Site Characterization Report and Remediation Workplan

June 25, 2020

Lovington Crude Booster Station Release
NRM2009250299

Prepared For:

Holly Energy Partners – Operating, L.P.
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1.0 Introduction

TRC Environmental Corporation (TRC), on behalf of Holly Energy Partners – Operating, L.P. (HEP), has prepared this *Site Characterization Report and Remediation Workplan* for the crude oil release at the Lovington Crude Booster Station (Release Site). On March 25, 2020, a release was discovered on a booster pump. The Site is located outside but immediately adjacent to the HollyFrontier Lovington Refinery at Unit Letter P, Section 36, Township 16 South, Range 36 East, Lea County, New Mexico. The global positioning system (GPS) coordinates for the Release Site are 32.87410145, -103.30126395. The property surface rights are owned by the State of New Mexico and administered by the City of Lovington. The area surrounding the Release Site is used for pastureland, oil and gas exploration and production, and petroleum refining activities. The location of the Release Site is depicted on Figure 1.

2.0 Background

The March 2020 release was attributed to a failed bypass valve on the station piping. Verbal notification of the release was provided to the New Mexico Oil Conservation Division (NMOCD) on March 25, 2020. A copy of the Release Notification and Corrective Action Form (Form C-141) is included as Appendix A. The volume of crude oil released was approximately 212 barrels (bbls). A vacuum truck was dispatched in response to the release, and approximately 130 bbls of crude oil were recovered during initial response activities. The affected area footprint appeared to be approximately 15,400 square feet. Approximately 630 cubic yards of affected soil was excavated from the release area and stockpiled on plastic pending waste characterization and disposal. Photographic documentation of the Release Site is provided in Appendix B. The NMOCD assigned tracking number NRM2009250299 to the release.

This *Site Characterization Report and Remediation Workplan* was due within 90 days of reporting the release in accordance with 19.15.29.11 New Mexico Administrative Code (NMAC).

3.0 NMOCD Closure Criteria

Cleanup standards for crude oil releases are provided in 19.15.29 NMAC. The cleanup standards (described in the rule as “Closure Criteria”) are based primarily on depth to groundwater but are also based on other criteria. Three different Closure Criteria are provided in the rule. The most stringent apply to sites where groundwater is found within 50 feet of the ground surface or if the release occurred within one of the following areas:

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.
- Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary highwater mark).
- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.
- Within 1,000 feet of any fresh water well or spring.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
- Within 300 feet of a wetland.
- Within the area overlying a subsurface mine.
- Within an unstable area such as a karst formation.
- Within a 100-year floodplain.

TRC reviewed available information to determine the Closure Criteria for the Site. The findings of this evaluation are summarized below.

3.1 Groundwater Evaluation

Review of the New Mexico Office of the State Engineer (NMOSE) records indicated three (3) Navajo (HollyFrontier) Lovington Refinery water wells (WW-NORTH, WW-SOUTH and WW-EAST) and thirty-four (34) HollyFrontier monitoring wells are located within 0.5-mile of the Release Site as depicted on Figure 2. The NMOSE records also indicated one (1) active City-owned municipal water well (L-04058-POD2) is located within the Refinery; however, upon further review of the City of Lovington records and an interview with HollyFrontier Refinery personnel, it was determined that the listed municipal water well is actually one of the three HollyFrontier water wells. As shown on the table below, the shallowest recorded depth to groundwater in a nearby monitoring well is approximately 102 feet below ground surface (bgs).

Nearby Water Wells With Shallowest Depth to Water

Well ID	Location from Release Site	Owner	Use	Well Depth and Depth to Water (feet bgs)
MW-12R	0.15 miles east	Navajo Refining Company	Monitoring Well	106 feet/102 feet

3.2 Surface Features and Other Development

TRC reviewed recent aerial photographs, topographic maps, the NMOSE Point of Discharge (POD) GIS website, and information available from the Lea County, New Mexico Central Appraisal District website. Based on this review, the Site is **not** located:

- Within 300 feet of any continuously flowing watercourse or any other significant watercourse.
    - No continuously flowing watercourses (rivers, streams, arroyos, etc.) are apparent within 300 feet of the Site in the aerial photography shown on Figure 2 or appear on the topographic map (Figure 1).
- Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary highwater mark).
    - The topographic map, aerial photography, and floodplain maps (Figures 1, 2, and 3, respectively) indicate there is not a lakebed, sinkhole, or playa lake located within 200 feet of the Site.
- Within 300 feet from an occupied permanent residence, school, hospital, institution or church.
    - The aerial photography shown on Figure 2 and information available from the Lea County, New Mexico Central Appraisal District do not show or list any permanent residence, school, hospital, institution or church within 300 feet of the Site.
- Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes.
    - No wells or springs located within 500 feet of the Site appear in the NMOSE records reviewed by TRC. The nearest HollyFrontier water well (WW-SOUTH) is located approximately 1,100 feet north/northeast from the release area.

- Within 1,000 feet of any fresh water well or spring.
    - No freshwater wells or springs located within 1,000 feet of the Site appear in the NMOSE records reviewed by TRC. The nearest HollyFrontier water well (WW-SOUTH) is located approximately 1,100 feet north/northeast from the release area.
- Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended.
    - Based on the property and other records reviewed by TRC, the Site is located within the City of Lovington Municipal Freshwater Well Field (see Figure 2).
- Within the area overlying a subsurface mine.
    - Based on the property and other records reviewed by TRC, the Site is not within the area overlying a subsurface mine.

3.3 Wetlands, Floodplain, and Karst Geology

A review of the United States Fish and Wildlife Service (USFWS) wetlands map indicated the Site is not located within 300 feet of a wetland. The New Mexico Bureau of Land Management (BLM) karst potential map indicates the Site is located within the “low karst potential” area. Finally, review of the Federal Emergency Management Act (FEMA) floodplain map indicates the release at the Site is located outside of a 100-year floodplain. Figures 3 and 4 depict the wetlands and FEMA floodplain information, and the karst potential data, respectively.

3.4 Closure Criteria Currently Assumed Applicable to the Site

As the Release Site is within the City of Lovington Municipal Freshwater Well Field, the Closure Criteria applicable to the Site will be based on the most stringent regulatory guidelines. A summary of the Closure Criteria is provided in the table below and in Table 1.

NMOCD Closure Criteria

Constituent of Concern		Closure Criteria Based on Depth to Groundwater (mg/kg)		
		≤ 50 feet bgs	51 feet to 100 feet bgs	> 100 feet bgs
Chloride (EPA 300)		600	10,000	20,000
TPH (EPA 8015M)	GRO + DRO + MRO	100	2,500	2,500
	GRO + DRO	NA	1,000	1,000
Total BTEX (EPA 8021 or 8260)		50	50	50
Benzene (EPA 8021 or 8260)		10	10	10

Notes: NA = not applicable
mg/kg = milligrams per kilogram
bgs = below ground surface
TPH = total petroleum hydrocarbons
GRO = gasoline range organics
DRO = diesel range organics
MRO = motor oil range organics
BTEX = benzene, toluene, ethylbenzene, and total xylenes
Green highlighted cells denote applicable Closure Criteria.

4.0 Site Assessment/Characterization Results

As per 19.15.29.11 NMAC, a Site Characterization Report will have the components described in Sections 4.1 through 4.5 of this document.

4.1 Site Map

As required by 19.15.29.11 NMAC, a scaled diagram showing significant Site infrastructure, and trench and soil sample locations is provided as Figure 5.

4.2 Depth to Groundwater

As discussed in Section 3.1, a review of the NMOSE water well records indicates the shallowest recorded depth to groundwater in a nearby monitoring well (MW-12R, located 0.15 miles east) is approximately 102 feet bgs. During investigation activities, a maximum depth of approximately 7 feet bgs was reached in the area represented by test trench TT-1, and a maximum depth of approximately 4 feet bgs was reached in the areas represented by test trenches TT-2 through TT-4. Groundwater was not encountered in any of the test trenches.

According to the United States Geological Survey (USGS), surface soils at the site consist of Tertiary-age alluvium, interlayered eolian sands, and petrocalcic soil deposits. Under the interlayered eolian deposits is a dense caliche layer. According to the USGS, the caliche layer is known to form in the Ogallala Formation and can range from approximately a few feet to as much as 60 feet in thickness. Soils beneath the Release Site were observed to consist of unconsolidated medium to fine grained sand at thicknesses of approximately 2 to 5 feet, underlain by a dense caliche layer which was encountered at a depth of approximately 6 feet bgs and extended through the total depth of the investigation.

4.3 Wellhead Protection Area

The 0.5-mile Wellhead Protection Area is shown on Figure 2. There are three (3) HollyFrontier water wells (WW-NORTH, WW-SOUTH AND WW-EAST) located within 0.5 mile of the Site. The Site is located within the City of Lovington Municipal Freshwater Well Field; however, no City of Lovington wells are located within 0.5 mile of the Site.

4.4 Distance to Nearest Significant Watercourse

The horizontal distance to the nearest significant watercourse as defined in Subsection P of 19.15.17.7 NMAC is greater than 0.5-mile from the Release Site.

4.5 Soil Characteristics

4.5.1 Summary of March 2020 Excavation and April 2020 Investigation and Soil Sampling

From March 25 to March 30, 2020, HEP removed the upper 3 feet of impacted soil in the eastern portion of the Release Site. Soil removed during this activity was stockpiled on plastic sheeting pending further waste management activities (Figure 5).

On April 22, 2020, investigation activities were conducted to assess the extent of affected soil associated with the March 2020 crude oil release. Lateral delineation of affected soil associated with the March 2020 release was based on visual observation of the surface extent of the crude oil release. To determine the vertical extent of the affected area, a total of 4 test trenches (TT-1 through TT-4) were advanced across the surface extent of the Release Site utilizing a backhoe.

The total depth of the trenches ranged from 4 feet bgs to 7 feet bgs. A hard caliche layer was encountered at approximately 6 feet bgs at Trench TT-1 which caused backhoe refusal at a depth of approximately 7 feet bgs. Lithology and field observations of hydrocarbons (i.e., odor, staining, and photo-ionization detector [PID] readings) were recorded every 1 vertical foot in each trench. The general lithology observed includes medium to fine grained sand in the upper 1 to 5 feet bgs, followed by a tan colored medium grained sand and angular gravel to a depth of approximately 6 feet bgs. The trench locations are depicted on Figure 5. The trench logs are provided in Appendix C.

Discrete soil samples were collected from the trenches either by hand using a shovel or from the backhoe bucket if the depth of the test trench did not allow for safe sampling via shovel. Non-dedicated sampling equipment was decontaminated between each sampling location. At trench TT-1, soil samples were collected from the bottom of the excavation (at a depth of 3 feet bgs) and at 1-foot intervals until refusal was encountered at 7 feet bgs. Soil samples were collected from trenches TT-2, TT-3 and TT-4 at the surface (0 to 0.5 feet bgs) and at 1-foot intervals until PID results indicated hydrocarbon concentrations were reduced.

Soil samples selected for laboratory analysis were collected from:

- The uppermost interval at each test trench, which was 3 feet below the original ground surface at trench TT-1 because prior excavation removed the upper 3 feet of soil and the surface (0 to 0.5 feet bgs) from test trenches TT-2, TT-3, and TT-4. This uppermost interval in test trenches TT-2, TT-3, and TT-4 exhibited field evidence of likely maximum chemical of concern (COC) concentrations (i.e., PID readings, petroleum hydrocarbon staining).
- The shallowest sample with reduced PID readings to assess vertical delineation.
- The bottom of each trench to assess and/or confirm vertical delineation.

Soil samples were submitted to DHL Analytical in Round Rock, Texas for laboratory analysis of TPH by Environmental Protection Agency (EPA) Method 8015; benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260; and chloride by EPA Method 300.0. The locations of the trenches and soil samples, and the soil analytical results are depicted in Figure 5. The sample depths and analytical results for the soil samples are also provided in Table 1. Laboratory analytical results are provided in Appendix D.

Following investigation and soil sampling activities, the trenches were backfilled with the originally excavated material.

4.5.2 Summary of April 2020 Analytical Results

Based on the analytical results, concentrations of TPH in soil exceeded Closure Criteria at test trenches TT-2, TT-3, and TT-4 from 0 to 0.5 feet bgs. A brief summary of the soil analytical results for each parameter is discussed below. Soils with exceedances will be addressed in accordance with the Remediation Workplan discussed in Section 5.0.

TPH

- TPH concentrations exceeded the Closure Criteria in one (1) sample collected from 0 to 0.5 feet bgs at each sampling location except for trench TT-1 where no TPH exceedances were detected.
- The highest TPH concentrations were observed in the samples collected from the 0 to 0.5 foot bgs interval from trenches TT-2 through TT-4, as expected based on a surface release.
- TPH concentrations decreased with depth at all sampling locations.
- TPH concentrations were vertically delineated at all sampling locations at depths ranging from 1 to 3 feet bgs.

BTEX and Benzene

- BTEX and benzene concentrations were below Closure Criteria in all samples collected at the Release Site.

Chloride concentrations were detected at one location (trench TT-4) above the Closure Criteria at a depth of 4 feet bgs. Chlorides are likely not associated with this crude oil release because chloride concentrations are below NMOCD Closure Criteria in every surface soil sample (0 to 0.5 feet bgs) where TPH concentrations are highest. In addition, sample location TT-3 had chloride concentrations below the Closure Criteria and this location provides lateral delineation between the release point and the chloride exceedances at trench sample TT-4; in other words, the data suggest chlorides did not migrate from the release to trench sample location TT-4. As the presence of chloride in soil at the Release Site is not attributed to this release, no further action will be proposed for the chloride exceedance at trench TT-4.

4.5.3 Laboratory Analytical Data Quality Assurance/Quality Control Results

Data reported in work order 20042111 generated by DHL Laboratory in Round Rock, Texas, was reviewed to ensure that reported analytical results met data quality objectives. It was determined by quality control data associated with analytical results that reported concentrations of target analytes were defensible and that measurement data reliability is within the expected limits of sampling and analytical error. All analytical results are usable for characterization of contamination at the Site. The laboratory analytical results are provided as Appendix D.

5.0 Proposed Remediation Workplan

5.1 Proposed Remedial Activities

Soil with TPH concentrations above the NMOCD Closure Criteria were documented at the following sample locations: trenches TT-2 through TT-4. Following approval of this workplan by the NMOCD, remediation activities will commence. Soils with TPH concentrations above the Closure Criteria will be excavated and transported under manifest to a NMOCD-approved disposal facility.

Excavation activities will extend to the margins of the affected areas that include trench locations TT-2, TT-3 and TT-4 until PID readings, as well as visual and olfactory evidence, indicates COC (benzene, BTEX, and TPH) concentrations are likely below Closure Criteria, at which point confirmation samples will be collected for laboratory analysis. No further excavation will be conducted in the area of trench TT-1 based on the soil sample results being below Closure Criteria. An attempt will be made to remove the impacted soil from around the aboveground piping of the Booster Station by hand. If soil concentrations in the area below the pipelines are above the NMOCD Closure Criteria, then the affected area will be sprayed with Micro-Blaze® and remediation will be deferred until time of abandonment of the Facility. Confirmation soil samples will be collected from the base and sidewalls of the excavation to confirm that soil concentrations in exceedance of the Closure Criteria were removed. Pursuant to 19.15.29.12(D) NMAC, confirmation samples will consist of five-point composite samples, and discrete grab samples will be collected from any wet or discolored areas. HEP will collect one soil sample per 200 square feet of excavation floor for confirmation sampling. Additionally, sidewall confirmation soil samples will be collected from the excavated areas on a basis of one soil sample per 100 linear feet of sidewall. Each confirmation sample will be analyzed for TPH by EPA SW-846 Method 8015M. Based on the site characterization results, excavation depths are expected to range from 1 to 3 feet bgs with an estimated 800 cubic yards of soil excavated for disposal at an NMOCD approved disposal facility. Stockpiled soil from initial response activities (approximately 630 cubic yards) will also be disposed at an NMOCD approved disposal facility.

Upon confirmation that TPH concentrations in all composite and grab sample locations are below the Closure Criteria, the excavation will be backfilled to grade with non-impacted similar material. Pursuant to 19.15.29.13 NMAC, the impacted surface areas will be restored to pre-release conditions. Surface grading will be performed to near original conditions and contoured to prevent erosion and ponding, promote stability, and preserve storm water flow patterns.

The Release Site is currently operational in and around the affected area. If laboratory analytical results of confirmation samples collected from below the aboveground pipelines report TPH concentrations above the NMOCD Closure Criteria, the area will be sprayed with Micro-Blaze® and backfilled. Further reclamation activities in accordance with 19.15.29.13 NMAC will be deferred until time of abandonment of the Facility.

HEP requests a remediation schedule of 150 days from the date of NMOCD approval of this Remediation Plan to complete the remediation activities and submit a *Remediation Summary and Closure Report* for NMOCD and NMSLO approval. The closure report will summarize remedial activities and confirmation sampling results and will include the final Form C-141.

5.2 Requested Closure Until Time of Abandonment (TOA) of Lovington Crude Booster Station

Lovington Crude Booster Station is an active facility with equipment including pumps and aboveground pipes. Affected soil in the area of TT-2 through TT-4 will be excavated to a depth of approximately 1 to 3 feet bgs. As mentioned in Section 5.1, an attempt will be made to remove the affected soil around the aboveground piping of the Booster Station by hand. If soil concentrations in the area below the pipelines are above the NMOCD Closure Criteria, then the affected area will be sprayed with Micro-Blaze® and remediation will be deferred until time of abandonment of the Facility. HEP proposes utilization of data from soil sample locations TT-2 through TT-4 as indication of vertical delineation of soil impacts to the Closure Criteria at an approximate depth of 2 feet surrounding the facility.

As mentioned above, impacted soil in this area has been vertically delineated, and there is not an imminent risk to human health, the environment, or groundwater (the shallowest recorded depth to groundwater in a nearby monitoring well is approximately 102 feet bgs). HEP will perform final remediation and reclamation of the facility area in accordance with 19.15.29.12 and 19.15.29.13 NMAC, if necessary once the facility is no longer operational.

6.0 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
Hobbs Field Office
New Mexico State Land Office
2827 North Del Paso St., Suite 117
Hobbs, NM 88240

Copy 3: Mark Shemaria
Holly Energy Partners – Operating, L.P.
2828 N. Harwood Street, Suite 1300
Dallas, TX 75201

Copy 4: Arsin Sahba
HollyFrontier Corporation
2828 N. Harwood Street, Suite 1300
Dallas, TX 75201

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
HOLLY ENERGY PARTNERS - OPERATING, L.P.
Lovington Crude Booster Station Release
NMOCD Tracking No.: NRM2009250299

Sample ID	Sample Date	Sample Depth (feet)	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Chloride
			milligrams per kilogram (mg/kg)									
NMOCD Closure Criteria			-	-	-	**100**	**10**	-	-	-	**50**	**600**
TT-1 @ 3'	4/22/2020	3'	<2.23	54.7	11.5	66.2	<0.00113	<0.00113	<0.00113	<0.00113	<0.00113	<20.9
TT-1 @ 4'	4/22/2020	4'	<2.13	4.30	<3.12	4.30	<0.00113	<0.00113	<0.00113	<0.00113	<0.00113	<22.2
TT-1 @ 6-7'	4/22/2020	6-7'	<2.17	6.52	<3.07	6.52	<0.00109	<0.00109	<0.00109	<0.00109	<0.00109	<21.1
DUP-1	4/22/2020	--	<2.15	8.80	<3.09	8.80	<0.000985	<0.000985	<0.000985	<0.000985	<0.000985	<22.1
TT-2 @ 0-0.5'	4/22/2020	0-0.5'	230	5,260	346	**5,836**	<0.000982	0.0355	0.176	0.5050	0.7165	84.6
TT-2 @ 2'	4/22/2020	2'	<2.10	4.81	<3.40	4.81	<0.00112	<0.00112	<0.00112	<0.00112	<0.00112	29.7
TT-2 @ 4'	4/22/2020	4'	<2.55	6.00	<3.93	6.00	<0.00123	<0.00123	<0.00123	<0.00123	<0.00123	<26.4
TT-3 @ 0-0.5'	4/22/2020	0-0.5'	981	8,460	1,090	**10,531**	0.0194	1.73	9.11	20.6	31.46	300
TT-3 @ 3'	4/22/2020	3'	<1.94	55.0	10.8	65.8	<0.00104	<0.00104	0.00256	0.00589	0.00845	205
TT-3 @ 4'	4/22/2020	4'	<2.30	6.34	<3.56	6.34	<0.00120	<0.00120	<0.00120	0.00122	0.00122	123
TT-4 @ 0-0.5'	4/22/2020	0-0.5'	<2.07	226	72.1	**298.1**	<0.00104	<0.00104	<0.00104	<0.00104	<0.00104	<20.3
TT-4 @ 1'	4/22/2020	1'	<2.27	5.41	<3.80	5.41	<0.00128	<0.00128	<0.00128	<0.00128	<0.00128	94.4
TT-4 @ 4'	4/22/2020	4'	<2.25	5.05	<3.36	5.05	<0.00108	<0.00108	<0.00108	<0.00108	<0.00108	**895**

Notes:

1. GRO: Gasoline Range Organics
2. DRO: Diesel Range Organics
3. MRO: Motor Oil Range Organics
4. Bold indicates the parameter was detected above the NMOCD Closure Criteria.
5. Orange highlight indicates sampled location and interval will be excavated during remedial activities.
6. < indicates the parameter was below the appropriate laboratory method/sample detection limit.
7. DUP-1 was collected from the same location as TT-1 @ 6-7'.

Plot Date: 6/24/2020, 13:57:24 PM by MJAGOE -- LAYOUT: ANSI B (11"x17")
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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS

SITE LOCATION

SOURCE: BASEMAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES. LOVINGTON SE, NEW MEXICO, 1985.

0 1,000 2,000 FEET

1 " = 2,000 '

1:24,000

N

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

PROJECT:

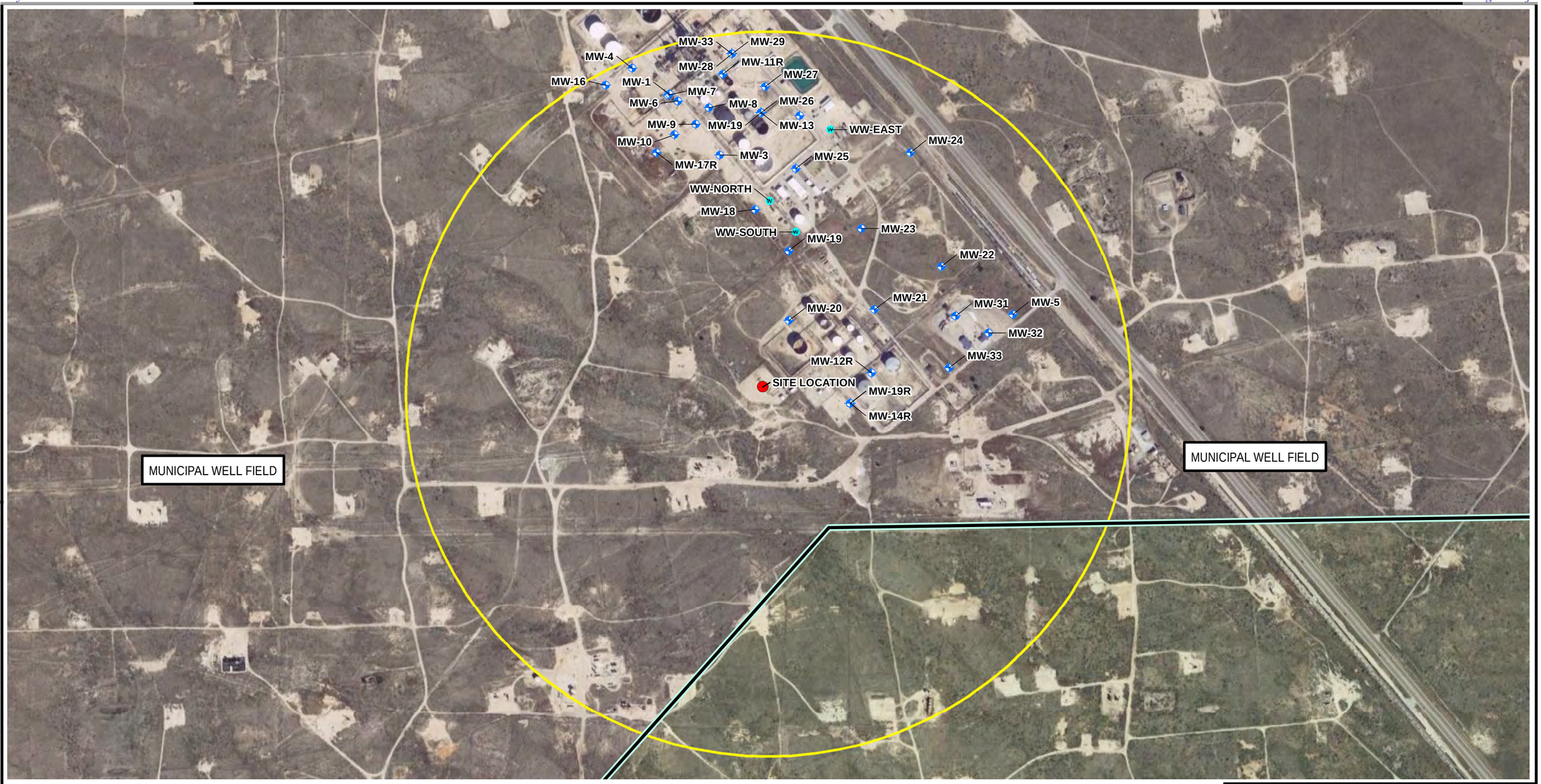
HOLLY ENERGY PARTNERS - OPERATING, L.P.
LOVINGTON CRUDE BOOSTER STATION RELEASE
LEA COUNTY, NEW MEXICO

TITLE:

SITE LOCATION MAP

DRAWN BY:	C.MCELROY
CHECKED BY:	T. BABU
APPROVED BY:	J. STOFFEL
DATE:	JUNE 2020
PROJ. NO.:	392796
FILE:	392796_1_20200612.mxd

FIGURE 1



BASEMAP FROM GOOGLE AND THEIR DATA PARTNERS

LEGEND

- Site Location
- Monitoring Well
- Water Well
- 1/2 Mile Release Area Radius
- City of Lovington Municipal Freshwater Well Field

N

0 350 700 Feet

1 " = 700 '

1:8,400

PROJECT:
HOLLY ENERGY PARTNERS - OPERATING, L.P.
LOVINGTON CRUDE BOOSTER STATION RELEASE
LEA COUNTY, NEW MEXICO

TITLE:
WELLHEAD PROTECTION AREA MAP

DRAWN BY:	C. MCELROY	PROJ NO.:	398796
CHECKED BY:	T. BABU		
APPROVED BY:			**FIGURE 2**
DATE:	JUNE 2020		

TRC

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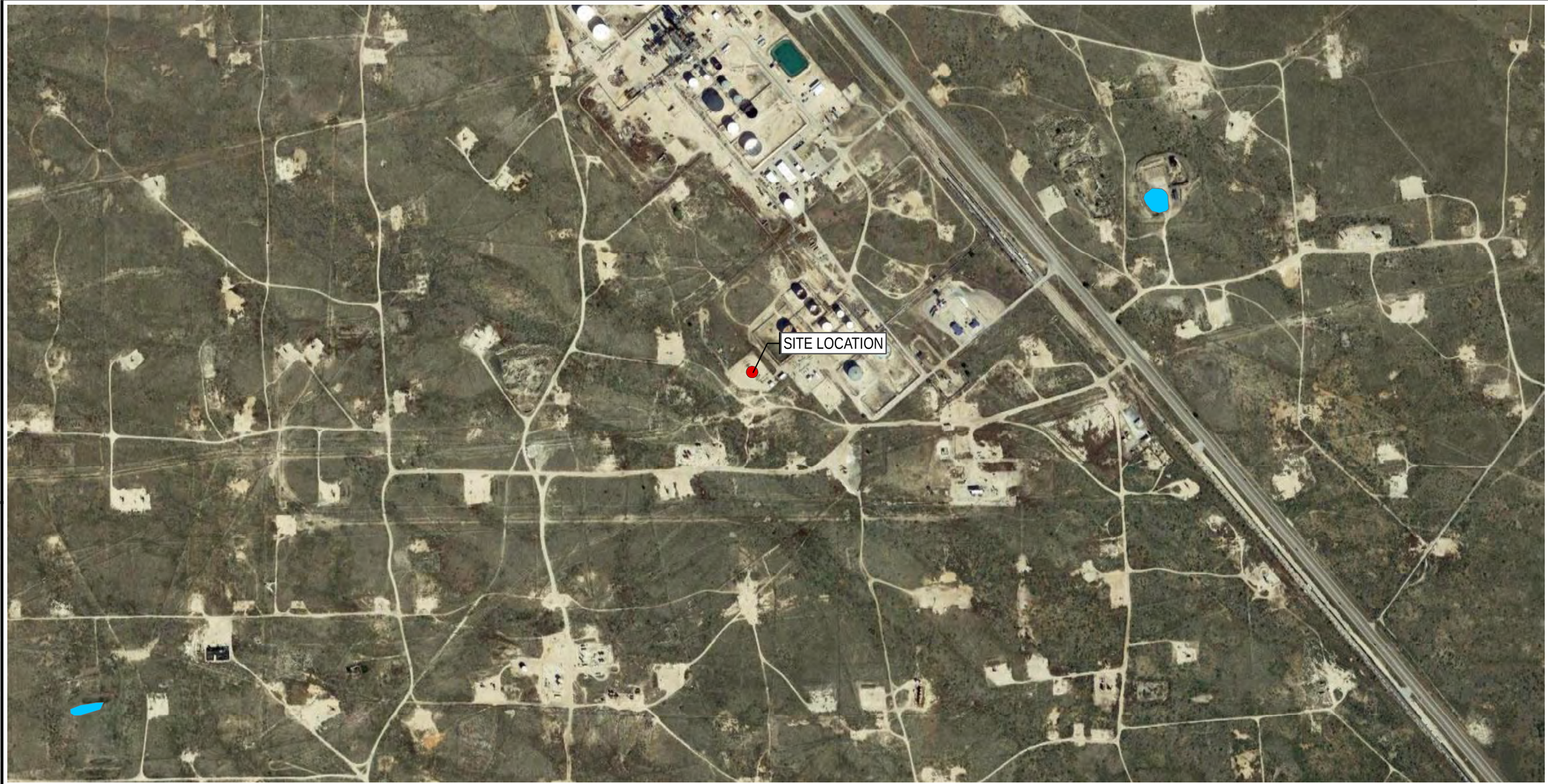
Austin, TX 78752
Phone: 512.329.6080
www.trcsolutions.com

FILE NO.: 392796_2_20200612_V2.mxd



BASEMAP FROM GOOGLE AND THEIR DATA PARTNERS.
FLOODPLAIN DATA FROM FEMA.

LEGEND

USFWS Wetlands

Freshwater Pond

FEMA FLOODPLAIN DATA NOT PRESENT AT CURRENT SCALE.

N

0 350 700 Feet

1 " = 700 '

1:8,400

PROJECT:
HOLLY ENERGY PARTNERS - OPERATING, L.P.
LOVINGTON CRUDE BOOSTER STATION RELEASE
LEA COUNTY, NEW MEXICO

TITLE:
WETLANDS AND FEMA FLOODPLAIN MAP

DRAWN BY:	C. MCELROY	PROJ NO.:	392796
CHECKED BY:	T. BABU		
APPROVED BY:	J. STOFFEL		**FIGURE 3**
DATE:	JUNE 2020		

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Phone: 512.329.6080
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FILE NO.: 392796_3_20200612.mxd

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

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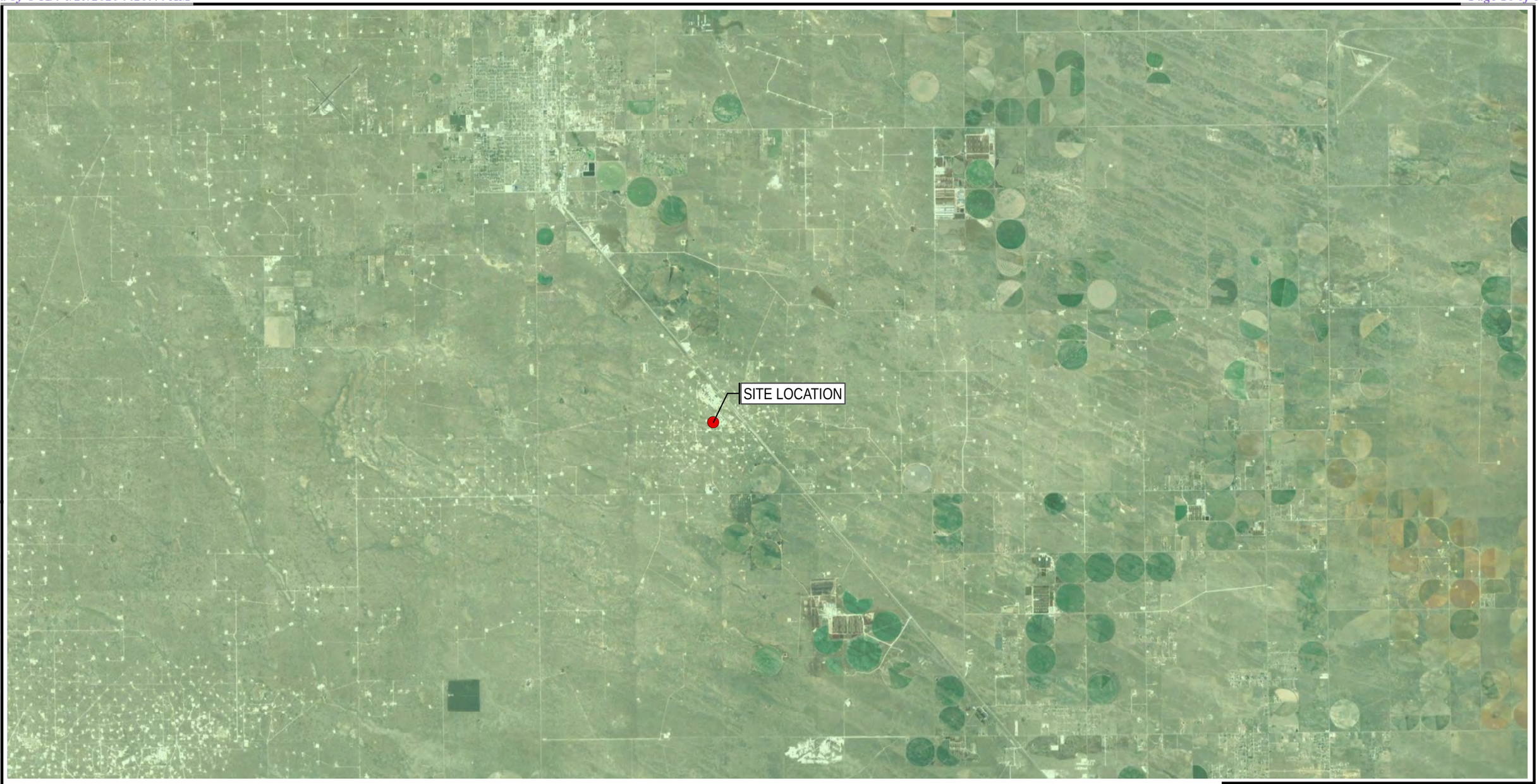

BASEMAP FROM GOOGLE AND THEIR DATA PARTNERS.
KARST DATA FROM NEW MEXICO BUREAU OF LAND MANAGEMENT.

LEGEND

Low Karst Potential

MEDIUM AND HIGH KARST DATA NOT PRESENT AT CURRENT SCALE.

N

0 1 2 Miles

1 " = 2 MILES
1:100,000

PROJECT:
HOLLY ENERGY PARTNERS - OPERATING, L.P.
LOVINGTON CRUDE BOOSTER STATION RELEASE
LEA COUNTY, NEW MEXICO

TITLE:
KARST POTENTIAL MAP

DRAWN BY:	C. MCELROY	PROJ NO.:	392796
CHECKED BY:	T. BABU		
APPROVED BY:	J. STOFFEL		**FIGURE 4**
DATE:	JUNE 2020		

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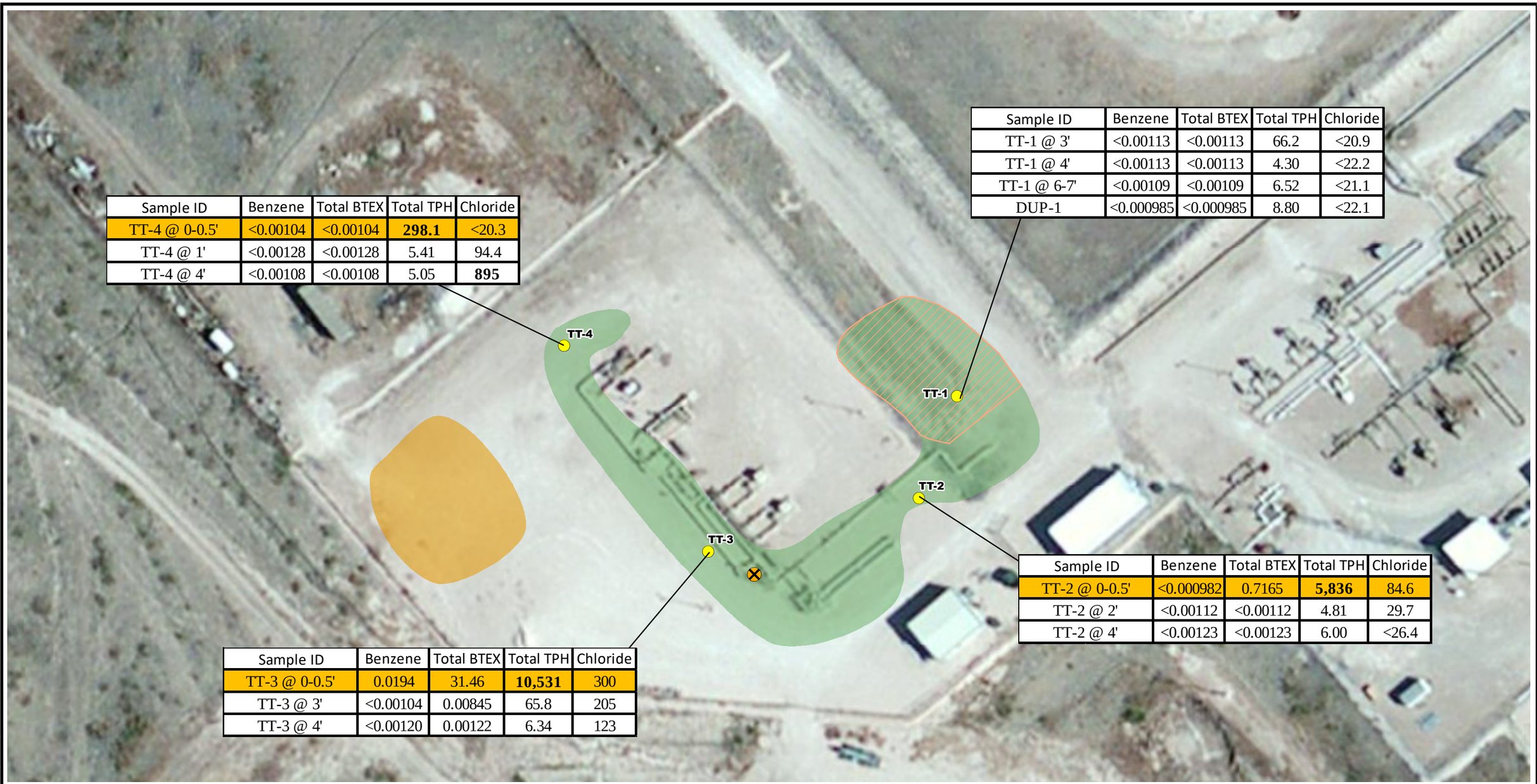
Austin, TX 78752
Phone: 512.329.6080
www.trcsolutions.com

FILE NO.: 392796_4_20200612.mxd

Plot Date: 6/24/2020, 13:59:56 PM by MJAGOE -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\392796_BoosterStation_Release\mxd\392796_4_20200612.mxd
Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



Sample ID	Benzene	Total BTEX	Total TPH	Chloride
TT-4 @ 0-0.5'	<0.00104	<0.00104	**298.1**	<20.3
TT-4 @ 1'	<0.00128	<0.00128	5.41	94.4
TT-4 @ 4'	<0.00108	<0.00108	5.05	**895**

Sample ID	Benzene	Total BTEX	Total TPH	Chloride
TT-1 @ 3'	<0.00113	<0.00113	66.2	<20.9
TT-1 @ 4'	<0.00113	<0.00113	4.30	<22.2
TT-1 @ 6-7'	<0.00109	<0.00109	6.52	<21.1
DUP-1	<0.000985	<0.000985	8.80	<22.1

Sample ID	Benzene	Total BTEX	Total TPH	Chloride
TT-2 @ 0-0.5'	<0.000982	0.7165	**5,836**	84.6
TT-2 @ 2'	<0.00112	<0.00112	4.81	29.7
TT-2 @ 4'	<0.00123	<0.00123	6.00	<26.4

Sample ID	Benzene	Total BTEX	Total TPH	Chloride
TT-3 @ 0-0.5'	0.0194	31.46	**10,531**	300
TT-3 @ 3'	<0.00104	0.00845	65.8	205
TT-3 @ 4'	<0.00120	0.00122	6.34	123

BASEMAP FROM GOOGLE AND THEIR DATA PARTNERS.

LEGEND

- Release Point
- Trench and Soil Sample Locations
- Affected Area
- Stockpile
- Area Excavated to 3 Feet

Sample ID	Benzene	Total BTEX	Total TPH	Chloride
NMOCD Closure Criteria	10 mg/kg	50 mg/kg	100 mg/kg	600 mg/kg

NOTES:
1. GRO: Gasoline Range Organics
2. DRO: Diesel Range Organics
3. MRO: Motor Oil Range Organics
4. Bold indicates the parameter was detected above the NMOCD Closure Criteria.
5. Orange highlight indicates sampled location and interval will be excavated during remedial activities.
6. < indicates the parameter was below the appropriate laboratory method/sample detection limit.
7. DUP-1 was collected from the same location as TT-1 @ 6-7'.
8. First sampling interval at TT-1 was at 3 feet below original ground surface because initial response activities removed the upper 3 feet in the area; excavated soil is stockpiled where shown.

N

0 50 100 Feet

1 " = 50 '
1:600

PROJECT:
HOLLY ENERGY PARTNERS - OPERATING, L.P.
LOVINGTON CRUDE BOOSTER STATION RELEASE
LEA COUNTY, NEW MEXICO

TITLE:
SOIL SAMPLE ANALYTICAL RESULTS MAP

DRAWN BY:	C. MCELROY	PROJ NO.:	392796
CHECKED BY:	T. BABU		
APPROVED BY:	J. STOFFEL		
DATE:	JUNE 2020		

FIGURE 5

TRC
505 East Huntland Drive, Suite 250
Austin, TX 78752
Phone: 512.329.6080
www.trcsolutions.com

FILE NO.: 392796_5_20200612.mxd

Plot Date: 6/24/2020, 14:02:32 PM by MJAGOE – LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\392796_BoosterStation_Release\mxd\392796_5_20200612.mxd
Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS

Appendix A: Release Notification and Corrective Action Form (NMOCD 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 Holly Energy Partners	OGRID 282505
Contact Name Melanie Nolan	Contact Telephone 214-605-8303
Contact email Melanie.Nolan@hollyenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 1602 W Main St. Artesia, NM 88210	

Location of Release Source

Latitude 32.87410145 *(NAD 83 in decimal degrees to 5 decimal places)*

Longitude -103.30126395

Site Name Lovington Crude Booster Station	Site Type Pump Booster Station
Date Release Discovered 3/25/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
P	36	16S	36E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: City of Lovington)*

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) Approximately 212	Volume Recovered (bbls) 130
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Station piping had a bypass valve fail causing the release of the crude oil

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release exceeding 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, Environmental Specialist – Melanie Nolan OCD Contact Given notification: Gilbert Cordero Notification was given on 3/25/2020 via phone with follow-up email sent to: Mike Bratcher, Victoria Venegas, Robert Hamlet, Jim Griswold and Gilbert Cordero	

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Melanie Nolan Title: Environmental Specialist

Signature: Melanie Nolan Date: 3/30/2020

email: Melanie.Nolan@hollyenergy.com Telephone: 214-605-8303

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009250299
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?	102 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☐ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☐ No

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

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

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009250299
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: Melanie Nolan Title: Environmental Specialist

Signature: Melanie Nolan Date: 6/23/2020

email: Melanie.Nolan@hollyenergy.com Telephone: 214-605-8303

OCD Only

Received by: Cristina Eads Date: 06/25/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009250299
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Melanie Nolan Title: Environmental Specialist

Signature: Melanie Nolan Date: 6/23/2020

email: Melanie.Nolan@hollyenergy.com Telephone: 214-605-8303

OCD Only

Received by: Cristina Eads Date: 06/25/2020

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

Signature: Date: 09/14/2020

State of New Mexico
Oil Conservation Division

Incident ID	
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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B: Photographic Documentation

Appendix B Photographic Documentation	
Photograph No. 1 **Date:** **4/22/2020** **Direction:** **East** **Description:** **View of release area.**	
Photograph No. 2 **Date:** **4/22/2020** **Direction:** **Northwest** **Description:** **View of release area.**	

Appendix B Photographic Documentation	
Photograph No. 3 **Date:** **4/22/2020** **Direction:** **Northwest** **Description:** **View of release area.**	
Photograph No. 4 **Date:** **4/22/2020** **Direction:** **Northeast** **Description:** **View of release area.**	

Appendix B Photographic Documentation	
Photograph No. 5 **Date:** **4/22/2020** **Direction:** **Southeast** **Description:** **View of delineation activities in TT-1.**	
Photograph No. 6 **Date:** **4/22/2020** **Direction:** **Southeast** **Description:** **View of delineation activities in TT-2.**	

Appendix B Photographic Documentation	
Photograph No. 7 **Date:** **4/22/2020** **Direction:** **Northwest** **Description:** **View of delineation activities in TT-3.**	
Photograph No. 8 **Date:** **4/22/2020** **Direction:** **West** **Description:** **View of delineation activities in TT-4.**	

Appendix C: Trench Logs

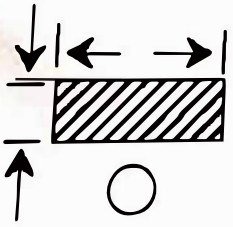
TRC

Test Pit Log

Project: Lovington Circle Booster Station	Date/Time: 4/22/20	Sheet 1 of 4
Contractor Personnel: TRC	TRC Personnel: T. Beba	
Equipment/Contractor Used: Backhoe / TRC	Location: Lovington, NM	Test Pit Number: 1
Reach/Capacity: 7 ft	Total Depth: 7 ft	Piezometer Installed? no
Depth to Ground Water: 102'/62'	Weather: 64°F, clear, sunny	Elevation: Top of Pit ____

Depth	Sample Number	Stratigraphic Description	REMARKS:
3		fine to med grained, moderately to well sorted, dark brown soil	30.1 ppm
4		fine to med grained, moderately to well sorted, dark brown soil	25.1 ppm
5		caliche layer, angular gravel, poorly sorted, tan color soil	10.9 ppm
6			20.5 ppm
7			

TEST PIT PLAN



North

Vol = ____ cu. yd.

PROPORTIONS BURMISTER USED

Trace (TR).	0 - 10%
Little (LI.)	10 - 20%
Some (SO.)	20 - 35%
And	35 - 50%

GRAIN SIZE (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. Sand	2.0-0.43 mm
e. Sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

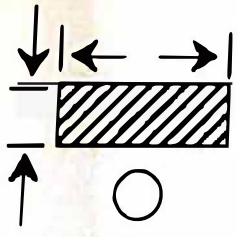
Rev: February 2006

TRC
Test Pit Log

Project: Lovington Crude Booster Station		Date/Time:	Sheet 2 of 4
Contractor Personnel:		TRC Personnel:	T. Babu
Equipment/Contractor Used: Backhoe	Location: Lovington, NM	Test Pit Number:	2
Reach/Capacity: 4 ft	Total Depth: 4ft	Piezometer Installed?	ND
Depth to Ground Water: 102/62	Weather: 64°F, clear, sunny	Elevation:	Top of Pit _____

Depth	Sample Number	Stratigraphic Description	REMARKS:
0		caliche surface, hard layer, strong odor ↓	>5,000 ppm ↓
1		med. to fine grained sand, moderately sorted, round to angular shaped pebbles, dark brown soil	45.2ppm
2			32.2ppm
3			27.0 ppm
4		↓	
5			
6			
7			
8			
9			
10			

TEST PIT PLAN



North

Vol = ____ cu. yd.

PROPORTIONS BURMISTER USED

Trace (TR).	0 - 10%
Little (LI.)	10 - 20%
Some (SO.)	20 - 35%
And	35 - 50%

GRAIN SIZE (USCS)

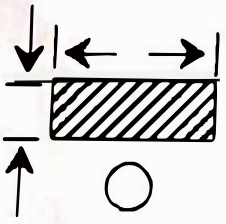
silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. Sand	2.0-0.43 mm
e. Sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

TRC Test Pit Log

Project: Lovington Crude Booster Station		Date/Time:	Sheet 3 of 4
Contractor Personnel:		TRC Personnel: T. Babu	
Equipment/Contractor Used: Backhoe	Location: Lovington, NM	Test Pit Number: 3	
Reach/Capacity: 4'	Total Depth: 4'	Piezometer Installed? no	
Depth to Ground Water: 102'/62'	Weather: 64°F, Sunny, clear skies	Elevation: Top of Pit _____	

Depth	Sample Number	Stratigraphic Description	REMARKS:
1		Surface caliche layer, angular to round pebbles, poorly sorted, staining evident	>5,000ppm
2		med to fine grained sand, well to med. sorted, dark brown in color, mixture w/ caliche layer tan	1,590 ppm
3		predominantly hard caliche layer encountered, compacted layer, tan/cream in color, no odor, no staining.	193.2 ppm
4			26.7 ppm
5			
6			
7			
8			
9			
10			

TEST PIT PLAN



North

Vol = ____ cu. yd.

PROPORTIONS BURMISTER USED

Trace (TR.)	0 - 10%
Little (LI.)	10 - 20%
Some (SO.)	20 - 35%
And	35 - 50%

GRAIN SIZE (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. Sand	2.0-0.43 mm
e. Sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

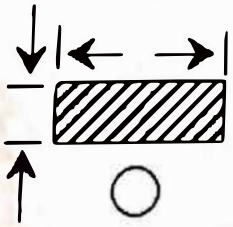
Rev: February 2006

TRC Test Pit Log

Project: Lovington Crude Booster Station		Date/Time:	Sheet 4 of 4
Contractor Personnel:		TRC Personnel: T. Babu	
Equipment/Contractor Used: Backhoe	Location: Lovington, NM	Test Pit Number: 4	
Reach/Capacity: 4'	Total Depth: 4'	Piezometer Installed? No	
Depth to Ground Water: 102'/62'	Weather: 64°F, clear skies, sunny	Elevation: Top of Pit ____	

Depth	Sample Number	Stratigraphic Description	REMARKS:
0		strong odor caliche layer, visible staining	1035 ppm
1		caliche mixed w/ med. to fine grained sand	19.2 ppm
2		med to fine grained sand, minimal to no odor, no visible staining, dark brown in color, med. to well sorted ↓	22.1 ppm
3			18.7 ppm
4			17.1 ppm
5			
6			
7			
8			
9			
10			

TEST PIT PLAN



North

Vol = ____ cu. yd.

PROPORTIONS BURMISTER USED

Trace (TR).	0 - 10%
Little (LI.)	10 - 20%
Some (SO.)	20 - 35%
And	35 - 50%

GRAIN SIZE (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. Sand	2.0-0.43 mm
e. Sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Rev: February 2006

Appendix D: Laboratory Analytical Report

May 01, 2020

Cindy Crain
TRC Environmental Corp.
10 Desta Dr. #150E
Midland, Texas 79705
TEL: (432) 215-6730
FAX:

Order No.: 2004211

RE: Lovington Crude Booster Station Release

Dear Cindy Crain:

DHL Analytical, Inc. received 23 sample(s) on 4/24/2020 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-20-25

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

Nº

CHAIN-OF-CUSTODY

CLIENT: TRC
ADDRESS: 10 Desta Dr. STE 150E
PHONE: 432-215-6730 FAX/E-MAIL: ckcrain@trccompanies.com
DATA REPORTED TO: Cindy Crain
ADDITIONAL REPORT COPIES TO: TBabu@trccompanies.com

DATE: 04/22/20 PAGE 1 OF 2
PO #: Direct Bill to HEP DHL WORK ORDER #: 2004211
PROJECT LOCATION OR NAME: Lovington Crude Booster Station Re
CLENT PROJECT #: 392796 COLLECTOR: Tania Babu

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL P=PAINT W=WATER SL=SLUDGE A=AIR O=OTHER L=LIQUID SO=SOLID SE=SEDIMENT

PRESERVATION: HCl, HNO_3, H_2SO_4 ❑ NaOH ❑, ICE, UNPRESERVED

ANALYSES: BTEX ❑ MTBE ❑ [METHOD 8021] ❑; TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑; GRO [METHOD 8015] ❑ DRO [METHOD 8105] ❑; VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑; SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑; 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑; 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑; 8321 HERB ❑ T PHOS, AMMONIA ❑; METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑; RCRA ❑ TX11 ❑ ____ ❑; PH ❑ HEX CHROM ❑ ALKALINITY ❑ COD ❑; CHLORIDE ❑ ANIONS ____ ❑; TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑; TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑; RCI ❑ FLASHPOINT ❑ DGAS ❑; TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑; TPH (BOLSTM)

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
TT-1@3'	01	04/22/20	0930	S	4oz	1				X		X X X	
TT-1@4'	02		0940									X X X	x - run analysis
TT-1@5'	03		0950									✓ ✓ ✓	✓ - HOLD
TT-1@6-7'	04		1000									X X X	
TT-2@0-0.5'	05		1010									X X X	
TT-2@1'	06		1020									✓ ✓ ✓	Bill to: HEP Accounts Payable@Holly Frontier.com
TT-2@2'	07		1030									X X X	
TT-2@3'	08		1040									✓ ✓ ✓	
TT-2@4'	09		1045									X X X	
TT-2@5'	10		1050									✓ ✓ ✓	
TT-2@6'	11		1100									✓ ✓ ✓	
TT-2@7'	12		1110									✓ ✓ ✓	
TT-3@0-0.5'	13		1120									X X X	
TT-3@1'	14		1130									✓ ✓ ✓	
TT-3@2'	15	↓	1140	↓	↓	↓				↓		✓ ✓ ✓	

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	04/22/20	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	1245 4/23/20	Fed Ex
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Fed Ex	4/24/20 0840	

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.5°C THERM #: 78
CUSTODY SEALS: ❑ BROKEN ☒ INTACT ❑ NOT USED
CARRIER: ❑ LONE STAR ☒ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№

CHAIN-OF-CUSTODY

CLIENT: TRC
ADDRESS: 10 Desta Dr. STE 1500E
PHONE: 432-215-6730 FAX/E-MAIL: CKCrain@trccompanies.com
DATA REPORTED TO: Cindy Crain
ADDITIONAL REPORT COPIES TO: TBabu@trccompanies.com

DATE: 04/22/20 PAGE 2 OF 2
PO #: Direct Bill to HEP DHL WORK ORDER #: 2004211
PROJECT LOCATION OR NAME: Lovington Crude Booster Station Release
CLENT PROJECT #: 392796 COLLECTOR: Tanica Babu

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR O=OTHER
L=LIQUID SO=SOLID
SE=SEDIMENT

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☒ MTBE ☐ [METHOD 8021]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐	VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐	8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8270 PCB ☐	8270 O-P PEST ☐ 8082 PCB ☐ T PHOS, AMMONIA ☐	8321 HERB ☐ T PHOS, AMMONIA ☐	METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐	RCRA ☐ TX11 ☐	PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	CHLORIDE ☒ ANIONS	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ FLASHPOINT ☐ DGAS ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	TPH (8015M)	FIELD NOTES
TT-3@3'	16	04/22/20	1150	S	4oz	1				X		X										X				X		
TT-3@4'	17	↓	1200	↓	↓	↓				↓		X										X				X		
TT-4@ 0-0.5'	18		1210									X										X				X		
TT-4@ 1'	19		1220									X										X				X		
TT-4@ 2'	20		1230									✓										✓				✓		
TT-4@ 3'	21		1240									✓										✓				✓		
TT-4@ 4'	22		1250									X										X				X		
DUP-1	23	↓	1300	↓	↓	↓				↓		X										X				X		

FIELD NOTES:
X - run analysis
✓ - HOLD
Bill to: HEP - Accounts Payable @HollyFrontier.com

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	04/22/20	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	16:45 4/23/20	Fed Ex
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Fed Ex	4/24/20 0840	

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 1.5°C THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☒ INTACT ☐ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

ORIGIN ID:MAFA (432) 520-7720
MARISSA IMRE
TRC COMPANIES
10 DESTA DRIVE, SUITE 150 E
MIDLAND, TX 79705
UNITED STATES US

SHIP DATE: 23APR20
ACTWGT: 30.00 LB
CAD: 110323837/INET4220
DIMS: 18x12x15 IN

BILL SENDER

TO JOHN DUPONT
DHL ANALYTICAL
2300 DOUBLE CREEK DR.
ROUND ROCK TX 78664
(432) 520-7720
INV:
PO:
REF: 324749
DEPT:

J201020011301uv

FedEx Express

56BJ4/7B3A/FE4A

TRK# 0201 7703 0612 1562

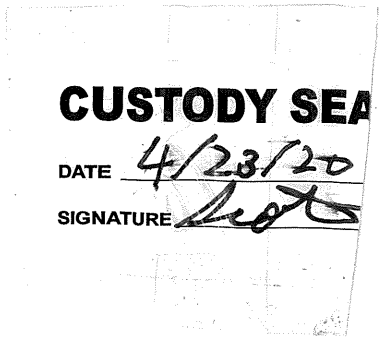
FRI - 24 APR 10:30A
PRIORITY OVERNIGHT

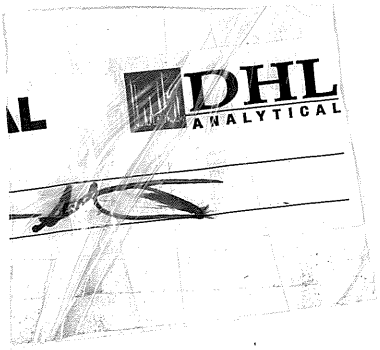
A8 BSMA

78664
TX-US AUS

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.





DHL Analytical, Inc.

Sample Receipt Checklist

Client Name TRC Environmental Corp. Date Received: 4/24/2020

Work Order Number 2004211 Received by: EL

Checklist completed by: _____ 4/24/2020 Reviewed by DL 4/24/2020
Signature | Date | Initials | Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	1.5 °C
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted? _____		Checked by _____
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted? _____		Checked by _____

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: Lovington Crude Booster Station Release	**LRC Date:** 5/1/2020
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2004211**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
R1	OI	**1)** Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				**R1-01**
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?	X				
		7) Were % moisture (or solids) reported for all soil and sediment samples?	X				
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?		X			**R3-08**
		9) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			**R4-02**
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, **greater** than 10 times the concentration in the blank sample?			X		
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: Lovington Crude Booster Station Release	**LRC Date:** 5/1/2020
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2004211**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC Chapter 5,
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) The amount of analyte measured in the duplicate,
  b) The calculated RPD, and
  c) The laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on February 25-28, 2019. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager

Name: Dr. Derhsing Luu
Official Title: Technical Director

Signature

5/1/2020
Date

DHL Analytical, Inc. **Date:** *01-May-20*

CLIENT: TRC Environmental Corp.
Project: Lovington Crude Booster Station Release
Lab Order: 2004211

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method M8015D - DRO/ORO Analysis
Method M8015V - GRO Analysis
Method SW8260D - Volatile Organics Analysis
Method SW9056A - Anions Analysis
Method D2216 - Percent Moisture Analysis

Exception Report R1-01

The samples were received and log-in performed on 4/24/2020. A total of 23 samples were received and 13 were analyzed. The samples arrived in good condition and were properly packaged. A total of ten sample placed on-hold, per the client, and no additional analysis requested.

Exception Report R3-08

As per the TCEQ-NELAP accreditation requirement the following must be noted: As of January 1, 2016, the TCEQ remediation division guidance on the collection of soil for VOC analysis requires the use of Method 5035 and will reject VOC data reported for soil samples collected and prepared using another method; this applies to remediation testing only. For analyses reported to TCEQ for waste characterization, TCLP testing or matrices other than soil, bulk sampling is allowed. For analyses reported to the Texas Railroad Commission, bulk sampling is allowed. NELAP requires a note that if 5035 sampling method for VOCs is not utilized, the results of samples collected in bulk containers for low level volatile components may be compromised. The client has been notified and has requested the Laboratory to proceed with analysis.

Exception Report R4-02

For DRO/ORO Analysis, the recoveries of up to two surrogates for three samples were above the method control limits. These were flagged accordingly in the Analytical Data Report. No further corrective action was taken.

For Volatile Organics Analysis, the recoveries of up to two surrogate for two samples, Method Blank-96123 MEOH and the Matrix Spike (2004211-13 MS) were outside of the method control limits. These were flagged accordingly in the Analytical Data Report and the QC Summary Report. The remaining surrogates for these samples were within method control limits. No further corrective action was taken.

Exception Report R7-03

CLIENT:	TRC Environmental Corp.
Project:	Lovington Crude Booster Station Release
Lab Order:	2004211

CASE NARRATIVE

For Volatile Organics Analysis, the recoveries of up to two compounds for the Matrix Spike and Matrix Spike Duplicate (2004211-13 MS/MSD) were above the method control limits. These are flagged accordingly in the QC Summary Report. These compounds were within method control limits in the associated LCS. The reference sample selected for the Batch QC was from this workorder. No further corrective action was taken.

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Project: Lovington Crude Booster Station Release
Lab Order: 2004211

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2004211-01	TT-1@3'		04/22/20 09:30 AM	4/24/2020
2004211-02	TT-1@4'		04/22/20 09:40 AM	4/24/2020
2004211-03	TT-1@5'		04/22/20 09:50 AM	4/24/2020
2004211-04	TT-1@6-7'		04/22/20 10:00 AM	4/24/2020
2004211-05	TT-2@0-0.5'		04/22/20 10:10 AM	4/24/2020
2004211-06	TT-2@1'		04/22/20 10:20 AM	4/24/2020
2004211-07	TT-2@2'		04/22/20 10:30 AM	4/24/2020
2004211-08	TT-2@3'		04/22/20 10:40 AM	4/24/2020
2004211-09	TT-2@4'		04/22/20 10:45 AM	4/24/2020
2004211-10	TT-2@5'		04/22/20 10:50 AM	4/24/2020
2004211-11	TT-2@6'		04/22/20 11:00 AM	4/24/2020
2004211-12	TT-2@7'		04/22/20 11:10 AM	4/24/2020
2004211-13	TT-3@0-0.5'		04/22/20 11:20 AM	4/24/2020
2004211-14	TT-3@1'		04/22/20 11:30 AM	4/24/2020
2004211-15	TT-3@2'		04/22/20 11:40 AM	4/24/2020
2004211-16	TT-3@3'		04/22/20 11:50 AM	4/24/2020
2004211-17	TT-3@4'		04/22/20 12:00 PM	4/24/2020
2004211-18	TT-4@0-0.5'		04/22/20 12:10 PM	4/24/2020
2004211-19	TT-4@1'		04/22/20 12:20 PM	4/24/2020
2004211-20	TT-4@2'		04/22/20 12:30 PM	4/24/2020
2004211-21	TT-4@3'		04/22/20 12:40 PM	4/24/2020
2004211-22	TT-4@4'		04/22/20 12:50 PM	4/24/2020
2004211-23	DUP-1		04/22/20 01:00 PM	4/24/2020

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2004211-01A	TT-1@3'	04/22/20 09:30 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-1@3'	04/22/20 09:30 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-1@3'	04/22/20 09:30 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-1@3'	04/22/20 09:30 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-1@3'	04/22/20 09:30 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-02A	TT-1@4'	04/22/20 09:40 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-1@4'	04/22/20 09:40 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-1@4'	04/22/20 09:40 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-1@4'	04/22/20 09:40 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-1@4'	04/22/20 09:40 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-04A	TT-1@6-7'	04/22/20 10:00 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-1@6-7'	04/22/20 10:00 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-1@6-7'	04/22/20 10:00 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-1@6-7'	04/22/20 10:00 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-1@6-7'	04/22/20 10:00 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-05A	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
	TT-2@0-0.5'	04/22/20 10:10 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-07A	TT-2@2'	04/22/20 10:30 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-2@2'	04/22/20 10:30 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-2@2'	04/22/20 10:30 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-2@2'	04/22/20 10:30 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-2@2'	04/22/20 10:30 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-2@2'	04/22/20 10:30 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-09A	TT-2@4'	04/22/20 10:45 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2004211-09A	TT-2@4'	04/22/20 10:45 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-2@4'	04/22/20 10:45 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-2@4'	04/22/20 10:45 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-2@4'	04/22/20 10:45 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-13A	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/27/20 02:22 PM	96123
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
	TT-3@0-0.5'	04/22/20 11:20 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-16A	TT-3@3'	04/22/20 11:50 AM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-3@3'	04/22/20 11:50 AM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-3@3'	04/22/20 11:50 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-3@3'	04/22/20 11:50 AM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-3@3'	04/22/20 11:50 AM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-3@3'	04/22/20 11:50 AM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-17A	TT-3@4'	04/22/20 12:00 PM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-3@4'	04/22/20 12:00 PM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-3@4'	04/22/20 12:00 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-3@4'	04/22/20 12:00 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-3@4'	04/22/20 12:00 PM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-3@4'	04/22/20 12:00 PM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-18A	TT-4@0-0.5'	04/22/20 12:10 PM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-4@0-0.5'	04/22/20 12:10 PM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-4@0-0.5'	04/22/20 12:10 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-4@0-0.5'	04/22/20 12:10 PM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-4@0-0.5'	04/22/20 12:10 PM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2004211-19A	TT-4@1'	04/22/20 12:20 PM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-4@1'	04/22/20 12:20 PM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-4@1'	04/22/20 12:20 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-4@1'	04/22/20 12:20 PM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-4@1'	04/22/20 12:20 PM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-22A	TT-4@4'	04/22/20 12:50 PM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	TT-4@4'	04/22/20 12:50 PM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	TT-4@4'	04/22/20 12:50 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	TT-4@4'	04/22/20 12:50 PM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	TT-4@4'	04/22/20 12:50 PM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130
2004211-23A	DUP-1	04/22/20 01:00 PM	Soil	SW9056A	Anion Prep	04/27/20 08:47 AM	96103
	DUP-1	04/22/20 01:00 PM	Soil	D2216	Moisture Preparation	04/30/20 02:32 PM	96177
	DUP-1	04/22/20 01:00 PM	Soil	SW5030C	Purge and Trap Soils GC- Gas	04/28/20 08:57 AM	96129
	DUP-1	04/22/20 01:00 PM	Soil	SW5030C	Purge and Trap Soils GC/MS	04/25/20 09:46 AM	96094
	DUP-1	04/22/20 01:00 PM	Soil	SW3550C	Soil Prep Sonication: DRO	04/28/20 09:01 AM	96130

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2004211-01A	TT-1@3'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 12:56 PM	GCMS2_200425A
	TT-1@3'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 01:16 PM	IC2_200427A
	TT-1@3'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-1@3'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 12:42 PM	GC15_200429A
	TT-1@3'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 12:06 PM	GC4_200428A
2004211-02A	TT-1@4'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 01:24 PM	GCMS2_200425A
	TT-1@4'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 02:20 PM	IC2_200427A
	TT-1@4'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-1@4'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 12:51 PM	GC15_200429A
	TT-1@4'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 12:30 PM	GC4_200428A
2004211-04A	TT-1@6-7'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 01:53 PM	GCMS2_200425A
	TT-1@6-7'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 02:52 PM	IC2_200427A
	TT-1@6-7'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-1@6-7'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:01 PM	GC15_200429A
	TT-1@6-7'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 12:53 PM	GC4_200428A
2004211-05A	TT-2@0-0.5'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 02:21 PM	GCMS2_200425A
	TT-2@0-0.5'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 03:08 PM	IC2_200427A
	TT-2@0-0.5'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-2@0-0.5'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 02:43 PM	GC15_200429A
	TT-2@0-0.5'	Soil	M8015D	TPH Extractable by GC - Soil	96130	100	04/29/20 03:46 PM	GC15_200429A
	TT-2@0-0.5'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	100	04/28/20 01:16 PM	GC4_200428A
2004211-07A	TT-2@2'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 02:49 PM	GCMS2_200425A
	TT-2@2'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 03:24 PM	IC2_200427A
	TT-2@2'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-2@2'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:10 PM	GC15_200429A
	TT-2@2'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 01:39 PM	GC4_200428A
	TT-2@2'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 05:10 PM	GC4_200428A
2004211-09A	TT-2@4'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 03:18 PM	GCMS2_200425A

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2004211-09A	TT-2@4'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 03:40 PM	IC2_200427A
	TT-2@4'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-2@4'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:19 PM	GC15_200429A
	TT-2@4'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 02:04 PM	GC4_200428A
2004211-13A	TT-3@0-0.5'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 03:46 PM	GCMS2_200425A
	TT-3@0-0.5'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96123	50	04/28/20 03:44 PM	GCMS2_200428B
	TT-3@0-0.5'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 03:56 PM	IC2_200427A
	TT-3@0-0.5'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-3@0-0.5'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 02:52 PM	GC15_200429A
	TT-3@0-0.5'	Soil	M8015D	TPH Extractable by GC - Soil	96130	100	04/29/20 03:55 PM	GC15_200429A
	TT-3@0-0.5'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	100	04/28/20 02:29 PM	GC4_200428A
2004211-16A	TT-3@3'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 04:14 PM	GCMS2_200425A
	TT-3@3'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 04:12 PM	IC2_200427A
	TT-3@3'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-3@3'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:28 PM	GC15_200429A
	TT-3@3'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 02:53 PM	GC4_200428A
	TT-3@3'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 05:34 PM	GC4_200428A
2004211-17A	TT-3@4'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 04:42 PM	GCMS2_200425A
	TT-3@4'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 04:28 PM	IC2_200427A
	TT-3@4'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-3@4'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:37 PM	GC15_200429A
	TT-3@4'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 03:16 PM	GC4_200428A
	TT-3@4'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 05:57 PM	GC4_200428A
2004211-18A	TT-4@0-0.5'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 05:11 PM	GCMS2_200425A
	TT-4@0-0.5'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 05:51 PM	IC2_200427A
	TT-4@0-0.5'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-4@0-0.5'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 02:34 PM	GC15_200429A
	TT-4@0-0.5'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 06:20 PM	GC4_200428A

Lab Order: 2004211
Client: TRC Environmental Corp.
Project: Lovington Crude Booster Station R

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2004211-19A	TT-4@1'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 05:39 PM	GCMS2_200425A
	TT-4@1'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 06:07 PM	IC2_200427A
	TT-4@1'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-4@1'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:46 PM	GC15_200429A
	TT-4@1'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 06:43 PM	GC4_200428A
2004211-22A	TT-4@4'	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 06:07 PM	GCMS2_200425A
	TT-4@4'	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 06:23 PM	IC2_200427A
	TT-4@4'	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	TT-4@4'	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 01:55 PM	GC15_200429A
	TT-4@4'	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 07:06 PM	GC4_200428A
2004211-23A	DUP-1	Soil	SW8260D	8260 Soil Volatiles by GC/MS	96094	1	04/25/20 06:35 PM	GCMS2_200425A
	DUP-1	Soil	SW9056A	Anions by IC method - Soil	96103	10	04/27/20 06:39 PM	IC2_200427A
	DUP-1	Soil	D2216	Percent Moisture	96177	1	05/01/20 08:55 AM	PMOIST_200430A
	DUP-1	Soil	M8015D	TPH Extractable by GC - Soil	96130	1	04/29/20 02:04 PM	GC15_200429A
	DUP-1	Soil	M8015V	TPH Purgeable by GC - Soil	96129	20	04/28/20 07:30 PM	GC4_200428A

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Client Sample ID: TT-1@3'
Project: Lovington Crude Booster Station Release
Lab ID: 2004211-01
Project No: 392796
Collection Date: 04/22/20 09:30 AM
Lab Order: 2004211
Matrix: SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	54.7	3.33	11.1		mg/Kg-dry	1	04/29/20 12:42 PM
TPH-ORO >C28-C35	11.5	3.33	11.1		mg/Kg-dry	1	04/29/20 12:42 PM
Surr: Isopropylbenzene	67.2	0	47-142		%REC	1	04/29/20 12:42 PM
Surr: Octacosane	138	0	25-162		%REC	1	04/29/20 12:42 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.23	2.23	4.45		mg/Kg-dry	20	04/28/20 12:06 PM
Surr: Tetrachlorethene	116	0	70-134		%REC	20	04/28/20 12:06 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 12:56 PM
Ethylbenzene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 12:56 PM
Toluene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 12:56 PM
Total Xylenes	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 12:56 PM
Surr: 1,2-Dichloroethane-d4	106	0	52-149		%REC	1	04/25/20 12:56 PM
Surr: 4-Bromofluorobenzene	91.0	0	84-118		%REC	1	04/25/20 12:56 PM
Surr: Dibromofluoromethane	109	0	65-135		%REC	1	04/25/20 12:56 PM
Surr: Toluene-d8	90.7	0	84-116		%REC	1	04/25/20 12:56 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<20.9	20.9	52.2		mg/Kg-dry	10	04/27/20 01:16 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	11.6	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

ND - Not Detected at the SDL
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DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Client Sample ID: TT-1@4'
Project: Lovington Crude Booster Station Release
Lab ID: 2004211-02
Project No: 392796
Collection Date: 04/22/20 09:40 AM
Lab Order: 2004211
Matrix: SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	4.30	3.12	10.4	J	mg/Kg-dry	1	04/29/20 12:51 PM
TPH-ORO >C28-C35	<3.12	3.12	10.4		mg/Kg-dry	1	04/29/20 12:51 PM
Surr: Isopropylbenzene	84.7	0	47-142		%REC	1	04/29/20 12:51 PM
Surr: Octacosane	74.7	0	25-162		%REC	1	04/29/20 12:51 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.13	2.13	4.26		mg/Kg-dry	20	04/28/20 12:30 PM
Surr: Tetrachlorethene	116	0	70-134		%REC	20	04/28/20 12:30 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 01:24 PM
Ethylbenzene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 01:24 PM
Toluene	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 01:24 PM
Total Xylenes	<0.00113	0.00113	0.00564		mg/Kg-dry	1	04/25/20 01:24 PM
Surr: 1,2-Dichloroethane-d4	108	0	52-149		%REC	1	04/25/20 01:24 PM
Surr: 4-Bromofluorobenzene	89.8	0	84-118		%REC	1	04/25/20 01:24 PM
Surr: Dibromofluoromethane	111	0	65-135		%REC	1	04/25/20 01:24 PM
Surr: Toluene-d8	91.3	0	84-116		%REC	1	04/25/20 01:24 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<22.2	22.2	55.4		mg/Kg-dry	10	04/27/20 02:20 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	11.7	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-1@6-7'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-04
Project No:	392796	**Collection Date:**	04/22/20 10:00 AM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	6.52	3.07	10.2	J	mg/Kg-dry	1	04/29/20 01:01 PM
TPH-ORO >C28-C35	<3.07	3.07	10.2		mg/Kg-dry	1	04/29/20 01:01 PM
Surr: Isopropylbenzene	70.1	0	47-142		%REC	1	04/29/20 01:01 PM
Surr: Octacosane	74.6	0	25-162		%REC	1	04/29/20 01:01 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.17	2.17	4.34		mg/Kg-dry	20	04/28/20 12:53 PM
Surr: Tetrachlorethene	119	0	70-134		%REC	20	04/28/20 12:53 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00109	0.00109	0.00547		mg/Kg-dry	1	04/25/20 01:53 PM
Ethylbenzene	<0.00109	0.00109	0.00547		mg/Kg-dry	1	04/25/20 01:53 PM
Toluene	<0.00109	0.00109	0.00547		mg/Kg-dry	1	04/25/20 01:53 PM
Total Xylenes	<0.00109	0.00109	0.00547		mg/Kg-dry	1	04/25/20 01:53 PM
Surr: 1,2-Dichloroethane-d4	103	0	52-149		%REC	1	04/25/20 01:53 PM
Surr: 4-Bromofluorobenzene	93.1	0	84-118		%REC	1	04/25/20 01:53 PM
Surr: Dibromofluoromethane	114	0	65-135		%REC	1	04/25/20 01:53 PM
Surr: Toluene-d8	92.7	0	84-116		%REC	1	04/25/20 01:53 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<21.1	21.1	52.7		mg/Kg-dry	10	04/27/20 02:52 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	10.2	0	0		WT%	1	05/01/20 08:55 AM

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- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-2@0-0.5'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-05
Project No:	392796	**Collection Date:**	04/22/20 10:10 AM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	5260	303	1010		mg/Kg-dry	100	04/29/20 03:46 PM
TPH-ORO >C28-C35	346	303	1010	J	mg/Kg-dry	100	04/29/20 03:46 PM
Surr: Isopropylbenzene	85.6	0	47-142		%REC	100	04/29/20 03:46 PM
Surr: Octacosane	899	0	25-162	S	%REC	100	04/29/20 03:46 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	230	9.82	19.6		mg/Kg-dry	100	04/28/20 01:16 PM
Surr: Tetrachlorethene	117	0	70-134		%REC	100	04/28/20 01:16 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000982	0.000982	0.00491		mg/Kg-dry	1	04/25/20 02:21 PM
Ethylbenzene	0.176	0.000982	0.00491		mg/Kg-dry	1	04/25/20 02:21 PM
Toluene	0.0355	0.000982	0.00491		mg/Kg-dry	1	04/25/20 02:21 PM
Total Xylenes	0.505	0.000982	0.00491		mg/Kg-dry	1	04/25/20 02:21 PM
Surr: 1,2-Dichloroethane-d4	109	0	52-149		%REC	1	04/25/20 02:21 PM
Surr: 4-Bromofluorobenzene	145	0	84-118	S	%REC	1	04/25/20 02:21 PM
Surr: Dibromofluoromethane	111	0	65-135		%REC	1	04/25/20 02:21 PM
Surr: Toluene-d8	99.8	0	84-116		%REC	1	04/25/20 02:21 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	84.6	19.4	48.5		mg/Kg-dry	10	04/27/20 03:08 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	3.17	0	0		WT%	1	05/01/20 08:55 AM

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- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-2@2'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-07
Project No:	392796	**Collection Date:**	04/22/20 10:30 AM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	4.81	3.40	11.3	J	mg/Kg-dry	1	04/29/20 01:10 PM
TPH-ORO >C28-C35	<3.40	3.40	11.3		mg/Kg-dry	1	04/29/20 01:10 PM
Surr: Isopropylbenzene	85.0	0	47-142		%REC	1	04/29/20 01:10 PM
Surr: Octacosane	72.5	0	25-162		%REC	1	04/29/20 01:10 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.10	2.10	4.20		mg/Kg-dry	20	04/28/20 05:10 PM
Surr: Tetrachlorethene	98.1	0	70-134		%REC	20	04/28/20 05:10 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00112	0.00112	0.00559		mg/Kg-dry	1	04/25/20 02:49 PM
Ethylbenzene	<0.00112	0.00112	0.00559		mg/Kg-dry	1	04/25/20 02:49 PM
Toluene	<0.00112	0.00112	0.00559		mg/Kg-dry	1	04/25/20 02:49 PM
Total Xylenes	<0.00112	0.00112	0.00559		mg/Kg-dry	1	04/25/20 02:49 PM
Surr: 1,2-Dichloroethane-d4	98.1	0	52-149		%REC	1	04/25/20 02:49 PM
Surr: 4-Bromofluorobenzene	88.8	0	84-118		%REC	1	04/25/20 02:49 PM
Surr: Dibromofluoromethane	108	0	65-135		%REC	1	04/25/20 02:49 PM
Surr: Toluene-d8	90.8	0	84-116		%REC	1	04/25/20 02:49 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	29.7	22.6	56.5	J	mg/Kg-dry	10	04/27/20 03:24 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	15.0	0	0		WT%	1	05/01/20 08:55 AM

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- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Client Sample ID: TT-2@4'
Project: Lovington Crude Booster Station Release
Lab ID: 2004211-09
Project No: 392796
Collection Date: 04/22/20 10:45 AM
Lab Order: 2004211
Matrix: SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	6.00	3.93	13.1	J	mg/Kg-dry	1	04/29/20 01:19 PM
TPH-ORO >C28-C35	<3.93	3.93	13.1		mg/Kg-dry	1	04/29/20 01:19 PM
Surr: Isopropylbenzene	89.4	0	47-142		%REC	1	04/29/20 01:19 PM
Surr: Octacosane	75.2	0	25-162		%REC	1	04/29/20 01:19 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.55	2.55	5.10		mg/Kg-dry	20	04/28/20 02:04 PM
Surr: Tetrachlorethene	133	0	70-134		%REC	20	04/28/20 02:04 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00123	0.00123	0.00613		mg/Kg-dry	1	04/25/20 03:18 PM
Ethylbenzene	<0.00123	0.00123	0.00613		mg/Kg-dry	1	04/25/20 03:18 PM
Toluene	<0.00123	0.00123	0.00613		mg/Kg-dry	1	04/25/20 03:18 PM
Total Xylenes	<0.00123	0.00123	0.00613		mg/Kg-dry	1	04/25/20 03:18 PM
Surr: 1,2-Dichloroethane-d4	100	0	52-149		%REC	1	04/25/20 03:18 PM
Surr: 4-Bromofluorobenzene	86.0	0	84-118		%REC	1	04/25/20 03:18 PM
Surr: Dibromofluoromethane	107	0	65-135		%REC	1	04/25/20 03:18 PM
Surr: Toluene-d8	90.2	0	84-116		%REC	1	04/25/20 03:18 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<26.4	26.4	66.0		mg/Kg-dry	10	04/27/20 03:40 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	25.0	0	0		WT%	1	05/01/20 08:55 AM

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RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-3@0-0.5'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-13
Project No:	392796	**Collection Date:**	04/22/20 11:20 AM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	8460	290	966		mg/Kg-dry	100	04/29/20 03:55 PM
TPH-ORO >C28-C35	1090	290	966		mg/Kg-dry	100	04/29/20 03:55 PM
Surr: Isopropylbenzene	183	0	47-142	S	%REC	100	04/29/20 03:55 PM
Surr: Octacosane	1630	0	25-162	S	%REC	100	04/29/20 03:55 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	981	10.1	20.3		mg/Kg-dry	100	04/28/20 02:29 PM
Surr: Tetrachlorethene	105	0	70-134		%REC	100	04/28/20 02:29 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	0.0194	0.000984	0.00492		mg/Kg-dry	1	04/25/20 03:46 PM
Ethylbenzene	9.11	0.0483	0.241		mg/Kg-dry	50	04/28/20 03:44 PM
Toluene	1.73	0.0483	0.241		mg/Kg-dry	50	04/28/20 03:44 PM
Total Xylenes	20.6	0.0483	0.241		mg/Kg-dry	50	04/28/20 03:44 PM
Surr: 1,2-Dichloroethane-d4	96.8	0	52-149		%REC	1	04/25/20 03:46 PM
Surr: 1,2-Dichloroethane-d4	92.5	0	52-149		%REC	50	04/28/20 03:44 PM
Surr: 4-Bromofluorobenzene	116	0	84-118		%REC	50	04/28/20 03:44 PM
Surr: 4-Bromofluorobenzene	313	0	84-118	S	%REC	1	04/25/20 03:46 PM
Surr: Dibromofluoromethane	102	0	65-135		%REC	50	04/28/20 03:44 PM
Surr: Dibromofluoromethane	109	0	65-135		%REC	1	04/25/20 03:46 PM
Surr: Toluene-d8	156	0	84-116	S	%REC	1	04/25/20 03:46 PM
Surr: Toluene-d8	101	0	84-116		%REC	50	04/28/20 03:44 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	300	20.6	51.5		mg/Kg-dry	10	04/27/20 03:56 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	3.72	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-3@3'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-16
Project No:	392796	**Collection Date:**	04/22/20 11:50 AM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	55.0	3.04	10.1		mg/Kg-dry	1	04/29/20 01:28 PM
TPH-ORO >C28-C35	10.8	3.04	10.1		mg/Kg-dry	1	04/29/20 01:28 PM
Surr: Isopropylbenzene	83.3	0	47-142		%REC	1	04/29/20 01:28 PM
Surr: Octacosane	102	0	25-162		%REC	1	04/29/20 01:28 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<1.94	1.94	3.89		mg/Kg-dry	20	04/28/20 05:34 PM
Surr: Tetrachlorethene	111	0	70-134		%REC	20	04/28/20 05:34 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00104	0.00104	0.00520		mg/Kg-dry	1	04/25/20 04:14 PM
Ethylbenzene	0.00256	0.00104	0.00520	J	mg/Kg-dry	1	04/25/20 04:14 PM
Toluene	<0.00104	0.00104	0.00520		mg/Kg-dry	1	04/25/20 04:14 PM
Total Xylenes	0.00589	0.00104	0.00520		mg/Kg-dry	1	04/25/20 04:14 PM
Surr: 1,2-Dichloroethane-d4	96.7	0	52-149		%REC	1	04/25/20 04:14 PM
Surr: 4-Bromofluorobenzene	86.3	0	84-118		%REC	1	04/25/20 04:14 PM
Surr: Dibromofluoromethane	106	0	65-135		%REC	1	04/25/20 04:14 PM
Surr: Toluene-d8	89.5	0	84-116		%REC	1	04/25/20 04:14 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	205	20.3	50.8		mg/Kg-dry	10	04/27/20 04:12 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	4.17	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-3@4'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-17
Project No:	392796	**Collection Date:**	04/22/20 12:00 PM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	6.34	3.56	11.9	J	mg/Kg-dry	1	04/29/20 01:37 PM
TPH-ORO >C28-C35	<3.56	3.56	11.9		mg/Kg-dry	1	04/29/20 01:37 PM
Surr: Isopropylbenzene	80.5	0	47-142		%REC	1	04/29/20 01:37 PM
Surr: Octacosane	75.2	0	25-162		%REC	1	04/29/20 01:37 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.30	2.30	4.61		mg/Kg-dry	20	04/28/20 05:57 PM
Surr: Tetrachlorethene	101	0	70-134		%REC	20	04/28/20 05:57 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00120	0.00120	0.00600		mg/Kg-dry	1	04/25/20 04:42 PM
Ethylbenzene	<0.00120	0.00120	0.00600		mg/Kg-dry	1	04/25/20 04:42 PM
Toluene	<0.00120	0.00120	0.00600		mg/Kg-dry	1	04/25/20 04:42 PM
Total Xylenes	0.00122	0.00120	0.00600	J	mg/Kg-dry	1	04/25/20 04:42 PM
Surr: 1,2-Dichloroethane-d4	93.9	0	52-149		%REC	1	04/25/20 04:42 PM
Surr: 4-Bromofluorobenzene	86.2	0	84-118		%REC	1	04/25/20 04:42 PM
Surr: Dibromofluoromethane	103	0	65-135		%REC	1	04/25/20 04:42 PM
Surr: Toluene-d8	90.2	0	84-116		%REC	1	04/25/20 04:42 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	123	24.2	60.4		mg/Kg-dry	10	04/27/20 04:28 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	18.7	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-4@0-0.5'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-18
Project No:	392796	**Collection Date:**	04/22/20 12:10 PM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	226	3.06	10.2		mg/Kg-dry	1	04/29/20 02:34 PM
TPH-ORO >C28-C35	72.1	3.06	10.2		mg/Kg-dry	1	04/29/20 02:34 PM
Surr: Isopropylbenzene	82.9	0	47-142		%REC	1	04/29/20 02:34 PM
Surr: Octacosane	186	0	25-162	S	%REC	1	04/29/20 02:34 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.07	2.07	4.14		mg/Kg-dry	20	04/28/20 06:20 PM
Surr: Tetrachlorethene	91.1	0	70-134		%REC	20	04/28/20 06:20 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00104	0.00104	0.00519		mg/Kg-dry	1	04/25/20 05:11 PM
Ethylbenzene	<0.00104	0.00104	0.00519		mg/Kg-dry	1	04/25/20 05:11 PM
Toluene	<0.00104	0.00104	0.00519		mg/Kg-dry	1	04/25/20 05:11 PM
Total Xylenes	<0.00104	0.00104	0.00519		mg/Kg-dry	1	04/25/20 05:11 PM
Surr: 1,2-Dichloroethane-d4	97.1	0	52-149		%REC	1	04/25/20 05:11 PM
Surr: 4-Bromofluorobenzene	90.3	0	84-118		%REC	1	04/25/20 05:11 PM
Surr: Dibromofluoromethane	106	0	65-135		%REC	1	04/25/20 05:11 PM
Surr: Toluene-d8	90.5	0	84-116		%REC	1	04/25/20 05:11 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<20.3	20.3	50.8		mg/Kg-dry	10	04/27/20 05:51 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	4.82	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

- ND - Not Detected at the SDL
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- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-4@1'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-19
Project No:	392796	**Collection Date:**	04/22/20 12:20 PM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	5.41	3.80	12.7	J	mg/Kg-dry	1	04/29/20 01:46 PM
TPH-ORO >C28-C35	<3.80	3.80	12.7		mg/Kg-dry	1	04/29/20 01:46 PM
Surr: Isopropylbenzene	76.3	0	47-142		%REC	1	04/29/20 01:46 PM
Surr: Octacosane	72.9	0	25-162		%REC	1	04/29/20 01:46 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.27	2.27	4.53		mg/Kg-dry	20	04/28/20 06:43 PM
Surr: Tetrachlorethene	95.7	0	70-134		%REC	20	04/28/20 06:43 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00128	0.00128	0.00638		mg/Kg-dry	1	04/25/20 05:39 PM
Ethylbenzene	<0.00128	0.00128	0.00638		mg/Kg-dry	1	04/25/20 05:39 PM
Toluene	<0.00128	0.00128	0.00638		mg/Kg-dry	1	04/25/20 05:39 PM
Total Xylenes	<0.00128	0.00128	0.00638		mg/Kg-dry	1	04/25/20 05:39 PM
Surr: 1,2-Dichloroethane-d4	103	0	52-149		%REC	1	04/25/20 05:39 PM
Surr: 4-Bromofluorobenzene	88.2	0	84-118		%REC	1	04/25/20 05:39 PM
Surr: Dibromofluoromethane	107	0	65-135		%REC	1	04/25/20 05:39 PM
Surr: Toluene-d8	87.7	0	84-116		%REC	1	04/25/20 05:39 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	94.4	24.7	61.8		mg/Kg-dry	10	04/27/20 06:07 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	22.1	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	TT-4@4'
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-22
Project No:	392796	**Collection Date:**	04/22/20 12:50 PM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	5.05	3.36	11.2	J	mg/Kg-dry	1	04/29/20 01:55 PM
TPH-ORO >C28-C35	<3.36	3.36	11.2		mg/Kg-dry	1	04/29/20 01:55 PM
Surr: Isopropylbenzene	75.1	0	47-142		%REC	1	04/29/20 01:55 PM
Surr: Octacosane	72.8	0	25-162		%REC	1	04/29/20 01:55 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.25	2.25	4.51		mg/Kg-dry	20	04/28/20 07:06 PM
Surr: Tetrachlorethene	120	0	70-134		%REC	20	04/28/20 07:06 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.00108	0.00108	0.00541		mg/Kg-dry	1	04/25/20 06:07 PM
Ethylbenzene	<0.00108	0.00108	0.00541		mg/Kg-dry	1	04/25/20 06:07 PM
Toluene	<0.00108	0.00108	0.00541		mg/Kg-dry	1	04/25/20 06:07 PM
Total Xylenes	<0.00108	0.00108	0.00541		mg/Kg-dry	1	04/25/20 06:07 PM
Surr: 1,2-Dichloroethane-d4	96.7	0	52-149		%REC	1	04/25/20 06:07 PM
Surr: 4-Bromofluorobenzene	88.2	0	84-118		%REC	1	04/25/20 06:07 PM
Surr: Dibromofluoromethane	108	0	65-135		%REC	1	04/25/20 06:07 PM
Surr: Toluene-d8	91.3	0	84-116		%REC	1	04/25/20 06:07 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	895	22.8	56.9		mg/Kg-dry	10	04/27/20 06:23 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	12.6	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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- SDL - Sample Detection Limit
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DHL Analytical, Inc.

Date: *01-May-20*

CLIENT:	TRC Environmental Corp.	**Client Sample ID:**	DUP-1
Project:	Lovington Crude Booster Station Release	**Lab ID:**	2004211-23
Project No:	392796	**Collection Date:**	04/22/20 01:00 PM
Lab Order:	2004211	**Matrix:**	SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TPH EXTRACTABLE BY GC - SOIL		**M8015D**					Analyst: **BTJ**
TPH-DRO C10-C28	8.80	3.09	10.3	J	mg/Kg-dry	1	04/29/20 02:04 PM
TPH-ORO >C28-C35	<3.09	3.09	10.3		mg/Kg-dry	1	04/29/20 02:04 PM
Surr: Isopropylbenzene	86.7	0	47-142		%REC	1	04/29/20 02:04 PM
Surr: Octacosane	74.4	0	25-162		%REC	1	04/29/20 02:04 PM
TPH PURGEABLE BY GC - SOIL		**M8015V**					Analyst: **BTJ**
Gasoline Range Organics	<2.15	2.15	4.29		mg/Kg-dry	20	04/28/20 07:30 PM
Surr: Tetrachlorethene	91.7	0	70-134		%REC	20	04/28/20 07:30 PM
8260 SOIL VOLATILES BY GC/MS		**SW8260D**					Analyst: **CC**
Benzene	<0.000985	0.000985	0.00493		mg/Kg-dry	1	04/25/20 06:35 PM
Ethylbenzene	<0.000985	0.000985	0.00493		mg/Kg-dry	1	04/25/20 06:35 PM
Toluene	<0.000985	0.000985	0.00493		mg/Kg-dry	1	04/25/20 06:35 PM
Total Xylenes	<0.000985	0.000985	0.00493		mg/Kg-dry	1	04/25/20 06:35 PM
Surr: 1,2-Dichloroethane-d4	94.8	0	52-149		%REC	1	04/25/20 06:35 PM
Surr: 4-Bromofluorobenzene	85.2	0	84-118		%REC	1	04/25/20 06:35 PM
Surr: Dibromofluoromethane	106	0	65-135		%REC	1	04/25/20 06:35 PM
Surr: Toluene-d8	90.1	0	84-116		%REC	1	04/25/20 06:35 PM
ANIONS BY IC METHOD - SOIL		**SW9056A**					Analyst: **SNM**
Chloride	<22.1	22.1	55.2		mg/Kg-dry	10	04/27/20 06:39 PM
PERCENT MOISTURE		**D2216**					Analyst: **RBW**
Percent Moisture	10.8	0	0		WT%	1	05/01/20 08:55 AM

Qualifiers:

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- DF- Dilution Factor
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- C - Sample Result or QC discussed in Case Narrative
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- SDL - Sample Detection Limit
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DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200330A

Sample ID: **DCS-95691** Batch ID: **95691** TestNo: **M8015D** Units: **mg/Kg**
SampType: **DCS** Run ID: **GC15_200330A** Analysis Date: **3/30/2020 11:37:15 AM** Prep Date: **3/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	10.1	10.0	15.00	0	67.4	20	400	0	0	
Surr: Isopropylbenzene	6.16		7.500		82.1	47	142	0	0	
Surr: Octacosane	6.03		7.500		80.4	25	162	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200429A

The QC data in batch 96130 applies to the following samples: 2004211-01A, 2004211-02A, 2004211-04A, 2004211-05A, 2004211-07A, 2004211-09A, 2004211-13A, 2004211-16A, 2004211-17A, 2004211-18A, 2004211-19A, 2004211-22A, 2004211-23A

Sample ID: **MB-96130** Batch ID: **96130** TestNo: **M8015D** Units: **mg/Kg**
SampType: **MBLK** Run ID: **GC15_200429A** Analysis Date: **4/29/2020 11:02:10 AM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	<3.00	10.0								
TPH-ORO >C28-C35	<3.00	10.0								
Surr: Isopropylbenzene	5.85		7.500		78.0	47	142			
Surr: Octacosane	5.97		7.500		79.6	25	162			

Sample ID: **LCS-96130** Batch ID: **96130** TestNo: **M8015D** Units: **mg/Kg**
SampType: **LCS** Run ID: **GC15_200429A** Analysis Date: **4/29/2020 11:11:14 AM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	92.8	10.0	125.0	0	74.2	50	114			
Surr: Isopropylbenzene	5.30		7.500		70.7	47	142			
Surr: Octacosane	5.81		7.500		77.5	25	162			

Sample ID: **2004211-02AMS** Batch ID: **96130** TestNo: **M8015D** Units: **mg/Kg-dry**
SampType: **MS** Run ID: **GC15_200429A** Analysis Date: **4/29/2020 2:15:55 PM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	77.8	10.4	130.2	4.295	56.4	50	114			
Surr: Isopropylbenzene	5.10		7.813		65.3	47	142			
Surr: Octacosane	5.45		7.813		69.8	25	162			

Sample ID: **2004211-02AMSD** Batch ID: **96130** TestNo: **M8015D** Units: **mg/Kg-dry**
SampType: **MSD** Run ID: **GC15_200429A** Analysis Date: **4/29/2020 2:24:58 PM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	89.4	10.5	130.9	4.295	65.0	50	114	13.9	30	
Surr: Isopropylbenzene	6.13		7.857		78.0	47	142	0	0	
Surr: Octacosane	5.60		7.857		71.2	25	162	0	0	

Qualifiers:				
	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC15_200429A

Sample ID: **ICV-200429**	Batch ID: **R110253**	TestNo: **M8015D**	Units: **mg/Kg**
SampType: **ICV**	Run ID: **GC15_200429A**	Analysis Date: **4/29/2020 10:49:08 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	435	10.0	500.0	0	87.1	80	120			
TPH-ORO >C28-C35	3.46	10.0	0							
Surr: Isopropylbenzene	27.4		25.00		109	80	120			
Surr: Octacosane	21.2		25.00		84.9	80	120			

Sample ID: **CCV1-200429**	Batch ID: **R110253**	TestNo: **M8015D**	Units: **mg/Kg**
SampType: **CCV**	Run ID: **GC15_200429A**	Analysis Date: **4/29/2020 4:19:48 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	204	10.0	250.0	0	81.5	80	120			
TPH-ORO >C28-C35	0.0660	10.0	0							
Surr: Isopropylbenzene	13.2		12.50		105	80	120			
Surr: Octacosane	10.6		12.50		84.8	80	120			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200327A

Sample ID: **DCS-95690**	Batch ID: **95690**	TestNo: **M8015V**	Units: **mg/Kg**
SampType: **DCS**	Run ID: **GC4_200327A**	Analysis Date: **3/27/2020 12:53:32 PM**	Prep Date: **3/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	0.189	0.200	0.2000	0	94.6	31	161	0	0	
Surr: Tetrachlorethene	0.470		0.4000		118	70	134	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200428A

The QC data in batch 96129 applies to the following samples: 2004211-01A, 2004211-02A, 2004211-04A, 2004211-05A, 2004211-07A, 2004211-09A, 2004211-13A, 2004211-16A, 2004211-17A, 2004211-18A, 2004211-19A, 2004211-22A, 2004211-23A

Sample ID: **LCS-96129 MEOH** Batch ID: **96129** TestNo: **M8015V** Units: **mg/Kg**
SampType: **LCS** Run ID: **GC4_200428A** Analysis Date: **4/28/2020 10:29:45 AM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	52.2	4.00	50.00	0	104	68	126			
Surr: Tetrachlorethene	8.72		8.000		109	70	134			

Sample ID: **MB-96129 MEOH** Batch ID: **96129** TestNo: **M8015V** Units: **mg/Kg**
SampType: **MBLK** Run ID: **GC4_200428A** Analysis Date: **4/28/2020 11:41:59 AM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	<2.00	4.00								
Surr: Tetrachlorethene	9.66		8.000		121	70	134			

Sample ID: **2004211-01AMS** Batch ID: **96129** TestNo: **M8015V** Units: **mg/Kg-dry**
SampType: **MS** Run ID: **GC4_200428A** Analysis Date: **4/28/2020 7:55:16 PM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	52.8	4.45	55.64	0	94.9	68	126			
Surr: Tetrachlorethene	9.36		8.903		105	70	134			

Sample ID: **2004211-01AMSD** Batch ID: **96129** TestNo: **M8015V** Units: **mg/Kg-dry**
SampType: **MSD** Run ID: **GC4_200428A** Analysis Date: **4/28/2020 8:20:11 PM** Prep Date: **4/28/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	50.8	4.45	55.64	0	91.2	68	126	3.93	30	
Surr: Tetrachlorethene	8.84		8.903		99.3	70	134	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GC4_200428A

Sample ID: **ICV-200428**	Batch ID: **R110273**	TestNo: **M8015V**	Units: **mg/Kg**
SampType: **ICV**	Run ID: **GC4_200428A**	Analysis Date: **4/28/2020 10:06:45 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	4.72	0.200	5.000	0	94.4	80	120			
Surr: Tetrachlorethene	0.376		0.4000		93.9	70	134			

Sample ID: **CCV1-200428**	Batch ID: **R110273**	TestNo: **M8015V**	Units: **mg/Kg**
SampType: **CCV**	Run ID: **GC4_200428A**	Analysis Date: **4/28/2020 4:26:31 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.10	0.200	2.500	0	84.1	80	120			
Surr: Tetrachlorethene	0.410		0.4000		102	70	134			

Sample ID: **CCV2-200428**	Batch ID: **R110273**	TestNo: **M8015V**	Units: **mg/Kg**
SampType: **CCV**	Run ID: **GC4_200428A**	Analysis Date: **4/28/2020 8:44:40 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	2.40	0.200	2.500	0	96.0	80	120			
Surr: Tetrachlorethene	0.413		0.4000		103	70	134			

Qualifiers:				
	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200219A

Sample ID: **DCS-95077**	Batch ID: **95077**	TestNo: **SW8260D**	Units: **mg/Kg**
SampType: **DCS**	Run ID: **GCMS2_200219A**	Analysis Date: **2/19/2020 3:12:00 PM**	Prep Date: **2/19/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.00243	0.00500	0.00232	0	105	10	400	0	0	
Ethylbenzene	0.00251	0.00500	0.00232	0	108	10	400	0	0	
Toluene	0.00259	0.00500	0.00232	0	112	10	400	0	0	
Total Xylenes	0.00767	0.00500	0.00696	0	110	10	400	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200425A

The QC data in batch 96094 applies to the following samples: 2004211-01A, 2004211-02A, 2004211-04A, 2004211-05A, 2004211-07A, 2004211-09A, 2004211-13A, 2004211-16A, 2004211-17A, 2004211-18A, 2004211-19A, 2004211-22A, 2004211-23A

Sample ID: **LCS-96094** Batch ID: **96094** TestNo: **SW8260D** Units: **mg/Kg**
SampType: **LCS** Run ID: **GCMS2_200425A** Analysis Date: **4/25/2020 11:03:00 AM** Prep Date: **4/25/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0235	0.00500	0.0232	0	101	75	125			
Ethylbenzene	0.0225	0.00500	0.0232	0	96.8	75	125			
Toluene	0.0240	0.00500	0.0232	0	103	75	125			
Total Xylenes	0.0645	0.00500	0.0696	0	92.6	75	125			
Surr: 1,2-Dichloroethane-d4	52.7		50.00		105	52	149			
Surr: 4-Bromofluorobenzene	45.2		50.00		90.5	84	118			
Surr: Dibromofluoromethane	56.5		50.00		113	65	135			
Surr: Toluene-d8	46.0		50.00		92.0	84	116			

Sample ID: **MB-96094** Batch ID: **96094** TestNo: **SW8260D** Units: **mg/Kg**
SampType: **MBLK** Run ID: **GCMS2_200425A** Analysis Date: **4/25/2020 12:28:00 PM** Prep Date: **4/25/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00100	0.00500								
Ethylbenzene	<0.00100	0.00500								
Toluene	<0.00100	0.00500								
Total Xylenes	<0.00100	0.00500								
Surr: 1,2-Dichloroethane-d4	52.0		50.00		104	52	149			
Surr: 4-Bromofluorobenzene	46.1		50.00		92.2	84	118			
Surr: Dibromofluoromethane	56.4		50.00		113	65	135			
Surr: Toluene-d8	45.8		50.00		91.7	84	116			

Sample ID: **2004211-16AMS** Batch ID: **96094** TestNo: **SW8260D** Units: **mg/Kg-dry**
SampType: **MS** Run ID: **GCMS2_200425A** Analysis Date: **4/25/2020 7:04:00 PM** Prep Date: **4/25/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0218	0.00507	0.0235	0	92.7	73	126			
Ethylbenzene	0.0207	0.00507	0.0235	0.00256	77.4	74	127			
Toluene	0.0225	0.00507	0.0235	0	95.8	71	127			
Total Xylenes	0.0632	0.00507	0.0705	0.00589	81.2	75	125			
Surr: 1,2-Dichloroethane-d4	48.9		50.66		96.4	52	149			
Surr: 4-Bromofluorobenzene	44.3		50.66		87.5	84	118			
Surr: Dibromofluoromethane	53.9		50.66		106	65	135			
Surr: Toluene-d8	46.9		50.66		92.5	84	116			

Sample ID: **2004211-16AMSD** Batch ID: **96094** TestNo: **SW8260D** Units: **mg/Kg-dry**
SampType: **MSD** Run ID: **GCMS2_200425A** Analysis Date: **4/25/2020 7:32:00 PM** Prep Date: **4/25/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200425A

Sample ID: **2004211-16AMSD** Batch ID: **96094** TestNo: **SW8260D** Units: **mg/Kg-dry**
SampType: **MSD** Run ID: **GCMS2_200425A** Analysis Date: **4/25/2020 7:32:00 PM** Prep Date: **4/25/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0205	0.00502	0.0233	0	88.0	73	126	6.16	30	
Ethylbenzene	0.0201	0.00502	0.0233	0.00256	75.5	74	127	2.94	30	
Toluene	0.0207	0.00502	0.0233	0	89.1	71	127	8.19	30	
Total Xylenes	0.0609	0.00502	0.0698	0.00589	78.8	75	125	3.58	30	
Surr: 1,2-Dichloroethane-d4	48.0		50.17		95.7	52	149	0	0	
Surr: 4-Bromofluorobenzene	44.5		50.17		88.8	84	118	0	0	
Surr: Dibromofluoromethane	53.0		50.17		106	65	135	0	0	
Surr: Toluene-d8	45.2		50.17		90.1	84	116	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200425A

Sample ID: **ICV-200425**	Batch ID: **R110201**	TestNo: **SW8260D**	Units: **mg/Kg**
SampType: **ICV**	Run ID: **GCMS2_200425A**	Analysis Date: **4/25/2020 10:34:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0430	0.00500	0.0464	0	92.8	70	130			
Ethylbenzene	0.0432	0.00500	0.0464	0	93.1	70	130			
Toluene	0.0439	0.00500	0.0464	0	94.5	70	130			
Total Xylenes	0.128	0.00500	0.139	0	92.1	70	130			
Surr: 1,2-Dichloroethane-d4	49.2		50.00		98.3	52	149			
Surr: 4-Bromofluorobenzene	44.7		50.00		89.4	84	118			
Surr: Dibromofluoromethane	53.3		50.00		107	65	135			
Surr: Toluene-d8	44.2		50.00		88.3	84	116			

Qualifiers:				
	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200428B

The QC data in batch 96123 applies to the following samples: 2004211-13A

Sample ID: **LCS-96123 MEOH** Batch ID: **96123** TestNo: **SW8260D** Units: **mg/Kg**
SampType: **LCS** Run ID: **GCMS2_200428B** Analysis Date: **4/28/2020 2:20:00 PM** Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	1.16	0.250	1.16	0	100	75	125			
Toluene	1.17	0.250	1.16	0	101	75	125			
Total Xylenes	3.36	0.250	3.48	0	96.7	75	125			
Surr: 1,2-Dichloroethane-d4	2320		2500		92.7	52	149			
Surr: 4-Bromofluorobenzene	2180		2500		87.3	84	118			
Surr: Dibromofluoromethane	2490		2500		99.6	65	135			
Surr: Toluene-d8	2190		2500		87.7	84	116			

Sample ID: **MB-96123 MEOH** Batch ID: **96123** TestNo: **SW8260D** Units: **mg/Kg**
SampType: **MBLK** Run ID: **GCMS2_200428B** Analysis Date: **4/28/2020 2:48:00 PM** Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	<0.0500	0.250								
Toluene	<0.0500	0.250								
Total Xylenes	<0.0500	0.250								
Surr: 1,2-Dichloroethane-d4	2340		2500		93.6	52	149			
Surr: 4-Bromofluorobenzene	2090		2500		83.4	84	118			S
Surr: Dibromofluoromethane	2490		2500		99.7	65	135			
Surr: Toluene-d8	2230		2500		89.1	84	116			

Sample ID: **2004211-13AMS** Batch ID: **96123** TestNo: **SW8260D** Units: **mg/Kg-dry**
SampType: **MS** Run ID: **GCMS2_200428B** Analysis Date: **4/28/2020 4:12:00 PM** Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	11.3	0.241	1.12	9.11	198	74	127			S
Toluene	2.93	0.241	1.12	1.73	107	71	127			
Total Xylenes	25.7	0.241	3.36	20.6	153	75	125			S
Surr: 1,2-Dichloroethane-d4	2190		2413		90.7	52	149			
Surr: 4-Bromofluorobenzene	2950		2413		122	84	118			S
Surr: Dibromofluoromethane	2470		2413		103	65	135			
Surr: Toluene-d8	2410		2413		100	84	116			

Sample ID: **2004211-13AMSD** Batch ID: **96123** TestNo: **SW8260D** Units: **mg/Kg-dry**
SampType: **MSD** Run ID: **GCMS2_200428B** Analysis Date: **4/28/2020 4:41:00 PM** Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	10.8	0.241	1.12	9.11	147	74	127	5.11	30	S
Toluene	2.85	0.241	1.12	1.73	100	71	127	2.50	30	
Total Xylenes	24.4	0.241	3.36	20.6	115	75	125	5.06	30	
Surr: 1,2-Dichloroethane-d4	2160		2413		89.3	52	149	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200428B

Sample ID: **2004211-13AMSD**	Batch ID: **96123**	TestNo: **SW8260D**		Units:	**mg/Kg-dry**
SampType: **MSD**	Run ID: **GCMS2_200428B**	Analysis Date: **4/28/2020 4:41:00 PM**		Prep Date:	**4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2850		2413		118	84	118	0	0	
Surr: Dibromofluoromethane	2380		2413		98.5	65	135	0	0	
Surr: Toluene-d8	2350		2413		97.3	84	116	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2_200428B

Sample ID: **ICV-200427**	Batch ID: **R110252**	TestNo: **SW8260D**	Units: **mg/Kg**
SampType: **ICV**	Run ID: **GCMS2_200428B**	Analysis Date: **4/28/2020 1:51:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	0.0452	0.00500	0.0464	0	97.4	70	130			
Toluene	0.0476	0.00500	0.0464	0	103	70	130			
Total Xylenes	0.136	0.00500	0.139	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	45.9		50.00		91.8	52	149			
Surr: 4-Bromofluorobenzene	44.2		50.00		88.4	84	118			
Surr: Dibromofluoromethane	52.4		50.00		105	65	135			
Surr: Toluene-d8	47.4		50.00		94.8	84	116			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_200330A

Sample ID: **DCS2-95714**	Batch ID: **95714**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **DCS2**	Run ID: **IC2_200330A**	Analysis Date: **3/30/2020 11:11:10 AM**	Prep Date: **3/30/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1.80	5.00	2.500	0	71.9	65	135	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_200427A

The QC data in batch 96103 applies to the following samples: 2004211-01A, 2004211-02A, 2004211-04A, 2004211-05A, 2004211-07A, 2004211-09A, 2004211-13A, 2004211-16A, 2004211-17A, 2004211-18A, 2004211-19A, 2004211-22A, 2004211-23A

Sample ID: **MB-96103**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **MBLK**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 10:23:41 AM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<2.00	5.00								

Sample ID: **LCS-96103**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **LCS**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 10:39:41 AM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48.3	5.00	50.00	0	96.6	80	120			

Sample ID: **LCSD-96103**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **LCSD**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 10:55:41 AM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48.3	5.00	50.00	0	96.6	80	120	0.039	15	

Sample ID: **2004211-01A-DUP**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg-dry**
SampType: **DUP**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 1:32:51 PM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<21.9	54.7	0	0				0	10	

Sample ID: **2004211-01AMS**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg-dry**
SampType: **MS**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 1:48:51 PM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	98.0	54.2	108.3	0	90.5	80	120			

Sample ID: **2004211-01AMSD**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg-dry**
SampType: **MSD**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 2:04:51 PM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	91.9	52.9	105.9	0	86.8	80	120	6.47	15	

Sample ID: **2004211-02A-DUP**	Batch ID: **96103**	TestNo: **SW9056A**	Units: **mg/Kg-dry**
SampType: **DUP**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 2:36:51 PM**	Prep Date: **4/27/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<22.6	56.4	0	0				0	10	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_200427A

Sample ID: **ICV-200427**	Batch ID: **R110231**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **ICV**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 9:51:41 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.9	5.00	25.00	0	99.7	90	110			

Sample ID: **CCV1-200427**	Batch ID: **R110231**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **CCV**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 5:19:08 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.78	5.00	10.00	0	97.8	90	110			

Sample ID: **CCV2-200427**	Batch ID: **R110231**	TestNo: **SW9056A**	Units: **mg/Kg**
SampType: **CCV**	Run ID: **IC2_200427A**	Analysis Date: **4/27/2020 7:43:08 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	5.00	10.00	0	97.3	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

ANALYTICAL QC SUMMARY REPORT

RunID: **PMOIST_200430A**

The QC data in batch 96177 applies to the following samples: 2004211-01A, 2004211-02A, 2004211-04A, 2004211-05A, 2004211-07A, 2004211-09A, 2004211-13A, 2004211-16A, 2004211-17A, 2004211-18A, 2004211-19A, 2004211-22A, 2004211-23A

Sample ID: **2004250-04A-DUP** Batch ID: **96177** TestNo: **D2216** Units: **WT%**
SampType: **DUP** Run ID: **PMOIST_200430A** Analysis Date: **5/1/2020 8:55:00 AM** Prep Date: **4/30/2020**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture	34.9	0	0	37.07				6.04	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: *01-May-20*

CLIENT: TRC Environmental Corp.
Work Order: 2004211
Project: Lovington Crude Booster Station Release

MQL SUMMARY REPORT

TestNo: SW8260D	MDL	MQL
Analyte	**mg/Kg**	**mg/Kg**
Benzene	0.00100	0.00500
Ethylbenzene	0.0500	0.250
Ethylbenzene	0.00100	0.00500
Toluene	0.0500	0.250
Toluene	0.00100	0.00500
Total Xylenes	0.0500	0.250
Total Xylenes	0.00100	0.00500

TestNo: SW9056A	MDL	MQL
Analyte	**mg/Kg**	**mg/Kg**
Chloride	2.00	5.00

TestNo: M8015D	MDL	MQL
Analyte	**mg/Kg**	**mg/Kg**
TPH-DRO C10-C28	3.00	10.0
TPH-ORO >C28-C35	3.00	10.0

TestNo: M8015V	MDL	MQL
Analyte	**mg/Kg**	**mg/Kg**
Gasoline Range Organics	2.00	4.00

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP