:05.13.2020 14:32 Sample Depth: 1 ft			
Analytical Me Tech:	ethod: Chloride by EPA 3	300					Prep Method: % Moisture:	E300	Р	
Analyst:	SPC		Date Prep):	05.15.2020 13:25		Basis:	Wet V	Weight	
Seq Number:	3126147									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil

Chloride

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16887-00-6 **3660**

25.0

05.15.2020 17:30

mg/kg

5



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: Lab Sample Id	TT-2 @ 2' d: 661472-009		Matrix: Date Colle	Soil 05.08.2020 10:20		Date Received:05.13.2020 14:32 Sample Depth: 2 ft				
•	ethod: Chloride by EPA	300			0010012020 10120		Prep Method:		Р	
Tech:	SPC						% Moisture:			
Analyst:	SPC		Date Prep):	05.15.2020 13:25		Basis:	Wet V	Weight	
Seq Number:	3126147		-							
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil

Chloride

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16887-00-6 **4020**

24.8

mg/kg 05.15.2020 17:36

5

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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 3' Lab Sample Id: 661472-010		Matrix: Date Collecte	Soil ed: 05.08.2020 10:30		Date Received:05.13.2020 14:32 Sample Depth: 3 ft				
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P			
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis:	Wet Weight			
Seq Number: 3126149									
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil		

Chloride

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16887-00-6 **5410**

50.3

05.15.2020 21:02

mg/kg

10



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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 4 '		Matrix:	Soil		Date Received		14:32
Lab Sample Id: 661472-011		Date Collect	ed: 05.08.2020 10:40		Sample Depth	n: 4 ft	
Analytical Method: Chloride by EPA	300				Prep Method:	E300P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis:	Wet Weight	
Seq Number: 3126149							
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil

Chloride

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16887-00-6 2220

50.2

05.15.2020 21:07

mg/kg

10

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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 5' Lab Sample Id: 661472-012		Matrix: Date Collecte	Soil d: 05.08.2020 10:50		Date Received:05.13.2020 14:32 Sample Depth: 5 ft					
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P				
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis:	Wet Weig	;ht			
Seq Number: 3126149										
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Fla	g Dil			

Chloride

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16887-00-6 **607**

4.98

05.15.2020 21:13

mg/kg

1

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Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: TT-2 @ 6'		Matrix:	Soil		Date Received:05.13.2020 14:32					
Lab Sample Id: 661472-013		Date Collecte	ed: 05.08.2020 11:00		Sample Depth	n: 6 ft				
Analytical Method: Chloride by EPA	300				Prep Method:	E300P				
Tech: CHE					% Moisture:					
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis:	Wet Weig	ght			
Seq Number: 3126149										
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Fla	g Dil			

199

Chloride

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16887-00-6

4.99

05.15.2020 18:39

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.	ND Not Detected								
RL Reporting Limit									
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection						
PQL Practical Quantitation Limit	PL Practical Quantitation Limit MQL Method 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/Labo	ratory Control Sample Duplicate					
MD/SD Method Duplicate/Samp	ble 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



QC Summary 661472

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: MB Sample Id: Parameter	Chloride by EPA 30 3126147 7703415-1-BLK MB	00 Spike	LCS San	LCS	Solid 7703415-3 LCSD	I-BKS LCSD	Limits		RPD	ep: 05.1	.5.2020 3415-1-BSD Analysis	Flag
Chloride	Result	Amount 250	Result 248	%Rec 99	Result 258	%Rec 103	90-110	4	Limit 20	malka	Date 05.15.2020 15:12	
Chionde	<5.00	250	248	99	258	103	90-110	4	20	mg/kg		
Analytical Method: Seq Number:	Chloride by EPA 3 3126149	00		Matrix:	Solid			Pr	ep Meth Date Pr		0P 5.2020	
MB Sample Id:	7703416-1-BLK		LCS San	nple Id:	7703416-	I-BKS		LCSI	D Sample	e Id: 770	3416-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	237	95	90-110	5	20	mg/kg	05.15.2020 18:27	
Seq Number:	Chloride by EPA 3 (3126147 661331-021	00		Matrix:	Soil 661331-02	21.5			ep Metho Date Pr	ep: 05.1	0P 5.2020 331-021 SD	
Parent Sample Id:	001331-021 Parent	Spike	MS Sal	MS	MSD	MSD	Limits	%RPD	RPD	Units	Analysis	
Parameter	Result	Amount	Result	%Rec	Result	%Rec			Limit		Date	Flag
Chloride	34.7	248	270	95	280	99	90-110	4	20	mg/kg	05.15.2020 15:29	
-	Chloride by EPA 3	00		Matrix	Soil			Pr	ep Meth			
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EPA 30 3126147 661472-004	00		Matrix: nple Id:	Soil 661472-00	04 S			Date Pr	ep: 05.1	0P .5.2020 472-004 SD	
Seq Number:	3126147	00 Spike Amount)4 S MSD %Rec	Limits		Date Pr	ep: 05.1	5.2020	Flag
Seq Number: Parent Sample Id:	3126147 661472-004 Parent	Spike	MS Sar MS	nple Id: MS	661472-00 MSD	MSD	Limits 90-110	MS	Date Pr D Sample RPD	ep: 05.1 e Id: 6614	.5.2020 472-004 SD Analysis	Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149	Spike Amount 1250	MS San MS Result 3100	mple Id: MS %Rec 106 Matrix:	661472-00 MSD Result 3030 Soil	MSD %Rec 100		MSI %RPD 2 Pr	Date Pr D Sample RPD Limit 20 rep Methe Date Pr	ep: 05.1 e Id: 6614 Units mg/kg od: E30 ep: 05.1	5.2020 472-004 SD Analysis Date 05.15.2020 16:50 0P 5.2020	Flag
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MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 661472

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: MB Sample Id:	mple Id: 7703327-1-BLK				Matrix: Solid LCS Sample Id: 7703327-1-BKS					Prep Method: SW8015P Date Prep: 05.14.2020 LCSD Sample Id: 7703327-1-BSD			
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocart	oons (GRO)	< 50.0	1000	829	83	905	91	70-130	9	20	mg/kg	05.14.2020 12:03	
Diesel Range Organics	(DRO)	<50.0	1000	856	86	893	89	70-130	4	20	mg/kg	05.14.2020 12:03	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1-Chlorooctane		93		1	04		98		70	-130	%	05.14.2020 12:03	
o-Terphenyl		98		1	00		102		70	-130	%	05.14.2020 12:03	

Analytical Method: Seq Number:	TPH by SW8015 Mod 3126065	Matrix: MB Sample Id:	Solid 7703327-1-BLK	Prep Method: Date Prep:			
Parameter Motor Oil Range Hydrocard	pons (MRO)	MB Result <50.0			J nits ng/kg	Analysis Date 05.14.2020 11:42	Flag

Analytical Method:	TPH by SV					P	rep Meth	od: SW	8015P				
Seq Number:	3126065				Matrix:	Soil				Date Pr	ep: 05.1	4.2020	
Parent Sample Id:	661472-00	1		MS Sar	nple Id:	661472-00	01 S		MS	D Sample	e Id: 661	472-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	999	848	85	832	84	70-130	2	20	mg/kg	05.14.2020 13:07	
Diesel Range Organics	(DRO)	< 50.0	999	864	86	857	86	70-130	1	20	mg/kg	05.14.2020 13:07	
Surrogate					1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date	
1-Chlorooctane				ç	97		94		70	-130	%	05.14.2020 13:07	
o-Terphenyl				1	04		99		70	-130	%	05.14.2020 13:07	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 8021 3126205 7703488-1-BLK	B		Matrix: nple Id:	Solid 7703488-1	I-BKS			rep Metho Date Pr D Sample	ep: 05.1	5035A 15.2020 3488-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0863	86	0.0907	91	70-130	5	35	mg/kg	05.18.2020 01:58	
Toluene	< 0.00200	0.100	0.0943	94	0.103	103	70-130	9	35	mg/kg	05.18.2020 01:58	
Ethylbenzene	< 0.00200	0.100	0.0872	87	0.0980	98	70-130	12	35	mg/kg	05.18.2020 01:58	
m,p-Xylenes	< 0.00400	0.200	0.173	87	0.197	99	70-130	13	35	mg/kg	05.18.2020 01:58	
o-Xylene	< 0.00200	0.100	0.0866	87	0.0974	97	70-130	12	35	mg/kg	05.18.2020 01:58	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	108		1	05		104		70	-130	%	05.18.2020 01:58	
4-Bromofluorobenzene	99		1	04		107		70	-130	%	05.18.2020 01:58	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 661472

Flag

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 8021 3126205 661472-001	Matrix: Soil MS Sample Id: 661472-001 S				Prep Method: SW5035A Date Prep: 05.15.2020 MSD Sample Id: 661472-001 SD					
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00199	0.0996	0.0770	77	0.0799	81	70-130	4	35	mg/kg	05.18.2020 02:39
Toluene	< 0.00199	0.0996	0.0871	87	0.0897	91	70-130	3	35	mg/kg	05.18.2020 02:39
Ethylbenzene	< 0.00199	0.0996	0.0826	83	0.0843	85	70-130	2	35	mg/kg	05.18.2020 02:39
m,p-Xylenes	< 0.00398	0.199	0.166	83	0.167	84	70-130	1	35	mg/kg	05.18.2020 02:39
o-Xylene	< 0.00199	0.0996	0.0808	81	0.0819	83	70-130	1	35	mg/kg	05.18.2020 02:39
Surrogate				IS Rec	MS Flag	MSD %Red			imits	Units	Analysis Date
1,4-Difluorobenzene			1	06		106		70	-130	%	05.18.2020 02:39
4-Bromofluorobenzene			1	08		108		70	-130	%	05.18.2020 02:39

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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[D] = 100*(C-A) / B LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

XENCO	Houston, ⁻ Midland	Chain of Custody Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (81)	Cha Dallas,T) EL Pas (480- <u>355</u>	(in c ;;, (214) ;;, TX (9 0900)_)f C 902-030(15)585-3-	Chain of Custody Dallas,TX (214) 902-0300 San Antonio, EL Paso,TX (915)585-3443 Lubbock,T (480-355-0900) Atlanta,GA (770-449-880	ndy htonio, TX (bock, TX (8 49-88 <u>00)</u>		210) 509-3334 06)794-1296 Tampa,FL (813-620-2000)	20-2000)		Work	Vork Order Na www.xenco.com	Work Order No: UUUUA	Page	10		r 2	
Project Manager: Jared Stoffel		Bill to: (if different)		lke Tavarez	ž							W	ork Or	Work Order Comments	mmen	5			
		Company Name:	e: COG	õ						rogram	: UST/F	ST□	×RP□ I	Program: UST/PST PRP Brownfields RRC Superfund	elds] Supe	rfund	
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	Emai	Email: Ike, Jared, Tania	†	gruk	bsec	onch	rgrubbse concho. con	p		Deliverables: EDD	oles: El		+	ADaPT		Other:			
Project Name: Willow State #003		Turn Around					ANALY	YSIS RE	SIS REQUEST	-	•				W	Work Order Notes	der N	otes	
Project Number:	Rou	Routine																	
P.O. Number:	Rush:	<u>ب</u> :																	
Sampler's Name: Tania Babu	Due	Due Date:									<u></u>								
SAMPLE RECEIPT Temp Blank: Yes	No Wet Ice:	e: (Ges No	3																
Temperature (°C): D.U.S. S	Thermometer ID	erip	iner											;				÷	
		24	onta		00)														
Sample Custody Seals: Yes No WA	Total Containers:	S													lint stat	lab, if received by 4:30pm	ved by 4	lab, if received by 4:30pm	
Sample Identification Matrix Sampled	te Time oled Sampled		Numbe	TPH (80 BTEX (8	Chlorid										Sa	Sample Comments	Comm	lents	
TT-1 @ 0-0.5' ss 5/7/	5/7/2020 1610	0-0.5'	<u> </u>	××	×														
TT-1 @ 1' ss 5/7/	5/7/2020 1620	4.	<u> </u>		×		-			 		<u> </u>							
TT-1 @ 2' ss 5/7/	5/7/2020 1630	2'		-	×														
TT-1 @ 3' ss 5/7/	5/7/2020 1640	ω	 	+	×														
SS		<u>4</u>	\ <u>-</u>	+	×		_												
TT-2 @ 0-0.5' ss 5/8/	5/8/2020 1000	0-0.5'	<u> </u>	× ×	^ × >			_											
SS		.1.			×														
ss		2'	<u> </u>	<u> </u>	×														
TT-2 @ 3' ss 5/8/	5/8/2020 1030	3'	<u> </u>		×						-	┝	-						
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RC	RA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA		Sb As Ba Sb As B	a Be Ba B		Cd Ca Cr Cc Cd Cr Co Cu		Cu Fe Pb Mg Mn Mo Ni Pb Mn Mo Ni Se Ag Tl U	Pb Mg Mn Mo Ni K Se Mo Ni Se Ag TI U	n Mo I Ag TI		Ąg	SiO2 N 1631	Na Sr 31 / 245	TI Sn U .1/7470	1 U V 170 / 7)2 Na Sr TI Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg	Ъ
of sortice. Xanco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of sortice.	shall not assume an	y responsibility for a	ny losses	-or expe	nses incu	, its all its	le client if s	uch losse	s are due	fo circum	Istances	beyond t	he contro						
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Houston,	TX (281) 240-4200	Chain o Dallas.TX (214) 9	902-0300 San Ar	• dy ntonio,TX (210) 509-33		Work Order No:
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	Bill to: (If different)	lke Tavare	Ž			Comments
	Company Name				Program: UST/PST	Program: UST/PST PRP Brownfields RRC Superfund
	Address:				State of Project:	
	City, State ZIP:				Reporting:Level II	Reporting:Level II Level III PST/UST TRRP Level IV
Ema		<u>inia, rarubr</u>	250 conch	10. WM	Deliverables: EDD	ADaPT Other:
				ANALYSIS RE	QUEST	Work Order Notes
Rou	utine					
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Due	e Date:					
Yes (Np Wet Ic	xe: Yes No	5				
Thermomet	ler h	iner				
		onta	00)			
Total Container		5)				IAI starts the day received by the lab, if received by 4:30pm
Date Time ampled Samplec	Depth	TPH (80 [.]				Sample Comments
8/2020 1040	4		×			V - run deeper
5/8/2020 1050	טַ	<u> </u>	×			depth if previous
5/8/2020 1100	<u>6</u>		×			is above toomy
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8/2020 1130	9		<			
5/8/2020 1140	10'		٢			
8RC	PPM Texas 11 SPLP 6010: 8R(່ເດຍ		Ca Cr Co Cu Fe r Co Cu Pb Mn	Mg Mn Mo Ni K Ni Se Ag Ti U	Se Ag SiO2 Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Hg
ples constitutes a valid nd shall not assume any project and a charge c	d purchase order fron iy responsibility for ar of \$5 for each sample	n client company to ny losses or expens submitted to Xenci	o Xenco, its affiliat ses incurred by the o, but not analyzed	es and subcontractors. e client if such losses a 1. These terms will be e	It assigns standard terms and cor re due to circumstances beyond the nforced unless previously negotiate	nditions a control ad.
eceived by: (Sign	ature)	Date/Tin	ne Re	linguished by: (Si	gnature) Received	Received by: (Signature) Date/Time
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	Huston Karlow River Striker Houston Madam Ma	Houston,TX (281) 240-4200 Midland,TX (322-704-5400 Midland,TX (432-704-5440 Company Nam Company Nam Address: Company Nam Address: Company Nam Address: Company Nam Address: Company Nam Address: Company Nam Address: Company Nam Company Nam Address: Company Nam Company Nam Address: Company Nam Company Nam Address: Company Nam Company Nam Address: Company Nam Company Nam Company Nam Address: Company Nam Company Nam Company Nam Address: Company Nam Company Nam Com Company Nam Company Nam Company Nam Company Nam	Chain Chain <th< td=""><td>Chain of Custo Midiand, TX (281) 240-4200 Dallas, TX (214) 902-0300 San A Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Enalt: Ike, Jared, Tavarez Company Name: COG Address: City, State ZIP: Itermoneter /b Routine C Rush: Rush: Rush: Due Date: Due Date: Total Containers: Total Containers: Midiand, TX (281) 240-420 Minutes Signo20 Ike Tavarez Cog Address: Rush: Rush: Rush: Due Date: Distribution Factor: Total Containers: Midiand, TX (281) 240-420 Minutes Signo20 Iter Manage Address: Rush: Depth Depth Depth Number of Containers Signo20 1050 5' 1 X Signo20 1060 5' 1 X Signo20 1100 7'' 1 X Signo20 1140 10' 1 X Signo20 1140 10' 1 X Signo20 1140 1' X X Signo20 1140 1' X X Signo20 1140 X X X Signo20 10'<td>Charlon of CLUSOU Housen, TX (21) 20-4000 Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU</td><td>Cu Fe Pt Cu Fe Pt Pb Mn Mo Pb Mn Mo Intractors: It associates are the second se</td></td></th<>	Chain of Custo Midiand, TX (281) 240-4200 Dallas, TX (214) 902-0300 San A Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Midiand, TX (432-704-5440) EL Paso, TX (915)585-3443 Lub Enalt: Ike, Jared, Tavarez Company Name: COG Address: City, State ZIP: Itermoneter /b Routine C Rush: Rush: Rush: Due Date: Due Date: Total Containers: Total Containers: Midiand, TX (281) 240-420 Minutes Signo20 Ike Tavarez Cog Address: Rush: Rush: Rush: Due Date: Distribution Factor: Total Containers: Midiand, TX (281) 240-420 Minutes Signo20 Iter Manage Address: Rush: Depth Depth Depth Number of Containers Signo20 1050 5' 1 X Signo20 1060 5' 1 X Signo20 1100 7'' 1 X Signo20 1140 10' 1 X Signo20 1140 10' 1 X Signo20 1140 1' X X Signo20 1140 1' X X Signo20 1140 X X X Signo20 10' <td>Charlon of CLUSOU Housen, TX (21) 20-4000 Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU</td> <td>Cu Fe Pt Cu Fe Pt Pb Mn Mo Pb Mn Mo Intractors: It associates are the second se</td>	Charlon of CLUSOU Housen, TX (21) 20-4000 Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU Mainen, TX (21) 20-4000 Charlon of CLUSOU Charlon of CLUSOU Charlon of CLUSOU	Cu Fe Pt Cu Fe Pt Pb Mn Mo Pb Mn Mo Intractors: It associates are the second se

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Tempera	ature Range: 0 - 6 degC
Date/ Time Received: 05.13.2020 02.32.00 PM		es Acceptable Range: Ambient
Work Order #: 661472	Temperature Measu	ring device used: R9
Sampl	e Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.	3
#2 *Shipping container in good condition?	Ye	es
#3 *Samples received on ice?	Ye	es
#4 *Custody Seals intact on shipping container/ cool	ler? N	/A
#5 Custody Seals intact on sample bottles?	N	/A
#6*Custody Seals Signed and dated?	N	/A
#7 *Chain of Custody present?	Ye	es
#8 Any missing/extra samples?	N	0
#9 Chain of Custody signed when relinquished/ rece	eived? Ye	es
#10 Chain of Custody agrees with sample labels/ma	trix? Ye	es
#11 Container label(s) legible and intact?	Ye	es
#12 Samples in proper container/ bottle?	Ye	BTEX was in bulk container
#13 Samples properly preserved?	Ye	es
#14 Sample container(s) intact?	Ye	es
#15 Sufficient sample amount for indicated test(s)?	Ye	es
#16 All samples received within hold time?	Ye	es
#17 Subcontract of sample(s)?	N	/A
#18 Water VOC samples have zero headspace?	N	/Α

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

Analyst:

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PH Device/Lot#:

Checklist completed by: Billion Tall Brianna Teel

Date: 05.13.2020

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 05.14.2020

Jared Stoffel



Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 661473

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

Date Received in Lab:Wed 05.13.2020 14:32Report Date:05.18.2020 14:35Project Manager:Jessica Kramer

Lab Id: 661473-001 661473-002 661473-003 Field Id: NSW SSW ESW Analysis Requested Depth: Matrix: SOIL SOIL SOIL Sampled: 05.08.2020 13:00 05.08.2020 13:10 05.08.2020 13:20 BTEX by EPA 8021B 05.15.2020 17:30 Extracted: 05.15.2020 17:30 05.15.2020 17:30 Analyzed: 05.18.2020 09:47 05.18.2020 10:08 05.18.2020 10:28 RL mg/kg RL RL Units/RL: mg/kg mg/kg < 0.00200 < 0.00200 0.00200 < 0.00198 0.00198 0.00200 Benzene < 0.00200 0.00200 < 0.00200 0.00200 Toluene < 0.00198 0.00198 < 0.00198 0.00198 < 0.00200 0.00200 < 0.00200 0.00200 Ethylbenzene 0.00396 < 0.00399 0.00399 < 0.00399 0.00399 < 0.00396 m,p-Xylenes < 0.00200 0.00200 o-Xylene < 0.00198 0.00198 < 0.00200 0.00200 0.002 < 0.002 0.002 < 0.00198 0.00198 < 0.002 Total Xylenes Total BTEX < 0.00198 0.00198 < 0.002 0.002 < 0.002 0.002 Chloride by EPA 300 Extracted: 05.15.2020 13:25 05.15.2020 13:25 05.15.2020 13:25 05.15.2020 19:30 05.15.2020 16:21 05.15.2020 20:56 Analyzed: RL RL RL Units/RL: mg/kg mg/kg mg/kg Chloride 299 25.1 28.1 5.00 13.9 5.00 TPH by SW8015 Mod Extracted: 05.14.2020 17:00 05.14.2020 11:00 05.14.2020 11:00 Analyzed: 05.15.2020 10:47 05.14.2020 14:32 05.14.2020 14:53 RL mg/kg RL RL Units/RL: mg/kg mg/kg Gasoline Range Hydrocarbons (GRO) <49.9 49.9 <49.9 49.9 < 50.0 50.0 50.0 Diesel Range Organics (DRO) <49.9 49.9 <49.9 49.9 < 50.0 Motor Oil Range Hydrocarbons (MRO) 49.9 49.9 < 50.0 50.0 <49.9 <49.9 Total TPH <49.9 49.9 <49.9 49.9 < 50 50

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Vermer

Jessica Kramer Project Manager

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Analytical Report 661473

for

TRC Solutions, Inc

Project Manager: Jared Stoffel

Willow State #003

05.18.2020

Collected By: Client



1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)



05.18.2020 Project Manager: **Jared Stoffel TRC Solutions, Inc** 2057 Commerce Midland, TX 79703

Reference: XENCO Report No(s): 661473 Willow State #003 Project Address:

Jared Stoffel:

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) 661473. 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. 661473 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,

Jession Vermer

Jessica Kramer Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



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Sample Cross Reference 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id	Matrix	Date Collected Sample Depth	Lab Sample Id
NSW	S	05.08.2020 13:00	661473-001
SSW	S	05.08.2020 13:10	661473-002
ESW	S	05.08.2020 13:20	661473-003





CASE NARRATIVE

Client Name: TRC Solutions, Inc Project Name: Willow State #003

Project ID: Work Order Number(s): 661473 Report Date: 05.18.2020 Date Received: 05.13.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



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Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: NSW Lab Sample Id: 661473-001		Matrix: Date Collec	Soil eted: 05.08.2020 13:00		Date Received:05.	13.2020 14	4:32
Analytical Method: Chloride by EF	PA 300				Prep Method: E30	00P	
Tech: CHE					% Moisture:		
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis: We	t Weight	
Seq Number: 3126149		ľ					
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	299	25.1	mg/kg	05.15.2020 19:30		5
Analytical Mathed: TDU by SW80	15 Mod				Prop Mathod: SW	28015D	
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	78015P	
Tech: DVM	15 Mod	Date Pren:	05.14.2020 17:00		% Moisture:		
	15 Mod	Date Prep:	05.14.2020 17:00		% Moisture:	78015P t Weight	
Tech: DVM Analyst: ARM	15 Mod Cas Number		05.14.2020 17:00 RL	Units	% Moisture:		Dil
Tech:DVMAnalyst:ARMSeq Number:3126160				Units mg/kg	% Moisture: Basis: We	t Weight	Dil 1
Tech: DVM Analyst: ARM Seq Number: 3126160 Parameter	Cas Number	Result	RL		% Moisture: Basis: We Analysis Date	t Weight Flag	

Total TPH	PHC635	<49.	9 49.9		mg/kg	05.15.2020 10:47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	109	%	70-130	05.15.2020 10:47		
o-Terphenyl		84-15-1	113	%	70-130	05.15.2020 10:47		



Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	NSW		Matrix:	Soil		Date Receive	d:05.13	3.2020 14:	32
Lab Sample I	d: 661473-001		Date Collected	d: 05.08.2020 13:00					
Analytical M	ethod: BTEX by EPA 80	21B				Prep Method:	SW5	035A	
Tech:	KTL					% Moisture:			
Analyst:	KTL		Date Prep:	05.15.2020 17:30		Basis:	Wet	Weight	
Seq Number:	3126205								
Parameter		Cas Number	Result RI		Units	Analysis D	ate	Flag	Dil

r al alletel	Cas Nullibe	i Kesuit	KL		Units	Analysis Date	Flag	Dii
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	05.18.2020 09:47	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	05.18.2020 09:47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	116	%	70-130	05.18.2020 09:47		
4-Bromofluorobenzene		460-00-4	125	%	70-130	05.18.2020 09:47		



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Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: SSW Lab Sample Id: 661473-002		Matrix: Date Collec	Soil cted: 05.08.2020 13:10		Date Received:05.	.13.2020 14	1:32
Analytical Method: Chloride by EF Tech: SPC Analyst: SPC Seq Number: 3126147	PA 300	Date Prep:	05.15.2020 13:25		Prep Method: E30 % Moisture: Basis: We	00P et Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.1	5.00	mg/kg	05.15.2020 16:21		1
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	V8015P	
Tech: DVM					% Moisture:		
Analyst: ARM		Date Prep:	05.14.2020 11:00		Basis: We	et Weight	
Seq Number: 3126065							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.14.2020 14:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.14.2020 14:32	U	1
	CIOCZODICO	(1)1)	1919	mg/ng	001111202011102	U	1

Total TPH	PHC635	<49.	9 49.9		mg/kg	05.14.2020 14:32	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-130	05.14.2020 14:32		
o-Terphenyl		84-15-1	101	%	70-130	05.14.2020 14:32		



Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	SSW		Matrix:	Soil	D	ate Received:	05.13.2020 14:	32
Lab Sample Id	: 661473-002		Date Collected	1:05.08.2020 13:10				
Analytical Met	thod: BTEX by EPA 80	21B			Pr	ep Method:	SW5035A	
Tech:	KTL				%	Moisture:		
Analyst:	KTL		Date Prep:	05.15.2020 17:30	Ba	asis:	Wet Weight	
Seq Number:	3126205							
Parameter		Cas Number	Result RL		Units	Analysis Dat	e Flag	Dil

	Cas Nullibe	n Ktsuit	KL		Units	Analysis Date	riag	Dii
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.18.2020 10:08	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.18.2020 10:08	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.18.2020 10:08	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	05.18.2020 10:08	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.18.2020 10:08	U	1
Total Xylenes	1330-20-7	< 0.002	2 0.002		mg/kg	05.18.2020 10:08	U	1
Total BTEX		< 0.002	2 0.002		mg/kg	05.18.2020 10:08	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	121	%	70-130	05.18.2020 10:08		
1,4-Difluorobenzene		540-36-3	116	%	70-130	05.18.2020 10:08		



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Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:ESWLab Sample Id:661473-003		Matrix: Date Collec	Soil cted: 05.08.2020 13:20		Date Received:05.13.2020 14:32				
Analytical Method: Chloride by EF	PA 300				Prep Method: E30)0P			
Tech: CHE					% Moisture:				
Analyst: CHE		Date Prep:	05.15.2020 13:25		Basis: Wet	t Weight			
Seq Number: 3126149									
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Chloride	16887-00-6	13.9	5.00	mg/kg	05.15.2020 20:56		1		
Analytical Method: TPH by SW80	15 Mod				Prep Method: SW	8015P			
Analytical Method: TPH by SW80 Tech: DVM	15 Mod				Prep Method: SW % Moisture:	8015P			
5	15 Mod	Date Prep:	05.14.2020 11:00		% Moisture:	8015P t Weight			
Tech: DVM	15 Mod	Date Prep:	05.14.2020 11:00		% Moisture:				
Tech: DVM Analyst: ARM	15 Mod Cas Number	·	05.14.2020 11:00 RL	Units	% Moisture:		Dil		
Tech:DVMAnalyst:ARMSeq Number:3126065		·		Units mg/kg	% Moisture: Basis: Wet	t Weight	Dil		
Tech: DVM Analyst: ARM Seq Number: 3126065 Parameter	Cas Number	Result	RL		 Moisture: Basis: Wet Analysis Date 	t Weight Flag	Dil 1		

Total TPH	PHC635	<5	0 50		mg/kg	05.14.2020 14:53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-130	05.14.2020 14:53		
o-Terphenyl		84-15-1	94	%	70-130	05.14.2020 14:53		



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TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	ESW		Matrix:	Soil		Date Received:05.13.2020 14:32				
Lab Sample I	d: 661473-003		Date Collected	1:05.08.2020 13:20	}					
Analytical Me	ethod: BTEX by EPA 80	21B				Prep Method:	SW5	035A		
Tech:	KTL					% Moisture:				
Analyst:	KTL		Date Prep:	05.15.2020 17:30		Basis:	Wet '	Weight		
Seq Number:	3126205									
Parameter		Cas Number	Result RI		Units	Analysis D	ate	Flag	Dil	

rarameter	Cas Nullibe	er Kesun	KL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	05.18.2020 10:28	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	05.18.2020 10:28	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	05.18.2020 10:28	U	1
m,p-Xylenes	179601-23-1	< 0.00399	9 0.00399		mg/kg	05.18.2020 10:28	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	05.18.2020 10:28	U	1
Total Xylenes	1330-20-7	< 0.002	2 0.002		mg/kg	05.18.2020 10:28	U	1
Total BTEX		< 0.002	2 0.002		mg/kg	05.18.2020 10:28	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	116	%	70-130	05.18.2020 10:28		
4-Bromofluorobenzene		460-00-4	119	%	70-130	05.18.2020 10:28		



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.	ND Not Detected			
RL Reporting Limit				
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection	
PQL Practical Quantitation Limit	MQL Method Qu	antitation Limit	LOQ Limit of Quantitatio	n
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/Labo	ratory Control Sample Duplicate
MD/SD Method Duplicate/Samp	ple Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate
+ NELAC certification not offered	l for this compound.			

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



QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: MB Sample Id:	Chloride by EPA 3 3126147 7703415-1-BLK	00		Matrix: nple Id:	Solid 7703415-2	-BKS		Prep Method: E300P Date Prep: 05.15.2020 LCSD Sample Id: 7703415-1-BSD				
Parameter	МВ	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride	Result <5.00	Amount 250	Result 248	% Rec 99	Result 258	%Rec 103	90-110	4	Limit 20	mg/kg	Date 05.15.2020 15:12	1108
Cinonae	<5.00	250	240		258	105	90-110	4	20	iiig/kg	0011012020 10112	
Analytical Method: Seq Number: MB Sample Id:	Chloride by EPA 3 (3126149) 7703416-1-BLK	00		Matrix: nple Id:	Solid 7703416-1	-BKS			ep Metho Date Pro O Sample	ep: 05.1	0P 15.2020 3416-1-BSD	
Parameter	MB	Spike	LCS Result		LCSD		Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	Result <5.00	Amount 250	248	%Rec 99	Result 237	%Rec 95	90-110	5	20	mg/kg	05.15.2020 18:27	
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EPA 3 3126147 661331-021	00		Matrix: nple Id:	Soil 661331-02	21 S			ep Metho Date Pr D Sample	ep: 05.1	0P 15.2020 331-021 SD	
Parameter	Parent	Spike	MS	MS	MSD	MSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride	Result 34.7	Amount 248	Result 270	%Rec 95	Result 280	%Rec 99	90-110	4	Limit 20	mg/kg	Date 05.15.2020 15:29	U
	2							·		88		
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EPA 3 3126147 661472-004	00		Matrix: nple Id:	Soil 661472-00)4 S			ep Metho Date Pro D Sample	ep: 05.1	0P 15.2020 472-004 SD	
Seq Number:	3126147 661472-004 Parent	Spike	MS Sar MS	nple Id: MS	661472-00 MSD	MSD	Limits		Date Pro D Sample RPD	ep: 05.1	15.2020 472-004 SD Analysis	Flag
Seq Number: Parent Sample Id:	3126147 661472-004		MS Sar	nple Id:	661472-00		Limits 90-110	MSI	Date Pr D Sample	ep: 05.1 e Id: 661	15.2020 472-004 SD	Flag
Seq Number: Parent Sample Id: Parameter	3126147 661472-004 Parent Result	Spike Amount	MS Sar MS Result	nple Id: MS %Rec	661472-00 MSD Result	MSD %Rec		MSI %RPD	Date Pro D Sample RPD Limit	ep: 05.1 e Id: 661 Units	15.2020 472-004 SD Analysis Date	Flag
Seq Number: Parent Sample Id: Parameter Chloride	3126147 661472-004 Parent Result	Spike Amount 1250	MS Sar MS Result 3100	mple Id: MS %Rec 106 Matrix:	661472-00 MSD Result 3030	MSD %Rec 100		MSI %RPD 2 Pr	Date Pro D Sample RPD Limit 20 rep Metho Date Pro	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1	15.2020 472-004 SD Analysis Date 05.15.2020 16:50	Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013 Parent	Spike Amount 1250 00 Spike	MS Sar MS Result 3100 MS Sar MS	nple Id: MS %Rec 106 Matrix: nple Id: MS	661472-00 MSD Result 3030 Soil 661472-0 MSD	MSD %Rec 100 3 S MSD		MSI %RPD 2 Pr	Date Pr D Sample RPD Limit 20 ep Methe Date Pr D Sample RPD	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 00P 15.2020 472-013 SD Analysis	Flag Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013	Spike Amount 1250	MS Sar MS Result 3100 MS Sar	nple Id: MS %Rec 106 Matrix: nple Id:	661472-00 MSD Result 3030 Soil 661472-0	MSD %Rec 100	90-110 Limits	MSI %RPD 2 Pr MSI	Date Pr D Sample RPD Limit 20 ep Metho Date Pr D Sample	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 0P 15.2020 472-013 SD	
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013 Parent Result	Spike Amount 1250 00 Spike Amount	MS Sar MS Result 3100 MS Sar MS Result	nple Id: MS %Rec 106 Matrix: nple Id: MS %Rec	661472-00 MSD Result 3030 Soil 661472-00 MSD Result	MSD %Rec 100 3 S MSD %Rec	90-110 Limits	MSI %RPD 2 Pr MSI %RPD	Date Pr D Sample RPD Limit 20 ep Methe Date Pr D Sample RPD Limit	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661 Units	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 0P 15.2020 472-013 SD Analysis Date	
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013 Parent Result 199 Chloride by EPA 30 3126149	Spike Amount 1250 00 Spike Amount 250	MS Sar MS Result 3100 MS Sar MS Result 445	nple Id: MS %Rec 106 Matrix: nple Id: MS %Rec 98 Matrix:	661472-00 MSD Result 3030 Soil 661472-0 MSD Result 464	MSD %Rec 100 3 S MSD %Rec 106	90-110 Limits	MSI %RPD 2 Pr MSI %RPD 4	Date Pr D Sample RPD Limit 20 ep Methe Date Pr D Sample Limit 20 ep Methe Date Pr	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 00P 15.2020 472-013 SD Analysis Date 05.15.2020 18:44	
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013 Parent Result 199 Chloride by EPA 30 3126149 661636-008 Parent	Spike Amount 1250 00 Spike Amount 250 00 Spike	MS Sar MS Result 3100 MS Sar MS Result 445 MS Sar MS Sar	nple Id: MS %Rec 106 Matrix: nple Id: %Rec 98 Matrix: nple Id: MS %Rec	661472-00 MSD Result 3030 Soil 661472-0 MSD Result 464 Soil 661636-00 MSD	MSD %Rec 100 3 S MSD %Rec 106	90-110 Limits	MSI %RPD 2 Pr MSI %RPD 4	Date Pr D Sample RPD Limit 20 ep Metho Date Pr D Sample RPD Limit 20 ep Metho Date Pr D Sample RPD Limit	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 0P 15.2020 472-013 SD Analysis Date 05.15.2020 18:44 0P 15.2020 636-008 SD Analysis	
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3126147 661472-004 Parent Result 1780 Chloride by EPA 30 3126149 661472-013 Parent Result 199 Chloride by EPA 30 3126149 661636-008	Spike Amount 1250 00 Spike Amount 250	MS Sar MS Result 3100 MS Sar MS Result 445	nple Id: MS %Rec 106 Matrix: nple Id: %Rec 98 Matrix: nple Id:	661472-00 MSD Result 3030 Soil 661472-0 MSD Result 464 Soil 661636-00	MSD %Rec 100 3 S MSD %Rec 106	90-110 Limits 90-110	MSI %RPD 2 Pr MSI %RPD 4 Pr MSI	Date Pr D Sample RPD Limit 20 ep Metho Date Pr D Sample RPD Limit 20 ep Metho Date Pr D Sample	ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661 Units mg/kg od: E30 ep: 05.1 e Id: 661	15.2020 472-004 SD Analysis Date 05.15.2020 16:50 0P 15.2020 472-013 SD Analysis Date 05.15.2020 18:44	Flag

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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Final 1.000



QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method:	TPH by SV	V8015 Mo	od						Prep Method: SW8015P				
Seq Number:	3126065							Solid Date Prep: 05.14.2020					
MB Sample Id:	7703327-1-	703327-1-BLK LCS Sample Id: 77033						7703327-1-BKS LCSD Sample Id: 7703327-1-BSD					
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<50.0	1000	829	83	905	91	70-130	9	20	mg/kg	05.14.2020 12:03	
Diesel Range Organics (DRO)	< 50.0	1000	856	86	893	89	70-130	4	20	mg/kg	05.14.2020 12:03	
Surrogate		MB %Rec	MB Flag			LCS Flag	LCSI %Re			mits	Units	Analysis Date	
1-Chlorooctane		93		1	04		98		70	-130	%	05.14.2020 12:03	
o-Terphenyl		98		1	00		102		70	-130	%	05.14.2020 12:03	

Analytical Method:	TPH by S	W8015 M	od						Pi	ep Metho	od: SW	8015P	
Seq Number:	3126160				Matrix:	Solid				Date Pr	ep: 05.1	4.2020	
MB Sample Id:	7703367-1	-BLK		LCS San	nple Id:	7703367-	1-BKS		LCS	D Sample	e Id: 770	3367-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	1000	934	93	928	93	70-130	1	20	mg/kg	05.15.2020 08:53	
Diesel Range Organics	(DRO)	<50.0	1000	897	90	897	90	70-130	0	20	mg/kg	05.15.2020 08:53	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			mits	Units	Analysis Date	
1-Chlorooctane		101		1	17		117		70	-130	%	05.15.2020 08:53	
o-Terphenyl		107		1	11		112		70	-130	%	05.15.2020 08:53	

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW	8015P	
Seq Number:	3126065	Matrix:	Solid	Date Prep:	05.1	4.2020	
		MB Sample Id:	7703327-1-BLK				
Parameter		MB Result		τ	J nits	Analysis Date	Flag
Motor Oil Range Hydrocarl	oons (MRO)	<50.0		m	ng/kg	05.14.2020 11:42	

Analytical Method: Seq Number:	TPH by SW8015 Mod 3126160	Matrix: MB Sample Id:	Solid 7703367-1-BLK	Prep Method: Date Prep:			
Parameter		MB Result		τ	J nits	Analysis Date	Flag
Motor Oil Range Hydrocar	oons (MRO)	<50.0		m	ng/kg	05.15.2020 08:34	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: Parent Sample Id:	Matrix: Soil MS Sample Id: 661472-001 S				Prep Method: SW8015P Date Prep: 05.14.2020 MSD Sample Id: 661472-001 SD								
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	999	848	85	832	84	70-130	2	20	mg/kg	05.14.2020 13:07	
Diesel Range Organics	(DRO)	< 50.0	999	864	86	857	86	70-130	1	20	mg/kg	05.14.2020 13:07	
Surrogate					1S Rec	MS Flag	MSD %Re			imits	Units	Analysis Date	
1-Chlorooctane				ç	97		94		70	-130	%	05.14.2020 13:07	
o-Terphenyl				1	04		99		70	-130	%	05.14.2020 13:07	

Analytical Method:	TPH by SV	V8015 M	od						Pi	rep Meth	od: SW	8015P	
Seq Number:	3126160				Matrix:	Soil				Date Pr	ep: 05.1	4.2020	
Parent Sample Id:	661563-001	l		MS Sar	nple Id:	661563-00	01 S		MS	D Sample	e Id: 661	563-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<49.8	996	923	93	933	94	70-130	1	20	mg/kg	05.15.2020 09:50	
Diesel Range Organics ((DRO)	<49.8	996	903	91	913	92	70-130	1	20	mg/kg	05.15.2020 09:50	
Surrogate					IS Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1-Chlorooctane				1	15		119		70	-130	%	05.15.2020 09:50	
o-Terphenyl				1	08		108		70	-130	%	05.15.2020 09:50	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 8021 3126205 7703488-1-BLK	B	Matrix: Solid LCS Sample Id: 7703488-1-BKS			1-BKS	Prep Method: SW5035A Date Prep: 05.15.2020 LCSD Sample Id: 7703488-1-BSD					
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0863	86	0.0907	91	70-130	5	35	mg/kg	05.18.2020 01:58	
Toluene	< 0.00200	0.100	0.0943	94	0.103	103	70-130	9	35	mg/kg	05.18.2020 01:58	
Ethylbenzene	< 0.00200	0.100	0.0872	87	0.0980	98	70-130	12	35	mg/kg	05.18.2020 01:58	
m,p-Xylenes	< 0.00400	0.200	0.173	87	0.197	99	70-130	13	35	mg/kg	05.18.2020 01:58	
o-Xylene	< 0.00200	0.100	0.0866	87	0.0974	97	70-130	12	35	mg/kg	05.18.2020 01:58	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	108		1	05		104		70	-130	%	05.18.2020 01:58	
4-Bromofluorobenzene	99		1	04		107		70	-130	%	05.18.2020 01:58	

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3126205 661472-001	Matrix: Soil MS Sample Id: 661472-001 S			Prep Method: SW5035A Date Prep: 05.15.2020 MSD Sample Id: 661472-001 SD							
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00199	0.0996	0.0770	77	0.0799	81	70-130	4	35	mg/kg	05.18.2020 02:39	
Toluene	< 0.00199	0.0996	0.0871	87	0.0897	91	70-130	3	35	mg/kg	05.18.2020 02:39	
Ethylbenzene	< 0.00199	0.0996	0.0826	83	0.0843	85	70-130	2	35	mg/kg	05.18.2020 02:39	
m,p-Xylenes	< 0.00398	0.199	0.166	83	0.167	84	70-130	1	35	mg/kg	05.18.2020 02:39	
o-Xylene	< 0.00199	0.0996	0.0808	81	0.0819	83	70-130	1	35	mg/kg	05.18.2020 02:39	
Surrogate			M %1	IS Rec	MS Flag	MSD %Ree			imits	Units	Analysis Date	
1,4-Difluorobenzene			10	06		106		70)-130	%	05.18.2020 02:39	
4-Bromofluorobenzene			10	08		108		70)-130	%	05.18.2020 02:39	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcor of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses incurred by the client if such a source of service. A subcort of samples and shall not assume any responsibility for any losses incurred by the client if such a source of service.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	ESW	SSW	WSN	Sample Identification		Cooler Custody Seals: Yes No	Received Intact:	Temperature (°C): 5, W	SAMPLE RECEIPT	Sampler's Name: Tania Babu	P.O. Number:	Project Number:	Project Name: Willow State #003	Phone: (432) 238-3003	City, State ZIP: Midland, TX 79705	Address: 10 Desta Dr. STE 150		Project Manager: Jared Stoffel	XENCO
uishment of samples constitutes a valid purch ost of samples and shall not assume any respo e applied to each project and a charge of \$5 for Becelved by (Signature)	8R	ss 5/8/2020	ss 5/8/2020	ss 5/8/2020	Matrix Date Sampled S	(but x	NIA	No	l	Temp Blank: Yes Nø				03	~~ 	705	TE 150 E			Hobbs, NM
	CRA 13PPM Texas 11 AI	1320 - 1	1310 - 1	1300 - 1	Time Depth Depth Numb		Correction Factor: ピン 8		ē	Wet Ice: Yes No	Due Date:	Rush:	Routine	Turn Around	Email: Ike, Jared, Tania	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	C Houston,TX (281) 240-4200 D Midland,TX (432-704-5440) E ;75-392-7550) Phoenix,AZ (45
lient company to Xenco, osses or expenses incur bmitted to Xenco, but not Date/Time		× × ×	- × × ×	- × × ×	TPH (8) BTEX (015) 8021									a, rarubbs @			COG	Ike Tavarez	Chain of Custody Dallas,TX (214) 902-0300 San Antonio, EL Paso,TX (915)585-3443 Lubbock,T (480-355-0900) Atlanta,GA (770-449-88
Voice: Signature of this document and relinquishment of samples constitutes a valid purchase order from cilent company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the cilent if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated. Relinquished by: (Signature) Received by: (Signature) Received by: (Signature)	Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn N Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag														P concho. com					Chain of Custody Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
tractors. It assigns standard terms and conditions losses are due to circumstances beyond the contro will be enforced unless previously negotiated.	Pb Mg Mn Mo Ni K Mo Ni Se Ag Tl U													UEST	Deliverables: EDD	Reporting:Level II	State of Project:	Program: UST/PST		
rms and conditions s beyond the control sly negotiated. Received by: (Signature)	Se Ag Si				Sa	lab,	TAT sta							W	ADaPT C	Reporting:Level II Level III PST/UST TRRP Level IV		Program: UST/PST PRP Brownfields RRC Superfund	ð	Work Order No:
Date/Time)2 Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Hg				Sample Comments	lab, if received by 4:30pm	TAT starts the day received by the			:				Work Order Notes	Other:			RRC Superfund	Its	

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Temperature	Range: 0 - 6 degC
Date/ Time Received: 05.13.2020 02.32.00 PM	Air and Metal samples Ac	ceptable Range: Ambient
Work Order #: 661473	Temperature Measuring d	levice used: R9
Sample Rec	eipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.3	
#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	BTEX was in bulk container
#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)?	Yes	
#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:

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PH Device/Lot#:

Checklist completed by: Bull Tal Brianna Teel

Date: 05.13.2020

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 05.14.2020

Jared Stoffel



Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 662893

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

 Date Received in Lab:
 Thu 05.28.2020 16:10

 Report Date:
 06.02.2020 16:35

Project Manager: Jessica Kramer

	Lab Id:	662893-0	01	662893-0	02	662893-00	03	662893-0	04	662893-0	05	662893-00)6
	Field Id:	BH-3 @ 0-		BH-3 @ 2	-	BH-3 @ 4-5		BH-3 @ 6-7	-	BH-3 @ 8-9		BH-3 @ 14-1	-
Analysis Requested	Depth:	0-1 ft		2-3 ft	-	4-5 ft		6-7 ft		8-9 ft		14-15 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.28.2020	10:30	05.28.2020	10:40	05.28.2020 1	10:50	05.28.2020	11:00	05.28.2020	11:10	05.28.2020	11:20
BTEX by EPA 8021B	Extracted:	05.29.2020	15:00										
	Analyzed:	05.29.2020 2	20:07										
	Units/RL:	mg/kg	RL										
Benzene		< 0.00202	0.00202										
Toluene		< 0.00202	0.00202										
Ethylbenzene		< 0.00202	0.00202										
n,p-Xylenes		< 0.00403	0.00403										
o-Xylene			0.00202										
Total Xylenes			0.00202										
Total BTEX		< 0.00202	0.00202										
Chloride by EPA 300	Extracted:	05.29.2020	15:20	05.29.2020	15:20	05.29.2020 1	15:20	05.29.2020	15:20	05.29.2020	15:20	05.29.2020	15:20
	Analyzed:	05.29.2020 2	22:25	05.29.2020 2	22:45	05.29.2020 2	22:51	05.29.2020 2	22:58	05.29.2020	23:04	05.29.2020 2	23:11
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		14600	99.6	16800	250	13200	252	13400	251	9420	99.2	2650	49.9
TPH by SW8015 Mod	Extracted:	05.28.2020	17:00										
	Analyzed:	05.29.2020 (08:58										
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2										
Diesel Range Organics (DRO)		<50.2	50.2										
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2										
Total TPH		<50.2	50.2										

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jession VRAMER

Jessica Kramer Project Manager

Jared Stoffel



Project Id:

Contact:

Certificate of Analysis Summary 662893

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

 Date Received in Lab:
 Thu 05.28.2020 16:10

 Report Date:
 06.02.2020 16:35

 Project Manager:
 Jessica Kramer

Project Location:								Project M	Ianager: Jessica Kra	mer
	Lab Id:	662893-00	07	662893-0	08	662893-00	09			
Analysis Requested	Field Id:	BH-3 @ 19-	-20'	BH-3 @ 24-	-25'	BH-3 @ 29-3	80'			
Anulysis Requesieu	Depth:	19-20 ft		24-25 ft		29-30 ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	05.28.2020	11:30	05.28.2020	11:40	05.28.2020 1	11:50			
Chloride by EPA 300	Extracted:	05.29.2020	15:20	05.29.2020	15:20	06.01.2020 1	11:20			
	Analyzed:	05.29.2020 2	23:18	05.29.2020 2	23:24	06.01.2020 1	18:15			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		1190	24.8	302	49.5	77.7	5.03			

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.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jession VRAMER

Jessica Kramer Project Manager



Analytical Report 662893

for

TRC Solutions, Inc

Project Manager: Jared Stoffel

Willow State #003

06.02.2020

Collected By: Client



1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)



06.02.2020

Project Manager: **Jared Stoffel TRC Solutions, Inc** 2057 Commerce Midland, TX 79703

Reference: XENCO Report No(s): 662893 Willow State #003 Project Address:

Jared Stoffel:

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) 662893. 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. 662893 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,

Jession Vermer

Jessica Kramer Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	05.28.2020 10:30	0 - 1 ft	662893-001
S	05.28.2020 10:40	2 - 3 ft	662893-002
S	05.28.2020 10:50	4 - 5 ft	662893-003
S	05.28.2020 11:00	6 - 7 ft	662893-004
S	05.28.2020 11:10	8 - 9 ft	662893-005
S	05.28.2020 11:20	14 - 15 ft	662893-006
S	05.28.2020 11:30	19 - 20 ft	662893-007
S	05.28.2020 11:40	24 - 25 ft	662893-008
S	05.28.2020 11:50	29 - 30 ft	662893-009

BH-3 @ 24-25'

Sample Id BH-3 @ 0-1' BH-3 @ 2-3' BH-3 @ 4-5' BH-3 @ 6-7' BH-3 @ 8-9' BH-3 @ 14-15'

BH-3 @ 29-30'





CASE NARRATIVE

Client Name: TRC Solutions, Inc Project Name: Willow State #003

Project ID: Work Order Number(s): 662893
 Report Date:
 06.02.2020

 Date Received:
 05.28.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3127491 BTEX by EPA 8021B Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 662739-021 SD.



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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Lao Sample	Id: 662893-001		Date Co.	llected: 05.28.2020	10:30	Sample Depth: 0 - 1	1 11	
Analytical M	lethod: Chloride by	EPA 300				Prep Method: E30	0P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Pre	p: 05.29.2020	0 15:20	Basis: Wet	t Weight	
Seq Number	: 3127477							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	14600	99.6	mg/kg	05.29.2020 22:25		20

Analytical Method: TPH by SW801	5 Mod					Prep Method: S	W8015P	
Tech: DVM						% Moisture:		
Analyst: ARM		Date P	rep: 05	5.28.2020 17:00		Basis: W	et Weight	
Seq Number: 3127302								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2		mg/kg	05.29.2020 08:58	3 U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2		mg/kg	05.29.2020 08:58	3 U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2		mg/kg	05.29.2020 08:58	3 U	1
Total TPH	PHC635	<50.2	50.2		mg/kg	05.29.2020 08:58	3 U	1
Surrogate	(Cas Number	% Recover	y Units	Limits	Analysis Da	te Flag	
1-Chlorooctane	1	111-85-3	110	%	70-130	05.29.2020 08	:58	
o-Terphenyl	8	84-15-1	113	%	70-130	05.29.2020 08	:58	



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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 0-1' Lab Sample Id: 662893-001	Matrix: Date Collecte	Soil ed: 05.28.2020 10:30	Date Recei Sample De	ved:05.28.2020 16:10 pth: 0 - 1 ft
Analytical Method: BTEX by EPA 8021B Tech: AMF			Prep Metho % Moisture	od: SW5035A e:
Analyst: AMF Seq Number: 3127491	Date Prep:	05.29.2020 15:00	Basis:	Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	05.29.2020 20:07	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	05.29.2020 20:07	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	121	%	70-130	05.29.2020 20:07		
1,4-Difluorobenzene		540-36-3	129	%	70-130	05.29.2020 20:07		



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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 2-3' Lab Sample Id: 662893-002	Matrix: Date Collecte	Soil d: 05.28.2020 10:40		Date Received:05.28.2020 16:10 Sample Depth: 2 - 3 ft					
Analytical Method: Chloride by EPA	300				Prep Method: % Moisture:				
Analyst: CHE Seq Number: 3127477		Date Prep:	05.29.2020 15:20		Basis:	Wet W	/eight		
Parameter	Cas Number	Result RI	_	Units	Analysis D	ate	Flag	Dil	

Chloride

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16887-00-6 **16800**

250

05.29.2020 22:45

mg/kg



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50

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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 4-5' Lab Sample Id: 662893-003	Matrix: Date Collecte	Soil d: 05.28.2020 10:50		Date Received:05.28.2020 16:10 Sample Depth: 4 - 5 ft					
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P			
Analyst: CHE Seq Number: 3127477		Date Prep:	05.29.2020 15:20		Basis:	Wet Weight			
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil		

Chloride

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16887-00-6 **13200**

252

05.29.2020 22:51

mg/kg



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50

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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 6-7' Lab Sample Id: 662893-004	Matrix: Date Collecte	Soil d: 05.28.2020 11:00		Date Received:05.28.2020 16:10 Sample Depth: 6 - 7 ft					
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P			
Analyst: CHE		Date Prep:	05.29.2020 15:20		Basis:	Wet W	eight		
Seq Number: 3127477									
Parameter	Cas Number	Result RI		Units	Analysis D	ate 1	Flag	Dil	

Chloride

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16887-00-6 13400

251

05.29.2020 22:58

mg/kg



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20

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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 8-9' Lab Sample Id: 662893-005	Matrix: Date Collecte	Soil d: 05.28.2020 11:10		Date Received:05.28.2020 16:10 Sample Depth: 8 - 9 ft				
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P		
Analyst: CHE Seq Number: 3127477		Date Prep:	05.29.2020 15:20		Basis:	Wet We	eight	
Parameter	Cas Number	Result RI		Units	Analysis D	ate l	Flag	Dil

Chloride

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16887-00-6 **9420**

99.2

mg/kg 05.29.2020 23:04



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TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 14-15' Lab Sample Id: 662893-006		Matrix: Date Collecte	Soil d: 05.28.2020 11:20		Date Receive Sample Depth			0
Analytical Method: Chloride by EPA Tech: CHE	300				Prep Method: % Moisture:	E300P		
Analyst: CHE		Date Prep:	05.29.2020 15:20		Basis:	Wet We	eight	
Seq Number: 3127477								
Parameter	Cas Number	Result RI	_	Units	Analysis D	ate F	lag	Dil

Chloride

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16887-00-6 2650

49.9

05.29.2020 23:11

mg/kg

10

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Certificate of Analytical Results 662893

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TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BI Lab Sample Id: 66	Matrix: Soil Date Collected: 05.28.2020 11:30				Date Received:05.28.2020 16:10 Sample Depth: 19 - 20 ft					
Analytical Method Tech: CH	d: Chloride by EPA 3 HE	00					Prep Method: % Moisture:	E300P		
Analyst: CH	ΗE		Date Prepa	05	5.29.2020 15:20		Basis:	Wet W	eight	
Seq Number: 312	27477									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ite	Flag	Dil

Chloride

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1190

16887-00-6

24.8

mg/kg 05.29.2020 23:18



Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 24-25 ' Lab Sample Id: 662893-008	Matrix: Date Collecte	Soil d: 05.28.2020 11:40		Date Received:05.28.2020 16:10 Sample Depth: 24 - 25 ft					
Analytical Method: Chloride by EPA Tech: CHE	A 300				Prep Method: % Moisture:	E300F	þ		
Analyst: CHE		Date Prep:	05.29.2020 15:20		Basis:	Wet W	Veight		
Seq Number: 3127477 Parameter	Cas Number	Result RI		Units	Analysis D	ate	Flag	Dil	

Chloride

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16887-00-6 **302**

49.5

05.29.2020 23:24

mg/kg

10

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Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id: BH-3 @ 29-30'Lab Sample Id:662893-009	Matrix: Soil Date Collected: 05.28.2020 11:50			Date Received:05.28.2020 16:10 Sample Depth: 29 - 30 ft				
Analytical Method: Chloride by EPA Tech: SPC	. 300				Prep Method: % Moisture:	E300P		
Analyst: CHE		Date Prep:	06.01.2020 11:20		Basis:	Wet Weigh	t	
Seq Number: 3127625								
Parameter	Cas Number	Result R	L	Units	Analysis D	ate Flag	Dil	

Chloride

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16887-00-6 77.7

5.03

06.01.2020 18:15

mg/kg

1

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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.	ND Not Detected			
RL Reporting Limit				
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection	
PQL Practical Quantitation Limit	MQL Method Qu	antitation Limit	LOQ Limit of Quantitatio	n
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/Labo	ratory Control Sample Duplicate
MD/SD Method Duplicate/Samp	ple Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate
+ NELAC certification not offered	l for this compound.			

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



QC Summary 662893

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: MB Sample Id:	Chloride by EP 3127477 7704392-1-BLK	A 300			Matrix: nple Id:	Solid 7704392-2	I-BKS			ep Methe Date Pr D Sample	ep: 05.2	0P 29.2020 4392-1-BSD	
Parameter		IB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride	Res		Amount 250	Result 248	%Rec 99	Result 248	%Rec 99	90-110	0	Limit 20	mg/kg	Date 05.29.2020 20:12	8
Analytical Method: Seq Number: MB Sample Id:	Chloride by EP 3127625 7704462-1-BLK	A 300			Matrix: nple Id:	Solid 7704462-1	I-BKS			ep Metho Date Pro D Sample	ep: 06.0	0P 01.2020 4462-1-BSD	
Parameter		IB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride	Res <5		Amount 250	Result 253	%Rec 101	Result 248	%Rec 99	90-110	2	Limit 20	mg/kg	Date 06.01.2020 16:59	
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EP . 3127477 662867-089	4 300			Matrix: nple Id:	Soil 662867-08	39 S			ep Methe Date Pr D Sample	ep: 05.2	0P 29.2020 867-089 SD	
Parameter	Pare		Spike	MS	MS	MSD	MSD	Limits	%RPD	RPD	Units	Analysis Date	Flag
Chloride	Res	int 7 189	Amount 250	Result 915	%Rec 90	Result 910	%Rec 88	90-110	1	Limit 20	mg/kg	05.29.2020 22:05	х
Analytical Method: Seq Number:	Chloride by EP 3127477	A 300			Matrix:	Soil			Pr	ep Metho Date Pro		0P 29.2020	
-		4 300				Soil 662973-00)1 S		MS	Date Pr	ep: 05.2		
Seq Number:	3127477	nt	Spike Amount)1 S MSD %Rec	Limits		Date Pr	ep: 05.2	29.2020	Flag
Seq Number: Parent Sample Id:	3127477 662973-001 Pare Res	nt	Spike	MS Sar MS	nple Id: MS	662973-00 MSD	MSD	Limits 90-110	MS	Date Pro D Sample RPD	ep: 05.2 e Id: 662	29.2020 973-001 SD Analysis	Flag X
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3127477 662973-001 Pare Res 7 Chloride by EP 3127625	nt Alt A	Spike Amount 250	MS Sar MS Result 1030	mple Id: MS %Rec 93 Matrix:	662973-00 MSD Result 1020 Soil	MSD %Rec 89		MSI %RPD 1 Pr	Date Pr D Sample RPD Limit 20 rep Methe Date Pr	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020	-
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id:	3127477 662973-001 Pare Res 7 Chloride by EP.	nt ult A '98 A 300	Spike Amount 250	MS Sar MS Result 1030 MS Sar MS	mple Id: MS %Rec 93 Matrix:	662973-00 MSD Result 1020	MSD %Rec 89		MSI %RPD 1 Pr	Date Pro D Sample RPD Limit 20 rep Metho Date Pro D Sample RPD	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD Analysis	X
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3127477 662973-001 Pare Ress 7 Chloride by EP 3127625 662904-001 Pare Ress	nt 11t A 198 A 300 nt	Spike Amount 250	MS Sar MS Result 1030 MS Sar	nple Id: MS %Rec 93 Matrix: nple Id:	662973-00 MSD Result 1020 Soil 662904-00 MSD Result	MSD %Rec 89	90-110 Limits	MSI %RPD 1 Pr MSI	Date Pr D Sample RPD Limit 20 rep Metho Date Pr D Sample	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662 Units	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD	-
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter	3127477 662973-001 Pare Ress 7 Chloride by EP 3127625 662904-001 Pare Ress	nt 11t A 198 A 300 nt 11t A	Spike Amount 250 Spike Amount	MS Sar MS Result 1030 MS Sar MS Result	nple Id: MS %Rec 93 Matrix: nple Id: MS %Rec	662973-00 MSD Result 1020 Soil 662904-00 MSD	MSD %Rec 89)1 S MSD %Rec	90-110 Limits	MSJ %RPD 1 Pr MSJ %RPD	Date Pr D Sample RPD Limit 20 rep Methe Date Pr D Sample RPD Limit	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD Analysis Date	X
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter	3127477 662973-001 Pare Res 7 Chloride by EP. 3127625 662904-001 Pare Res 2	nt 11 A 198 A 300 nt 11 A 4.8	Spike Amount 250 Spike Amount 249	MS Sar MS Result 1030 MS Sar MS Result 273	nple Id: MS %Rec 93 Matrix: nple Id: MS %Rec 100 Matrix:	662973-00 MSD Result 1020 Soil 662904-00 MSD Result 268	MSD %Rec 89 01 S MSD %Rec 98	90-110 Limits	MSI %RPD 1 Pr MSI %RPD 2 Pr	Date Pro D Sample RPD Limit 20 rep Metho Date Pro D Sample RPD Limit 20 rep Metho Date Pro	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662 Units mg/kg od: E30 ep: 06.0	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD Analysis Date 06.01.2020 18:25	X
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3127477 662973-001 Pare Res 7 Chloride by EP 3127625 662904-001 Pare Res 2 2 Chloride by EP 3127625 662991-041 Pare	nt 4 98 A 300 nt 4.8 A 300 n t	Spike Amount 250 Spike Amount 249 Spike	MS Sar MS Result 1030 MS Sar MS Result 273 MS Sar MS Sar	nple Id: MS %Rec 93 Matrix: nple Id: MS %Rec 100 Matrix: nple Id: MS	662973-00 MSD Result 1020 Soil 662904-00 MSD Result 268 Soil 662991-04 MSD	MSD %Rec 89)1 S MSD %Rec 98 41 S MSD	90-110 Limits	MSI %RPD 1 Pr MSI %RPD 2 Pr	Date Pro D Sample RPD Limit 20 rep Metho Date Pro D Sample RPD Limit 20 rep Metho Date Pro Date Pro Date Pro Date Pro	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662 Units mg/kg od: E30 ep: 06.0	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD Analysis Date 06.01.2020 18:25 0P 01.2020 991-041 SD Analysis	X
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number: Parent Sample Id: Chloride Analytical Method: Seq Number: Parent Sample Id:	3127477 662973-001 Pare Res 7 Chloride by EP. 3127625 662904-001 Pare Res 2 Chloride by EP. 3127625 662991-041 Pare Res	nt 4 98 A 300 nt 4.8 A 300 n t	Spike Amount 250 Spike Amount 249	MS Sar MS Result 1030 MS Sar MS Result 273	nple Id: MS %Rec 93 Matrix: nple Id: MS %Rec 100 Matrix: nple Id:	662973-00 MSD Result 1020 Soil 662904-00 MSD Result 268 Soil 662991-04	MSD %Rec 89 01 S MSD %Rec 98	90-110 Limits 90-110	MSI %RPD 1 Pr MSI %RPD 2 Pr MSI	Date Pro D Sample RPD Limit 20 rep Metho Date Pro D Sample RPD Limit 20 rep Metho Date Pro Date Pro Date Pro	ep: 05.2 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662 Units mg/kg od: E30 ep: 06.0 e Id: 662	29.2020 973-001 SD Analysis Date 05.29.2020 20:32 0P 01.2020 904-001 SD Analysis Date 06.01.2020 18:25 0P 01.2020 991-041 SD	X

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 662893

TRC Solutions, Inc

Willow State #003

Analytical Method: Seq Number: MB Sample Id:	TPH by S 3127302 7704293-1		od	l LCS San	Matrix: ple Id:	Solid 7704293-	I-BKS			rep Metho Date Pr D Sample	ep: 05.2	8015P 28.2020 4293-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	< 50.0	1000	1160	116	1170	117	70-130	1	20	mg/kg	05.28.2020 11:32	
Diesel Range Organics	(DRO)	<50.0	1000	1190	119	1180	118	70-130	1	20	mg/kg	05.28.2020 11:32	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1-Chlorooctane		112		9	0		130	1	70	-130	%	05.28.2020 11:32	
o-Terphenyl		129		12	28		129		70	-130	%	05.28.2020 11:32	

Analytical Method:TSeq Number:31	127302	Matrix: B Sample Id:	Solid 7704293-1-BLK	Prep Method: Date Prep:			
Parameter Motor Oil Range Hydrocarbons	Re	MB esult 50.0			J nits ng/kg	Analysis Date 05.28.2020 11:13	Flag

Analytical Method:	TPH by SV	W8015 M	od						Pi	rep Metho	od: SW	8015P						
Seq Number:	3127302				Matrix:	Soil			Date Prep: 05.28.2020									
Parent Sample Id:	662742-00	1		MS Sar	nple Id:	662742-00	01 S		MSD Sample Id: 662742-001 SD									
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag					
Gasoline Range Hydrocarb	< 50.2	1000	976 98		990	99	70-130	1	20	mg/kg	05.28.2020 12:29							
Diesel Range Organics	(DRO)	<50.2	1000	924	92	936	94	70-130	1	20	mg/kg	05.28.2020 12:29						
Surrogate				MS %Rec		MS Flag	MSD %Re			imits	Units	Analysis Date						
1-Chlorooctane				1	19		125		70	-130	%	05.28.2020 12:29						
o-Terphenyl				1	10		110	1	70	-130	%	05.28.2020 12:29						

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 8021 3127491 7704443-1-BLK	B		Matrix: ple Id:	Solid 7704443-1	1-BKS	Prep Method: SW5035A Date Prep: 05.29.2020 LCSD Sample Id: 7704443-1-BSD								
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag			
Benzene	< 0.00200	0.100	0.116	116	0.115	115	70-130	1	35	mg/kg	05.29.2020 15:07				
Toluene	< 0.00200	0.100	0.115	115	0.114	114	70-130	1	35	mg/kg	05.29.2020 15:07				
Ethylbenzene	< 0.00200	0.100	0.114	114	0.112	112	70-130	2	35	mg/kg	05.29.2020 15:07				
m,p-Xylenes	< 0.00400	0.200	0.235	118	0.229	115	70-130	3	35	mg/kg	05.29.2020 15:07				
o-Xylene	< 0.00200	0.100	0.116	116	0.113	113	70-130	3	35 mg/kg		05.29.2020 15:07				
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Ree			Limits Units		Analysis Date				
1,4-Difluorobenzene	105		1	02		107		70	-130	%	05.29.2020 15:07				
4-Bromofluorobenzene	71		1	13		114		70	-130	%	05.29.2020 15:07				

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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QC Summary 662893

SW5035A

05.29.2020

Prep Method: Date Prep:

TRC Solutions, Inc

Willow State #003

Analytical Method:	BTEX by EPA 8021	В				
Seq Number:	3127491			Matrix:	Soil	
Parent Sample Id:	662739-021		MS Sa	nple Id:	662739-02	21 S
Parameter	Parent	Spike	MS Bosult	MS % Boo	MSD	MS

MSD Sample Id: 662739-021 SD RPD SD Limits %RPD Units Analysis Flag Result Amount Result %Rec Result Limit Date %Rec 0.000503 0.134 35 05.29.2020 15:47 0.101 0.115 113 70-130 15 Х Benzene 133 mg/kg 05.29.2020 15:47 114 0.130 70-130 11 35 mg/kg Toluene 0.00107 0.101 0.116 129 05.29.2020 15:47 Ethylbenzene < 0.00202 0.101 0.113 112 0.127 127 70-130 12 35 mg/kg < 0.00404 0.202 0.235 116 0.260 70-130 10 35 05.29.2020 15:47 m,p-Xylenes 129 mg/kg 0.000563 0.101 0.127 70-130 12 35 05.29.2020 15:47 o-Xylene 0.113 111 mg/kg 126 MS MS MSD Limits Units Analysis MSD Surrogate %Rec Flag %Rec Flag Date 05.29.2020 15:47 1,4-Difluorobenzene 112 117 70-130 % 05.29.2020 15:47 125 132 ** 70-130 %

4-Bromofluorobenzene

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100*(C-A) / B $\begin{array}{l} \text{[D]} & = 100^{\circ} | (\text{C-E}) / (\text{C+E}) | \\ \text{[D]} & = 100^{\circ} (\text{C}) / [\text{B}] \\ \text{Log Diff.} & = \text{Log(Sample Duplicate)} - \text{Log(Original Sample)} \end{array}$ LCS = Laboratory Control Sample A = Parent ResultC = MS/LCS Res C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

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\$ 01 22/32/2	(Signature) Regeived by: (Signature) Date/Time Relinquished by: (Signature) 2	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 AI Sb As Ba Be BC Circle Action Concerned Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn No Ni Ke Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Ke Ag Ti U			@ (3-9) 110- @	0 4-S 1 1 1 1	1040 2-31 1	BH-300-11 S 05/26/26 10-20 0-11 X X X X	Sample Identification Matrix Sampled Sampled Depth	Yes No Wirk Total Containers:	Vac No WA Connection Earlow TON	Temperature (°C): 1/2/2000 Theymometer ID Performance Received Intact: (Yed) No V/A Each of the second	SAMPLE RECEIPT Temp Blank: Yes Wet Ice: Yes No a C	Quote #	Mishi Teinert / Tania Babu	Rush:	Routine 🕅 Pres.	AN	Phone: 432-238-3003 Email: 1KC, JULED, TUNIC, ROBERT GRADDS Deliverables: EDD	Ind, TX 70,705 City, State ZIP:	EISDE Address:	(DG			LABORATORIES Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
	Received by: (Signature) Date/Time		K Se Ag SiO2 Na Sr TI Sn U V Zn 1631/245.1/7470/7471:Hg							Sample Comments	TAT starts the day received by the lab, received by 4:00pm		NaOH: Na	HCL: HL	H2S04: H2	HNO3: HN	ON :auoN aiv :unaiv		Preservative Codes	EDD ADaPT Other:	Reporting:Level II Level III PST/UST TRRP Level IV	oject:	Program: UST/PST PRP Brownfields RRC Superfund	Comments	www.xenco.com Page { of	

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc	Acceptable Temp	Acceptable Temperature Range: 0 - 6 degC									
Date/ Time Received: 05.28.2020 04.10.00 PM		Air and Metal samples Acceptable Range: Ambient									
Work Order #: 662893	Temperature Meas	Temperature Measuring device used: R9									
Sample	Receipt Checklist		Comments								
#1 *Temperature of cooler(s)?		5.3									
#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/ receiv	ed?	Yes									
#10 Chain of Custody agrees with sample labels/matri	x?	Yes									
#11 Container label(s) legible and intact?		Yes									
#12 Samples in proper container/ bottle?		Yes	BTEX was in bulk container								
#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)?		N/A									
#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:

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PH Device/Lot#:

Checklist completed by: Billion Tall Brianna Teel

Date: 05.29.2020

Checklist reviewed by: Jession Veamer

Jessica Kramer

Date: 06.02.2020