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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

10 Desta Dr., Suite 150E
Midland, TX 79705
T 432.520.7720
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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 Release. One (1) soil boring (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 @ 4', and AH-1 @ 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 @ 2', AH-2 @ 3', and AH-2 @ 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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Midland, TX 79705
T 432.520.7720
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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.

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

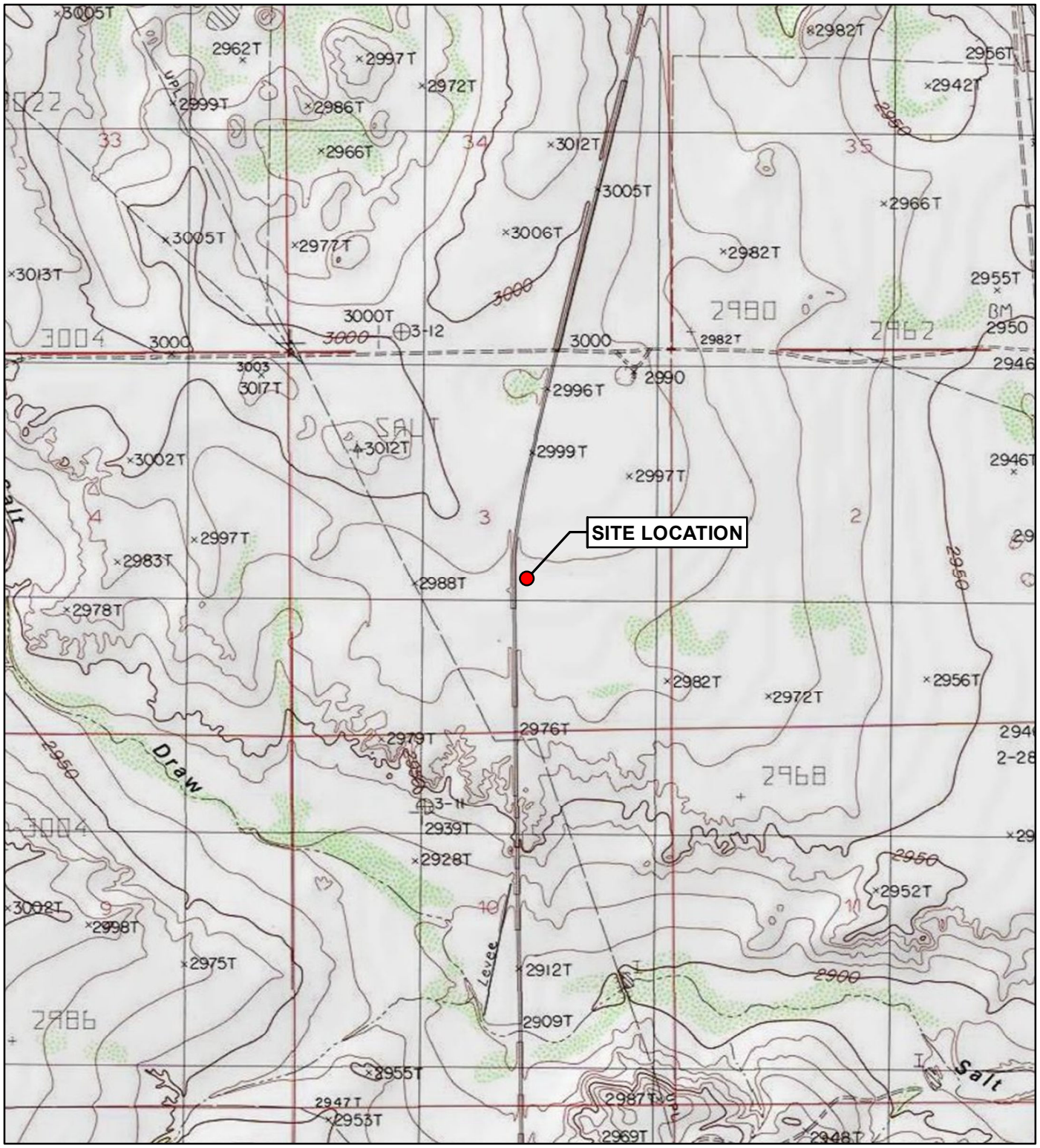
DISTRIBUTION

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
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



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES MALAGA, NEW MEXICO (32104-B1)

N

1 " = 2,000 '
1:24,000

0 2,000 4,000
FEET

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505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080
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PROJECT:

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

TITLE:

TOPOGRAPHIC MAP

DRAWN BY:	M. JAGOE
CHECKED BY:	J. STOFFEL
APPROVED BY:	J. STOFFEL
DATE:	JULY 2020
PROJ. NO.:	372972
FILE:	372972_1.mxd

FIGURE 1

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Path: S:\1-PROJECTS\ConchoResources\372972\MXD\372972_2.mxd

Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

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LEGEND

WATER WELL
WETLANDS
HALF MILE RADIUS
AREA INSIDE 100 YEAR FLOODPLAIN

SOURCE: FLOODPLAIN - FEMA FLOOD MAP SERVICE CENTER (MSC); AERIAL IMAGERY - ESRI WORLD IMAGERY (11/4/2018)

N
0 1,500 FEET
1 " = 1,500 '
1:18,000

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505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

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

TITLE:
AERIAL MAP

DRAWN BY:	M. JAGOE
CHECKED BY:	J. STOFFEL
APPROVED BY:	J. STOFFEL
DATE:	JULY 2020
PROJ. NO.:	372972
FILE:	372972_2.mxd

FIGURE 2

Plot Date: 7/17/2020, 12:32:42 PM by SRAY -- LAYOUT: ANSI B (11"x17")
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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

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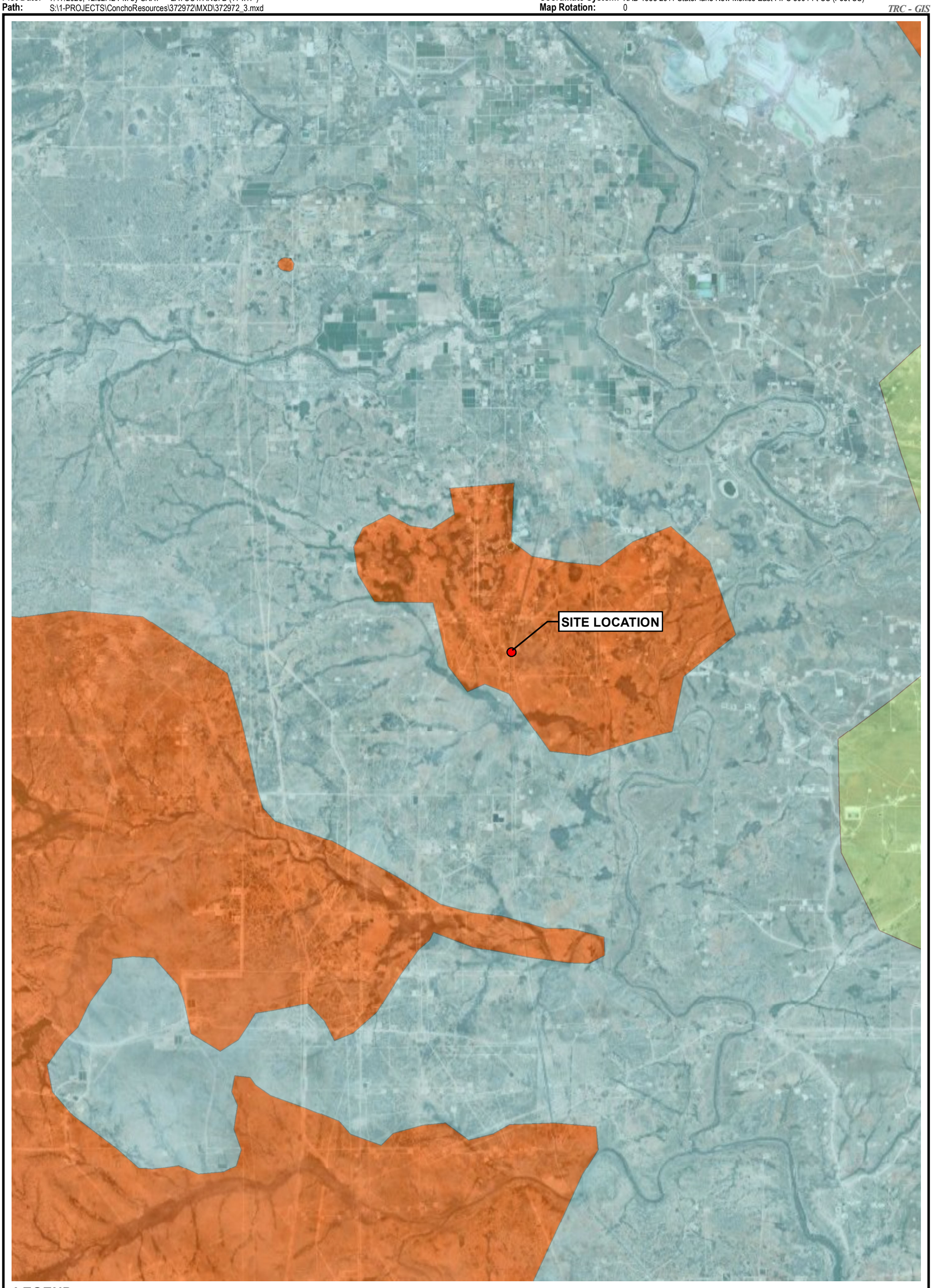

LEGEND

- Points
- LOW KARST POTENTIAL
- MEDIUM KARST POTENTIAL
- HIGH KARST POTENTIAL

SOURCE: KARST DATA FROM NEW MEXICO BUREAU OF LAND MANAGEMENT; AERIAL IMAGERY - ESRI WORLD IMAGERY (11/4/2018)

N

0 2 MILES

1 " = 2 MILES

1:100,000

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Suite #250
Austin, TX 78752
Phone: 512.329.6080

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WILLOW STATE #003
EDDY COUNTY, NEW MEXICO

TITLE:

KARST POTENTIAL MAP

DRAWN BY:	M. JAGOE
CHECKED BY:	J. STOFFEL
APPROVED BY:	J. STOFFEL
DATE:	JULY 2020
PROJ. NO.:	372972
FILE:	372972_3.mxd

FIGURE 3

SOURCE: AERIAL IMAGERY - ESRI WORLD IMAGERY (CLARITY)

LEGEND

- DELINEATION SAMPLE
- RELEASE AREA
- PROPOSED SHALLOWER LINER LOCATION
- PROPOSED DEEPER LINER LOCATION
- CURRENT EXCAVATION
- APPROXIMATE LINER LOCATION 2RP-1541
- APPROXIMATE LINER LOCATION 2RP-3105
- 36" SURFACE POLY GAS LINE
- COG FLOWLINE
- PLAINS BURIED LINE
- RYX MIDSTREAM SERVIES LINE
- US 285 RIGHT OF WAY PROPERTY BOUNDARY

N

0 35 70 Feet

1 " = 35 '

1:420

PROJECT:

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

TITLE:

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		

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Austin, TX 78752
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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0
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TABLE 1
Summary of Sampling Analytical Results (Delineation Samples)
Concentrations of BTEX, TPH, and/or Chloride in Soil

Sample ID	Date	Depth	Proposed Soil Status	Vertical or Horizontal Delineation Sample	SW 846 8021B		SW 846 8015M Ext.					E 300
					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)
Road Bore Excavation 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	–	–	–	–	–	–	–	**8,360**
Wall @ 4'	12/3/19	-	Excavate	Horizontal	–	–	–	–	–	–	–	**9,650**
Wall @ 5'	12/3/19	-	Excavate	Horizontal	–	–	–	–	–	–	–	**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	–	–	–	–	–	–	–	**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
NMOCD Closure Criteria					**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**

Proposed Soil Status - Excavate
Proposed Soil Status - Under Liner
Proposed Soil Status - Excavate and Backfill Prior to Setting Liner

TABLE 1
Summary of Sampling Analytical Results (Delineation Samples)
Concentrations of BTEX, TPH, and/or Chloride in Soil

Sample ID	Date	Depth	Proposed Soil Status	Vertical or Horizontal Delineation Sample	SW 846 8021B		SW 846 8015M Ext.					E 300
					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 Samples												
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
NMOCD Closure Criteria					**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**

Proposed Soil Status - Excavate
Proposed Soil Status - Under Liner
Proposed Soil Status - Excavate and Backfill Prior to Setting Liner

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

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

☐ 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		

State of New Mexico
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? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

- ☐ 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 Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	≈50 (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 ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Ike Tavarez Title: Senior HSE Supervisor

Signature: Date: 07/17/2020

email: itavarez@concho.com Telephone: (432) 685-2573

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Ike Tavarez Title: Senior HSE Supervisor

Signature: Date: 07/17/2020

email: itavarez@concho.com Telephone: (432) 685-2573

OCD Only

Received by: Date:

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

Signature: Date:

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

Appendix B – Groundwater Database Results

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

No records found.

PLSS Search:

Section(s): 3 **Township:** 25S **Range:** 28E

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01411 POD2		C	ED	4	2	4	04	25S	28E	586374	3558036	1211	90	50	40
C 01411	R	C	ED	4	4	2	04	25S	28E	586289	3558522*	1235	69	35	34

Average 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**

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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

Photograph No. 3 **Date:** **5/7/2020** **Direction:** **East** **Description:** **View of the release area.**	
Photograph No. 4 **Date:** **5/7/2020** **Direction:** **East** **Description:** **View of the release area.**	

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Appendix D – Soil Boring Log

TRC

LOG OF SOIL BORING

PROJECT NAME: COG: Willow State #3	SOIL BORING ID: BH-3		
PROJECT NUMBER: 372972	LOCATION:	SHEET 1 OF 2	
LOGGED BY: Tania Babu / Misti Teinert		SURFACE ELEV.:	
PROJECT LOCATION: Eddy County, NM	N: 32.1577320 E: 104.0732201	DATE STARTED: 5/28/2020	
DRILLED BY: Scharborough Drilling	DRILLER NAME: Lane Scharborough	DATE COMPLETED: 5/28/2020	

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						Dark brown, Medium to well sorted sand	14,160 ppm
						no staining, Slight odor	
					2.5		15,624 ppm
					5.0		10,788 ppm
					7.5		11,776 ppm
							8,388 ppm
					10.0	Samples not collected	
					12.5		
						Red clay, low to medium moisture content	1,940 ppm
					15.0	no staining, no odor, ~10% gypsum	
					17.5		
					20.0		970 ppm

DRILLING METHOD	WATER LEVEL OBSERVATIONS			
Air rotary	FIRST OCCURRENCE:			
DRILL RIG	DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM
BORING DIAMETER				

Misti Teinert 5/28/20
SIGNED DATE

CHECKED DATE

REVISED 06/2011

TRC

LOG OF SOIL BORING

PROJECT NAME: COG: Willow State #3	SOIL BORING ID: BH-3		
PROJECT NUMBER: 372972	LOCATION:	SHEET 2 OF 2	
LOGGED BY: Tania Baker / Misti Feinerst		SURFACE ELEV.:	
PROJECT LOCATION: Eddy County, TX	N: 32.1577370 E: -104.0732201	DATE STARTED: 5/28/2020	
DRILLED BY: Scharborough Drilling	DRILLER NAME: Lane Scharborough	DATE COMPLETED: 5/28/2020	

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
					20		496 ppm
					22.5	Red Silty clays, low moisture well sorted no staining or odor	
					25.0		168 ppm
					27.5		
					30.0	Medium to fine grained sand, light brown no staining or odor Two consecutive clean samples, drilling terminated.	74 ppm
					32.5		
					35.0		
					37.5		
					40.0		

DRILLING METHOD
DRILL RIG
BORING DIAMETER

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED DATE 5/28/20

CHECKED DATE

REVISED 06/2011

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Midland, TX 79705
T 432.520.7720
TRCcompanies.com

Appendix E – Laboratory Analytical Report

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX

Project Name: Willow State 003

Project Id:
Contact: Jared Stoffel
Project Location: New Mexico

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

Analysis Requested													
	Lab Id:	644960-001		644960-002		644960-003		644960-004		644960-005		644960-006	
	Field Id:	AH-1 @ 0-0.5'		AH-1 @ 1'		AH-1 @ 2'		AH-1 @ 3'		AH-1 @ 4'		AH-1 @ 5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-03-19 09:00		Dec-03-19 09:05		Dec-03-19 09:10		Dec-03-19 09:15		Dec-03-19 09:20		Dec-03-19 09:25	
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 16:34		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										

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX

Project Name: Willow State 003

Project Id:
Contact: Jared Stoffel
Project Location: New Mexico

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

Analysis Requested													
	Lab Id:	644960-007		644960-008		644960-009		644960-010		644960-011		644960-012	
	Field Id:	AH-2 @ 0-0.5'		AH-2 @ 1'		AH-2 @ 2'		AH-2 @ 3'		AH-2 @ 4'		Wall	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-03-19 09:30		Dec-03-19 09:35		Dec-03-19 09:40		Dec-03-19 09:45		Dec-03-19 09:50		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 17:48		Dec-04-19 17:57		Dec-04-19 22:17		Dec-04-19 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										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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 644960

TRC Solutions, Inc, Midland, TX

Project Name: Willow State 003

Project Id:
Contact: Jared Stoffel
Project Location: New Mexico

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

Analysis Requested												
	Lab Id:	644960-013		644960-014		644960-015		644960-016		644960-017		
	Field Id:	Wall @1'		Wall @2'		Wall @3'		Wall @4'		Wall @5'		
	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Dec-03-19 10:00		Dec-03-19 10:05		Dec-03-19 10:10		Dec-03-19 10:15		Dec-03-19 10:20		
Chloride by EPA 300	***Extracted:***	Dec-04-19 13:35		Dec-04-19 13:35		Dec-04-19 13:35		Dec-04-19 13:35		Dec-04-19 14:00		
	Analyzed:	Dec-04-19 22:45		Dec-04-19 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	

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

Version: 1.%

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 Kramer

Jessica Kramer
Project Assistant

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

CASE NARRATIVE

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
Lab Sample Id:	644960-001	Date Collected:	12.03.19 09.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**6920**	49.9	mg/kg	12.04.19 16.24		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	12.04.19 11.00	Basis:	Wet 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'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-001	Date Collected:	12.03.19 09.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% 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'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-002	Date Collected:	12.03.19 09.05		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**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'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-003	Date Collected:	12.03.19 09.10		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**13100**	101	mg/kg	12.04.19 17.02		20

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**AH-1 @ 3'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-004	Date Collected:	12.03.19 09.15		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**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'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-005	Date Collected:	12.03.19 09.20		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**10100**	99.6	mg/kg	12.04.19 17.20		20

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**AH-1 @ 5'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-006	Date Collected:	12.03.19 09.25		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**3330**	49.5	mg/kg	12.04.19 17.29		10

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:	644960-007	Date Collected:	12.03.19 09.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**8460**	99.4	mg/kg	12.04.19 17.39		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	12.04.19 11.00	Basis:	Wet 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	

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:	644960-007	Date Collected:	12.03.19 09.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% 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 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:	**AH-2 @ 1'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-008	Date Collected:	12.03.19 09.35		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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	**6450**	49.6	mg/kg	12.04.19 17.48		10

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**AH-2 @ 2'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-009	Date Collected:	12.03.19 09.40		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% 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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**AH-2 @ 3'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-010	Date Collected:	12.03.19 09.45		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet Weight
Seq Number:	3109422				

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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**AH-2 @ 4'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-011	Date Collected:	12.03.19 09.50		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet 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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-012	Date Collected:	12.03.19 09.55		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet 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 SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	12.04.19 11.00	Basis:	Wet 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	
o-Terphenyl	84-15-1	106	%	70-135	12.04.19 16.41	

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-012	Date Collected:	12.03.19 09.55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% 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	<0.00200	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'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-013	Date Collected:	12.03.19 10.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet 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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall @2'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-014	Date Collected:	12.03.19 10.05		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet 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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall @3'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-015	Date Collected:	12.03.19 10.10		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet Weight
Seq Number:	3109422				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8360**	100	mg/kg	12.04.19 23.03		20

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall @4'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-016	Date Collected:	12.03.19 10.15		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 13.35	Basis:	Wet Weight
Seq Number:	3109422				

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

Certificate of Analytical Results 644960

TRC Solutions, Inc, Midland, TX

Willow State 003

Sample Id:	**Wall @5'**	Matrix:	Soil	Date Received:	12.04.19 09.04
Lab Sample Id:	644960-017	Date Collected:	12.03.19 10.20		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.04.19 14.00	Basis:	Wet 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

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **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/Laboratory Control Sample Duplicate

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

+ NELAC certification not offered for this compound.

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

QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109421 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691651-1-BLK — LCS Sample Id: 7691651-1-BKS — LCSD Sample Id: 7691651-1-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	255	102	255	102	90-110	0	20	mg/kg	12.04.19 13:19	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109422 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691652-1-BLK — LCS Sample Id: 7691652-1-BKS — LCSD Sample Id: 7691652-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
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: E300P
Seq Number: 3109426 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691653-1-BLK — LCS Sample Id: 7691653-1-BKS — LCSD Sample Id: 7691653-1-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	254	102	252	101	90-110	1	20	mg/kg	12.04.19 23:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109421 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644709-005 — 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	RPD 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 300 — Prep Method: E300P
Seq Number: 3109421 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644958-002 — MS Sample Id: 644958-002 S — MSD Sample Id: 644958-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	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 — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109422 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644958-003 — MS Sample Id: 644958-003 S — MSD Sample Id: 644958-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	135	250	376	96	367	93	90-110	2	20	mg/kg	12.04.19 19:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109422 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644958-013 — MS Sample Id: 644958-013 S — MSD Sample Id: 644958-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	185	250	434	100	432	99	90-110	0	20	mg/kg	12.04.19 21:21	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109426 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644440-010 — MS Sample Id: 644440-010 S — MSD Sample Id: 644440-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.0	250	296	104	295	103	90-110	0	20	mg/kg	12.05.19 00:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109426 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644597-002 — MS Sample Id: 644597-002 S — MSD Sample Id: 644597-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	127	249	375	100	374	99	90-110	0	20	mg/kg	12.05.19 01:51	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109353 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691630-1-BLK — LCS Sample Id: 7691630-1-BKS — LCSD Sample Id: 7691630-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1100	110	1060	106	70-135	4	20	mg/kg	12.04.19 10:26	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	997	100	70-135	2	20	mg/kg	12.04.19 10:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		127		125		70-135	%	12.04.19 10:26
o-Terphenyl	109		109		105		70-135	%	12.04.19 10:26

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3109353 | Matrix: Solid | Date Prep: 12.04.19
MB Sample Id: 7691630-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.04.19 10:08	

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3109353 | Matrix: Soil | Date Prep: 12.04.19
Parent 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 Hydrocarbons (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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		129		70-135	%	12.04.19 11:24
o-Terphenyl	113		114		70-135	%	12.04.19 11:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3109384 | Matrix: Solid | Date Prep: 12.04.19
MB Sample Id: 7691602-1-BLK | LCS Sample Id: 7691602-1-BKS | LCSD Sample Id: 7691602-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		97		70-130	%	12.04.19 11:45
4-Bromofluorobenzene	95		101		116		70-130	%	12.04.19 11:45

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

QC Summary 644960

TRC Solutions, Inc

Willow State 003

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3109384 Matrix: Soil Date Prep: 12.04.19

Parent Sample Id: 644960-001 MS Sample Id: 644960-001 S MSD Sample Id: 644960-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	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	X
m,p-Xylenes	0.00133	0.200	0.121	60	0.168	83	70-130	33	35	mg/kg	12.04.19 12:25	X
o-Xylene	0.000996	0.0998	0.0610	60	0.0845	84	70-130	32	35	mg/kg	12.04.19 12:25	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		70-130	%	12.04.19 12:25
4-Bromofluorobenzene	106		111		70-130	%	12.04.19 12:25

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 6044900

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr STE 150E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432-238-3003	Email:	Jared, Ike

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	US 285 Direct Bore	Turn Around	
Project Number:		Routine ☐	
Project Location	New Mexico	Rush: 3 day	
Sampler's Name:	J. Stoffel	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.3	Thermometer ID:	IR8
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (8015)	BTEX (8021B)	Chloride (E300)	4 to 12	Sample Comments
	AH-1 @ 0-0.5'	Soil	12/3/19	0900		1		X	X	X		
	AH-1 @ 1'			0905						X	X	
	AH-1 @ 2'			0910						X	X	
	AH-1 @ 3'			0915						X	X	
	AH-1 @ 4'			0920						X	X	
	AH-1 @ 5'			0925						X	X	
	AH-2 @ 0-0.5'			0930				X	X	X		
	AH-2 @ 1'			0935						X	X	
	AH-2 @ 2'			0940						X	X	
	AH-2 @ 3'	↓	↓	0945		↓				X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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 Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/4/19	2		
3				4		
5			904	6		

Revised Date 022619 Rev. 2019.1

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 614960

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr STE 150E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432-238-3003	Email:	Jared, Ike

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	US 285 Direct Bore	Turn Around	
Project Number:		Routine ☐	
Project Location	New Mexico	Rush: 3 day	
Sampler's Name:	J. Stoffel	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.5	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0
Sample Custody Seals:	Yes No N/A	Total Containers:	

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (8015)	BTEX (8021B)	Chloride (E300)	Hold	Sample Comments
	AH-2 @ 4'	Soil	12/3/19	0950		1				X	X	
	Wall			0955				X	X	X		
	Wall @ 1'			1000						X	X	
	Wall @ 2'			1005						X	X	
	Wall @ 3'			1010						X	X	
	Wall @ 4'			1015						X	X	
	Wall @ 5'			1020						X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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 Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12/4/19	2		
3		904	4		
5			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 12/04/2019 09:04:00 AM

Work Order #: 644960

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#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**
#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
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/05/2019
Jessica Kramer

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

Analysis Requested													
	Lab Id:	661472-001		661472-002		661472-003		661472-004		661472-005		661472-006	
	Field Id:	TT-1 @ 0-0.5'		TT-1 @ 1'		TT-1 @ 2'		TT-1 @ 3'		TT-1 @ 4'		TT-1 @ 5'	
	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 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	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:***	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										

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

Jessica Kramer
Project Manager

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

Analysis Requested													
	Lab Id:	661472-007		661472-008		661472-009		661472-010		661472-011		661472-012	
	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 04:20											
	Units/RL:	mg/kg	RL										
Benzene		<0.00200	0.00200										
Toluene		<0.00200	0.00200										
Ethylbenzene		<0.00200	0.00200										
m,p-Xylenes		<0.00400	0.00400										
o-Xylene		<0.00200	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										

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

Jessica Kramer
Project Manager

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

Analysis Requested							
	Lab Id:	661472-013					
	Field Id:	TT-2 @ 6'					
	Depth:	6- ft					
	Matrix:	SOIL					
	Sampled:	05.08.2020 11:00					
Chloride by EPA 300	***Extracted:***	05.15.2020 13:25					
	Analyzed:	05.15.2020 18:39					
	Units/RL:	mg/kg	RL				
Chloride		199	4.99				

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)

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,

Jessica Kramer

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

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 0-0.5'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-001	Date Collected:	05.07.2020 16:10	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**4510**	50.4	mg/kg	05.15.2020 16:27		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 11:00	Basis:	Wet 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 12:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.14.2020 12:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.14.2020 12:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.14.2020 12:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	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	

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

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

Parameter	Cas Number	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	

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 1'**	Matrix:	Soil	Date Received:	05.13.2020 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 Weight
Seq Number:	3126147				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**449**	25.2	mg/kg	05.15.2020 16:33		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 2'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-003	Date Collected:	05.07.2020 16:30	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**1050**	25.1	mg/kg	05.15.2020 16:38		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 3'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-004	Date Collected:	05.07.2020 16:40	Sample Depth:	3 ft
Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**1780**	25.0	mg/kg	05.15.2020 16:44		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 4'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-005	Date Collected:	05.07.2020 16:50	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**17.3**	5.02	mg/kg	05.16.2020 11:51		1

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-1 @ 5'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-006	Date Collected:	05.07.2020 17:00	Sample Depth:	5 ft
Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**70.3**	25.3	mg/kg	05.15.2020 17:07		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 0-0.5'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-007	Date Collected:	05.08.2020 10:00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**2780**	25.0	mg/kg	05.15.2020 17:24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 11:00	Basis:	Wet 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	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.14.2020 13:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.14.2020 13:49	U	1
Total TPH	PHC635	<50	50	mg/kg	05.14.2020 13:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	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	

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 0-0.5'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-007	Date Collected:	05.08.2020 10:00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight
Seq Number:	3126205				

Parameter	Cas Number	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	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	

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 1'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-008	Date Collected:	05.08.2020 10:10	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 Weight
Seq Number:	3126147				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3660**	25.0	mg/kg	05.15.2020 17:30		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 2'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-009	Date Collected:	05.08.2020 10:20	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**4020**	24.8	mg/kg	05.15.2020 17:36		5

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 3'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-010	Date Collected:	05.08.2020 10:30	Sample Depth:	3 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	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5410**	50.3	mg/kg	05.15.2020 21:02		10

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 4'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-011	Date Collected:	05.08.2020 10:40	Sample Depth:	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	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2220**	50.2	mg/kg	05.15.2020 21:07		10

Certificate of Analytical Results 661472

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**TT-2 @ 5'**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661472-012	Date Collected:	05.08.2020 10:50	Sample Depth:	5 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	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**607**	4.98	mg/kg	05.15.2020 21:13		1

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 Collected:	05.08.2020 11:00	Sample Depth:	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 Weight
Seq Number:	3126149				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**199**	4.99	mg/kg	05.15.2020 18:39		1

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 Detection Limit **LOD** Limit of Detection

PQL 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/Laboratory Control Sample Duplicate

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

+ NELAC certification not offered for this compound.

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

QC Summary 661472

TRC Solutions, Inc

Willow State #003

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703415-1-BLK — LCS Sample Id: 7703415-1-BKS — LCSD Sample Id: 7703415-1-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	258	103	90-110	4	20	mg/kg	05.15.2020 15:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703416-1-BLK — LCS Sample Id: 7703416-1-BKS — LCSD Sample Id: 7703416-1-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	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661331-021 — MS Sample Id: 661331-021 S — MSD Sample Id: 661331-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.7	248	270	95	280	99	90-110	4	20	mg/kg	05.15.2020 15:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661472-004 — MS Sample Id: 661472-004 S — MSD Sample Id: 661472-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1780	1250	3100	106	3030	100	90-110	2	20	mg/kg	05.15.2020 16:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661472-013 — MS Sample Id: 661472-013 S — MSD Sample Id: 661472-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	199	250	445	98	464	106	90-110	4	20	mg/kg	05.15.2020 18:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661636-008 — MS Sample Id: 661636-008 S — MSD Sample Id: 661636-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	263	249	507	98	512	100	90-110	1	20	mg/kg	05.15.2020 20:04	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 661472

TRC Solutions, Inc

Willow State #003

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126065 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703327-1-BLK — LCS Sample Id: 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 Hydrocarbons (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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		104		98		70-130	%	05.14.2020 12:03
o-Terphenyl	98		100		102		70-130	%	05.14.2020 12:03

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126065 — Matrix: Solid — Date Prep: 05.14.2020
MB Sample Id: 7703327-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.14.2020 11:42	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126065 — Matrix: Soil — Date Prep: 05.14.2020
Parent Sample Id: 661472-001 — MS Sample Id: 661472-001 S — 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 Hydrocarbons (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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		94		70-130	%	05.14.2020 13:07
o-Terphenyl	104		99		70-130	%	05.14.2020 13:07

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3126205 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703488-1-BLK — LCS Sample Id: 7703488-1-BKS — 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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		104		70-130	%	05.18.2020 01:58
4-Bromofluorobenzene	99		104		107		70-130	%	05.18.2020 01:58

MS/MSD Percent Recovery [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 661472

TRC Solutions, Inc

Willow State #003

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3126205 Matrix: Soil Date Prep: 05.15.2020

Parent Sample Id: 661472-001 MS Sample Id: 661472-001 S 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		106		70-130	%	05.18.2020 02:39
4-Bromofluorobenzene	108		108		70-130	%	05.18.2020 02:39

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 606472

XENCO LABORATORIES

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)

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Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003 Email:	Ike, Jared, Tania, rgruhbs@concho.com	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Willow State #003	Turn Around	
Project Number:		Routine ☑	
P.O. Number:		Rush:	
Sampler's Name:	Tania Babu	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	5.6/5.3	Thermometer ID		
Received Intact:	(Yes) No		19	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.3	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015)	BTEX (8021)	Chlorides (E300)	Sample Comments
TT-1 @ 0-0.5'	ss	5/7/2020	1610	0-0.5'	1	x	x	x	
TT-1 @ 1'	ss	5/7/2020	1620	1'	1			x	
TT-1 @ 2'	ss	5/7/2020	1630	2'	1			x	
TT-1 @ 3'	ss	5/7/2020	1640	3'	1			x	
TT-1 @ 4'	ss	5/7/2020	1650	4'	1			x	
TT-1 @ 5'	ss	5/7/2020	1700	5'	1			x	
TT-2 @ 0-0.5'	ss	5/8/2020	1000	0-0.5'	1	x	x	x	
TT-2 @ 1'	ss	5/8/2020	1010	1'	1			x	
TT-2 @ 2'	ss	5/8/2020	1020	2'	1			x	
TT-2 @ 3'	ss	5/8/2020	1030	3'	1			x	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
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 Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/13/20 1432	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 1e1472

XENCO LABORATORIES

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)

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Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003	Email:	Ike, Jared, Tania, rgrubbs@concho.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Willow State #003	Turn Around	
Project Number:		Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Tania Babu	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	5.4/5.3	Thermometer ID	D9	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.3	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015)	BTEX (8021)	Chlorides (E300)	Sample Comments
TT-2 @ 4'	ss	5/8/2020	1040	4'	1			x	✓ - run deeper depth if previous is above 600 mg/kg
TT-2 @ 5'	ss	5/8/2020	1050	5'	1			x	
TT-2 @ 6'	ss	5/8/2020	1100	6'	1			x	
TT-2 @ 7'	ss	5/8/2020	1110	7'	1			✓	
TT-2 @ 8'	ss	5/8/2020	1120	8'	1			✓	
TT-2 @ 9'	ss	5/8/2020	1130	9'	1			✓	
TT-2 @ 10'	ss	5/8/2020	1140	10'	1			✓	

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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 Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 05.13.2020 02.32.00 PM

Work Order #: 661472

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

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/ 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)?	**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: 05.13.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05.14.2020
Jessica Kramer

Certificate of Analysis Summary 661473

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 14:35

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	661473-001		661473-002		661473-003					
	Field Id:	NSW		SSW		ESW					
	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	***Extracted:***	05.15.2020 17:30		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					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00396	0.00396	<0.00399	0.00399	<0.00399	0.00399				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.002	0.002	<0.002	0.002				
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					
	Analyzed:	05.15.2020 19:30		05.15.2020 16:21		05.15.2020 20:56					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
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					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Total TPH		<49.9	49.9	<49.9	49.9	<50	50				

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

Jessica Kramer
Project Manager

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,

Jessica Kramer

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 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

Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**NSW**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661473-001	Date Collected:	05.08.2020 13:00		

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	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**299**	25.1	mg/kg	05.15.2020 19:30		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 17:00	Basis:	Wet Weight
Seq Number:	3126160				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.15.2020 10:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.15.2020 10:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.15.2020 10:47	U	1
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 Received:	05.13.2020 14:32
Lab Sample Id:	661473-001	Date Collected:	05.08.2020 13:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight
Seq Number:	3126205				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
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	

Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**SSW**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661473-002	Date Collected:	05.08.2020 13:10		

Analytical Method:	Chloride by EPA 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 Date	Flag	Dil
Chloride	16887-00-6	**28.1**	5.00	mg/kg	05.15.2020 16:21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 11:00	Basis:	Wet 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
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.14.2020 14:32	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	Date Received:	05.13.2020 14:32
Lab Sample Id:	661473-002	Date Collected:	05.08.2020 13:10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight
Seq Number:	3126205				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
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	0.002	mg/kg	05.18.2020 10:08	U	1
Total BTEX		<0.002	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	

Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**ESW**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661473-003	Date Collected:	05.08.2020 13:20		

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	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 SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.14.2020 11:00	Basis:	Wet 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 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.14.2020 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.14.2020 14:53	U	1
Total TPH	PHC635	<50	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	

Certificate of Analytical Results 661473

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**ESW**	Matrix:	Soil	Date Received:	05.13.2020 14:32
Lab Sample Id:	661473-003	Date Collected:	05.08.2020 13:20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	05.15.2020 17:30	Basis:	Wet Weight
Seq Number:	3126205				

Parameter	Cas Number	Result	RL	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	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	0.002	mg/kg	05.18.2020 10:28	U	1
Total BTEX		<0.002	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 Detection Limit **LOD** Limit of Detection

PQL 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/Laboratory Control Sample Duplicate

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

+ NELAC certification not offered for this compound.

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

QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703415-1-BLK — LCS Sample Id: 7703415-1-BKS — LCSD Sample Id: 7703415-1-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	258	103	90-110	4	20	mg/kg	05.15.2020 15:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Solid — Date Prep: 05.15.2020
MB Sample Id: 7703416-1-BLK — LCS Sample Id: 7703416-1-BKS — LCSD Sample Id: 7703416-1-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	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661331-021 — MS Sample Id: 661331-021 S — MSD Sample Id: 661331-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.7	248	270	95	280	99	90-110	4	20	mg/kg	05.15.2020 15:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126147 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661472-004 — MS Sample Id: 661472-004 S — MSD Sample Id: 661472-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1780	1250	3100	106	3030	100	90-110	2	20	mg/kg	05.15.2020 16:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661472-013 — MS Sample Id: 661472-013 S — MSD Sample Id: 661472-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	199	250	445	98	464	106	90-110	4	20	mg/kg	05.15.2020 18:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126149 — Matrix: Soil — Date Prep: 05.15.2020
Parent Sample Id: 661636-008 — MS Sample Id: 661636-008 S — MSD Sample Id: 661636-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	263	249	507	98	512	100	90-110	1	20	mg/kg	05.15.2020 20:04	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126065 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703327-1-BLK LCS Sample Id: 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 Hydrocarbons (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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		104		98		70-130	%	05.14.2020 12:03
o-Terphenyl	98		100		102		70-130	%	05.14.2020 12:03

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126160 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703367-1-BLK LCS Sample Id: 7703367-1-BKS LCSD Sample Id: 7703367-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		117		117		70-130	%	05.15.2020 08:53
o-Terphenyl	107		111		112		70-130	%	05.15.2020 08:53

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126065 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703327-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.14.2020 11:42	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126160 Matrix: Solid Date Prep: 05.14.2020
MB Sample Id: 7703367-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.15.2020 08:34	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
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 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126065 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661472-001 MS Sample Id: 661472-001 S 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 Hydrocarbons (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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		94		70-130	%	05.14.2020 13:07
o-Terphenyl	104		99		70-130	%	05.14.2020 13:07

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126160 Matrix: Soil Date Prep: 05.14.2020
Parent Sample Id: 661563-001 MS Sample Id: 661563-001 S MSD Sample Id: 661563-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		119		70-130	%	05.15.2020 09:50
o-Terphenyl	108		108		70-130	%	05.15.2020 09:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126205 Matrix: Solid Date Prep: 05.15.2020
MB Sample Id: 7703488-1-BLK LCS Sample Id: 7703488-1-BKS 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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		104		70-130	%	05.18.2020 01:58
4-Bromofluorobenzene	99		104		107		70-130	%	05.18.2020 01:58

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
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 661473

TRC Solutions, Inc

Willow State #003

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3126205 Matrix: Soil Date Prep: 05.15.2020

Parent Sample Id: 661472-001 MS Sample Id: 661472-001 S 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	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		106		70-130	%	05.18.2020 02:39
4-Bromofluorobenzene	108		108		70-130	%	05.18.2020 02:39

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 2026473

XENCO LABORATORIES

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)

www.xenco.com Page 1 of 1

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003	Email:	Ike, Jared, Tania, rgrubbs@concho.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Willow State #003	Turn Around	
Project Number:		Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Tania Babu	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	5.6/5.3	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.3
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015)	BTEX (8021)	Chlorides (E300)
NSW	ss	5/8/2020	1300	--	1	x	x	x
SSW	ss	5/8/2020	1310	--	1	x	x	x
ESW	ss	5/8/2020	1320	--	1	x	x	x

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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 Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/13	2		
3			4		
5		1432	6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 05.13.2020 02.32.00 PM

Work Order #: 661473

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

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/ 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: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05.13.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05.14.2020
Jessica Kramer

Certificate of Analysis Summary 662893

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

Project Id:
Contact: Jared Stoffel
Project Location:

Date Received in Lab: Thu 05.28.2020 16:10
Report Date: 06.02.2020 16:35
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	662893-001		662893-002		662893-003		662893-004		662893-005		662893-006	
	Field 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'	
	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 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 20:07											
	Units/RL:	mg/kg	RL										
Benzene		<0.00202	0.00202										
Toluene		<0.00202	0.00202										
Ethylbenzene		<0.00202	0.00202										
m,p-Xylenes		<0.00403	0.00403										
o-Xylene		<0.00202	0.00202										
Total Xylenes		<0.00202	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 15:20		05.29.2020 15:20		05.29.2020 15:20		05.29.2020 15:20	
	Analyzed:	05.29.2020 22:25		05.29.2020 22:45		05.29.2020 22:51		05.29.2020 22:58		05.29.2020 23:04		05.29.2020 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										

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 662893

TRC Solutions, Inc, Midland, TX

Project Name: Willow State #003

Project Id:
Contact: Jared Stoffel
Project Location:

Date Received in Lab: Thu 05.28.2020 16:10
Report Date: 06.02.2020 16:35
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	662893-007		662893-008		662893-009					
	Field Id:	BH-3 @ 19-20'		BH-3 @ 24-25'		BH-3 @ 29-30'					
	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 11:50					
Chloride by EPA 300	***Extracted:***	05.29.2020 15:20		05.29.2020 15:20		06.01.2020 11:20					
	Analyzed:	05.29.2020 23:18		05.29.2020 23:24		06.01.2020 18:15					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1190	24.8	302	49.5	77.7	5.03				

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

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,

Jessica Kramer

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

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

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.

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 0-1'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-001	Date Collected:	05.28.2020 10:30	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet 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 SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	05.28.2020 17:00	Basis:	Wet 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	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.29.2020 08:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.29.2020 08:58	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.29.2020 08:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	05.29.2020 08:58	
o-Terphenyl	84-15-1	113	%	70-130	05.29.2020 08:58	

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 0-1'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-001	Date Collected:	05.28.2020 10:30	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	05.29.2020 15:00	Basis:	Wet Weight
Seq Number:	3127491				

Parameter	Cas Number	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	

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 2-3'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-002	Date Collected:	05.28.2020 10:40	Sample Depth:	2 - 3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16800**	250	mg/kg	05.29.2020 22:45		50

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 4-5'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-003	Date Collected:	05.28.2020 10:50	Sample Depth:	4 - 5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13200**	252	mg/kg	05.29.2020 22:51		50

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 6-7'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-004	Date Collected:	05.28.2020 11:00	Sample Depth:	6 - 7 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13400**	251	mg/kg	05.29.2020 22:58		50

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 8-9'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-005	Date Collected:	05.28.2020 11:10	Sample Depth:	8 - 9 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9420**	99.2	mg/kg	05.29.2020 23:04		20

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 14-15'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-006	Date Collected:	05.28.2020 11:20	Sample Depth:	14 - 15 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2650**	49.9	mg/kg	05.29.2020 23:11		10

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 19-20'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-007	Date Collected:	05.28.2020 11:30	Sample Depth:	19 - 20 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1190**	24.8	mg/kg	05.29.2020 23:18		5

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 24-25'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-008	Date Collected:	05.28.2020 11:40	Sample Depth:	24 - 25 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.2020 15:20	Basis:	Wet Weight
Seq Number:	3127477				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**302**	49.5	mg/kg	05.29.2020 23:24		10

Certificate of Analytical Results 662893

TRC Solutions, Inc, Midland, TX

Willow State #003

Sample Id:	**BH-3 @ 29-30'**	Matrix:	Soil	Date Received:	05.28.2020 16:10
Lab Sample Id:	662893-009	Date Collected:	05.28.2020 11:50	Sample Depth:	29 - 30 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	06.01.2020 11:20	Basis:	Wet Weight
Seq Number:	3127625				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.7**	5.03	mg/kg	06.01.2020 18:15		1

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 Detection Limit **LOD** Limit of Detection

PQL 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/Laboratory Control Sample Duplicate

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

+ NELAC certification not offered for this compound.

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

QC Summary 662893

TRC Solutions, Inc

Willow State #003

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127477 Matrix: Solid Date Prep: 05.29.2020
MB Sample Id: 7704392-1-BLK LCS Sample Id: 7704392-1-BKS LCSD Sample Id: 7704392-1-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	248	99	90-110	0	20	mg/kg	05.29.2020 20:12	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127625 Matrix: Solid Date Prep: 06.01.2020
MB Sample Id: 7704462-1-BLK LCS Sample Id: 7704462-1-BKS LCSD Sample Id: 7704462-1-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	253	101	248	99	90-110	2	20	mg/kg	06.01.2020 16:59	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127477 Matrix: Soil Date Prep: 05.29.2020
Parent Sample Id: 662867-089 MS Sample Id: 662867-089 S MSD Sample Id: 662867-089 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	689	250	915	90	910	88	90-110	1	20	mg/kg	05.29.2020 22:05	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127477 Matrix: Soil Date Prep: 05.29.2020
Parent Sample Id: 662973-001 MS Sample Id: 662973-001 S MSD Sample Id: 662973-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	798	250	1030	93	1020	89	90-110	1	20	mg/kg	05.29.2020 20:32	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127625 Matrix: Soil Date Prep: 06.01.2020
Parent Sample Id: 662904-001 MS Sample Id: 662904-001 S MSD Sample Id: 662904-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	24.8	249	273	100	268	98	90-110	2	20	mg/kg	06.01.2020 18:25	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3127625 Matrix: Soil Date Prep: 06.01.2020
Parent Sample Id: 662991-041 MS Sample Id: 662991-041 S MSD Sample Id: 662991-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	99.4	251	368	107	370	108	90-110	1	20	mg/kg	06.01.2020 17:15	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
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 662893

TRC Solutions, Inc

Willow State #003

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127302 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704293-1-BLK — LCS Sample Id: 7704293-1-BKS — LCSD Sample Id: 7704293-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (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	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		90		130		70-130	%	05.28.2020 11:32
o-Terphenyl	129		128		129		70-130	%	05.28.2020 11:32

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127302 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704293-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.28.2020 11:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127302 — Matrix: Soil — Date Prep: 05.28.2020
Parent Sample Id: 662742-001 — MS Sample Id: 662742-001 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 Hydrocarbons (GRO)	<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 %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		125		70-130	%	05.28.2020 12:29
o-Terphenyl	110		110		70-130	%	05.28.2020 12:29

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3127491 — Matrix: Solid — Date Prep: 05.29.2020
MB Sample Id: 7704443-1-BLK — LCS Sample Id: 7704443-1-BKS — 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 %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		102		107		70-130	%	05.29.2020 15:07
4-Bromofluorobenzene	71		113		114		70-130	%	05.29.2020 15:07

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 662893

TRC Solutions, Inc

Willow State #003

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3127491 Matrix: Soil Date Prep: 05.29.2020

Parent Sample Id: 662739-021 MS Sample Id: 662739-021 S MSD Sample Id: 662739-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000503	0.101	0.115	113	0.134	133	70-130	15	35	mg/kg	05.29.2020 15:47	X
Toluene	0.00107	0.101	0.116	114	0.130	129	70-130	11	35	mg/kg	05.29.2020 15:47	
Ethylbenzene	<0.00202	0.101	0.113	112	0.127	127	70-130	12	35	mg/kg	05.29.2020 15:47	
m,p-Xylenes	<0.00404	0.202	0.235	116	0.260	129	70-130	10	35	mg/kg	05.29.2020 15:47	
o-Xylene	0.000563	0.101	0.113	111	0.127	126	70-130	12	35	mg/kg	05.29.2020 15:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		117		70-130	%	05.29.2020 15:47
4-Bromofluorobenzene	125		132	**	70-130	%	05.29.2020 15:47

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

XENCO LABORATORIES

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 426293

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Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432-238-3003	Email:	Ike, Jared, Tania, Robert Grubbs

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Willow State #003	Turn Around	
Project Number:		Routine ☒	
Project Location		Rush:	
Sampler's Name:	Misti Teinert / Tania Babu	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT

Temperature (°C):	5.6/5.3	Temp Blank:	Yes (No)
Received Intact:	(Yes) No	Thermometer ID	D9
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0.0
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Wet Ice: (Yes) No

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
~~Zn Acetate+ NaOH: Zn~~

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015M)	BTEX (8021)	Chlorides (E300)	Sample Comments
	BH-3 @ 0-1'	S	05/20/20	1030	0-1'	1	X	X	X	
	BH-3 @ 2-3'			1040	2-3'					
	BH-3 @ 4-5'			1050	4-5'					
	BH-3 @ 6-7'			1100	6-7'					
	BH-3 @ 8-9'			1110	8-9'					
	BH-3 @ 14-15'			1120	14-15'					
	BH-3 @ 19-20'			1130	19-20'					
	BH-3 @ 24-25'			1140	24-25					
	BH-3 @ 29-30'	↓	↓	1150	29-30	↓			↓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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 Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

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.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1				2		
3			5/26/20 1610	4		
5				6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 05.28.2020 04.10.00 PM

Work Order #: 662893

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

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/ 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)?	**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: 05.29.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06.02.2020
Jessica Kramer