



JA9YI-200302-C-1410

# Remediation Summary and Deferral Request

February 19, 2020

A handwritten signature in black ink, reading "Jared E. Stoffel", written over a horizontal line.

Prepared by:  
Jared Stoffel, P.G.  
Project Manager

## Sly Hawk State #001

### Prepared For:

COG Operating, LLC.  
600 W Illinois Avenue  
Midland, TX 79701

### Prepared By:

TRC Environmental Corporation  
10 Desta Dr. STE 150E  
Midland, TX 79705

A handwritten signature in blue ink, reading "Curt Stanley", written over a horizontal line.

Reviewed and Approved by:  
Curt Stanley  
Senior Project Manager

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## 1.0 Introduction and Background Information

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Deferral Request* for the Release at the Site known as the Sly Hawk State #001 (the Release Site). The legal description of the Site is Unit Letter “H”, Section 3, 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 32.15921°, W 104.06956°. A topographical map is provided as **Figure 1**. Photographs are provided in the photolog as **Appendix A**.

On November 3, 2019, COG discovered a crude oil and produced water release had occurred at the Release Site. The Release was attributed to a filter pot left in the wrong position, impacting the inside of the tank battery and the adjacent pastureland. On the discovery date, COG notified the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO) of the Release. The Release was assigned an NMOCD Reference number of NRM2001534588. On November 19, 2019, the initial Release Notification and Corrective Action (Form C-141) was submitted to the NMOCD. The Form C-141 indicated one (1) barrel (bbl) of crude oil and eight (8) barrels (bbls) of produced water was released. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. According to the initial C-141, no crude oil or produced water was recovered during initial response activities. The Release affected an area measuring approximately 1,350 square feet (sq. ft.). A copy of the submitted Form C-141 for the Release is provided in **Appendix B**.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 17, Township 25 South, Range 28 East. A radius search conducted on the NMOSE website indicated there were no registered water wells within a 0.5-mile radius of the site. There are two (2) water wells registered within 1.5 miles of the site and the average depth to groundwater was listed at 35 feet below ground surface (bgs). The NMOSE search results are included in **Appendix C**. 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. An aerial map of the site location is provided as **Figure 2**.

Based on the depth to groundwater at the Release Site, the NMOCD *Closure Criteria for Soils Impacted by a Release* is the most stringent closure criteria listed. In addition, the Release Site is located in the ‘high karst’ area as outlined in the BLM publicly available Karst Potential Map, provided as **Figure 3**. Subsequently, COG will utilize the most stringent NMOCD Closure Criteria for Soils Impacted by a Release for the Release Site 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

## 2.0 Summary of Soil Remediation Activities

On December 3, 2019, remediation activities commenced at the Release Site. The excavation began in the north section of the impacted area within the earthen berm and continued to the east and south. The area within the berm was excavated to approximately two (2) feet bgs, and the area outside the berm was excavated to approximately three (3) feet bgs. Excavated soil was stockpiled on polyurethane liners pending final disposition at an NMOCD-approved disposal facility.

On December 3, 2019, two (2) five-point composite floor confirmation samples (FL-A1-2' and FL-B1-3') and five (5) five-point composite sidewall confirmation sample (ESW-A1-1', SSW-A1-1', SSW-B1-1', NSW-B1-1', and ESW-B1-1') were collected from the excavated area. Soil samples were submitted to Xenco Laboratories in Midland, Texas, for chloride, TPH and BTEX analyses. Analytical data for the collected confirmation soil samples indicated TPH and BTEX concentrations were below the NMOCD regulatory guidelines for each constituent, with the exception of ESW-B1-1', which exceeded the NMOCD regulatory guideline for TPH. In addition, three (3) confirmation soil samples (FL-A1-2', ESW-A1-1', and SSW-A1-1') exceeded the NMOCD regulatory guidelines for chloride concentrations.

Soil samples FL-A1-2' and ESW-A1-1', which characterize the floor of the excavation inside the berm and the sidewall immediately adjacent to the tanks. Impacted soil represented by soil samples FL-A1-2' and ESW-A1-1' was removed to the maximum extent practicable within the facility. In order to delineate the impact for deferral within the facility, one (1) test trench was advanced within the excavation to a depth of approximately five (5) feet bgs. Three (3) delineation soil samples (TT-A1-3', TT-A1-4', and TT-A1-5') were collected and submitted to the laboratory for TPH, BTEX, and chloride analyses. A review of laboratory analytical results indicated delineation soil samples collected within the bermed facility exhibited TPH and BTEX concentrations below the NMOCD regulatory guidelines. The chloride concentrations exhibited by the delineation soil samples were above the NMOCD regulatory guidelines, with the exception of TT-A1-5', which exhibited chloride concentrations below the NMOCD regulatory guidelines. Due to the proximity to production equipment within the bermed facility, this area was not excavated further vertically to prevent potential de-stabilization of the active equipment and was not excavated further laterally to the east, as the production tanks prevented access to the eastern extent.

Following a review of the analytical results from soil samples collected on December 3<sup>rd</sup>, the excavation in the area represented by soil sample SSW-A1-1' was excavated to the south to connect excavated areas inside and outside the bermed facility and create a continuous excavation. In addition, the excavation in the area represented by ESW-B1-1', outside the bermed facility, was extended to the east.

On December 5, 2019, four (4) five-point composite sidewall confirmation samples (NSW-A1-0.5', WSW-A1-0.5', ESW-B1-1'R, and WSW-B1-1') were collected from the excavated area. Soil samples collected on December 5<sup>th</sup> were submitted to Xenco Laboratories in Midland, Texas, for chloride, TPH and BTEX analyses. Analytical data for the collected soil samples indicated TPH, BTEX, and chloride concentrations were below the NMOCD regulatory guidelines for each constituent.

On December 5, 2019, the impacted soil was transported under manifest to the R360 Red Bluff Facility and the Site was returned to grade with locally sourced, non-impacted backfill material. Confirmation soil sample locations are depicted in **Figure 4**. A summary of the analytical data is shown in **Table 1**. Laboratory analytical reports are provided in **Appendix D**.

### 3.0 Deferral Request

Remediation activities were conducted in accordance with NMCOD regulatory guidelines. Laboratory analytical results from excavation confirmation soil samples indicated TPH, BTEX, and/or chloride concentrations were below the NMOCD regulatory guidelines in the submitted confirmation soil samples, with the exception of soil samples FL-A1-2', ESW-A1-1', TT-A1-3', and TT-A1-4'. The soil samples which exhibited NMOCD regulatory guideline exceedances are confined within the active production battery and have been fully vertically delineated. The eastern extent of the impact within the facility is defined by the adjacent tank. COG respectfully requests deferral of the area within the berm until time of abandonment (TOA), at which time the impact will be removed in accordance with NMOCD regulatory guidelines. Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Site Deferral Request to the NMOCD and NMSLO and request deferral status for the Sly Hawk State #001 until time of abandonment.

### 4.0 Limitation

TRC has prepared this Remediation Summary and Site Deferral Request 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.

## 5.0 Distribution

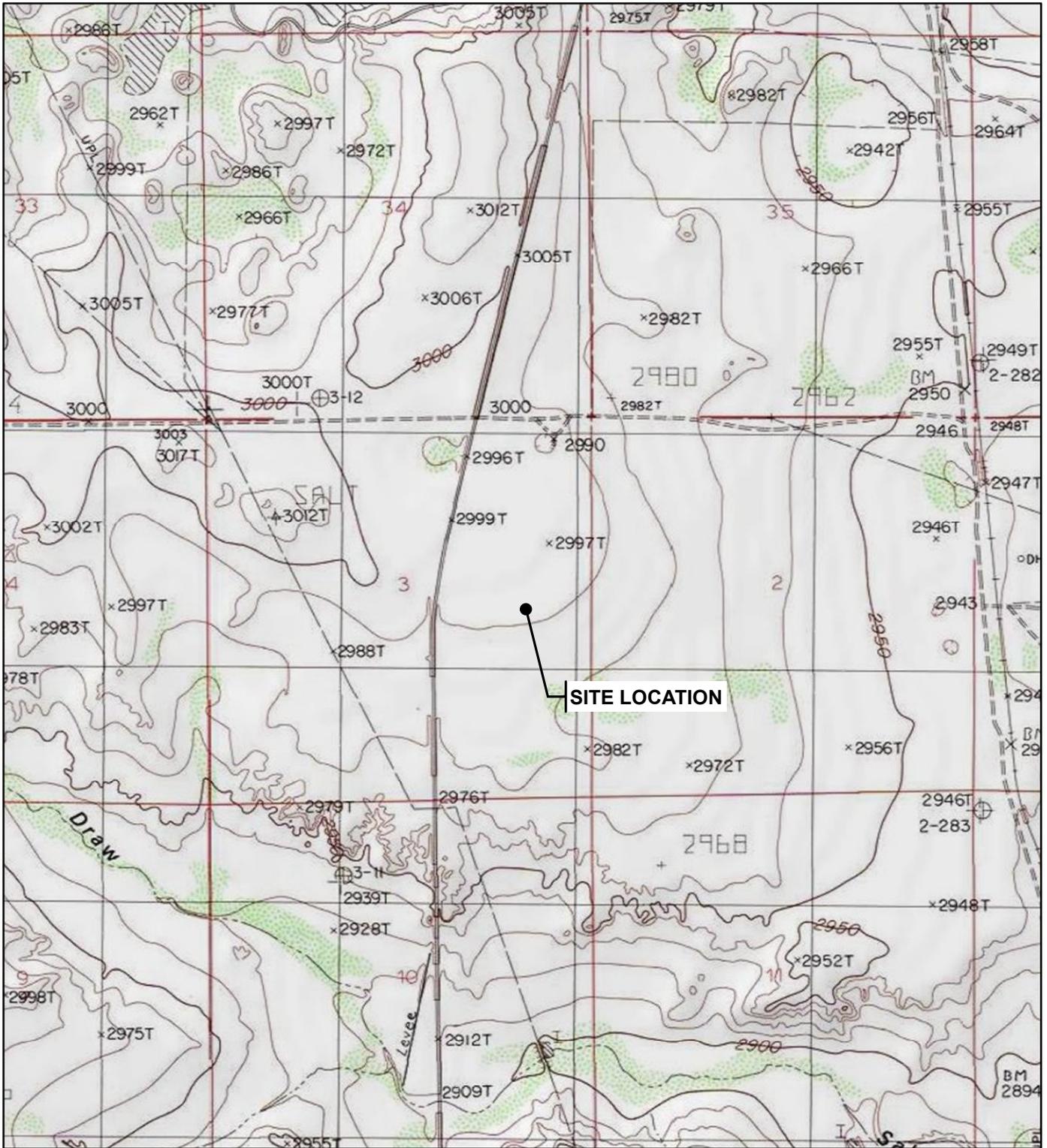
- Copy 1: Mike Bratcher  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division, District 2  
811 S. First Street  
Artesia, NM 88210
- Copy 2: Ryan Mann  
New Mexico State Land Office  
2827 N. Dal Paso Suite 117  
Hobbs, NM 88240
- Copy 3: Ike Tavaréz  
COG Operating, LLC  
600 W. Illinois Avenue  
Midland, Texas 79701
- Copy4: TRC Environmental Corporation  
10 Desta Dr STE 150E  
Midland, TX 79705

TABLE 1

## Summary of Sampling Analytical Results

## Concentrations of Benzene, BTEX, TPH, and Chloride in Soil

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
FL-A1-2'	12/3/19	2'	Deferred	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<b>1,030</b>
TT-A1-3'	12/3/19	3'	Deferred	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<b>659</b>
TT-A1-4'	12/3/19	4'	Deferred	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	<b>727</b>
TT-A1-5'	12/3/19	5'	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	292
ESW-A1-1'	12/3/19	1'	Deferred	<0.00200	<0.00200	<50.0	55.3	55.3	<50.0	55.3	<b>2,190</b>
SSW-A1-1'	12/3/19	1'	Excavated	<0.00200	<0.00200	<50.0	70.2	70.2	<50.0	70.2	<b>1,370</b>
NSW-A1-0.5'	12/5/19	0.5'	In-Situ	<0.00198	0.0980	<49.8	<49.8	<49.8	<49.8	<49.8	351
WSW-A1-0.5'	12/5/19	0.5'	In-Situ	<0.00201	<0.00201	<50.0	60.4	60.4	<50.0	60.4	268
FL-B1-3'	12/3/19	3'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	199
SSW-B1-1'	12/3/19	1'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	269
NSW-B1-1'	12/3/19	1'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	234
ESW-B1-1'	12/3/19	1'	Excavated	<0.00198	<0.00198	<49.9	108	108	<49.9	108	534
ESW-B1-1' R	12/5/19	1'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	89.2
WSW-B1-1'	12/5/19	1'	In-Situ	<0.00202	0.00869	<50.0	<50.0	<50.0	<50.0	<50.0	224
<b>NMOCD Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



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

TRC - GIS

PROJECT: **COG SLY HAWK STATE #001  
 EDDY COUNTY, NM**

TITLE: **SITE LOCATION TOPOGRAPHIC MAP**

DRAWN BY:	M. JAGOE
CHECKED BY:	J. STOFFEL
APPROVED BY:	J. STOFFEL
DATE:	JANUARY 2020
PROJ. NO.:	373057
FILE:	373057_1.mxd

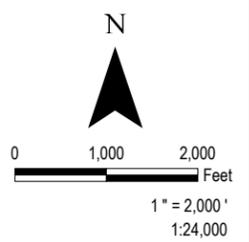
**FIGURE 1**



**LEGEND**

 AREA INSIDE 100 YEAR FLOODPLAIN

SOURCE: AERIAL IMAGERY - GOOGLE AND THEIR DATA PARTNERS (3/12/2016)  
FLOODPLAIN - FEMA FLOOD MAP SERVICE CENTER (MSC)



PROJECT:		<b>COG SLY HAWK STATE #001 EDDY COUNTY, NM</b>	
TITLE:		<b>FLOODPLAIN MAP</b>	
DRAWN BY:	M. JAGOE	PROJ NO.:	373057
CHECKED BY:	J. STOFFEL	<b>FIGURE 2</b>	
APPROVED BY:	J. STOFFEL		
DATE:	JANUARY 2020		
		505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
		FILE NO.: 373057_2.mxd	



**LEGEND**

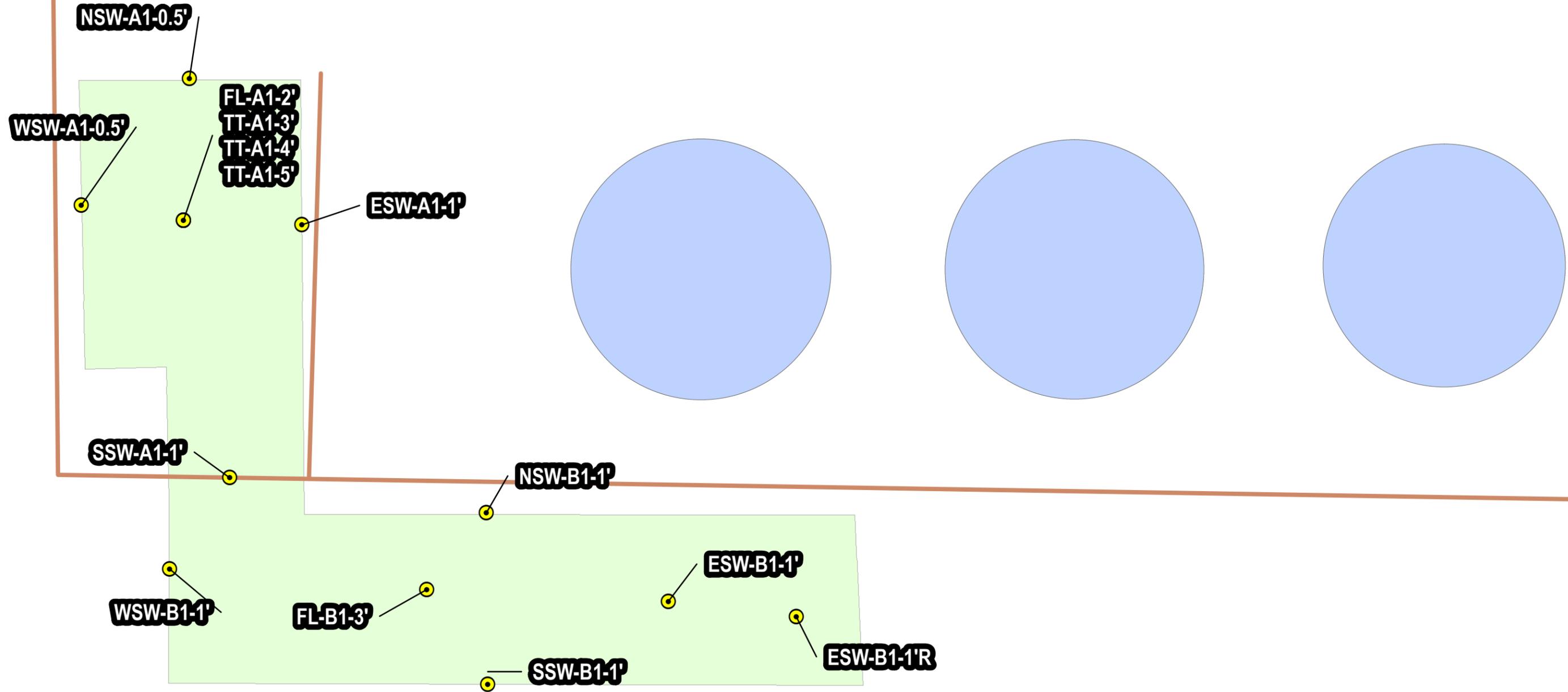
- LOW KARST POTENTIAL
- MEDIUM KARST POTENTIAL
- HIGH KARST POTENTIAL

SOURCE: KARST DATA FROM NEW MEXICO BUREAU OF LAND MANAGEMENT

N

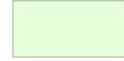
0 10,000 Feet  
1" = 10,000'  
1:120,000

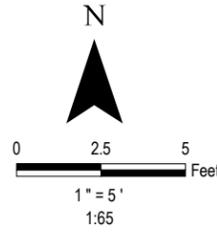
<b>PROJECT:</b> COG SLY HAWK STATE #001 EDDY COUNTY, NM	
<b>TITLE:</b> KARST POTENTIAL MAP	
<b>DRAWN BY:</b> M. JAGOE	<b>PROJ NO.:</b> 373057
<b>CHECKED BY:</b> J. STOFFEL	<b>FIGURE 3</b>
<b>APPROVED BY:</b> J. STOFFEL	
<b>DATE:</b> JANUARY 2020	
<span style="float: right; font-size: small;">505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com</span>	
<b>FILE NO.:</b> 373057_3.mxd	



SOURCE: AERIAL IMAGERY - GOOGLE AND THEIR DATA PARTNERS (3/12/2016)

### LEGEND

-  CONFIRMATION SOIL SAMPLE LOCATIONS
-  FIREWALL
-  TANK
-  EXCAVATION



PROJECT:		COG SLY HAWK STATE #001 EDDY COUNTY, NM	
TITLE:			
<b>SITE AND CONFIRMATION SAMPLE LOCATION MAP</b>			
DRAWN BY:	M. JAGOE	PROJ NO.:	373057
CHECKED BY:	J. STOFFEL	<b>FIGURE 4</b>	
APPROVED BY:	J. STOFFEL		
DATE:	JANUARY 2020		
		505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
FILE NO.:		373057_4.mxd	

## **Appendix A: Photographic Documentation**

## Photographic Documentation

### Photograph No. 1

**Date:**

**11/18/2019**

**Direction:**

**South**

**Description:**

**View of the  
Release area  
prior to  
remediation.**



### Photograph No. 2

**Date:**

**12/5/2019**

**Direction:**

**Southeast**

**Description:**

**View of  
excavated area  
A1.**



## Photographic Documentation

### Photograph No. 3

**Date:**

12/5/2019

**Direction:**

Northwest

**Description:**

View of excavated area B1.



### Photograph No. 4

**Date:**

12/6/2019

**Direction:**

North

**Description:**

View of excavated area A1.



COG- Sly Hawk State #001

Date: 2/19/2020

## Photographic Documentation

**Photograph No. 5**

**Date:**

**12/6/2019**

**Direction:**

**East**

**Description:**

**View of  
excavated area  
B1.**



**Appendix B: 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)

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

Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

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

### Initial Response

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

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name _____ Title: _____ Signature: <u>Patricia Espinoza</u> _____ Date: _____ email: _____ Telephone: _____
<b><u>OCD Only</u></b> Received by: _____ Date: _____

**\*\*\*\*\* LIQUID SPILLS - VOLUME CALCULATIONS \*\*\*\*\***

Location of spill: COG -Sly Hawk State #1 TB

Date of Spill: 3-Nov-2019

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box, flowline, tank battery, production vessel, transfer pump, or storage tank place an "X" here:

**Input Data:**

If spill volumes from measurement, i.e. metering, tank volumes, etc. are known enter the volumes here: OIL: 0.0 BBL WATER: 0.0 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations						Standing Liquid Calculations							
Total Surface Area	width	length	wet soil depth	oil (%)	Standing Liquid Area	width	length	liquid depth	oil (%)				
Rectangle Area #1	30 ft	30 ft	X	3.75 in	10%	Rectangle Area #1	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #2	30 ft	X	15 ft	X	2.50 in	10%	Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

okay

**production system leak - DAILY PRODUCTION DATA REQUIRED**

Average Daily Production: Oil 0 BBL Water 0 BBL 0 Gas (MCFD)

Total Hydrocarbon Content in gas: 0% (percentage)

Did leak occur before the separator?:  YES  N/A (place an "X")

H2S Content in Produced Gas: 0 PPM

H2S Content in Tank Vapors: 0 PPM

Amount of Free Liquid Recovered: 0 BBL okay

Percentage of Oil in Free Liquid Recovered: 0% (percentage)

Liquid holding factor \*: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.

Use the following when the liquid completely fills the pore space of the soil:

- \* Sand = 0.08 gallon (gal.) liquid per gal. volume of soil.
- \* Gravelly (caliche) loam = 0.14 gal. liquid per gal. volume of soil.
- \* Sandy clay loam soil = 0.14 gal liquid per gal. volume of soil.
- \* Clay loam = 0.16 gal. liquid per gal. volume of soil.

- Occurs when the spill soaked soil is contained by barriers, natural (or not).
- \* Clay loam = 0.20 gal. liquid per gal. volume of soil.
- \* Gravelly (caliche) loam = 0.25 gal. liquid per gal. volume of soil.
- \* Sandy loam = 0.5 gal. liquid per gal. volume of soil.

Total Solid/Liquid Volume: 1,350 sq. ft. 338 cu. ft. 38 cu. ft. Total Free Liquid Volume:            sq. ft.            cu. ft.            cu. ft.

**Estimated Volumes Spilled**

	<b>H2O</b>	<b>OIL</b>
Liquid in Soil:	8.4 BBL	0.9 BBL
Free Liquid:	0.0 BBL	0.0 BBL
Totals:	8.4 BBL	0.9 BBL

**Estimated Production Volumes Lost**

	<b>H2O</b>	<b>OIL</b>
Estimated Production Spilled:	0.0 BBL	0.0 BBL

**Estimated Surface Damage**

Surface Area: 1,350 sq. ft.  
Surface Area: .0310 acre

**Recovered Volumes**

Estimated oil recovered:            BBL check - okay  
Estimated water recovered:            BBL check - okay

**Estimated Weights, and Volumes**

Saturated Soil = 42,000 lbs 375 cu. ft. 14 cu. yds.  
Total Liquid = 9 BBL 393 gallon 3,267 lbs

**Air Emission from flowline leaks:**

Volume of oil spill: - BBL  
Separator gas calculated: - MCF  
Separator gas released: - MCF  
Gas released from oil: - lb  
H2S released: - lb  
Total HC gas released: - lb  
Total HC gas released: - MCF

**Air Emission of Reporting Requirements:**

	<u>New Mexico</u>	<u>Texas</u>
HC gas release reportable?	<b>NO</b>	<b>NO</b>
H2S release reportable?	<b>NO</b>	<b>NO</b>

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

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

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

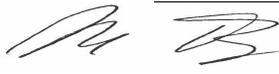
- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the 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.

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 Tavaréz Title: Senior HSE Representative

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

email: itavarez@concho.com Telephone: 432-701-8630

**OCD Only**

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

Incident ID	<b>NRM2001534588</b>
District RP	
Facility ID	
Application ID	

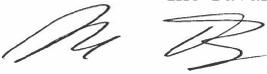
## Closure

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Ike Tavarez Title: Senior HSE Representative  
 Signature:  Date: \_\_\_\_\_  
 email: itavarez@concho.com Telephone: 432-701-8630

**OCD Only**

Received by: Victoria Venegas Date: 03/02/2020

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

Closure Approved by: CLOSURE DENIED Date: 04/15/2020  
 Printed Name: Victoria Venegas Title: Engineering Tech. III

## **Appendix C: Depth to Groundwater Data**



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# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

---

No records found.

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 587734.51

**Northing (Y):** 3558462.34

**Radius:** 804.67



# 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
<a href="#">C 01411</a>	C	ED	4	4	2	04	25S	28E	586289	3558522*		1446	69	35	34
<a href="#">C 02668</a>	C	ED	2	1	2	09	25S	28E	585890	3557525*		2069	150		

Average Depth to Water: **35 feet**

Minimum Depth: **35 feet**

Maximum Depth: **35 feet**

**Record Count: 2**

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 587734.51

**Northing (Y):** 3558462.34

**Radius:** 2414

\*UTM location was derived from PLSS - see Help

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

## Appendix D: Laboratory Analytical Reports



# Certificate of Analysis Summary 644955

TRC Solutions, Inc, Midland, TX

Project Name: Sly Hawk State #001



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

**Date Received in Lab:** Wed Dec-04-19 08:54 am  
**Report Date:** 05-DEC-19  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644955-001	644955-002	644955-003	644955-004	644955-005	644955-006	
	<i>Field Id:</i>	FL-A1-2	TT-A1-3	TT-A1-4	TT-A1-5	ESW-A1-1	SSW-A1-1	
	<i>Depth:</i>							
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Dec-03-19 13:30	Dec-03-19 13:35	Dec-03-19 13:40	Dec-03-19 13:45	Dec-03-19 13:50	Dec-03-19 13:55	
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-04-19 09:15						
	<i>Analyzed:</i>	Dec-04-19 13:38	Dec-04-19 14:06	Dec-04-19 14:26	Dec-04-19 14:46	Dec-04-19 15:06	Dec-04-19 15:26	
	<i>Units/RL:</i>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL	RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
m,p-Xylenes		<0.00401 0.00401	<0.00400 0.00400	<0.00397 0.00397	<0.00397 0.00397	<0.00400 0.00400	<0.00399 0.00399	
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes		<0.002 0.002	<0.002 0.002	<0.00198 0.00198	<0.00198 0.00198	<0.002 0.002	<0.002 0.002	
Total BTEX		<0.002 0.002	<0.002 0.002	<0.00198 0.00198	<0.00198 0.00198	<0.002 0.002	<0.002 0.002	
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Dec-04-19 10:00						
	<i>Analyzed:</i>	Dec-04-19 10:37	Dec-04-19 11:05	Dec-04-19 11:14	Dec-04-19 11:24	Dec-04-19 11:33	Dec-04-19 12:01	
	<i>Units/RL:</i>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL		RL	RL	RL	RL	RL	RL	
Chloride		1030 5.03	659 49.8	727 50.5	292 49.6	2190 50.4	1370 25.1	
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-04-19 11:00						
	<i>Analyzed:</i>	Dec-04-19 11:04	Dec-04-19 12:01	Dec-04-19 12:20	Dec-04-19 12:38	Dec-04-19 12:57	Dec-04-19 13:16	
	<i>Units/RL:</i>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL		RL	RL	RL	RL	RL	RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	55.3 50.0	70.2 50.0	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	
Total TPH		<50 50	<50 50	<49.9 49.9	<49.8 49.8	55.3 50	70.2 50	

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

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

Version: 1.9%

*Jessica Kramer*

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 644955



TRC Solutions, Inc, Midland, TX

Project Name: Sly Hawk State #001

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

**Date Received in Lab:** Wed Dec-04-19 08:54 am  
**Report Date:** 05-DEC-19  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	644955-007	644955-008	644955-009	644955-010		
	<i>Field Id:</i>	FL-B1-3	SSW-B1-1	NSW-B1-1	ESW-B1-1		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-03-19 14:00	Dec-03-19 14:05	Dec-03-19 14:10	Dec-03-19 14:15		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-04-19 09:15	Dec-04-19 09:15	Dec-04-19 09:15	Dec-04-19 09:15		
	<i>Analyzed:</i>	Dec-04-19 15:46	Dec-04-19 16:07	Dec-04-19 16:27	Dec-04-19 16:47		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198		
	Toluene	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198		
	Ethylbenzene	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198		
	m,p-Xylenes	<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398	<0.00397 0.00397		
	o-Xylene	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198		
Total Xylenes	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198			
Total BTEX	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198			
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Dec-04-19 10:00	Dec-04-19 10:00	Dec-04-19 10:00	Dec-04-19 10:00		
	<i>Analyzed:</i>	Dec-04-19 12:10	Dec-04-19 12:19	Dec-04-19 12:28	Dec-04-19 12:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		199 49.6	269 50.5	234 4.95	534 50.2		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-04-19 11:00	Dec-04-19 11:00	Dec-04-19 11:00	Dec-04-19 11:00		
	<i>Analyzed:</i>	Dec-04-19 13:34	Dec-04-19 13:53	Dec-04-19 14:11	Dec-04-19 14:30		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9		
	Diesel Range Organics (DRO)	<49.9 49.9	<50.0 50.0	<50.0 50.0	108 49.9		
Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9			
Total TPH	<49.9 49.9	<50 50	<50 50	108 49.9			

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

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

Version: 1.9%

*Jessica Kramer*

Jessica Kramer  
Project Assistant

# Analytical Report 644955

for  
**TRC Solutions, Inc**

**Project Manager: Jared Stoffel**

**Sly Hawk State #001**

**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): **644955**  
**Sly Hawk State #001**  
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) 644955. 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. 644955 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**  
Project Assistant

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.  
Certified and approved by numerous States and Agencies.  
A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



# Sample Cross Reference 644955



TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FL-A1-2	S	12-03-19 13:30		644955-001
TT-A1-3	S	12-03-19 13:35		644955-002
TT-A1-4	S	12-03-19 13:40		644955-003
TT-A1-5	S	12-03-19 13:45		644955-004
ESW-A1-1	S	12-03-19 13:50		644955-005
SSW-A1-1	S	12-03-19 13:55		644955-006
FL-B1-3	S	12-03-19 14:00		644955-007
SSW-B1-1	S	12-03-19 14:05		644955-008
NSW-B1-1	S	12-03-19 14:10		644955-009
ESW-B1-1	S	12-03-19 14:15		644955-010



## CASE NARRATIVE

*Client Name: TRC Solutions, Inc*

*Project Name: Sly Hawk State #001*

Project ID:  
Work Order Number(s): 644955

Report Date: 05-DEC-19  
Date Received: 12/04/2019

---

**Sample receipt non conformances and comments:**

CORRECTED SAMPLE 010 NAME TO REFLECT THE COC. NEW VERSION GENERATED. JK  
12/05/19

---

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

None

**Analytical non conformances and comments:**

Batch: LBA-3109394 BTEX by EPA 8021B

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



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **FL-A1-2**  
 Lab Sample Id: 644955-001

Matrix: Soil  
 Date Collected: 12.03.19 13.30

Date Received: 12.04.19 08.54

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.04.19 10.00

Basis: Wet Weight

Seq Number: 3109331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>1030</b>	5.03	mg/kg	12.04.19 10.37		1

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	<50.0	50.0	mg/kg	12.04.19 11.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.04.19 11.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 11.04	U	1
Total TPH	PHC635	<50	50	mg/kg	12.04.19 11.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.04.19 11.04	
o-Terphenyl	84-15-1	103	%	70-135	12.04.19 11.04	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **FL-A1-2**  
 Lab Sample Id: 644955-001

Matrix: Soil  
 Date Collected: 12.03.19 13.30

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 13.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 13.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 13.38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.04.19 13.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 13.38	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	12.04.19 13.38	U	1
Total BTEX		<0.002	0.002	mg/kg	12.04.19 13.38	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.04.19 13.38		
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.04.19 13.38		

## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: <b>TT-A1-3</b>	Matrix: Soil	Date Received: 12.04.19 08.54
Lab Sample Id: 644955-002	Date Collected: 12.03.19 13.35	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109331		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>659</b>	49.8	mg/kg	12.04.19 11.05		10

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Basis: Wet Weight
Seq Number: 3109353	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.04.19 12.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.04.19 12.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 12.01	U	1
Total TPH	PHC635	<50	50	mg/kg	12.04.19 12.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.04.19 12.01	
o-Terphenyl	84-15-1	102	%	70-135	12.04.19 12.01	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **TT-A1-3**  
 Lab Sample Id: 644955-002

Matrix: Soil  
 Date Collected: 12.03.19 13.35

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 14.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 14.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 14.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.04.19 14.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 14.06	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	12.04.19 14.06	U	1
Total BTEX		<0.002	0.002	mg/kg	12.04.19 14.06	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	107		%	70-130	12.04.19 14.06	
4-Bromofluorobenzene	460-00-4	95		%	70-130	12.04.19 14.06	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: <b>TT-A1-4</b>	Matrix: Soil	Date Received: 12.04.19 08.54
Lab Sample Id: 644955-003	Date Collected: 12.03.19 13.40	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109331		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	727	50.5	mg/kg	12.04.19 11.14		10

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	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 12.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.04.19 12.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.04.19 12.20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.04.19 12.20	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	105	%	70-135	12.04.19 12.20		
o-Terphenyl	84-15-1	103	%	70-135	12.04.19 12.20		

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **TT-A1-4**  
 Lab Sample Id: 644955-003

Matrix: Soil  
 Date Collected: 12.03.19 13.40

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.04.19 14.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 14.26	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	99		%	70-130	12.04.19 14.26	
1,4-Difluorobenzene	540-36-3	111		%	70-130	12.04.19 14.26	

## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: <b>TT-A1-5</b>	Matrix: Soil	Date Received: 12.04.19 08.54
Lab Sample Id: 644955-004	Date Collected: 12.03.19 13.45	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109331		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	292	49.6	mg/kg	12.04.19 11.24		10

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.04.19 11.00
Seq Number: 3109353	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.04.19 12.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.04.19 12.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.04.19 12.38	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.04.19 12.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.04.19 12.38	
o-Terphenyl	84-15-1	114	%	70-135	12.04.19 12.38	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **TT-A1-5**  
Lab Sample Id: 644955-004

Matrix: Soil  
Date Collected: 12.03.19 13.45

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3109394

Date Prep: 12.04.19 09.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.04.19 14.46	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 14.46	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	114	%	70-130	12.04.19 14.46		
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.04.19 14.46		

## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: <b>ESW-A1-1</b>	Matrix: Soil	Date Received: 12.04.19 08.54
Lab Sample Id: 644955-005	Date Collected: 12.03.19 13.50	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109331		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>2190</b>	50.4	mg/kg	12.04.19 11.33		10

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.04.19 11.00
Seq Number: 3109353	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.04.19 12.57	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>55.3</b>	50.0	mg/kg	12.04.19 12.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 12.57	U	1
<b>Total TPH</b>	PHC635	<b>55.3</b>	50	mg/kg	12.04.19 12.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.04.19 12.57	
o-Terphenyl	84-15-1	104	%	70-135	12.04.19 12.57	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: **ESW-A1-1**  
 Lab Sample Id: 644955-005

Matrix: Soil  
 Date Collected: 12.03.19 13.50

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 15.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 15.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 15.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.04.19 15.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 15.06	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	12.04.19 15.06	U	1
Total BTEX		<0.002	0.002	mg/kg	12.04.19 15.06	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.04.19 15.06		
1,4-Difluorobenzene	540-36-3	115	%	70-130	12.04.19 15.06		

## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: <b>SSW-A1-1</b>	Matrix: Soil	Date Received: 12.04.19 08.54
Lab Sample Id: 644955-006	Date Collected: 12.03.19 13.55	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.04.19 10.00	Basis: Wet Weight
Seq Number: 3109331		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1370	25.1	mg/kg	12.04.19 12.01		5

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.04.19 11.00
Seq Number: 3109353	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.04.19 13.16	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>70.2</b>	50.0	mg/kg	12.04.19 13.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 13.16	U	1
<b>Total TPH</b>	PHC635	<b>70.2</b>	50	mg/kg	12.04.19 13.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.04.19 13.16	
o-Terphenyl	84-15-1	105	%	70-135	12.04.19 13.16	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX Sly Hawk State #001

Sample Id: **SSW-A1-1**  
 Lab Sample Id: 644955-006

Matrix: Soil  
 Date Collected: 12.03.19 13.55

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 15.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 15.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 15.26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.04.19 15.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 15.26	U	1
Total Xylenes	1330-20-7	<0.002	0.002	mg/kg	12.04.19 15.26	U	1
Total BTEX		<0.002	0.002	mg/kg	12.04.19 15.26	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.04.19 15.26		
1,4-Difluorobenzene	540-36-3	113	%	70-130	12.04.19 15.26		

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **FL-B1-3**  
 Lab Sample Id: 644955-007

Matrix: Soil  
 Date Collected: 12.03.19 14.00

Date Received: 12.04.19 08.54

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.04.19 10.00

Basis: Wet Weight

Seq Number: 3109331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>199</b>	49.6	mg/kg	12.04.19 12.10		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	<49.9	49.9	mg/kg	12.04.19 13.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.04.19 13.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.04.19 13.34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.04.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.04.19 13.34	
o-Terphenyl	84-15-1	104	%	70-135	12.04.19 13.34	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **FL-B1-3**  
 Lab Sample Id: 644955-007

Matrix: Soil  
 Date Collected: 12.03.19 14.00

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.04.19 15.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.04.19 15.46	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
4-Bromofluorobenzene	460-00-4	104		%	70-130	12.04.19 15.46	
1,4-Difluorobenzene	540-36-3	113		%	70-130	12.04.19 15.46	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **SSW-B1-1**  
 Lab Sample Id: 644955-008

Matrix: Soil  
 Date Collected: 12.03.19 14.05

Date Received: 12.04.19 08.54

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3109331

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 12.04.19 10.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>269</b>	50.5	mg/kg	12.04.19 12.19		10

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3109353

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 12.04.19 11.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.04.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.04.19 13.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 13.53	U	1
Total TPH	PHC635	<50	50	mg/kg	12.04.19 13.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.04.19 13.53	
o-Terphenyl	84-15-1	97	%	70-135	12.04.19 13.53	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **SSW-B1-1**

Matrix: Soil

Date Received: 12.04.19 08.54

Lab Sample Id: 644955-008

Date Collected: 12.03.19 14.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.04.19 16.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.04.19 16.07	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.04.19 16.07		
1,4-Difluorobenzene	540-36-3	84	%	70-130	12.04.19 16.07		



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **NSW-B1-1**

Matrix: Soil

Date Received: 12.04.19 08.54

Lab Sample Id: 644955-009

Date Collected: 12.03.19 14.10

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.04.19 10.00

Basis: Wet Weight

Seq Number: 3109331

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	234	4.95	mg/kg	12.04.19 12.28		1

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	<50.0	50.0	mg/kg	12.04.19 14.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.04.19 14.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.04.19 14.11	U	1
Total TPH	PHC635	<50	50	mg/kg	12.04.19 14.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.04.19 14.11	
o-Terphenyl	84-15-1	104	%	70-135	12.04.19 14.11	



# Certificate of Analytical Results 644955



## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **NSW-B1-1**

Matrix: Soil

Date Received: 12.04.19 08.54

Lab Sample Id: 644955-009

Date Collected: 12.03.19 14.10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.04.19 16.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.04.19 16.27	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	113		%	70-130	12.04.19 16.27	
4-Bromofluorobenzene	460-00-4	104		%	70-130	12.04.19 16.27	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **ESW-B1-1**  
 Lab Sample Id: 644955-010

Matrix: Soil  
 Date Collected: 12.03.19 14.15

Date Received: 12.04.19 08.54

Analytical Method: Chloride by EPA 300  
 Tech: CHE  
 Analyst: CHE  
 Seq Number: 3109331

Date Prep: 12.04.19 10.00

Prep Method: E300P  
 % Moisture:  
 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>534</b>	50.2	mg/kg	12.04.19 12.38		10

Analytical Method: TPH by SW8015 Mod  
 Tech: DVM  
 Analyst: ARM  
 Seq Number: 3109353

Date Prep: 12.04.19 11.00

Prep Method: SW8015P  
 % Moisture:  
 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.04.19 14.30	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>108</b>	49.9	mg/kg	12.04.19 14.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.04.19 14.30	U	1
<b>Total TPH</b>	PHC635	<b>108</b>	49.9	mg/kg	12.04.19 14.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.04.19 14.30	
o-Terphenyl	84-15-1	99	%	70-135	12.04.19 14.30	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #001

Sample Id: **ESW-B1-1**  
 Lab Sample Id: 644955-010

Matrix: Soil  
 Date Collected: 12.03.19 14.15

Date Received: 12.04.19 08.54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.04.19 09.15

Basis: Wet Weight

Seq Number: 3109394

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.04.19 16.47	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 16.47	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.04.19 16.47		
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.04.19 16.47		





TRC Solutions, Inc  
Sly Hawk State #001

Analytical Method: Chloride by EPA 300

Seq Number: 3109331

MB Sample Id: 7691624-1-BLK

Matrix: Solid

LCS Sample Id: 7691624-1-BKS

Prep Method: E300P

Date Prep: 12.04.19

LCSD Sample Id: 7691624-1-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	243	97	242	97	90-110	0	20	mg/kg	12.04.19 10:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3109331

Parent Sample Id: 644955-001

Matrix: Soil

MS Sample Id: 644955-001 S

Prep Method: E300P

Date Prep: 12.04.19

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
Chloride	1030	201	1250	109	1230	100	90-110	2	20	mg/kg	12.04.19 10:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109353

MB Sample Id: 7691630-1-BLK

Matrix: Solid

LCS Sample Id: 7691630-1-BKS

Prep Method: SW8015P

Date Prep: 12.04.19

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109353

Matrix: Solid  
MB Sample Id: 7691630-1-BLK

Prep Method: SW8015P

Date Prep: 12.04.19

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

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



TRC Solutions, Inc  
Sly Hawk State #001

Analytical Method: TPH by SW8015 Mod

Seq Number: 3109353

Parent Sample Id: 644955-001

Matrix: Soil

MS Sample Id: 644955-001 S

Prep Method: SW8015P

Date Prep: 12.04.19

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

Seq Number: 3109394

MB Sample Id: 7691595-1-BLK

Matrix: Solid

LCS Sample Id: 7691595-1-BKS

Prep Method: SW5030B

Date Prep: 12.04.19

LCSD Sample Id: 7691595-1-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	0.111	111	0.115	115	70-130	4	35	mg/kg	12.04.19 11:38	
Toluene	<0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	12.04.19 11:38	
Ethylbenzene	<0.00200	0.100	0.117	117	0.116	116	70-130	1	35	mg/kg	12.04.19 11:38	
m,p-Xylenes	<0.00400	0.200	0.239	120	0.238	119	70-130	0	35	mg/kg	12.04.19 11:38	
o-Xylene	<0.00200	0.100	0.117	117	0.119	119	70-130	2	35	mg/kg	12.04.19 11:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		107		111		70-130	%	12.04.19 11:38
4-Bromofluorobenzene	92		105		113		70-130	%	12.04.19 11:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109394

Parent Sample Id: 644955-001

Matrix: Soil

MS Sample Id: 644955-001 S

Prep Method: SW5030B

Date Prep: 12.04.19

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
Benzene	<0.00202	0.101	0.0900	89	0.0834	84	70-130	8	35	mg/kg	12.04.19 12:19	
Toluene	<0.00202	0.101	0.0853	84	0.0782	78	70-130	9	35	mg/kg	12.04.19 12:19	
Ethylbenzene	<0.00202	0.101	0.0860	85	0.0787	79	70-130	9	35	mg/kg	12.04.19 12:19	
m,p-Xylenes	<0.00403	0.202	0.175	87	0.160	80	70-130	9	35	mg/kg	12.04.19 12:19	
o-Xylene	<0.00202	0.101	0.0873	86	0.0800	80	70-130	9	35	mg/kg	12.04.19 12:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		70-130	%	12.04.19 12:19
4-Bromofluorobenzene	109		105		70-130	%	12.04.19 12:19

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



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) 565-3443 Lubbock, TX (806) 794-1296 Caslbad, NM (432) 704-5440  
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 820-2000 West Palm Beach, FL (561) 689-6701

**Chain of Custody**

Work Order No: 0414955

Page 1 of 1

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**Project Manager:** Sue Stevan  
**Company Name:** TRC  
**Address:** 10 West Dr STE 150E  
**City, State ZIP:** Milford TX 79705  
**Phone:** 432-255-3009  
**Project Name:** SH Hawk State #001  
**Project Number:** New Mexico  
**Project Location:** New Mexico  
**Sampler's Name:** J. Steffli  
**PO #:**   
**Quote #:**   
**Turn Around:**   
**Rush:** Same Day  
**Due Date:**   
**Bill to: (if different):** TRC  
**Company Name:** TRC  
**Address:**   
**City, State ZIP:**   
**Email:** jsk@trc.com

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

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No	Thermometer ID	Correction Factor:	Total Containers:
Temperature (°C):	<u>33</u>	Yes	<input checked="" type="checkbox"/>	No	Yes	<input checked="" type="checkbox"/>	No	<u>7E</u>	<u>0</u>	<u>0</u>
Received Intact:	<u>Yes</u>	Yes	<input checked="" type="checkbox"/>	No	Yes	<input checked="" type="checkbox"/>	No	<u>N/A</u>	<u>0</u>	<u>0</u>
Cooler Custody Seals:	<u>Yes</u>	Yes	<input checked="" type="checkbox"/>	No	Yes	<input checked="" type="checkbox"/>	No	<u>N/A</u>	<u>0</u>	<u>0</u>
Sample Custody Seals:	<u>Yes</u>	Yes	<input checked="" type="checkbox"/>	No	Yes	<input checked="" type="checkbox"/>	No	<u>N/A</u>	<u>0</u>	<u>0</u>

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
FL-A1-2		Soil	12/8/11	1330		1			MeOH: Me None: NO HNO3: HN H2SO4: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn
TT-A1-3				1335		X		TPH (8015)	
TT-A1-4				1340		X		BTEX (8021)	
TT-A1-5				1345		X		Chloride (8300)	
ESW-A1-1				1350					
SW-A1-1				1355					
FL-B1-3				1400					
SW-B1-1				1405					
NSW-B1-1				1410					
PSW-B1-1				1415					

**ANALYSIS REQUEST**

MeOH: Me  
None: NO  
HNO3: HN  
H2SO4: H2  
HCL: HL  
NaOH: Na  
Zn Acetate+ NaOH: Zn

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

**Sample Comments**

Total 200.7 / 6010    200.8 / 6020:  
 Circle Method(s) and Metal(s) to be analyzed    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 Ti Sn U V Zn  
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti 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
<u>[Signature]</u>	<u>[Signature]</u>	<u>12/4/19</u>			
		<u>8:09</u>			



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 12/04/2019 08:54:11 AM

Work Order #: 644955

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: 12/04/2019  
 Jessica Kramer



# Certificate of Analysis Summary 645465

TRC Solutions, Inc, Midland, TX

Project Name: Sly Hawk State #1



**Project Id:**  
**Contact:** Jared Stoffel  
**Project Location:**

**Date Received in Lab:** Fri Dec-06-19 04:53 pm  
**Report Date:** 10-DEC-19  
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	645465-001	645465-002	645465-003	645465-004		
	<i>Field Id:</i>	WSW-B1-1'	ESW-B1-1'R	NSW-A1-0.5'	WSW-A1-0.5'		
	<i>Depth:</i>	1- ft	1- ft	0.5- ft	0.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Dec-05-19 09:45	Dec-05-19 10:15	Dec-05-19 10:30	Dec-05-19 12:30		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Dec-07-19 15:15	Dec-07-19 15:15	Dec-07-19 15:15	Dec-07-19 15:15		
	<i>Analyzed:</i>	Dec-08-19 01:52	Dec-08-19 02:12	Dec-08-19 09:38	Dec-08-19 09:59		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201		
Toluene		<0.00202 0.00202	<0.00199 0.00199	0.0980 0.00198	<0.00201 0.00201		
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201		
m,p-Xylenes		0.00869 0.00403	<0.00398 0.00398	<0.00397 0.00397	<0.00402 0.00402		
o-Xylene		<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201		
Total Xylenes		0.00869 0.00202	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201		
Total BTEX		0.00869 0.00202	<0.00199 0.00199	0.098 0.00198	<0.00201 0.00201		
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Dec-09-19 09:00	Dec-09-19 10:45	Dec-09-19 10:45	Dec-09-19 10:45		
	<i>Analyzed:</i>	Dec-09-19 11:48	Dec-09-19 12:26	Dec-09-19 12:42	Dec-09-19 12:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		224 49.9	89.2 5.02	351 4.96	268 5.00		
<b>TPH by SW8015 Mod</b>	<i>Extracted:</i>	Dec-06-19 17:00	Dec-06-19 17:00	Dec-06-19 17:00	Dec-06-19 17:00		
	<i>Analyzed:</i>	Dec-07-19 08:12	Dec-07-19 08:31	Dec-07-19 08:50	Dec-07-19 09:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	60.4 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Total TPH		<50 50	<49.9 49.9	<49.8 49.8	60.4 50		

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

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

Jessica Kramer  
 Project Assistant

# Analytical Report 645465

for  
**TRC Solutions, Inc**

**Project Manager: Jared Stoffel**

**Sly Hawk State #1**

**10-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)



10-DEC-19

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

Reference: XENCO Report No(s): **645465**  
**Sly Hawk State #1**  
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) 645465. 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. 645465 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,

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**Jessica Kramer**  
Project Assistant

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

*Certified and approved by numerous States and Agencies.*

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# Sample Cross Reference 645465



TRC Solutions, Inc, Midland, TX

Sly Hawk State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WSW-B1-1'	S	12-05-19 09:45	1 ft	645465-001
ESW-B1-1'R	S	12-05-19 10:15	1 ft	645465-002
NSW-A1-0.5'	S	12-05-19 10:30	0.5 ft	645465-003
WSW-A1-0.5'	S	12-05-19 12:30	0.5 ft	645465-004



## CASE NARRATIVE

*Client Name: TRC Solutions, Inc*

*Project Name: Sly Hawk State #1*

Project ID:  
Work Order Number(s): 645465

Report Date: 10-DEC-19  
Date Received: 12/06/2019

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3109770 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 645465-001.

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

## TRC Solutions, Inc, Midland, TX

### Sly Hawk State #1

Sample Id: <b>WSW-B1-1'</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-001	Date Collected: 12.05.19 09.45	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.09.19 09.00	Basis: Wet Weight
Seq Number: 3109876		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	224	49.9	mg/kg	12.09.19 11.48		10

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.06.19 17.00
Seq Number: 3109756	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.07.19 08.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.07.19 08.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.07.19 08.12	U	1
Total TPH	PHC635	<50	50	mg/kg	12.07.19 08.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	12.07.19 08.12	
o-Terphenyl	84-15-1	121	%	70-135	12.07.19 08.12	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #1

Sample Id: **WSW-B1-1'**

Matrix: Soil

Date Received: 12.06.19 16.53

Lab Sample Id: 645465-001

Date Collected: 12.05.19 09.45

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.07.19 15.15

Basis: Wet Weight

Seq Number: 3109770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.08.19 01.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.08.19 01.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.08.19 01.52	U	1
<b>m,p-Xylenes</b>	179601-23-1	<b>0.00869</b>	0.00403	mg/kg	12.08.19 01.52		1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.08.19 01.52	U	1
<b>Total Xylenes</b>	1330-20-7	<b>0.00869</b>	0.00202	mg/kg	12.08.19 01.52		1
<b>Total BTEX</b>		<b>0.00869</b>	0.00202	mg/kg	12.08.19 01.52		1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.08.19 01.52		
4-Bromofluorobenzene	460-00-4	135	%	70-130	12.08.19 01.52	**	

## TRC Solutions, Inc, Midland, TX

### Sly Hawk State #1

Sample Id: <b>ESW-B1-1'R</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-002	Date Collected: 12.05.19 10.15	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.09.19 10.45	Basis: Wet Weight
Seq Number: 3109877		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>89.2</b>	5.02	mg/kg	12.09.19 12.26		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.06.19 17.00
Seq Number: 3109756	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.07.19 08.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.07.19 08.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.07.19 08.31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.07.19 08.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.07.19 08.31	
o-Terphenyl	84-15-1	105	%	70-135	12.07.19 08.31	



# Certificate of Analytical Results 645465



## TRC Solutions, Inc, Midland, TX Sly Hawk State #1

Sample Id: <b>ESW-B1-1'R</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-002	Date Collected: 12.05.19 10.15	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 12.07.19 15.15	Basis: Wet Weight
Seq Number: 3109770		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.08.19 02.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.08.19 02.12	U	1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.08.19 02.12		
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.08.19 02.12		

## TRC Solutions, Inc, Midland, TX

### Sly Hawk State #1

Sample Id: <b>NSW-A1-0.5'</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-003	Date Collected: 12.05.19 10.30	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.09.19 10.45	Basis: Wet Weight
Seq Number: 3109877		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	351	4.96	mg/kg	12.09.19 12.42		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.06.19 17.00
Seq Number: 3109756	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.07.19 08.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.07.19 08.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.07.19 08.50	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.07.19 08.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.07.19 08.50	
o-Terphenyl	84-15-1	107	%	70-135	12.07.19 08.50	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #1

Sample Id: <b>NSW-A1-0.5'</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-003	Date Collected: 12.05.19 10.30	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 12.07.19 15.15	Basis: Wet Weight
Seq Number: 3109770		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.08.19 09.38	U	1
<b>Toluene</b>	108-88-3	<b>0.0980</b>	0.00198	mg/kg	12.08.19 09.38		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.08.19 09.38	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.08.19 09.38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.08.19 09.38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.08.19 09.38	U	1
<b>Total BTEX</b>		<b>0.098</b>	0.00198	mg/kg	12.08.19 09.38		1
			%				
<b>Surrogate</b>	<b>Cas Number</b>	<b>Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	93	%	70-130	12.08.19 09.38		
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.08.19 09.38		

## TRC Solutions, Inc, Midland, TX Sly Hawk State #1

Sample Id: <b>WSW-A1-0.5'</b>	Matrix: Soil	Date Received: 12.06.19 16.53
Lab Sample Id: 645465-004	Date Collected: 12.05.19 12.30	Sample Depth: 0.5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 12.09.19 10.45	Basis: Wet Weight
Seq Number: 3109877		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>268</b>	5.00	mg/kg	12.09.19 12.48		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 12.06.19 17.00
Seq Number: 3109756	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.07.19 09.09	U	1
<b>Diesel Range Organics (DRO)</b>	C10C28DRO	<b>60.4</b>	50.0	mg/kg	12.07.19 09.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.07.19 09.09	U	1
<b>Total TPH</b>	PHC635	<b>60.4</b>	50	mg/kg	12.07.19 09.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.07.19 09.09	
o-Terphenyl	84-15-1	106	%	70-135	12.07.19 09.09	

## TRC Solutions, Inc, Midland, TX

Sly Hawk State #1

Sample Id: **WSW-A1-0.5'**

Matrix: Soil

Date Received: 12.06.19 16.53

Lab Sample Id: 645465-004

Date Collected: 12.05.19 12.30

Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.07.19 15.15

Basis: Wet Weight

Seq Number: 3109770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.08.19 09.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.08.19 09.59	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>		<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>
1,4-Difluorobenzene	540-36-3	102		%	70-130	12.08.19 09.59	
4-Bromofluorobenzene	460-00-4	83		%	70-130	12.08.19 09.59	





TRC Solutions, Inc  
Sly Hawk State #1

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109876

MB Sample Id: 7691936-1-BLK

Matrix: Solid

LCS Sample Id: 7691936-1-BKS

Prep Method: E300P

Date Prep: 12.09.19

LCSD Sample Id: 7691936-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	262	105	265	106	90-110	1	20	mg/kg	12.09.19 09:13	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109877

MB Sample Id: 7691969-1-BLK

Matrix: Solid

LCS Sample Id: 7691969-1-BKS

Prep Method: E300P

Date Prep: 12.09.19

LCSD Sample Id: 7691969-1-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	263	105	266	106	90-110	1	20	mg/kg	12.09.19 12:16	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109876

Parent Sample Id: 645426-007

Matrix: Soil

MS Sample Id: 645426-007 S

Prep Method: E300P

Date Prep: 12.09.19

MSD Sample Id: 645426-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	46.1	251	285	95	290	97	90-110	2	20	mg/kg	12.09.19 09:29	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109876

Parent Sample Id: 645426-017

Matrix: Soil

MS Sample Id: 645426-017 S

Prep Method: E300P

Date Prep: 12.09.19

MSD Sample Id: 645426-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.3	251	274	97	271	96	90-110	1	20	mg/kg	12.09.19 10:44	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109877

Parent Sample Id: 645405-001

Matrix: Soil

MS Sample Id: 645405-001 S

Prep Method: E300P

Date Prep: 12.09.19

MSD Sample Id: 645405-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.96	249	241	96	241	96	90-110	0	20	mg/kg	12.09.19 13:47	

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



TRC Solutions, Inc  
Sly Hawk State #1

**Analytical Method: Chloride by EPA 300**

Seq Number: 3109877  
Parent Sample Id: 645465-002

Matrix: Soil  
MS Sample Id: 645465-002 S

Prep Method: E300P  
Date Prep: 12.09.19  
MSD Sample Id: 645465-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	89.2	251	326	94	328	95	90-110	1	20	mg/kg	12.09.19 12:32	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3109756  
MB Sample Id: 7691874-1-BLK

Matrix: Solid  
LCS Sample Id: 7691874-1-BKS

Prep Method: SW8015P  
Date Prep: 12.06.19  
LCSD Sample Id: 7691874-1-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	1150	115	1170	117	70-135	2	20	mg/kg	12.07.19 01:26	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	1120	112	70-135	9	20	mg/kg	12.07.19 01:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		127		129		70-135	%	12.07.19 01:26
o-Terphenyl	121		113		119		70-135	%	12.07.19 01:26

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3109756

Matrix: Solid  
MB Sample Id: 7691874-1-BLK

Prep Method: SW8015P  
Date Prep: 12.06.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.07.19 01:07	

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3109756  
Parent Sample Id: 645199-001

Matrix: Soil  
MS Sample Id: 645199-001 S

Prep Method: SW8015P  
Date Prep: 12.06.19  
MSD Sample Id: 645199-001 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	1130	113	1120	112	70-135	1	20	mg/kg	12.07.19 02:24	
Diesel Range Organics (DRO)	<15.0	997	1050	105	1030	103	70-135	2	20	mg/kg	12.07.19 02:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		127		70-135	%	12.07.19 02:24
o-Terphenyl	110		105		70-135	%	12.07.19 02:24

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



TRC Solutions, Inc  
Sly Hawk State #1

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109770

MB Sample Id: 7691901-1-BLK

Matrix: Solid

LCS Sample Id: 7691901-1-BKS

Prep Method: SW5030B

Date Prep: 12.07.19

LCSD Sample Id: 7691901-1-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	0.104	104	0.0975	98	70-130	6	35	mg/kg	12.07.19 21:51	
Toluene	<0.000456	0.100	0.0997	100	0.0974	97	70-130	2	35	mg/kg	12.07.19 21:51	
Ethylbenzene	<0.000565	0.100	0.0964	96	0.0956	96	70-130	1	35	mg/kg	12.07.19 21:51	
m,p-Xylenes	<0.00101	0.200	0.194	97	0.196	98	70-130	1	35	mg/kg	12.07.19 21:51	
o-Xylene	<0.000344	0.100	0.0965	97	0.0990	99	70-130	3	35	mg/kg	12.07.19 21:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		91		93		70-130	%	12.07.19 21:51
4-Bromofluorobenzene	92		100		113		70-130	%	12.07.19 21:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3109770

Parent Sample Id: 645454-001

Matrix: Soil

MS Sample Id: 645454-001 S

Prep Method: SW5030B

Date Prep: 12.07.19

MSD Sample Id: 645454-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0935	94	0.0899	91	70-130	4	35	mg/kg	12.07.19 22:31	
Toluene	<0.000456	0.100	0.0899	90	0.0868	88	70-130	4	35	mg/kg	12.07.19 22:31	
Ethylbenzene	<0.000565	0.100	0.0864	86	0.0842	85	70-130	3	35	mg/kg	12.07.19 22:31	
m,p-Xylenes	<0.00101	0.200	0.174	87	0.170	86	70-130	2	35	mg/kg	12.07.19 22:31	
o-Xylene	<0.000344	0.100	0.0878	88	0.0858	86	70-130	2	35	mg/kg	12.07.19 22:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		95		70-130	%	12.07.19 22:31
4-Bromofluorobenzene	108		113		70-130	%	12.07.19 22:31

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





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 12/06/2019 04:53:00 PM

Work Order #: 645465

Acceptable Temperature Range: 0 - 6 degC  
 Air and Metal samples Acceptable Range: Ambient  
 Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.3
#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: 12/06/2019  
 Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/10/2019  
 Jessica Kramer