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EMPIRE ABO GAS PLANT (AP-112)
Soil Remediation Report, Eddy County, New Mexico

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LAI Project Number: 6-0141-11

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1.0 EXECUTIVE SUMMARY

This report presents soil remediation at eight (8) areas (EA-02, EA-03, EA-05, EA-07, EA-12, EA-13, EA-14 and EA-15) at the Empire Abo Gas Plant (Facility) in Eddy County, New Mexico. The report is submitted to the New Mexico Oil Conservation Division (OCD) Environmental Bureau on behalf of Aka Energy Group LLC (Aka Energy), a wholly owned subsidiary of Southern Ute Indian Tribe Growth Fund (SUGF), which sold the Facility including the surface to Durango Midstream Services LLC (Durango), on March 1, 2019. Aka retained liability for certain environmental conditions at the Facility including among other things soil remediation at the above-referenced areas. The Facility currently operates as a natural gas booster station that is located approximately 9 miles east and southeast of Artesia, New Mexico. The legal description is Unit I (NE/4, SE/4), Section 3, Township 18 South, Range 27 East, Eddy County, New Mexico. The geodetic position is 32.777056° North and -104.259083° West.

The remediation was performed between February 18, 2020 and April 8, 2020, in accordance with the document titled, "Empire Abo Plant (AP-112) Soil Investigation Report and Remediation Plan, Eddy County, New Mexico, February 7, 2020" that was approved by OCD on February 14, 2020. On March 4, 2020, OCD approved a variance to use crushed concrete for backfilling the excavations with the following conditions:

1. Must have letter, signed, included in remedial report detailing concrete use and the internal approval of the "owner" for said use/activity.
2. Concrete must not be derived from any areas that may have been subject to contaminants of concern for this location. Remedial report needs to attest to this requirement.

On April 14, 2020, OCD agreed with the plan presented by Aka and Durango for testing each 2,000 cubic yards of concrete with the following exception: please give all concrete to be used a good water and soap wash down post crushing and before use. In a written agreement between Aka and Durango, Durango is responsible for backfilling the excavations with concrete.

Approximately 8,108.65 tons (equivalent to cubic yards) of soil and rock were hauled and disposed at Lea Land Landfill, LLC, an OCD permitted surface waste management facility (NM-1-0035), located at Mile Marker 64 south of U.S. Highway 62/180 east of Carlsbad, New Mexico. Personnel from Larson & Associates, Inc. (LAI) supervised the excavation of soil, manifests and collected bottom and sidewall composite samples according to OCD rule for releases (19.15.29 NMAC) for about every 200 square feet of the excavations. The samples were analyzed by Xenco Laboratories, a NELAP accredited laboratory, located in Carlsbad, New Mexico and Midland, Texas. Soil was excavated until the concentrations of BTEX, TPH and chloride were below the OCD remediation standards in Table 1 (19.15.29 NMAC) and/or metals concentrations were below the NMED soil screening levels (chromium and arsenic) unless physical conditions (i.e., pipelines, equipment, etc.) prevented complete remediation.

Laboratory analysis confirmed that remediation is complete at the following areas: EA-02, EA-03, EA-05, and EA-07. Remediation at the main compressor (Clark) building (EA-12) was not completed where an above-ground steel inlet gas line crosses the excavation from east to west and runs north along the west side of the excavation. Remediation at the Engine 9 (compressor) building (EA-13) was not completed on the north side of the former building where total petroleum hydrocarbons (TPH) in soil extends north approximately 100 feet beneath a paved road where concrete from demolition is piles and a horizontal vessel is located. LAI personnel delineated albeit not fully the extent of hydrocarbon contamination north of Engine 9 (compressor) building. Remediation on the south side of the Engine 9 (compressor) building was not completed due to high pressure natural gas pipeline. Aka and Durango request approval to defer final remediation until the plant ceases to operate and is demolished.

1.0 INTRODUCTION

This report is prepared on behalf of Aka Energy Group LLC (Aka), as former owner and operator of the Empire Abo Gas Plant (Facility), for submittal to the New Mexico Oil Conservation Division (OCD) to document soil remediation at eight (8) locations at the Facility. Aka is a wholly owned subsidiary of Southern Ute Indian Tribe Growth Fund (SUGF) and sold the Facility, including the land surface, to Durango Midstream LLC (Durango), on March 1, 2019. Aka retained liability for environmental conditions including soil remediation at eight (8) locations: EA-02, EA-03, EA-05, EA-07, EA-12, EA-13, EA-14 and EA-15, an area where polychlorinated biphenyls (PCBs) previously used in lubrication oil in the air compressors and instrument air (EA-10), and groundwater contamination from light non-aqueous phase liquids and dissolved hydrocarbons. The report documents soil remediation at the following environmental assessment (EA) areas:

Wastewater Tanks (EA-02)

Amine Sump (EA-03)

Slop Oil Tanks (EA-05)

Cooling Tower (EA-07)

Main Compressor (Clark) Building (EA-12)

Compressor (Engine 9) Building (EA-13)

Area North of Engine 9 (EA-14)

Southwest Containment Area (EA-15)

The Facility address is 257 Empire Road, Artesia, New Mexico. The Facility is located approximately nine (9) miles southeast of Artesia, New Mexico. The legal description is Unit I (NE/4 SE/4) Section 3, Township 18 South and Range 27 East. The geodetic position is North 32.777056° and West -104.259083°. Figure 1 presents a topographic map. Figure 2 presents an aerial drawing showing the soil remediation areas.

1.2 Regulatory Communications

On February 20, 2020, LAI, on behalf of Aka, submitted the document titled, "Empire Abo Plant (AP-112) Soil Investigation Report and Remediation Plan, Eddy County, New Mexico, February 7, 2020" to the OCD in Santa Fe, New Mexico. The document presented the investigation results, and remediation plan for each area. The report included an analytical data table, sample location drawings, analytical laboratory reports and soil boring logs. The document excluded the PCB Area (EA-10) which was submitted separately to the U.S. EPA and OCD. On February 14, 2020, NMOCD accepted and approved the report and remediation plan, as written.

On March 4, 2020, LAI, on behalf of Aka and Durango, submitted requested from OCD variance from 19.15.29.13(D)(1) to use crushed concrete for backfilling the excavations based on the foreseeable use of the plant, which Durango owns the surface, and to provide a substantial foundation for planned expansion in areas that will be remediated. On March 4, 2020, OCD approved the variance request with the following conditions:

1. *Must have letter, signed, included in remedial report detailing concrete use and the internal approval of the "owner" for said use/activity.*
2. *Concrete must not be derived from any areas that may have been subject to contaminants of concern for this location. Remedial report needs to attest to this requirement.*

If the above conditions are agreeable and met, then please consider approval of variance granted. Please indicate in an email to me acceptance of conditions.

On April 14, 2020, LAI transmitted an email to OCD from Aka and Durango dated April 9, 2020, agreeing to use recycled concrete for backfilling the excavations with a plan for testing the concrete for contaminants of concern. On April 14, 2020, OCD responded and agreed with the plan for testing the concrete with the following exception: *please give all concrete to be used a good water and soap wash down post crushing and before use. Small thing, but as the sampling could be with, I suspect large particles, it just seems a good extra touch for little effort. So that, and a little drying time ought to be fine.* Appendix A presents OCD correspondence.

In a written agreement between Aka and Durango, Aka is responsible for completing the remediation including excavating and disposing soil and rock in accordance with an OCD approved plan. Durango responsible for backfilling the excavations where remediation was performed and any future remediation deferred due to equipment, piping, site infrastructure or facility limitations.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,550 feet above mean sea level (msl).
- The topography slopes to the southeast.
- The nearest surface water feature is an unnamed drainage adjacent to the west side of the Site the flows south to Scoggins Draw about 1,300 feet south of the Site which discharges to Chalk Bluff Draw and to the Pecos River about 3.4 miles east-northeast of the Site.
- The principal soil type is "Reeves-Gypsum land complex, 0 to 3 percent slopes" consisting of about 8 inches of loam, 24 inches of clay loam, in descending order, and underlain by gypsum.
- The Tansill Formation (Permian) is the upper geological unit and is comprised of anhydrite, gypsum and salt about 100 feet thick.
- Groundwater in the Tansill Formation occurs between about 8 (MW-07) and 116 (MW-16) feet below ground surface (bgs).
- Mounding caused by naturally occurring perched water or historic leakage of water near the north central area of the Site causes groundwater to flow north, west, east and southeast.
- No fresh-water wells are located within 2 miles of the Site. According to TWDB the closest well is located about 500 feet south of the Site.

2.0 SOIL INVESTIGATION

During July 2019, LAI was tasked with investigating each area for soil impacts. Soil samples were collected using Geoprobe Model DT-7822 track mounted direct push rig operated by LAI. Penetration with the Geoprobe was limited due to gypsum in the subsurface, therefore, soil samples were collected by Enviro-Drill, Inc. (Enviro-Drill), Albuquerque, New Mexico, under LAI supervision with a truck-mounted CME-75 hollow stem auger rig and spilt-spoon samplers. Enviro-Drill collected soil samples every 2.5-feet, depending on sample recovery, beginning at ground surface, 2.5, 7.5, 10 feet etc. to a maximum depth of about 25 feet bgs. The soil samples were submitted under preservation and chain of custody to DHL Analytical, Inc. (DHL), a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, located in Round Rock, Texas.

2.1 Wastewater Tank (EA-02)

The wastewater tank is located near the northwest corner of the Site and north of the former evaporation pond. The wastewater tank collected fluid (oil and produced water mixture) from the dehydration units, closed header tanks and inlet scrubbers while the plant was operating. Approximately of 3,000 barrels (bbl.) of wastewater was generated each month and disposed off-site in an OCD permitted commercial saltwater disposal (SWD) well while the plant was operating. Figure 2 presents a location map for the wastewater tank (EA-02).

On July 25, 2019, Enviro-Drill collected soil samples from three (3) borings (02-01, 02-02 and 02-03) to a maximum depth of about twelve (12) feet bgs (03). DHL analyzed the samples for chloride by EPA Method 300 and total petroleum hydrocarbons (TPH) including gasoline range organics (C6 to C12), diesel range organics (>C12 to C28) and oil range organics (>C28 to C35) by Criteria Working Group (CWG) Method 1005, equivalent to EPA SW-846 Method 8015, due to the shortened turnaround time and sample volume.

The laboratory reported TPH below the OCD remediation limit of 100 mg/Kg in Table 1 (19.15.29 NMAC). Chloride was delineated vertically to 600 mg/Kg and exceeded the OCD cleanup limit of 600 mg/Kg in sample 02-03, 0 to 2 feet (787 mg/Kg). Table 1a presents the laboratory analytical data summary. Figure 3a presents the soil sample location map.

2.2 Amine Sump (EA-03)

The amine sump is located near the west side of the Site and south of the former evaporation pond (Figure 2). While the plant was operating monoethanolamine (MEA) was used to remove hydrogen sulfide and carbon dioxide gases from the gas stream. The MEA was recycled back into the system and spent amine was transferred to an open drain sump and captured at the amine sump and tank. Approximately 200 bbl. of spent amine and water were disposed off-site in an OCD permitted commercial SWD well per month while the plant was operating. The amine sump is constructed of steel that sets inside a partially buried concrete containment. Figure 2 presents a location map for the amine sump (EA-03).

On July 25, 2019, Enviro-Drill collected soil samples from four (4) borings (03-01 through 03-04) on the north, east, south and west sides of the amine sump, respectively, to a maximum depth of about 10.25 feet bgs. DHL analyzed the upper samples (0 to 2 feet) for BTEX by EPA Method 8021B. All samples were analyzed for diethanolamine (DEA) and MEA by EPA Method 8015B and Method 1671, respectively, and TPH by CWG Method 1005, equivalent to EPA SW-846 Method 8015, due to the shortened turnaround time and sample volume. DEA and MEA were not reported above the laboratory analytical method reporting limits of 500 mg/Kg and 50 mg/Kg, respectively, and below the OCD recommended remediation limit of 500 mg/Kg. Benzene and BTEX were not reported above the OCD remediation limits of 10 mg/Kg and 50 mg/Kg, respectively. TPH was reported above the OCD remediation limit (2,500 mg/Kg) in the following soil samples:

03-01, 0 to 2 feet (2,796 mg/Kg)	03-02, 2.5 to 3 feet (7,950 mg/Kg)
03-03, 2.5 to 3.5 feet (6,316 mg/Kg)	03-04, 5 to 7 feet (6,230 mg/Kg)

Table 1a presents the laboratory analytical data summary. Figure 3b presents the soil sample location map.

2.3 Slop Oil Tanks (EA-05)

The slop oil tanks consisted of two (2) 210-barrel (bbl.) steel tanks within earthen containment that captured oils from the compressor engines and drain system. The tanks were removed between 2013 and 2014 however the earthen berm is visible from Google Earth® satellite imagery. The plant generated approximately 400 bbl. of oil waste per week which was removed from the tanks and trucked off site and disposed in OCD permitted SWD well. Figure 2 presents a location map for the slop oil tanks (EA-05).

On July 24, 2019, Superior Hydrovac Solutions LLC (Superior), Hobbs, New Mexico, used a hydrovac to expose underground pipelines at several locations inside and around the earthen containment. Enviro-Drill collected soil samples from five (5) borings (05-01 through 05-05) to a maximum depth of about 25.25 feet bgs. DHL analyzed the upper samples (0 to 1 foot) for BTEX by EPA Methods 8021B. All samples were analyzed for TPH by CWG Method 1005, equivalent to EPA SW-846 Method 8015, due to the shortened turnaround time and sample volume, and chloride by Method 300, respectively.

Benzene and BTEX were not reported above the OCD remediation limits of 10 mg/Kg and 50 mg/Kg, respectively. TPH was reported above the OCD remediation limit (2,500 mg/Kg) in the following soil samples: 05-02, 0 to 1 foot (8,980 mg/Kg), 05-03, 1 to 1.5 feet (9,180 mg/Kg) and 2.5 to 2.75 feet (8,490 mg/Kg). Chloride was not reported above the OCD remediation limit of 10,000 mg/Kg but exceeds the OCD surface restoration limit (600 mg/Kg) per 19.15.29.13D(1) in sample 05-01, 0 to 1 foot (1,070 mg/Kg). Table 1 presents the laboratory analytical data summary. Figure 3c presents the soil sample location map.

2.4 Cooling Tower (EA-07)

The cooling tower was located near the north-central area of the Site and was used for cooling engine jacket water and other equipment, as needed. Blow down (waste) from the cooling tower was directed to the former evaporation pond. Sulfuric acid was occasionally added to the cooling tower to control pH in the cooling water. A representative sample of water was collected from the cooling on May 29, 2009, while the plant was operating. The sample was analyzed for BTEX, dissolved (filtered) metals including arsenic, barium cadmium, chromium, lead, mercury, selenium and silver (RCRA 8), cations (calcium, magnesium, sodium, and potassium), anions (alkalinity, sulfate and chloride) and total dissolved solids (TDS). Benzene and chromium were reported at 0.00128 and 0.00282 milligrams per liter (mg/L), respectively, and below the New Mexico Water Quality Control Commission (WQCC) human health standards of 0.01 mg/L. Figure 2 presents a location map for the cooling tower (EA-07).

On July 26, 2019, Enviro-Drill collected soil samples from six (6) borings (07-01 through 07-06) to a maximum depth of about 7.75 feet bgs. DHL analyzed the samples for RCRA 8 metals (arsenic, barium cadmium, chromium, lead, mercury, selenium, and silver) by EPA Method 6020A, Method 7471B (mercury) and Method 300 (chloride). Arsenic in sample 07-02, 2 feet (21.3 mg/Kg) was reported above the New Mexico Environment Department (NMED) soil screening level (17.7 mg/Kg). Chromium in sample 07-05, 8 feet and approximately 5 x 10 feet around location 07-05 to approximately six (6) feet bgs (427 mg/Kg) exceeded the NMED soil screening level (340 mg/Kg). Table 1b presents the laboratory analytical data summary. Figure 3d presents the soil sample location map.

2.5 Lube Oil Tanks (EA-08)

The lube oil tanks were located west of the cooling tower near the north-central area of the Site where lubrication oil was stored in two (2) 400 bbl. steel tanks inside lined containment. The lube oil was used for lubricating engines, etc. The tanks were removed in April 2020. Figure 2 presents a location map for the lube oil tanks (EA-08).

On July 25, 2019, Enviro-Drill collected soil samples from four (4) borings (08-01 through 08-04) on the west, north, east, and south sides of the former tank containment to a maximum depth of about 11 feet bgs. DHL analyzed the samples for TPH by CWG Method 1005, equivalent to EPA SW-846 Method 8015, due to the shortened turnaround time. No remediation was performed at the lube oil tanks (EA-08) since TPH concentrations were below the analytical method reporting limit in all samples. Table 1a presents the laboratory analytical data summary. Figure 3e presents the soil sample location map.

2.6 Main Compressor (Clark) Building (EA-12)

The main compressor (Clark) building (EA-12) was located near the east central area of the Site and south from the plant office. The main compressor (Clark) building housed eight (8) engines for compressing natural gas. The building, engines, piping, and concrete were demolished during the last quarter 2018 and first quarter 2019. Figure 2 presents a location map for the main compressor (Clark) building.

On October 14, 2019, a backhoe operated by Rocky Peak Services, Hobbs, New Mexico, was used to collect soil samples at seventeen (17) locations. LAI personnel used a stainless-steel trowel to collect the samples from the backhoe bucket. Soil samples were collected to a maximum depth of seven (7) feet bgs at location C-12. The samples were analyzed for BTEX by Method 8021B, TPH by Method 8015D and PCBs by EPA SW-846 Method 8082. Benzene and BTEX were not reported above the OCD remediation limits of 10 mg/Kg and 50 mg/Kg, respectively. The laboratory reported TPH above the OCD remediation limit (2,500 mg/Kg) in the following soil samples:

C-2, 1.0 feet (3,070 mg/Kg)	C-3, 1.0 feet (3,319 mg/Kg)
C-4, 1.0 feet (5,242.29 mg/Kg)	C-10, 0.5 feet (3,006 mg/Kg)
C-11, 0.5 feet (3,167 mg/Kg)	C-11, 1.0 feet (6,360 mg/Kg)
C-11, 2.0 feet (3,957.1 mg/Kg)	C-12, 0.5 feet (18,173 mg/Kg)
C-12, 1.0 feet (24,776.5 mg/Kg)	C-12, 3.0 feet (15,630 mg/Kg)
C-12, 5.0 feet (4,838 mg/Kg)	C-12, 7.0 feet (5,051 mg/Kg)
C-13, 0.5 feet (24,590 mg/Kg)	C-13, 1.0 mg/Kg (17,470 mg/Kg)
C-14, 0.5 mg/Kg (3,429.6 mg/Kg)	C-15, 0.5 feet (4,428.8 mg/Kg)
C-15, 2.0 feet (14,650 mg/Kg)	C-15, 3.0 feet (13,200 mg/Kg)
C-16, 0.5 feet (3,660 mg/Kg)	

PCBs were not reported above the EPA low-occupancy remediation level of 25 ppm pursuant to 40 CFR 761.61(a). Table 4 presents the BTEX and TPH laboratory analytical data summary. Table 5 presents the total metals laboratory analytical data summary. Table 6 presents the PCB laboratory analytical data summary. Figure 3g presents the soil sample location map.

2.7 Compressor (Engine 9) Building (EA-13)

The compressor (Engine 9) building (EA-13) was located southwest of the main compressor (Clark) building and housed an engine for compressing natural gas. Demolition of the compressor (Engine 9) building,

including the engine, piping and concrete, occurred during the last quarter 2018 and first quarter 2019. Figure 2 presents a location map for the compressor (Engine 9) building (EA-13).

On June 12, 2019, LAI personnel collected a soil sample (Engine 9) near the center of the former building foundation at approximately three (3) feet bgs. A stainless-steel trowel was used to collect the sample. The sample was analyzed for BTEX by Method 8260, TPH by Method 8015D and chloride by EPA Method 300. Benzene and BTEX were not reported above the OCD remediation standards of 10 mg/Kg and 50 mg/Kg, respectively. The laboratory reported TPH at 3,570.434 mg/Kg and above the OCD remediation limit of 2,500 mg/Kg. Table 4 presents the laboratory analytical data summary. Figure 3h presents the soil sample location map.

2.8 Area North of Engine 9 (EA-14)

Contaminated soil was identified while remediating soil on the north side of Engine 9. The extent of soil contamination was delineated during the remediation at Compressor (Engine 9) Building (EA-13). Figure 3i presents the soil sample location map.

2.9 Southwest Containment Area (EA-15)

Oil stained soil and sediment removed from the concrete foundation during demolition of the main compressor (Clark) building (EA-12) was placed on plastic at two (2) containments (EA-15) near the southwest corner of the Site. Soil removed during excavation (hydrovac) at the Slop Oil Tanks (EA-12) was placed on plastic near the southwest corner of the Site. The sediment and plastic liner were removed for disposal during the Site remediation. Soil samples were collected following removal of the sediment and plastic liner. Figure 3j presents the soil sample location map.

3.0 SOIL REMEDIATION

From February 18, 2020 through April 8, 2020, SDR Enterprises, LLC, Hobbs, New Mexico, under supervision from LAI, used a track hoe and hammer hoe to remove soil and rock areas EA-02, EA-3, EA-05, EA-07, EA-08, EA-12, EA-13 and EA-15. Approximately 8,108.65 tons (equivalent to cubic yards) of soil and rock were hauled and disposed at Lea Land Landfill, LLC (Lea Land), an OCD permitted surface waste management facility (NM-1-0035), located at Mile Marker 64 on U.S. Highway 62/180 east of Carlsbad, New Mexico. Appendix B presents the Lea Land disposal summary.

LAI personnel collected composite bottom and sidewall samples according to OCD rule for releases (19.15.29 NMAC) for about every 200 square feet of excavation. The samples were collected with a stainless-steel trowel that was cleaned between composite samples with a solution of laboratory grade detergent (Alkonox®) and potable water and rinsed with distilled water. The samples were hand delivered to Xenco Laboratories, a NELAP accredited laboratory, located in Carlsbad, New Mexico and Midland, Texas. Soil was removed until the concentrations of BTEX, TPH and chloride were below the OCD remediation standards in Table 1 (19.15.29 NMAC) and/or metals concentrations were below the NMED soil screening levels (chromium and arsenic). Table 2 presents the BTEX, TPH, metals (arsenic and chromium), and chloride confirmation sample analytical data summary. Appendix C presents the laboratory reports. Appendix D presents photographs.

3.1 Wastewater Tank (EA-02) Remediation

Remediation at the wastewater tank (EA-02) was performed on March 19, 2020. Soil was excavated to two (2) feet bgs from an area measuring about 10 x 20 feet around sample location 02-03. A 5-spot composite soil sample was collected from the bottom of the excavation and a 5-spot composite soil sample was collected from the excavation sidewall. BTEX and TPH were not reported in the confirmation soil samples above the analytical method reporting limits (RL). Chloride was reported at 390 mg/Kg and 295 mg/Kg in the bottom and sidewall samples, respectively, and below the OCD remediation standard of 600 mg/Kg. Excavation 02-03 measures approximately 73 square feet and was completed on March 19, 2020. Figure 4a presents a drawing for the wastewater tank (EA-2) excavation.

3.2 Amine Sump (EA-03)

Between March 18 and 23, 2020, remediation was performed around the amine sump (EA-03). The steel sump was cleaned with a high- pressure wash and a vacuum truck was used to remove liquid from the sump and concrete containment for disposal at an offsite OCD permitted commercial salt-water disposal (SWD) well. The steel sump was removed and placed in the scrap metal bin for recycling. The concrete was disposed at Lea Land Landfill, LLC. Soil was excavated around sample locations 03-01 through 03-04 to a maximum depth of approximately 8 feet bgs. The main excavation measured approximately 40 x 50 feet.

On March 18, 2020, LAI personnel collected composite soil samples from the excavation bottom and sidewalls. Benzene, BTEX and TPH were below the OCD remediation standards in Table 1 (19.15.29 NMAC) except the northeast bottom and west sidewall at approximately 8 feet bgs which reported TPH at 2,557 mg/Kg and 7,812 mg/Kg, respectively. Chloride was below 600 mg/Kg in all samples. On March 19, 2020, the northeast corner of the excavation was deepened to nine (9) feet bgs and the west side was extended about ten (10) feet west onto property administered by the U.S. Bureau of Land Management (BLM). The BLM office in Carlsbad, New Mexico, was notified (verbal conversation with Jim Amos, March 17, 2020) and approved the excavation. The excavation on BLM property measured approximately 10 x 25 feet by 8 feet deep.

On March 23, 2020, LAI personnel collected composite samples from the BLM property excavation sidewalls and hand delivered the samples to Xenco in Carlsbad, New Mexico. The laboratory reported benzene, BTEX, TPH and chloride concentrations below the OCD remediation standards in Table 1 of 19.15.29.12 NMAC. The BLM excavation was backfilled on March 31, 2020, with caliche confirmed clean by laboratory testing (Table 2) to approximately four (4) feet bgs and topsoil to ground surface. On April 2, 2020, the excavation area on BLM property, estimated at approximately 817 square feet of surface, was seeded with BLM Mix #2 following excavation and backfill with clean material.

On March 30, 2020, the bottom of the excavation on the north side near the amine sump was deepened to approximately nine (9) feet bgs. The sample was hand delivered to the laboratory which reported TPH below the analytical method RL. The main excavation at the amine sump measures approximately 2,210 square feet. The excavation on BLM land measures approximately 623 square feet. The total area of the excavations is approximately 2,833 square feet. The excavations were completed on March 30, 2020. Figure 4b presents a drawing for the amine sump (EA-03) excavations.

3.3 Slop Oil Tanks (EA-05)

Between February 25, 2020 and March 6, 2020, Hydro Tech, Inc. (Hydro Tech), Hobbs, New Mexico, used a hydrovac to expose buried lines in the vicinity of the slop oil tanks. Between March 6 and 24, 2020, SDR under supervision from LAI excavated soil from the area in the vicinity of soil sample locations 05-01, 05-

02 and 05-03. The excavations measured approximately 15'x15' (05-01) and 10'x10' (05-02 and 05-03). Soil was excavated to maximum depths of 1.5 feet bgs (05-02), 2.5 feet bgs (05-03) and 3.0 feet bgs (05-01).

On March 5, 6, and 12, 2020, LAI personnel collected composite soil samples from the bottom and sidewalls of excavations 05-02, 05-01 and 05-03, respectively. Total BTEX (69.136 mg/Kg) and TPH (8,017 mg/Kg) exceeded the OCD remediation standards of 50 mg/Kg and 2,500 mg/Kg, respectively, in the bottom sample from excavation 05-01 at 1.5 feet bgs. TPH exceeded the OCD remediation standard (2,500 mg/Kg) in the sidewall sample from excavation 05-01, between 0 and 1.5 feet bgs (8,296 mg/Kg), and sidewall sample from 05-03 between 0 and 2.5 feet bgs (5,241 mg/Kg).

Additional soil was removed from excavations 05-03 and 05-01 on March 23 and 24, 2020, respectively. The excavations at 05-01 and 05-03 were expanded laterally and 05-01 was deepened to about 3 feet bgs. Composite samples were collected on March 23, 2020 (05-03) and March 24, 2020 (05-01). Total BTEX and TPH were below the OCD remediation standards in the bottom and sidewall samples from excavation 05-01. TPH was below the OCD remediation standard in the sidewall sample from excavation 05-03. Excavations at EA-05 were completed on March 24, 2020.

Excavation 05-01 measures approximately 185 square feet. Excavation 05-02 measures approximately 177 square feet. Excavation 05-03 measures approximately 84 square feet. The total area of the excavations at the slop oil tanks (EA-05) is approximately 446 square feet and were completed on March 30, 2020. Figure 4c presents a drawing for the slop oil tanks (EA-05) excavations.

3.4 Cooling Tower (EA-07)

On March 12, 2020, SDR under supervision from LAI excavated soil to about 5'x10' around sample locations 07-02 and 07-05. Soil at 07-02 and 07-05 was excavated to approximately 4 and 8 feet bgs, respectively. LAI personnel collected composite soil samples from the bottom and sidewalls of excavations. Xenco analyzed the samples for arsenic (07-02) and chromium (07-05). Arsenic was below the analytical method RL in samples from excavation 07-02. Chromium was reported at 17.3 mg/Kg, 330 mg/Kg, and 211 mg/Kg in the bottom, north and south (N/S) and east and west (E/W) sidewall samples, respectively, from excavation 07-05. The arsenic and chromium concentrations are below the NMED soil screening level of 17.7 mg/Kg and 340 mg/Kg, respectively. Excavations at the cooling tower (EA-07) were completed on March 12, 2020. Excavation 07-02 measures approximately 52 square feet. Excavation 07-05 measures approximately 53 square feet. The total area of the excavations is approximately 105 square feet. Figure 4d presents a drawing for the cooling tower (EA-07) excavations.

3.5 Main Compressor (Clark) Building (EA-12)

Remediation began near the north end of the former compressor building in the vicinity of sample C-2 and progressed south to sample C-16. Remediation was limited in the area between samples C-12 and C-13 due to an inlet high pressure gas line that crosses the remediation area from west to east. The gas line turns north near the west side of the excavation and runs along the west side of the former compressor building between samples C-12 and C-2. Remediation on the east side of the former compressor building was limited by a concrete foundation that extends from the north end of the former compressor building to about sample C-5. Soil was excavated between about 3 and 5 feet bgs to allow for constructing cellars beneath the compressor engines when the main compressor (Clark) Building was constructed (circa 1960). North of the inlet gas line soil was excavated from about 1 and 2 feet bgs between samples C-2 and C-4

to about 15 feet bgs at C-12. Soil south of the inlet gas line was excavated 7 feet bgs at C-13, 6 feet bgs at C-14, 8 feet bgs at C-15 and 13 feet bgs at C-16.

Excavation at EA-12 began on February 20, 2020. Composite soil samples were collected for about every 200 square feet of excavation bottom and sidewall. No samples were collected from the west side of the excavation at C-12D and C-12E due to the height of the sidewall (15 feet) and vertical slope due to interference from the inlet gas line. Discrete samples were collected from the bottom of the excavation nearest to the south end of the exaction (C-12) immediately north of the inlet gas line to assess the vertical extent of TPH at 12, 15, 18 and 20 feet bgs. The final benzene, BTEX, TPH and chloride concentrations were below the OCD remediation standards of 10 mg/Kg, 50 mg/Kg, 2,500 mg/Kg, and 600 mg/Kg, respectively, in Table 1 of 19.115.29.12 NMAC except the following samples:

Sample	Location	Depth	Type	TPH	Comment
C-10	West Side	0 – 10 feet	Composite	4,030 mg/Kg	Inlet gas line west of excavation
C-11	West Side	0 – 10 feet	Composite	4,218 mg/Kg	Inlet gas line west of excavation
C-12	Bottom	15 feet	Discrete	3,113 mg/Kg	Inlet gas line south of excavation
C-12	West Side	5 feet	Discrete	7,159 mg/Kg	Inlet gas line west of excavation
C-12	West Side	10 feet	Discrete	6,146 mg/Kg	Inlet gas line west of excavation
C-12A	East Side	10 feet	Discrete	2,842 mg/Kg	Limited access for excavator

The excavation at EA-12 was completed on March 18, 2020. Figure 4e presents a drawing for the main compressor (Clark) building (EA-12). Figure 4e₁ presents a focused drawing for the excavation at C-2 through C-4 estimated at approximately 2,766 square feet. Figure 4e₂ presents a focused drawing for the excavation at C-10 through C-12 estimated at approximately 2,238 square feet. Figure 4e₃ presents composite soil samples for C-13 and C-14. Figure 4e₄ presents composite soil samples for C-16 and C-16. Remaining hydrocarbon impacted material will be excavated by Durango in the future when the facility ceases operation.

3.6 Engine 9 (Compressor) Building (EA-13)

Remediation at the Engine 9 (compressor) building commenced on February 24, 2020. Soil and rock were excavated to approximately 5 feet bgs from within the building footprint. Composite samples collected on February 25, 2020, from the sidewalls (north, east, west, and south) between ground surface and 5 feet bgs reported TPH at 7,580 mg/Kg, 4,372 mg/Kg, 8,405.4 mg/Kg and 3,696 mg/Kg, respectively, and above the OCD remediation standard of 2,500 mg/Kg. TPH in the bottom of the excavation on the south side was 4,430 mg/Kg. The excavation was extended east approximately 25 feet, west approximately 22 feet and south approximately 15 feet. TPH concentrations in the east and west sidewall composite samples decreased below the OCD remediation standard. TPH remains above the OCD remediation standard in soil from the west half of the south sidewall (2,930 mg/Kg) and north sidewall (7,580 mg/Kg). TPH decreased below the OCD remediation standard in composite samples from the bottom of the excavation.

Further excavation to the south was not possible due to a pipeline right of way (ROW) owned by Energy Transfer Partners (formerly Transwestern Pipeline). Further excavation to the north was not possible due to a road that provides access to the interior and south areas of the plant, pile of concrete from demolition and a large horizontal vessel. The area north of road (EA-14) was investigated to delineate the vertical and lateral extent of hydrocarbons and is presented in the following section of this report.

The excavation at EA-13 measures approximately 4,721 square feet and was completed on March 31, 2020. Figure 4f presents a drawing for the Engine 9 (compressor) building (EA-13). Remaining hydrocarbon impacted material will be excavated by Durango in the future when the facility ceases operation.

3.7 Area North of Engine 9 (Compressor) Building (EA-14)

The area north of Engine 9 (compressor) building (EA-14) was investigated to delineate the vertical and lateral extent of hydrocarbon impacted soil and rock. Between February 25, 2020 and March 20, 2020, SDR under supervision from LAI collected soil and rock samples from eight (8) locations (S-4A, S-4B, S-5A, S-5B, S-8, S-9, S-10, and S-11) with the track hoe and hammer hoe. The samples were collected 1-foot increments between two (2) and ten (10) feet bgs, depending on location, and were analyzed for TPH by EPA SW-846 Method 8015. The highest TPH concentration (25,800 mg/Kg) was reported in the sample from 3 feet bgs at S-5A, located north of the Engine 9 excavation. The vertical extent of TPH in soil was not determined at S-5A. The TPH concentrations in samples from S-5B located about 60 feet north of S-5A were above the OCD remediation standard between about 3 feet (2,838 mg/Kg) and six (6) feet (3,387 mg/Kg). The vertical extent of TPH in soil was determined at S-5B located about 60 feet north from the road along the north side of the Engine 9 (compressor) building. The lateral (south to north) extent of TPH was determined at S-9 located about 35 feet northwest of S-5B where TPH was not reported above the RL. TPH was reported above the OCD remediation standard between about six (6) and eight (8) feet bgs at location S-10 on the east side. The vertical and lateral extent of TPH above the OCD remediation standard was not determined at location S11 on the west side. The area of TPH impacted soil above the OCD remediation standard is estimated at approximately 11,600 square feet and extends deeper than ten (10) feet bgs at location S-5A. Figure 4g presents a drawing showing the sample locations and impact area north of Engine 9 (compressor) building (EA-14). Figure 4h presents a drawing showing the estimated depth of impact for the area north of Engine 9 (compressor) building (EA-14). Remaining hydrocarbon impacted material will be excavated by Durango in the future when the facility ceases operation.

3.8 Southwest Containment Area (EA-15)

During demolition of the main compressor (Clark) building (EA-12) oil contaminated soil and sediment was scraped from the concrete around the compressor engines and placed on plastic at two (2) containments (North and West) near the southwest corner of the Site. A separate containment (hydrovac) was established for soil removed at the Slop Oil Tanks (EA-05).

On March 27, 2020, SDR under LAI supervision removed the oil contaminated soil and hydrovac cuttings from the containments and plastic liners for disposal at Lea Land. LAI personnel collected a 5-spot composite sample from each containment following removal of the material and liners. Xenco analyzed for the samples for benzene, BTEX, TPH and chloride per Table 1 of 19.15.29.12 NMAC.

Benzene and BTEX concentrations were less than the analytical method RL. TPH was less than the OCD remediation standard (2,500 mg/Kg) except the west containment which reported TPH at 2,876 mg/Kg. On April 3, 2020, SDR removed approximately 6 inches of soil from the containment area for disposal at Lea Land. LAI personnel collected bottom and sidewall composite samples that were hand delivered to Xenco in Carlsbad, New Mexico. The laboratory reported TPH at 73.9 mg/Kg and 1,400 mg/Kg in the bottom and sidewall samples, respectively. The excavation at EA-15 measures approximately 847 square

feet and was completed on April 8, 2020. Figure 41 presents a drawing showing the southwest containment area (EA-15).

4.0 CONCLUSIONS

Laboratory analysis confirmed that remediation is complete at the following areas: EA-02, EA-03, EA-05, and EA-07.

5.0 DEFERRAL REQUEST

Remediation at the main compressor (Clark) building (EA-12) was not completed where an above-ground steel inlet gas line crosses the excavation from east to west and runs north along the west side of the excavation. Remediation at the Engine 9 (compressor) building (EA-13) was not completed on the north side of the former building where total petroleum hydrocarbons (TPH) in soil extends north approximately 100 feet beneath a paved road where concrete from demolition is piles and a horizontal vessel is located. LAI personnel delineated albeit not fully the extent of hydrocarbon contamination north of Engine 9 (compressor) building. Remediation on the south side of the Engine 9 (compressor) building was not completed due to high pressure natural gas pipeline. Aka and Durango request approval to defer final remediation until the plant ceases to operate and is demolished. At that time, Durango will complete final excavation of impacted material and reclamation of the site.

Tables

Table 1
Soil Sample Organic Analytical Data Summary
AKA Energy Group LLC, Empirre Abo Plant
Eddy County, New Mexico

Investigation Area	Area Number	Boring Number	Depth (Feet)	Collection Date	Status	DEA (mg/Kg)	MEA (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/kg)	Chloride (mg/kg)
Cleanup Standard:						--	--	10	50				100	600
Wastewater Tanks	EA-02	01	0 - 2	07/25/2019	In-Situ	--	--	--	--	<10.8	43.6	26.8	70.4	77.2
			2.5 - 4	07/25/2019	In-Situ	--	--	--	--	<7.90	<7.90	<7.90	<7.90	467
			5 - 6.5	07/25/2019	In-Situ	--	--	--	--	<8.08	<8.08	<8.08	<8.08	238
			7.5 - 9	07/25/2019	In-Situ	--	--	--	--	<9.53	<9.53	<9.53	<9.53	191
			10 - 10.5	07/25/2019	In-Situ	--	--	--	--	<7.76	<7.76	<7.76	<7.76	75.1
		02	0 - 2	07/25/2019	In-Situ	--	--	--	--	<9.24	25.8	12.4	38.2	273
			2.5 - 4	07/25/2019	In-Situ	--	--	--	--	<9.01	<9.01	<9.01	<9.01	306
			5 - 6.5	07/25/2019	In-Situ	--	--	--	--	<8.03	<8.03	<8.03	<8.03	291
			7.5 - 8	07/25/2019	In-Situ	--	--	--	--	<10.5	<10.5	<10.5	<10.5	294
			10 - 11.25	07/25/2019	In-Situ	--	--	--	--	<7.10	<7.10	<7.10	<7.10	186
		03	0 - 2	07/25/2019	In-Situ	--	--	--	--	<8.86	51.4	14.2	65.6	787
			2.5 - 4	07/25/2019	In-Situ	--	--	--	--	<8.45	<8.45	<8.45	<8.45	318
			5 - 6.5	07/25/2019	In-Situ	--	--	--	--	<8.02	14.8	<8.02	14.8	300
			7.5 - 9	07/25/2019	In-Situ	--	--	--	--	<8.37	<8.37	<8.37	<8.37	296
			10 - 12	07/25/2019	In-Situ	--	--	--	--	<8.13	<8.13	<8.13	<8.13	252
Cleanup Standard:						--	--	10	50				2,500	--
Amine Sump	EA-03	01	0 - 2	07/25/2019	In-Situ	<500	<50	0.252	20.133	1,280	801	715	2,796	--
			2.5 - 3	07/25/2019	In-Situ	<500	<50	--	--	373	407	270	1,050	--
			5 - 5.5	07/25/2019	In-Situ	<500	<50	--	--	26.0	101	131	--	--
			7.5 - 8	07/25/2019	In-Situ	<500	<50	--	--	<8.83	36.6	29.6	66.2	--
			10 - 10.25	07/25/2019	In-Situ	<500	<50	--	--	<8.78	<8.78	<8.78	<8.78	--
		02	0 - 2	07/25/2019	In-Situ	<500	<50	0.0241	0.0441	278	650	635	1,563	--
			2.5 - 3	07/25/2019	In-Situ	<500	<50	--	--	2,930	2,590	2,430	7,950	--
			5 - 5.25	07/25/2019	In-Situ	<500	<50	--	--	11.3	37.3	45.3	93.9	--
			7.5 - 8	07/25/2019	In-Situ	<500	<50	--	--	<8.53	<8.53	<8.53	<8.53	--
			10 - 10.25	07/25/2019	In-Situ	<500	<50	--	--	<9.40	27.1	17.7	44.8	--
		03	0 - 2	07/25/2019	In-Situ	<500	<50	--	--	<8.03	30.6	20.5	51.1	--
			2.5 - 3.5	07/25/2019	In-Situ	<500	<50	0.00255	0.00479	896	2,810	2,610	6,316	--
			5 - 5.5	07/25/2019	In-Situ	<500	<50	--	--	93.9	523	291	907.9	--
			7.5 - 7.75	07/25/2019	In-Situ	<500	<50	--	--	109	565	486	1,159	--

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Eddy County, New Mexico

Investigation Area	Area Number	Boring Number	Depth (Feet)	Collection Date	Status	DEA (mg/Kg)	MEA (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/kg)	Chloride (mg/kg)
Cleanup Standard:						--	--	10	50				100	600
		04	10 - 10.25	07/25/2019	In-Situ	<500	<50	--	--	<8.34	241	73.8	314.8	--
			0 - 2	07/25/2019	In-Situ	<500	<50	0.0223	0.0833	<9.81	28.6	17.8	46.6	--
			2.5 - 4	07/25/2019	In-Situ	<500	<50	--	--	72.2	165	132	396.2	--
			5 - 7	07/25/2019	In-Situ	<500	<50	--	--	3,240	1,560	1,430	6,230	--
			7.5 - 9	07/25/2019	In-Situ	<500	<50	--	--	2,170	208	66.9	2,444.9	--
			10 - 10.25	07/25/2019	In-Situ	<500	<50	--	--	91.2	152	159	402.2	--
Cleanup Standard:						--	--	10	50				2,500	10,000
Slop Oil Tanks	EA-06	01	0 - 1	07/24/2019	In-Situ	--	--			<7.36	226	85.5	311	1,070
			2.5 - 3	07/24/2019	In-Situ	--	--			<9.29	<9.29	<9.29	<9.29	37.3
			5 - 5.5	07/24/2019	In-Situ	--	--			<8.22	<8.22	<8.22	<8.22	<23.2
			10 - 10.5	07/24/2019	In-Situ	--	--			<9.26	<9.26	<9.26	<9.26	34.6
			15 - 16	07/24/2019	In-Situ	--	--			<8.33	<8.33	<8.33	<8.33	25.2
			20 - 20.25	07/24/2019	In-Situ	--	--							
		02	0 - 1	07/24/2019	In-Situ	--	--	0.0172	8.4472	1,330	5,860	1,800	8,980	<27.8
			2.5 - 2.75	07/24/2019	In-Situ	--	--	--	--	<8.55	95	<8.55	95	79.6
			5 - 5.25	07/24/2019	In-Situ	--	--	--	--	<10.3	<10.3	<10.3	<10.3	<29.2
			10 - 10.25	07/24/2019	In-Situ	--	--	--	--	<8.97	<8.97	<8.97	<8.97	27.8
			15 - 15.25	07/24/2019	In-Situ	--	--	--	--	<7.72	<7.72	<7.72	<7.72	60.9
			20 - 20.25	07/24/2019	In-Situ	--	--	--	--					
		03	0 - 1	07/24/2019	In-Situ	--	--	0.00871	1.84871	124	1,190	1,080	2,390	<25.9
			1 - 1.5	07/24/2019	In-Situ	--	--	--	--	1,320	5,740	2,120	9,180	30.0
			2.5 - 2.75	07/24/2019	In-Situ	--	--	--	--	3,210	4,460	816	8,490	95.0
			5 - 5.25	07/24/2019	In-Situ	--	--	--	--	<8.72	76.6	<8.72	76.6	<23.7
			10 - 10.25	07/24/2019	In-Situ	--	--	--	--	<9.16	<9.16	<9.16	71.6	39.6
			15 - 15.25	07/24/2019	In-Situ	--	--	--	--	<8.40	50.6	18.2	68.8	98.6
			20 - 21	07/24/2019	In-Situ	--	--	--	--	32.4	217.0	12.7	262	30.2
			25 - 25.25	07/24/2019	In-Situ	--	--	--	--	<9.27	<9.27	<9.27	<9.27	32.6
		04	0 - 1	07/24/2019	In-Situ	--	--	<0.00147	0.01049	<9.70	65.4	101	166.4	78.1
			1 - 2	07/24/2019	In-Situ	--	--	--	--	<9.05	108	110	218	145
			2 - 2.5	07/25/2019	In-Situ	--	--	--	--	<8.84	<8.84	<8.84	<8.84	32.4

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Eddy County, New Mexico

Investigation Area	Area Number	Boring Number	Depth (Feet)	Collection Date	Status	DEA (mg/Kg)	MEA (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/kg)	Chloride (mg/kg)
Cleanup Standard:						--	--	10	50				100	600
			2.5 - 3	07/26/2019	In-Situ	--	--	--	--	<7.54	<7.54	<7.54	<7.54	--
			5 - 5.25	07/26/2019	In-Situ	--	--	--	--	<7.04	<7.04	<7.04	<7.04	--
			7.5 - 8	07/26/2019	In-Situ	--	--	--	--	<7.83	<7.83	<7.83	<7.83	--
			10 - 10.5	07/26/2019	In-Situ	--	--	--	--	<9.59	<9.59	<9.59	<9.59	--

Notes: analysis performed by DHL Analytical, Round Rock, Texas

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

<: Denote concentration below analytical method reporting limit

--: No data available

Denotes concentration above OCD clean up limit (19.15.29 NMAC Table 1)

Denotes concentration below OCD clean up limit (19.15.29 NMAC Table 1) but exceeds OCD surface restoration limit of 600 mg/Kg (19.15.29.13 NMAC)

Table 2
Soil Sample Inorganic Analytical Data Summary
AKA Energy Group LLC, Empirre Abo Plant
Eddy County, New Mexico

Investigation Area	Area Number	Boring Number	Depth (Feet)	Collection Date	Status	Arsenic (mg/Kg)	Barium (mg/Kg)	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Chloride (mg/Kg)
*NMED Soil Screening Level:						17.7	100,000	564	340	800	68.4	568	568	**600
Cooling Tower	EA-07	01	0 - 2	07/26/2019	In-Situ	6.50	120	<0.112	42.8	3.76	<0.0168	0.685	<0.112	315
			2.5 - 3			<0.648	3.28	<0.130	3.58	0.1	<0.0191	<0.194	<0.130	40.2
			5 - 5.5			2.84	121	0.145	4.97	0.8	<0.0166	<0.177	<0.118	51.0
			7.5 - 7.75			12.6	44.1	0.196	19.1	5.88	0.0451	1.61	<0.132	70.4
		02	0 - 2	07/26/2019	In-Situ	21.3	138	0.441	422	26.0	0.0281	1.26	<0.111	349
			2.5 - 2.75			1.27	9	<0.134	47	1.4	<0.0200	<0.201	<0.134	<26.9
			5 - 5.25			4.80	4	0.189	4.30	1.2	<0.0152	0.291	<0.109	57.7
			7.5 - 7.75			<0.611	6.72	<0.122	4.91	0.4	<0.0180	<0.183	<0.122	31.6
		03	0 - 2	07/26/2019	In-Situ	2.13	24.5	<0.132	68.4	0.956	<0.0215	0.313	<0.132	470
			2.5 - 2.75			<0.609	8.98	<0.122	7.06	0.226	<0.0193	<0.183	<0.122	132
			5 - 6			3.59	14.5	0.138	5.00	0.946	<0.0183	0.174	<0.101	34.1
			7.5 - 7.75			7.16	110	<0.109	31.3	3.21	0.0431	1.71	<0.109	42.2
		04	0 - 2	07/26/2019	In-Situ	4.80	137	0.148	44.4	5.47	<0.0187	1.62	<0.119	62.3
			2.5 - 4			6.43	62.1	0.243	13.1	4.08	0.0183	0.632	<0.108	130
			5.0 - 5.5			3.20	14.9	0.157	6.55	1.57	<0.0153	0.828	<0.0998	104
			7.5 - 7.75			<0.574	1.58	<0.115	0.979	0.125	<0.0162	<0.172	<0.115	<22.5
		05	0 - 2	07/26/2019	In-Situ	7.69	139	0.261	238	14.8	0.150	1.08	<0.109	48.8
			2.5 - 3			7.45	177	0.430	205	17.9	0.0522	1.12	<0.108	55.1
			5 - 6			8.64	197	0.438	427	21.4	0.449	1.48	<0.123	153
		06	0 - 2	07/26/2019	In-Situ	4.04	165	0.147	19.4	6.61	<0.0180	1.77	<0.106	543
			2.5 - 3.5			<0.690	2.18	<0.138	3.76	0.173	<0.0207	<0.207	<0.138	95.4
			5 - 5.25			0.625	1.41	<0.116	3.77	0.152	<0.0188	<0.173	<0.116	117

Notes: analysis performed by Permian Basin Environmental Lab, Midland, Texas by Method TX1005 (TPH) and EPA Method 300E (chloride)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

* New Mexico Environment Department (NMED) screening level for industrial/occupational soil

** New Mexico Oil Conservation Division (OCD) cleanup limit for depth to groundwater less than 50 feet below ground surface (bgs)

Denotes concentration above NMED Soil Screening Level

Table 2
Soil Sample Inorganic Analytical Data Summary
AKA Energy Group LLC, Empirre Abo Plant
Eddy County, New Mexico

Investigation Area	Area Number	Boring Number	Depth (Feet)	Collection Date	Status	Arsenic (mg/Kg)	Barium (mg/Kg)	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Chloride (mg/Kg)
*NMED Soil Screening Level:						17.7	100,000	564	340	800	68.4	568	568	**600

EA-02	Wastewater
EA-03	Amine Sump
EA-02	Wastewater Tanks
EA-03	Amine Sump
EA-06	Slop Oil Tanks
EA-07	Cooling Tower
EA-08	Lube Oil Tanks

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Table 3
PCB Soil Sample Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Page 2 of 5

Sample ID	Depth (Feet BGS)	Collection Date	Field PCB (ppm)	Aroclor 1016 (mg/Kg)	Aroclor 1221 (mg/Kg)	Aroclor 1232 (mg/Kg)	Aroclor 1242 (mg/Kg)	Aroclor 1248 (mg/Kg)	Aroclor 1254 (mg/Kg)	Aroclor 1260 (mg/Kg)	Total PCB (mg/Kg)
10-2	0 - 0.5	6/26/2019	<50	<0.0608	<0.0608	<0.0608	<0.0608	<0.0608	168	<0.0608	168
	2 - 3		<50	<0.0575	<0.0575	<0.0575	<0.0575	<0.0575	85.6	<0.0575	85.6
	4 - 4.5		<50	<0.0609	<0.0609	<0.0609	<0.0609	<0.0609	34.6	<0.0609	34.6
	6 - 7		<50	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	24.2	<0.0597	24.2
10-3	0 - 1.5	6/26/2019	<50	<0.0504	<0.0504	<0.0504	<0.0504	<0.0504	5.80	<0.0504	5.80
	2 - 2.25		<50	<0.0553	<0.0553	<0.0553	<0.0553	<0.0553	3.33	<0.0553	3.33
	4 - 4.25		<50	<0.0586	<0.0586	<0.0586	<0.0586	<0.0586	<0.0586	<0.0586	<0.0586
	6 - 7		<50								
10-4	0 - 1	6/26/2019	<50	<0.0612	<0.0612	<0.0612	<0.0612	<0.0612	1.83	<0.0612	1.83
	2 - 2.25		<50	<0.0602	<0.0602	<0.0602	<0.0602	<0.0602	0.0697	<0.0602	0.0697
	4 - 5		<50	<0.0605	<0.0605	<0.0605	<0.0605	<0.0605	<0.0605	<0.0605	<0.0605
10-5	0 - 1	6/26/2019	<50	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	0.210	<0.0597	0.210
	2 - 3		<50	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597
	4 - 4.5		<50	<0.0596	<0.0596	<0.0596	<0.0596	<0.0596	<0.0596	<0.0596	<0.0596
	6 - 6.75		<50	<0.0608	<0.0608	<0.0608	<0.0608	<0.0608	0.115	<0.0608	0.115
	8 - 8.5		<50	<0.0588	<0.0588	<0.0588	<0.0588	<0.0588	0.300	<0.0588	0.300
	8.5 - 10		<50	<0.0578	<0.0578	<0.0578	<0.0578	<0.0578	<0.0578	<0.0578	<0.0578
10-6	3 - 4	6/27/2019	<50	<0.0573	<0.0573	<0.0573	<0.0573	<0.0573	2.08	<0.0573	2.08
	5 - 6		<50	<0.0548	<0.0548	<0.0548	<0.0548	<0.0548	7.30	<0.0548	7.30
	7 - 7.5		<50	<0.0568	<0.0568	<0.0568	<0.0568	<0.0568	0.0725	<0.0568	0.0725
10-7	3 - 3.25	6/27/2019	--	<0.0606	<0.0606	<0.0606	<0.0606	<0.0606	0.913	<0.0606	0.913
10-8	0 - 0.25	6/27/2019	<50	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604
	0 - 0.25	6/27/2019	<50	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604	<0.0604
10-9	0 - 1.25	6/27/2019	<50	<0.0536	<0.0536	<0.0536	<0.0536	<0.0536	<0.0536	<0.0536	<0.0536
	2 - 2.25		>50	<0.0590	<0.0590	<0.0590	<0.0590	<0.0590	1,390	<0.0590	1,390

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Table 3
PCB Soil Sample Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Sample ID	Depth (Feet BGS)	Collection Date	Field PCB (ppm)	Aroclor 1016 (mg/Kg)	Aroclor 1221 (mg/Kg)	Aroclor 1232 (mg/Kg)	Aroclor 1242 (mg/Kg)	Aroclor 1248 (mg/Kg)	Aroclor 1254 (mg/Kg)	Aroclor 1260 (mg/Kg)	Total PCB (mg/Kg)
	2 - 2.5 4 - 4.25		<50 --	<0.0595 <0.0582	<0.0595 <0.0582	<0.0595 <0.0582	<0.0595 <0.0582	<0.0595 <0.0582	<0.0595 0.166	<0.0595 <0.0582	<0.0595 0.166
10-18	0 - 1.75 2 - 2.25 4 - 4.5	6/27/2019	-- <50 --	<0.0701 <0.0574 <0.0607	<0.0701 <0.0574 <0.0607	<0.0701 <0.0574 <0.0607	<0.0701 <0.0574 <0.0607	<0.0701 <0.0574 <0.0607	0.0803 <0.0574 0.0755	<0.0701 <0.0574 <0.0607	0.0803 <0.0574 0.0755
10-19	0 - 1 2 - 2.5	6/27/2019	-- --	<0.0514 <0.0570	<0.0514 <0.0570	<0.0514 <0.0570	<0.0514 <0.0570	<0.0514 <0.0570	0.412 2.48	<0.0514 <0.0570	0.412 2.48
10-20	0 - 1.5 2 - 3 4 - 4.5	6/27/2019	-- <50 --	<0.0507 <0.0612 <0.0583	<0.0507 <0.0612 <0.0583	<0.0507 <0.0612 <0.0583	<0.0507 <0.0612 <0.0583	<0.0507 <0.0612 <0.0583	<0.0507 1.20 <0.0583	<0.0507 <0.0612 <0.0583	<0.0507 1.20 <0.0583
10-21	0 - 1.5 2 - 2.5 4 - 4.25	6/28/2019	-- -- --	<0.0537 <0.0596 <0.0606	<0.0537 <0.0596 <0.0606	<0.0537 <0.0596 <0.0606	<0.0537 <0.0596 <0.0606	<0.0537 <0.0596 <0.0606	0.0672 0.137 <0.0606	<0.0537 <0.0596 <0.0606	0.0672 0.137 <0.0606
10-22	0 - 1 2 - 2.25 4 - 5	6/28/2019	-- -- --	<0.0551 <0.0603 <0.0592	<0.0551 <0.0603 <0.0592	<0.0551 <0.0603 <0.0592	<0.0551 <0.0603 <0.0592	<0.0551 <0.0603 <0.0592	160 0.838 5.11	<0.0551 <0.0603 <0.0592	160 0.838 5.11
10-23	0 - 1 2 - 2.25 4 - 4.25	6/28/2019	-- -- --	<0.0519 <0.0601 <0.0603	<0.0519 <0.0601 <0.0603	<0.0519 <0.0601 <0.0603	<0.0519 <0.0601 <0.0603	<0.0519 <0.0601 <0.0603	0.142 0.553 1.44	<0.0519 <0.0601 <0.0603	0.142 0.553 1.44
10-24	0 - 1.5 2 - 2.5	6/28/2019	-- --	<0.0635 <0.0570	<0.0635 <0.0570	<0.0635 <0.0570	<0.0635 <0.0570	<0.0635 <0.0570	0.441 3.10	<0.0635 <0.0570	0.441 3.10
10-25	0 - 1.5 2 - 3	6/28/2019	-- --	<0.0608 <0.0554	<0.0608 <0.0554	<0.0608 <0.0554	<0.0608 <0.0554	<0.0608 <0.0554	0.380 0.487	<0.0608 <0.0554	0.380 0.487

Table 3
PCB Soil Sample Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Sample ID	Depth (Feet BGS)	Collection Date	Field PCB (ppm)	Aroclor 1016 (mg/Kg)	Aroclor 1221 (mg/Kg)	Aroclor 1232 (mg/Kg)	Aroclor 1242 (mg/Kg)	Aroclor 1248 (mg/Kg)	Aroclor 1254 (mg/Kg)	Aroclor 1260 (mg/Kg)	Total PCB (mg/Kg)
10-26	0 - 1.5	6/28/2019	--	<0.0554	<0.0554	<0.0554	<0.0554	<0.0554	12.2	<0.0554	12.2
	2 - 2.75		--	<0.0591	<0.0591	<0.0591	<0.0591	<0.0591	1.34	<0.0591	1.34
10-27	0 - 1.5	6/28/2019	--	<0.0594	<0.0594	<0.0594	<0.0594	<0.0594	<0.0594	<0.0594	<0.0594
	2 - 2.75		--	<0.0613	<0.0613	<0.0613	<0.0613	<0.0613	0.127	<0.0613	0.127
	4 - 4.5		--	<0.0529	<0.0529	<0.0529	<0.0529	<0.0529	<0.0529	<0.0529	<0.0529

Notes: analysis performed by Dexsil Corporation (concrete) and DHL Analytical (Soil) by EPA SW-846 Method 8082

mg/K: concentration in milligrams per kilogram equivalent to parts per million (ppm)

<: concentration below analytical method reporting limit

--: no data available

Denotes: concentration exceeds EPA clean-up limit for full time occupancy (1.0 mg/Kg)

Table 4
Main Compressor (Clark) Building Soil Sample BTEX and TPH Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Page 1 of 2

Sample	Depth (Feet BGS)	Collection Date	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
Remediation Limit:			10	50				2,500	10,000
C-1	0.5	10/14/2019	<0.0524	<0.2010	<2.09	12.0	11.7	23.7	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	--
C-2	0.5	10/14/2019	<0.0529	<0.2116	<2.11	929	1,310	2,239	--
	*1.0	10/14/2019	<0.525	<0.2100	<2.10	1,030	2,040	3,070	--
C-3	0.5	10/14/2019	<0.0539	<0.2156	<2.15	578	1,890	2,468	--
	*1.0	10/14/2019	<0.0572	<0.2288	<2.29	649	2,670	3,319	--
C-4	0.5	10/14/2019	<0.0559	<0.2236	<2.23	662	1,610	2,272	--
	1.0	10/14/2019	<0.0559	<0.2236	2.29	1,010	4,230	5,242.29	--
	*1.5	11/7/2019	--	--	<27.8	195	247	442	--
C-5	0.5	10/14/2019	<0.0662	<0.2488	<2.49	343	948	1,291	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	--
C-6	0.5	10/14/2019	<0.0714	<0.2856	<2.86	36.3	95.2	131.5	--
	1.0	10/14/2019	<0.0588	<0.2352	<2.35	365	498	863	--
C-7	0.5	10/14/2019	<0.0592	<0.2368	<2.37	26.7	43.4	70.1	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	--
C-8	0.5	10/14/2019	<0.0607	<0.2428	<2.43	1,260	1,040	2,300	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	--
C-9	0.5	10/14/2019	<0.0596	<0.2384	<2.38	504	1,850	2,354	--
	1.0	10/14/2019	<0.0612	<0.2448	<2.45	247	989	1,236	--
C-10	0.5	10/14/2019	<0.0638	<0.2552	<2.55	696	2,310	3,006	--
	1.0	11/7/2019	--	--	67.8	793	846	1,706.8	--
	*2.0	11/7/2019	--	--	<30.5	310	167	477	--
C-11	0.5	10/14/2019	<0.0600	<0.2400	<2.40	767	2,400	3,167	--
	1.0	10/14/2019	<0.0634	<0.2536	<2.54	1,590	4,770	6,360	--
	*2.0	11/7/2019	--	--	37.1	1,790	2,130	3,957.1	--
C-12	0.5	10/14/2019	0.165	0.637	103	13,200	4,870	18,173	--
	1.0	10/14/2019	<0.0627	<0.2508	26.5	15,200	9,550	24,776.5	--
	3.0	11/7/2019	--	--	1390	10,500	3,740	15,630	--
	5.0	11/7/2019	--	--	530	3,600	708	4,838	--
	*7.0	11/7/2019	--	--	787	3,700	564	5,051	--

Table 4
Main Compressor (Clark) Building Soil Sample BTEX and TPH Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Page 2 of 2

Sample	Depth (Feet BGS)	Collection Date	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)		C6-C35 (mg/Kg)
Remediation Limit:			10	50					2,500
C-13	0.5	10/14/2019	<0.0585	<0.234	<2.34	4,690	19,900	24,590	--
	1.0	10/14/2019	<0.0590	<0.236	<2.36	3,370	14,100	17,470	--
	*2.0	11/7/2019	--	--	<30.5	77.7	39.2	116.9	--
C-14	0.5	10/14/2019	<0.0628	<0.2512	74.6	2,500	855	3,429.6	--
	1.0	10/14/2019	<0.0620	<0.2480	3.42	1,200	1,140	2,343.42	--
C-15	0.5	10/14/2019	<0.0649	<0.2596	60.8	3,760	608	4,428.8	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	2.0	11/7/2019	--	--	1790	11100	1760	14,650	--
	*3.0	11/7/2019	--	--	2,170	9,580	1,450	13,200	--
C-16	0.5	10/14/2019	<0.0576	<0.2304	<2.30	2,390	1,270	3,660	--
	1.0	10/14/2019	N/S	N/S	N/S	N/S	N/S	N/S	N/S
	2.0	11/7/2019	--	--	<26.3	492	479	971	--
	*3.0	11/7/2019	--	--	<30.9	572	564	1,136	--
C-17	0.5	10/14/2019	<0.0594	<0.2376	2.94	513	562	1,075	--
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S
Compressor (Engine 9) Building									
Eng 9	3.0	6/12/2019	<0.00114	0.01262	0.434	3,570	--	3,570.43	41.7

Notes: analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8260C (BTEX) and Method 8015D (TPH)

mg/K: concentration in milligrams per kilogram equivalent to parts per million (ppm)

<: concentration below analytical method reporting limit

N/S: no sample collected - auger refusal

Denotes: concentration exceeds OCD closure limit in Table 1 (19.15.29 NMAC)

Table 5
Main Compressor (Clark) Building Soil Sample Total Metals Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

Page 1 of 2

Sample	Depth (Feet BGS)	Collection Date	Arsenic (mg/Kg)	Barium (mg/Kg)	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)
Remediation Limit:			17.7	100,000	564	340	800	68.4	568	568
C-1	0.5	10/14/2019	1.97	205	0.326	10.8	5.30	<0.0159	1.28	<0.0997
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-2	0.5	10/14/2019	2.25	238	0.650	10.6	8.04	0.0378	1.55	<0.0944
	1.0		2.18	2.96	0.535	9.96	8.57	0.0272	1.62	<0.0921
C-3	0.5	10/14/2019	2.60	231	0.306	11.3	5.85	0.0436	1.34	<0.0898
	1.0		3.95	287	0.165	10.3	3.92	0.0522	1.19	<0.104
C-4	0.5	10/14/2019	7.27	321	0.422	13.6	23.4	0.0630	1.36	<0.0931
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-5	0.5	10/14/2019	3.61	146	0.633	46.9	18.2	0.233	1.15	<0.0998
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-6	0.5	10/14/2019	4.66	132	0.535	21.3	15.7	0.150	0.893	<0.119
	1.0		4.46	73.0	<0.116	16.4	7.27	<0.0219	0.586	<0.116
C-7	0.5	10/14/2019	6.82	306	0.292	32.9	28.4	0.240	2.37	<0.0980
	1.0		7.67	508	0.214	26.8	10.6	<0.0176	3.53	<0.101
C-8	0.5	10/14/2019	4.81	228	0.209	19.5	13.9	0.111	1.25	<0.109
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-9	0.5	10/14/2019	5.97	314	0.658	83.4	13.8	0.278	1.24	<0.115
	1.0		3.87	193	0.326	59.8	10.4	0.123	1.10	<1.06
C-10	0.5	10/14/2019	3.59	114	0.318	16.0	11.7	1.26	1.02	<0.114
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-11	0.5	10/14/2019	2.80	81.3	0.284	25.2	5.11	0.0714	1.20	<0.105
	1.0		3.08	89.6	0.242	40.3	7.46	0.0829	1.11	<0.11
C-12	0.5	10/14/2019	3.79	207	0.174	16.0	26.1	0.0285	1.29	<0.113
	1.0		3.18	110	<0.115	15.5	13.5	0.0554	1.14	<0.115
C-13	0.5	10/14/2019	6.45	193	1.40	363	48.3	1.77	1.61	<0.0974
	1.0		4.45	143	1.30	1.51	96.1	3.03	1.23	<0.108
C-14	0.5	10/14/2019	5.87	86.9	0.181	27.1	7.48	0.140	1.48	<0.110
	1.0		6.21	176	0.841	163	29.2	0.238	2.19	<0.109
C-15	0.5	10/14/2019	5.51	65.8	<0.118	29.5	3.56	0.0196	1.51	<0.118

Table 5
Main Compressor (Clark) Building Soil Sample Total Metals Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

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Sample	Depth (Feet BGS)	Collection Date	Arsenic (mg/Kg)	Barium (mg/Kg)	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead 1016 (mg/Kg)	Mercury 1221 (mg/Kg)	Selenium 1232 (mg/Kg)	Silver 1242 (mg/Kg)
Remediation Limit:			17.7	100,000	564	340	800	68.4	568	568
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-16	0.5	10/14/2019	13.8	92.9	0.293	31.3	20.7	0.106	1.06	<0.114
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-17	0.5	10/14/2019	2.74	85.5	0.377	19.5	17.1	0.0647	0.773	<0.112
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Notes: analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8015D (TPH) and Method 8082 (PCB)

mg/K: concentration in milligrams per kilogram equivalent to parts per million (ppm)

<: concentration below analytical method reporting limit

N/S: no sample collected - auger refusal

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Sample	Depth (Feet BGS)	Collection Date	Aroclor 1016 (mg/Kg)	Aroclor 1221 (mg/Kg)	Aroclor 1232 (mg/Kg)	Aroclor 1242 (mg/Kg)	Aroclor 1248 (mg/Kg)	Aroclor 1254 (mg/Kg)	Aroclor 1260 (mg/Kg)	Total PCB (mg/Kg)
Remediation Limit:										25
C-1	0.5	10/14/2019	<0.0517	<0.0517	<0.0517	<0.0517	<0.0517	0.0661	<0.0517	0.0661
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-2	0.5	10/14/2019	<0.0513	<0.0513	<0.0513	<0.0513	<0.0513	0.109	<0.0513	0.0109
	1.0		<0.0501	<0.0501	<0.0501	<0.0501	<0.0501	0.0997	<0.0501	0.0997
C-3	0.5	10/14/2019	<0.0537	<0.0537	<0.0537	<0.0537	<0.0537	0.462	<0.0537	0.462
	1.0		<0.0564	<0.0564	<0.0564	<0.0564	<0.0564	0.175	<0.0564	0.175
C-4	0.5	10/14/2019	<0.0548	<0.0548	<0.0548	<0.0548	<0.0548	0.135	<0.0548	0.135
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-5	0.5	10/14/2019	<0.0543	<0.0543	<0.0543	<0.0543	<0.0543	1.41	<0.0543	1.41
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-6	0.5	10/14/2019	<0.0578	<0.0551	<0.0578	<0.0578	<0.0578	0.166	<0.0578	0.166
	1.0		<0.0678	<0.0678	<0.0678	<0.0678	<0.0678	<0.0678	<0.0678	<0.0678
C-7	0.5	10/14/2019	<0.0551	<0.0551	<0.0551	<0.0551	<0.0551	<0.0551	<0.0551	<0.0551
	1.0		<0.0561	<0.0561	<0.0561	<0.0561	<0.0561	<0.0561	<0.0561	<0.0561
C-8	0.5	10/14/2019	<0.0559	<0.0559	<0.0559	<0.0559	<0.0559	0.708	<0.0559	0.708
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-9	0.5	10/14/2019	<0.0584	<0.0584	<0.0584	<0.0584	<0.0584	7.62	<0.0584	7.62
	1.0		<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597	<0.0597
C-10	0.5	10/14/2019	<0.0633	<0.0633	<0.0633	<0.0633	<0.0633	0.0841	<0.0633	0.0841
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-11	0.5	10/14/2019	<0.0590	<0.0590	<0.0590	<0.0590	<0.0590	0.140	<0.0590	0.140
	1.0		<0.0628	<0.0628	<0.0628	<0.0628	<0.0628	0.149	<0.0628	0.149
C-12	0.5	10/14/2019	<0.0632	<0.0632	<0.0632	<0.0632	<0.0632	0.0845	<0.0632	0.0845
	1.0		<0.0591	<0.0591	<0.0591	<0.0591	<0.0591	0.163	<0.0591	0.163
C-13	0.5	10/14/2019	<0.0573	<0.0573	<0.0573	<0.0573	<0.0573	<0.0573	<0.0573	<0.0573
	1.0		<0.0580	<0.0580	<0.0580	<0.0580	<0.0580	<0.0580	<0.0580	<0.0580
C-14	0.5	10/14/2019	<0.0613	<0.0613	<0.0613	<0.0613	<0.0613	<0.0613	<0.0613	<0.0613
	1.0		<0.0590	<0.0590	<0.0590	<0.0590	<0.0590	0.0916	<0.0590	<0.0590
C-15	0.5	10/14/2019	<0.0625	<0.0625	<0.0625	<0.0625	<0.0625	<0.0625	<0.0625	<0.0625

Table 6
Main Compressor (Clark) Building Soil Sample PCB Analytical Data Summary
Empire Abo Gas Plant, Eddy County, New Mexico

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Sample	Depth (Feet BGS)	Collection Date	Aroclor 1016 (mg/Kg)	Aroclor 1221 (mg/Kg)	Aroclor 1232 (mg/Kg)	Aroclor 1242 (mg/Kg)	Aroclor 1248 (mg/Kg)	Aroclor 1254 (mg/Kg)	Aroclor 1260 (mg/Kg)	Total PCB (mg/Kg)
Remediation Limit:										25
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-16	0.5	10/14/2019	<0.0586	<0.0586	<0.0586	<0.0586	<0.0586	0.177	<0.0586	0.177
	1.0		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-17	0.5	10/14/2019	<0.0565	<0.0565	<0.0565	<0.0565	<0.0565	0.0682	<0.0565	0.0682
	1.0		<0.0602	<0.0602	<0.0602	<0.0602	<0.0602	0.0697	<0.0602	0.0697

Notes: analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8082A

mg/K: concentration in milligrams per kilogram equivalent to parts per million (ppm)

<: concentration below analytical method reporting limit

N/S: no sample collected - auger refusal

Denotes: concentration reported above analytical method reporting limit and below EPA remediation limit for low occupancy

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
Wastewater Tanks (EA-02)														
Remediation Standard:								10	50				100	600
EA-02	03/19/2020	2	Bottom	Composite	In-Situ	--	--	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	390
	03/19/2020	0 - 2	Sidewalls	Composite	In-Situ	--	--	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	295
Amine Sump (EA-03)														
Remediation Standard:								10	50				2,500	10,000
EA-03 BLM Property	03/18/2020	8	Bottom - Northeast	Composite	Excavated	--	--	<0.101	8.315	320	1,670	567	2,557	109
	03/30/2020	9	Bottom - Northeast	Composite	In-Situ	--	--	--	--	<50.2	<50.2	<50.2	<50.2	--
	03/18/2020	8	Bottom - Northwest	Composite	In-Situ	--	--	<0.0833	1.179	63.4	324	93.4	480.8	251
	03/18/2020	8	Bottom - Southeast	Composite	In-Situ	--	--	<0.100	3.518	332	1,360	279	1,971	114
	03/18/2020	8	Bottom - Southwest	Composite	In-Situ	--	--	<0.0556	3.9736	78.2	513	162	603.1	73.6
	03/18/2020	2.5	East - Bottom	Composite	In-Situ	--	--	<0.00200	0.01575	<50.1	89.5	<50.1	89.5	86.2
	03/18/2020	0 - 2.5	East - Side	Composite	In-Situ	--	--	<0.00200	<0.00200	<49.9	150	<49.9	150	459
	03/18/2020	0 - 8	East Side	Composite	In-Situ	--	--	<0.0556	0.079	<50.1	109	<50.1	109	223
	03/18/2020	0 - 8	South Side	Composite	In-Situ	--	--	<0.101	4.121	169	1,230	453	1,852	341
	03/18/2020	0 - 8	West Side	Composite	Excavated	--	--	1.22	45.79	3,370	3,540	902	7,812	377
	03/23/2020	0 - 8	West Side (N)	Composite	In-Situ	--	--	--	--	<50.3	103	<50.3	103	--
	03/23/2020	0 - 8	West Side (S)	Composite	In-Situ	--	--	--	--	<50.0	174	59.9	233.9	--
	03/23/2020	0 - 8	North Side (E)	Composite	In-Situ	--	--	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	306
	03/23/2020	0 - 8	North Side (W)	Composite	In-Situ	--	--	<0.00952	<0.00952	<50.2	103	<50.2	103	259
Slop Oil Tanks (EA-05)														
Remediation Standard:								10	50				2,500	10,000
EA-05-01	03/06/2020	1.5	Bottom	Composite	Excavated	--	--	0.376	69.136	2,020	5,000	997	8,017	115
	03/24/2020	3	Bottom	Composite	In-Situ	--	--	<0.002	0.02103	<50.2	287	<50.2	287	--
	03/06/2020	0 - 1.5	Sidewalls	Composite	Excavated	--	--	<0.0998	7.793	1,280	6,340	676	8,296	121
	03/23/2020	0 - 2.5			In-Situ	--	--	--	--	67.7	1,940	318	2,325.7	--
EA-05-02	03/05/2020	1.5	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	20.3
	03/05/2020	0 - 1.5	Sidewalls	Composite	In-situ	--	--	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	121
EA-05-03	03/12/2020	2.5	Bottom	Composite	In-situ	--	--	0.365	1.971	114	1,200	240	1,554	317
	03/12/2020	0 - 2.5	Sidewalls	Composite	Excavated	--	--	0.0243	5.6663	431	3,100	1,710	5,241	103
	03/23/2020	0 - 2.5			In-Situ	--	--	--	--	<50.1	1,520	374	1,894	--

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
Cooling Tower (EA-07)														
Remediation Standard:						17.7	340	10	50				100	600
EA-07-02	03/12/2020	4	Bottom	Composite	In-situ	<1.85	--	--	--	--	--	--	--	--
	03/12/2020	2	Sidewalls	Composite	In-situ	<1.69	--	--	--	--	--	--	--	--
EA-07-05	03/12/2020	8	Bottom	Composite	In-situ	--	17.3	--	--	--	--	--	--	--
	03/12/2020	4	Sidewalls (N/S)	Composite	In-situ	--	330	--	--	--	--	--	--	--
	03/12/2020	4	Sidewalls (E/W)	Composite	In-situ	--	211	--	--	--	--	--	--	--
Clark Building (EA-12)														
Remediation Standard:								10	50				2,500	10,000
C-2A	02/20/2020	1.0	Bottom	Composite	Excavated	--	--	<0.009990	<0.009990	<50.0	3,670	1,460	5,130	<10.1
	02/26/2020	2.0	Bottom	Composite	In-situ	--	--	<0.00990	<0.00990	<74.9	922	442	1,364	<20.0
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<10.0
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	784	276	1,060	164
C-2B	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.1	441	130	571	12.1
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00198	<0.00198	<50.0	341	93.8	434.8	13.2
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	249	103	352	68.8
C-2C	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	15.6
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00200	<0.00200	<49.9	143	<49.9	143	13.3
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.009990	<0.009990	<50.2	1,380	740	2,120	11.4
C-2D	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00201	<0.00201	<49.9	228	321	549	15.4
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00200	<0.00200	<49.8	106	<49.8	106	20.4
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00990	<0.00990	<50.2	1,120	924	2,044	16.6
C-2E	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00201	<0.00201	<50.2	336	236	572	21.9
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.1	77.6	<50.1	77.6	12.2
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00990	<0.00990	<50.1	1,150	937	2,087	12.8
C-3A	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00201	<0.00201	<50.2	412	376	788	19.4
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00200	<0.00200	<49.8	363	122	486	19.3
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00201	<0.00201	<49.9	224	116	340	22.7
C-3B	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.1	297	169	466	
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<9.98
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.1	1,640	661	2,301	102
C-3C	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00196	<0.00196	<50.2	116	79.8	195.8	10.2
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00201	<0.00201	<50.0	95.6	56.2	151.8	<9.98

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
C-3D	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00199	<0.00199	<50.1	58.7	<50.1	58.7	42.9
	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	300	213	513	<9.92
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00201	<0.00201	<50.1	95.6	<50.1	95.6	<9.92
C-3E	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.0101	<0.0101	<49.9	579	325	904	<9.98
	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00196	<0.00196	<50.1	214	104	318	11.8
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00199	<0.00199	<50.2	1,230	492	1722.00	10.9
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00201	<0.00201	<50.2	394	299	693	18.3
C-4A	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00202	<0.00202	<50.0	279	129	408	11.2
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00201	<0.00201	<50.1	918	417	1,335	<9.98
	02/20/2020	0 - 1	West Side	Composite	In-situ	--	--	<0.00201	<0.00201	<49.9	492	308	800	<9.98
C-4B	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00201	<0.00201	<50.1	299	204	503	14.6
	02/20/2020	0 - 1	East Side	Composite	In-situ	--	--	<0.00202	<0.00202	<50.2	138	66.9	204.9	<9.88
	02/20/2020	0 - 1	West Sidewall	Composite	In-situ	--	--	<0.0100	<0.0100	<50.0	552	542	1,094	21.7
C-4C	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	224	114	338	13.2
	02/20/2020	0 - 1	East Side	Composite	Excavated	--	--	<0.00990	<0.00990	<50.2	1,640	1,210	2,850	11.5
	03/02/2020	0 - 1	East Side	Composite	Excavated	--	--	--	--	<75.4	2,720	1,850	6,460	--
	03/05/2020	0.5	East Side	Composite	In-situ	--	--	--	--	<49.9	234	414	648	--
C-4D	02/20/2020	0.5	West Side	Composite	In-situ	--	--	<0.00990	<0.00990	<50.1	249	239	488	42.8
	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<49.8	238	119	357	11.3
	02/20/2020	0.5	East Side	Composite	In-situ	--	--	<0.00101	<0.00101	<50.3	622	610	1,232	93.6
	02/20/2020	0.5	West Side	Composite	In-situ	--	--	<0.00990	<0.00990	<50.0	397	177	574	<9.92
C-4E	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00980	<0.00980	<50.0	988	559	1,547	10.9
	02/20/2020	0.5	East Side	Composite	In-situ	--	--	<0.00100	<0.00100	<50.1	836	1,050	1,886	92.0
	02/20/2020	0.5	West Side	Composite	In-situ	--	--	<0.00990	<0.00990	<50.0	526	629	1,155	12.8
C-4F	02/20/2020	1.0	Bottom	Composite	In-situ	--	--	<0.00990	<0.00990	<49.9	837	563	1,400	10.4
	02/20/2020	0.5	East Side	Composite	Excavated	--	--	<0.0100	<0.0100	<249	5,810	5,250	11,060	<9.90
	03/02/2020	0.5	East Side	Composite	Excavated	--	--	--	--	<75.1	1,970	1,130	3,100	--
	03/05/2020	0.5	East Side	Composite	In-situ	--	--	--	--	<50.3	658	638	1,296	--
	02/20/2020	0.5	West Side	Composite	In-situ	--	--	<0.0100	<0.0100	<50.1	1,080	1,140	2,220	41.6
C-10A	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.134	3.936	120	597	476	1,193	7.78
C-10B	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.0553	1.1302	91.8	817	493	1,401.8	6.63
C-10C	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.117	9.687	274	521	294	815	7.48
C-10D	02/28/2020	6	Bottom	Composite	In-situ	--	--	<0.00198	0.0271	<49.9	254	109	363	6.98

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
C-10E	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.00311	0.00811	<50.0	263	107	370	<4.95
*C-10E-S-2	02/28/2020	8	Bottom	Discrete	In-situ	--	--	0.901	18.011	1,070	846	239	2,155	17.0
C-10	02/28/2020	0 - 6	East Side	Composite	Excavated	--	--	0.108	0.17056	110	2,970	2,101	5,090	26.6
	03/05/2020	0 - 6	East Side	Composite	In-situ	--	--	--	--	<50.3	<50.3	<50.3	<50.3	--
*C-10	02/28/2020	0 - 6	West Side	Composite	In-situ	--	--	0.871	18.601	550	2,250	1,230	4,030	8.06
C-11A	02/28/2020	10	Bottom	Composite	In-situ	--	--	0.0555	2.4025	104	1,480	579	2,163	25.6
C-11B	02/28/2020	10	Bottom	Composite	In-situ	--	--	<0.00200	0.05173	<49.9	1,540	292	1,832	16.5
C-11C	02/28/2020	10	Bottom	Composite	In-situ	--	--	<0.00200	0.00352	<49.8	1,590	239	1,829	19.5
C-11D	02/28/2020	10	Bottom	Composite	In-situ	--	--	0.0572	1.4988	102	1,980	235	2,317	18.8
C-11E	02/28/2020	10	Bottom	Composite	Excavated	--	--	0.00247	0.02582	61.7	2,080	1,120	3,261.7	15.2
C-11E	03/05/2020	12	Bottom	Composite	In-situ	--	--	--	--	<50.2	403	<50.2	403	--
C-11	02/28/2020	0 - 10	East Side	Composite	Excavated	--	--	0.00478	0.00943	<50.0	2,250	384	2,634	8.29
C-11	03/05/2020	0 - 12	East Side	Composite	In-situ	--	--	--	--	<50.2	614	328	942	--
*C-11	02/28/2020	0 - 10	West Side	Composite	In-situ	--	--	0.181	7.5069	404	2,900	914	4,218	33.6
C-12	02/21/2020	12	Bottom	Discrete	In-situ	--	--	<0.00990	<0.00990	<50.1	583	51.2	634.4	21.1
C-12	02/21/2020	15	Bottom	Discrete	In-situ	--	--	0.00706	0.13696	161	2,450	502	3,113	39.6
C-12	02/21/2020	18	Bottom	Discrete	In-situ	--	--	0.0163	0.0163	<50.1	233	<50.1	233	98.1
C-12	02/21/2020	20	Bottom	Discrete	In-situ	--	--	<0.00231	0.05341	<49.8	247	56.7	303.7	91.2
C-12	02/21/2020	5	West Side	Discrete	In-situ	--	--	3.72	34.8	649	4,500	2,010	7,159	26.8
C-12	02/21/2020	10	West Side	Discrete	In-situ	--	--	1.55	10.1	765	4,950	410	6,146	28.9
C-12A	02/21/2020	15	Bottom	Composite	In-situ	--	--	<0.00201	<0.00201	<50.0	827.00	81.7	908.7	15.8
C-12A	02/21/2020	7.5	East Side	Composite	In-situ	--	--	<0.00510	0.1796	<75.2	2,520	322	2,842	<0.86
C-12B	02/21/2020	15	Bottom	Composite	In-situ	--	--	<0.00481	0.0941	<75.4	367	<75.4	367	11.2
C-12B	02/21/2020	7.5	East Side	Composite	In-situ	--	--	<0.0202	0.00331	<50.1	556	73.3	629.3	<9.98
C-12C	02/21/2020	15	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<49.9	420	<49.9	420	25.8
C-12C	02/21/2020	7.5	East Side	Composite	In-situ	--	--	<0.0167	3.552	79.0	1,070	240	1,389	<10.1
C-12D	02/21/2020	15	Bottom	Composite	In-situ	--	--	<0.0278	18.946	188	1,060	206	1,454	<9.88
*C-12-S-3	03/02/2020	15	Bottom	Discrete	In-situ	--	--	<0.0250	3.398	273	1,130	370	1,773	16.6
C-12D	02/21/2020	7.5	East Side	Composite	In-situ	--	--	<0.00625	0.2289	93.4	620	190	903.4	<10.1
C-12D	02/21/2020	N/S	East Side	N/S	N/S	--	--	N/S	N/S	N/S	N/S	N/S	N/S	N/S
C-12E	02/21/2020	15	Bottom	Composite	In-situ	--	--	<0.00200	<0.0200	<49.8	81.7	<49.8	81.7	13.2
C-12E	02/21/2020	7.5	East Side	Composite	In-situ	--	--	<0.0250	0.2885	<74.9	831	200	1,031	<10.0
C-12E	02/21/2020	N/S	West Side	N/S	N/S	--	--	N/S	N/S	N/S	N/S	N/S	N/S	N/S

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Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
13A	02/28/2020	6	Bottom	Composite	Excavated	--	--	0.209	7.04	210	2,170	594	2,974	7.99
	03/05/2020	7	Bottom	Composite	In-situ	--	--	--	--	<50.3	94.9	<50.3	94.9	--
13B	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.166	7.717	185	1,890	428	2,503	10.1
13C	02/28/2020	6	Bottom	Composite	Excavated	--	--	0.0101	0.093	57.9	2,240	446	2,743.9	10.9
	03/05/2020	7	Bottom	Composite	In-situ	--	--	--	--	<50.2	1,220	322	1,542	--
13D	02/28/2020	6	Bottom	Composite	Excavated	--	--	<0.00199	0.01897	<49.9	1,750	248	1,998	5.07
13E	02/28/2020	6	Bottom	Composite	In-situ	--	--	0.00219	0.02271	<50.0	1,020	176	1,196	9.16
13E	02/28/2020	0 - 6	East Side	Composite	Excavated	--	--	0.00359	0.00359	<50.0	4,040	1,790	5,830	7.33
13E	03/05/2020	0 - 7	East Side	Composite	Excavated	--	--	--	--	196	3,130	2,620	5,946	--
13E	03/10/2020	0 - 7	East Side (N)	Composite	In-situ	--	--	--	--	<50.2	389	<50.2	389	--
13E	03/10/2020	0 - 7	East Side (S)	Composite	In-situ	--	--	--	--	<50.0	94.6	<50.2	94.6	--
13E	02/28/2020	0 - 7	West Side	Composite	Excavated	--	--	0.0484	2.5727	273	2,180	1,100	3,553	9.41
13E	03/09/2020	0 - 7	West Side	Composite	Excavated	--	--	--	--	266	2,430	192	2,888	--
13E	03/12/2020	0 - 7	West Side	Composite	Excavated	--	--	--	--	<50.3	3,430	3,530	6,960	--
13E	03/18/2020	0 - 7	West Side	Composite	In-situ	--	--	--	--	<50.1	590	148	738	--
14A	03/02/2020	3	Bottom	Composite	Excavated	--	--	<0.0250	0.1852	145	6,040	995	7,180	19.5
	03/05/2020	4	Bottom	Composite	Excavated	--	--	--	--	308	2,600	515	3,423	--
	03/09/2020	6	Bottom	Composite	In-situ	--	--	--	--	<50.1	344	<50.1	344	--
14B	03/02/2020	3	Bottom	Composite	Excavated	--	--	<0.00200	0.9078	91.8	3,160	757	4,008.8	31.4
	03/05/2020	4	Bottom	Composite	Excavated	--	--	--	--	96.7	2,520	268	2,884.7	--
	03/09/2020	6	Bottom	Composite	In-situ	--	--	--	--	73.2	978	82.2	1,133.4	--
14C	03/02/2020	3	Bottom	Composite	Excavated	--	--	0.0248	1.39805	138	7,250	1,140	8,528	41.1
	03/05/2020	4	Bottom	Composite	Excavated	--	--	--	--	96.3	4,160	417	4,673.3	--
	03/09/2020	6	Bottom	Composite	In-situ	--	--	--	--	51.3	829	75.9	956.2	--
14D	03/02/2020	3	Bottom	Composite	Excavated	--	--	<0.00200	0.03278	111	6,250	1,040	7,401	26.2
	03/05/2020	4	Bottom	Composite	In-situ	--	--	--	--	<50.2	1,420	181	1,601	--
14E	03/02/2020	3	Bottom	Composite	Excavated	--	--	<0.00667	<0.00667	81.9	7,040	982	8,103.9	18.4
	03/05/2020	4	Bottom	Composite	In-situ	--	--	--	--	<50.2	661	332	993	--
14	03/02/2020	0 - 3	East Side	Composite	Excavated	--	--	<0.00200	<0.00200	<75.2	4,200	1,120	5,320	<9.98
	03/05/2020	0 - 4	East Side	Composite	In-situ	--	--	--	--	58.4	763	263	1,026	--
14	03/02/2020	0 - 3	West Side	Composite	Excavated	--	--	<0.0200	0.09104	<75.2	4,760	1,700	6,450	29.7
	03/05/2020	0 - 4	West Side	Composite	In-situ	--	--	--	--	<50.2	426	217	643	--
15A	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00909	0.3426	231	5,210	875	6,316	<10.0

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15B	03/09/2020	8	Bottom	Composite	In-situ	--	--	--	--	<50.2	246	<50.2	246	--
	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.0100	0.3524	169	5,650	948	6,767	<10.0
	03/09/2020	8	Bottom	Composite	In-situ	--	--	--	--	<50.2	110	<50.2	110	--
15C	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00833	0.2194	303	6,170	817	7,290	<10.0
	03/09/2020	8	Bottom	Composite	In-situ	--	--	--	--	<50.0	62.7	<50.0	62.7	--
	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.0100	0.1199	298	6,510	781	7,589	<9.96
15D	03/09/2020	8	Bottom	Composite	In-situ	--	--	--	--	<50.0	444	79.3	523.3	--
	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00909	0.0412	135	2,440	318	2,894	<9.96
	03/09/2020	8	Bottom	Composite	In-situ	--	--	--	--	<50.0	636	107	743	--
15	03/02/2020	0 - 6	East Side	Composite	In-situ	--	--	<0.00813	<0.00813	<50.2	1,010	373	1,383	14.5
15	03/02/2020	0 - 6	West Side	Composite	Excavated	--	--	<0.00199	0.00955	86.8	3,990	687	4,763.8	36.4
15	03/09/2020	0 - 8	West Side	Composite	In-situ	--	--	--	--	65.6	1,700	346	2,111.6	--
16A	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00901	0.1934	56.3	2,210	399	2,665.3	11.4
	03/09/2020	13	Bottom	Composite	In-situ	--	--	--	--	<50.0	102	<50.0	102	--
	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00877	<0.00877	119	3,630	883	4,632	<9.90
16B	03/09/2020	13	Bottom	Composite	In-situ	--	--	--	--	<50.0	144	<50.0	144	--
	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00833	0.03083	94.6	2,660	748	3,502.6	14.5
	03/09/2020	13	Bottom	Composite	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
16C	03/02/2020	6	Bottom	Composite	Excavated	--	--	<0.00200	<0.00200	78.8	3,410	2,700	6,188.8	11.0
	03/10/2020	13	Bottom	Composite	In-situ	--	--	--	--	<50.3	<50.3	<50.3	<50.3	--
	03/02/2020	6	Bottom	Composite	In-situ	--	--	<0.00200	<0.00200	<50.3	1,070	712	1,782	11.0
16D	03/02/2020	0 - 6	East Side	Composite	Excavated	--	--	<0.00198	<0.00198	<74.9	4,020	1,160	5,180	110
	03/09/2020	0 - 13	East Side	Composite	In-situ	--	--	--	--	<50.0	199	75.3	274.3	--
	03/02/2020	0 - 13	West Side	Composite	In-situ	--	--	<0.00200	<0.00200	<50.2	1,370	455	1,825	16.2
Engine 9 Building (EA-13)														
Remediation Standard:						10		50		2,500			10,000	
EA-13	02/25/2020	5	Bottom (N)	Composite	Excavated	--	--	<0.0192	3.0485	121	1,650	303	2,074	14.1
	02/25/2020	5	Bottom (S)	Composite	Excavated	--	--	<0.0156	3.059	126	3,280	1,020	4,430	12.3
	03/09/2020	7	Bottom (SE)	Composite	In-situ	--	--	--	--	<50.0	365	53.1	418.1	--
	03/09/2020	7	Bottom (SW)	Composite	In-situ	--	--	--	--	69.9	881	112	1,062.9	--
	03/30/2020	9	Bottom (NE)	Composite	In-situ	--	--	--	--	<50.2	<50.2	<50.2	<50.2	--
	03/30/2020	12	Bottom (NW)	Composite	In-situ	--	--	--	--	<50.2	1,370	144	1,514	--
	03/30/2020	12	Bottom (SW)	Composite	In-situ	--	--	--	--	<50.0	712	68.8	780.80	--

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S-1	03/31/2020	10	Bottom (E)	Composite	In-situ	--	--	<0.00202	<0.00202	<49.9	177	<49.9	177	<10.0
	03/31/2020	12	Bottom (SW)	Composite	In-situ	--	--	--	--	<49.8	245	172	417	--
	02/25/2020	0 - 5	North Side	Composite	In-situ	--	--	0.0263	4.9313	319	6,540	721	7,580	<9.96
	02/25/2020	3	North of Engine 9	Discrete	In-situ	--	--	0.715	10.434	642	16,300	1,390	18,332	11.5
	02/25/2020	0 - 5	East Side	Composite	Excavated	--	--	0.0312	7.6572	192	3,110	1,070	4,372	31.4
	03/10/2020	0 - 5	East Side (N)	Composite	In-situ	--	--	--	--	<50.2	389	<50.2	389	--
	03/19/2020	0 - 7	East Side (N)	Composite	In-situ	--	--	--	--	<50.2	245	<50.2	245	--
	03/26/2020	0 - 7	East Side (N)	Composite	In-situ	--	--	--	--	<50.0	70.7	<50.0	70.7	--
	03/10/2020	0 - 5	East Side (S)	Composite	In-situ	--	--	--	--	<50.0	94.6	<50.0	94.6	--
	03/19/2020	0 - 7	East Side (S)	Composite	Excavated	--	--	--	--	55.3	3,470	681	4,206.3	--
	03/26/2020	0 - 7	East Side (S)	Composite	In-situ	--	--	--	--	<49.9	101	<49.9	101	--
	02/25/2020	0 - 5	West Side	Composite	Excavated	--	--	<0.00207	<0.00207	95.4	6,940	1,370	8,405.4	14.1
	03/19/2020	0 - 7	West Side (N)	Composite	Excavated	--	--	--	--	<251	4,170	1,700	5,870	--
	03/25/2020	0 - 7	West Side (N)	Composite	In-situ	--	--	--	--	220	1,750	217	2,187	--
	03/19/2020	0 - 7	West Side (S)	Composite	Excavated	--	--	--	--	96.4	3,200	426	3,722.40	--
	03/25/2020	0 - 7	West Side (S)	Composite	Excavated	--	--	--	--	415	2,700	469	3,584	--
	03/31/2020	0 - 12	West Side (SW)	Composite	In-situ	--	--	--	--	<50.0	142	80.3	222.3	--
S-6	02/25/2020	0 - 5	South Side	Composite	Excavated	--	--	0.0858	4.1528	156	2,720	820	3,696	25.2
	03/12/2020	2	South Side (W)	Discrete	Excavated	--	--	--	--	<50.1	875	197	1,072	--
	03/19/2020	0 - 7	South Side (E)	Composite	Excavated	--	--	--	--	<50.1	1,850	261	2,111	--
S-7 (SW)	03/19/2020	0 - 7	South Side (W)	Composite	Excavated	--	--	--	--	<251	12,900	1,500	14,400	--
	03/19/2020	5	South Side (W)	Discrete	Excavated	--	--	--	--	<249	7,310	662	7,972	--
	03/30/2020	0 - 12	South Side (W)	Composite	In-situ	--	--	--	--	<50.0	2,650	280	2,930	--
North of Engine 9 (EA-14)														
Remediation Standard:								10	50				2,500	10,000
S-4A (N-E)	03/11/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<49.8	729	125	854	--
	03/11/2020	3		Discrete	In-situ	--	--	--	--	1,430	15,500	1,650	18,580	--
	03/11/2020	4		Discrete	In-situ	--	--	--	--	265	2,570	269	3,104	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	154	1,210	176	1,540	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	127	1,060	144	1,331	--

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S-4B (N-E)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<49.8	<49.8	<49.8	<49.8	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	188	536	105	829	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	840	1,570	307	2,717	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	2,110	4,610	544	7,264	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	123	1,600	226	1,949	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	<49.9	624	79.9	703.9	--
S-5A (N-W) on standard in so	03/11/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	138	4,760	503	5,401	--
	03/11/2020	3		Discrete	In-situ	--	--	--	--	1,210	21,700	2,890	25,800	--
	03/11/2020	4		Discrete	In-situ	--	--	--	--	135	2,890	472	3,479	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	1,800	17,500	2,280	21,580	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	1,520	10,300	2,470	14,290	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	1,460	11,400	1,970	14,830	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	1,320	11,300	1,980	14,600	--
	03/20/2020	9		Discrete	In-situ	--	--	--	--	261	3,080	465	3,806	--
	03/20/2020	10		Discrete	In-situ	--	--	--	--	208	2,430	347	2,985	--
S-5B (N-W)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<50.0	514	106	620	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<50.0	2,550	288	2,838	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	<249	4,240	575	4,815	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	1,120	8,300	854	10,274	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	239	2,820	328	3,387	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	64.7	1,780	211	2,055.7	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
S-6 (SW)	03/12/2020	2	South Side (W)	Discrete	Excavated	--	--	0.715	10.434	642	16,300	1,390	18,332	--
S-7 (SW)	03/19/2020	5		Discrete	In-situ	--	--	--	--	<249	7,310	662	7,972	--
S-8 (N-E)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<49.8	<49.8	<49.8	<49.8	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	64.5	2,340	965	3,369.5	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	<50.0	536	209	745	--

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
	03/20/2020	6		Discrete	In-situ	--	--	--	--	259	677	220	956	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	<49.9	<49.9	<49.9	<49.9	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	<49.8	290	,49.8	290	--
S-9 (N-W)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	84.8	889	125	1,098.8	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	<49.9	93.1	<49.9	93.1	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	<49.8	60.7	<49.8	60.7	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	<50.0	71.8	<50.0	71.8	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	<49.9	85.8	<49.9	85.8	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	<50.0	139	55.0	194	--
S-10 (N-E)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<49.9	<49.9	<49.9	<49.9	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<50.0	<50.0	<50.0	<50.0	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	<50.0	96.9	<50.0	96.9	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	132	756	122	1,010	--
	03/20/2020	6		Discrete	In-situ	--	--	--	--	2,370	8,480	1,240	12,090	--
	03/20/2020	7		Discrete	In-situ	--	--	--	--	2,200	5,420	830	8,450	--
	03/20/2020	8		Discrete	In-situ	--	--	--	--	692	2,520	396	3,608	--
	03/20/2020	9		Discrete	In-situ	--	--	--	--	84.0	787	139	1,010	--
S-11 (N-E)	03/20/2020	2	North of Engine 9	Discrete	In-situ	--	--	--	--	<49.8	1,000	283	1,283	--
	03/20/2020	3		Discrete	In-situ	--	--	--	--	<50.0	1,880	441	2,321	--
	03/20/2020	4		Discrete	In-situ	--	--	--	--	1,470	14,100	2,350	17,920	--
	03/20/2020	5		Discrete	In-situ	--	--	--	--	322	3,660	708	4,690	--
Southwest Containment Area (EA-14)														
Remediation Standard:						10		50		2,500			10,000	
N. Containment	03/27/2020	Surface	Clark Building	Composite	In-situ	--	--	<0.00200	0.0854	<50.0	62.4	<50.0	62.4	234
EA	03/27/2020	Surface	Clark Building	Composite	Excavated	--	--	<0.00201	<0.00201	<250	426	2,450	2,876	427
	04/03/2020	0.5	Bottom	Composite	In-situ	--	--	<0.00202	<0.00202	<50.3	73.9	<50.3	73.9	36.3
	04/03/2020	0 - 0.5	Sidewalls	Composite	In-situ	--	--	<0.00200	<0.00200	<50.3	1,400	<50.3	1,400	29.9
Hydrovac	03/27/2020	Surface	Hydrovac Sludge	Composite	In-situ	--	--	<0.0201	<0.0201	<49.9	75.8	113	188.80	102

Table 7
Remediation Confirmation Soil Sample Analytical Data Summary
Aka Energy LLC, Empire Abo Plant (AP-112)
Eddy County, New Mexico

Soil Sample	Date	Depth (Feet BGS)	Position	Type	Status	Arsenic (mg/Kg)	Chromium (mg/Kg)	Benzene (mg/Kg)	BTEX (mg/Kg)	C6-C12 (mg/Kg)	>C12-C28 (mg/Kg)	>C28-C35 (mg/Kg)	C6-C35 (mg/Kg)	Chloride (mg/Kg)
Backfill Samples														
EA-03 (BLM)	04/03/2020	--	Backfill - North	Composite	Excavated	--	--	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	140
	04/03/2020	--	Backfill - South	Composite	Excavated	--	--	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	96.3

Notes: analysis performed by Xenco Laboratories, Midland, Texas by EPA Sw-846 Methods 8021B (BTEX), 8015 (TPH), 6010C (Metals) and 300 (Chloride)

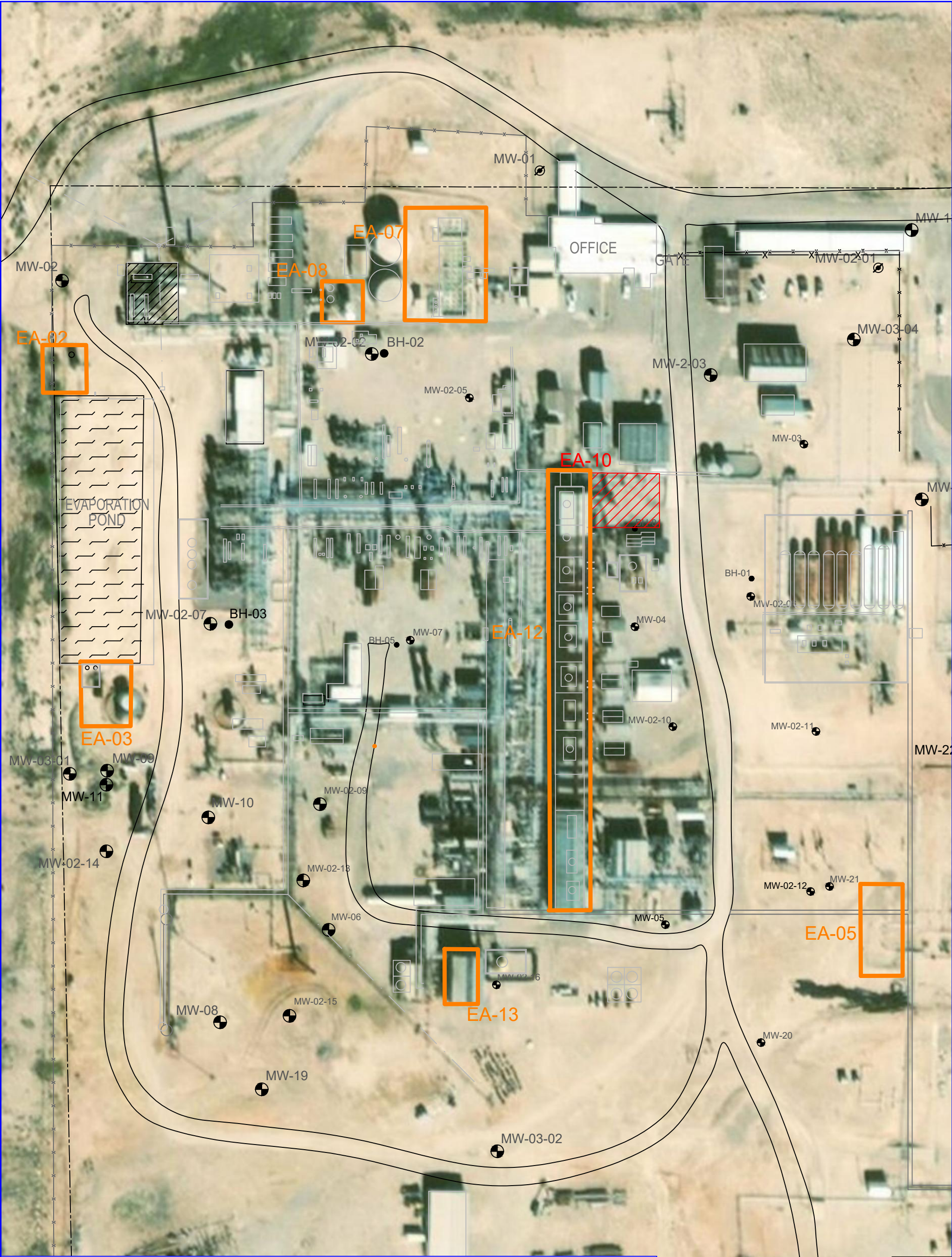
BGS - below ground surface

X: unable to excavate further due to obstacle (i.e., pipeline)

P: laboratory analysis pending

Highlighted exceeds OCD remediation standard

Figures



Legend

MW-18

- Monitoring Well Location

MW-01

- Plugged and Abandoned Monitoring Well

EB-02

- Monitoring Well Location

P-02

- Piezometer (Fluid Level) Location

- Environmental Assessment Area

EA-02

- Waste Water Tank

EA-03

- Anime Sump

EA-05

- Slop Oil Tank

EA-07

- Cooling Tower

EA-08

- Lube Oil Tank

EA-10

- PCB Area

EA-12

- Main Compressor (Clark) Building

EA-13

- Compressor (Engine 9) Building

Fence

Draw

Property Line

Road

95

0

95

Graphic Scale in Feet

Frontier Field Services, LLC
AP - 112 / Empire - Abo Compressor Station
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico
32° 46' 33.7"N
104° 15' 37.22"W

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ssociates, Inc.

Environmental Consultants

Figure 2- Aerial Map



Figure 3a - Wastewater Tanks (EA-02)



Legend

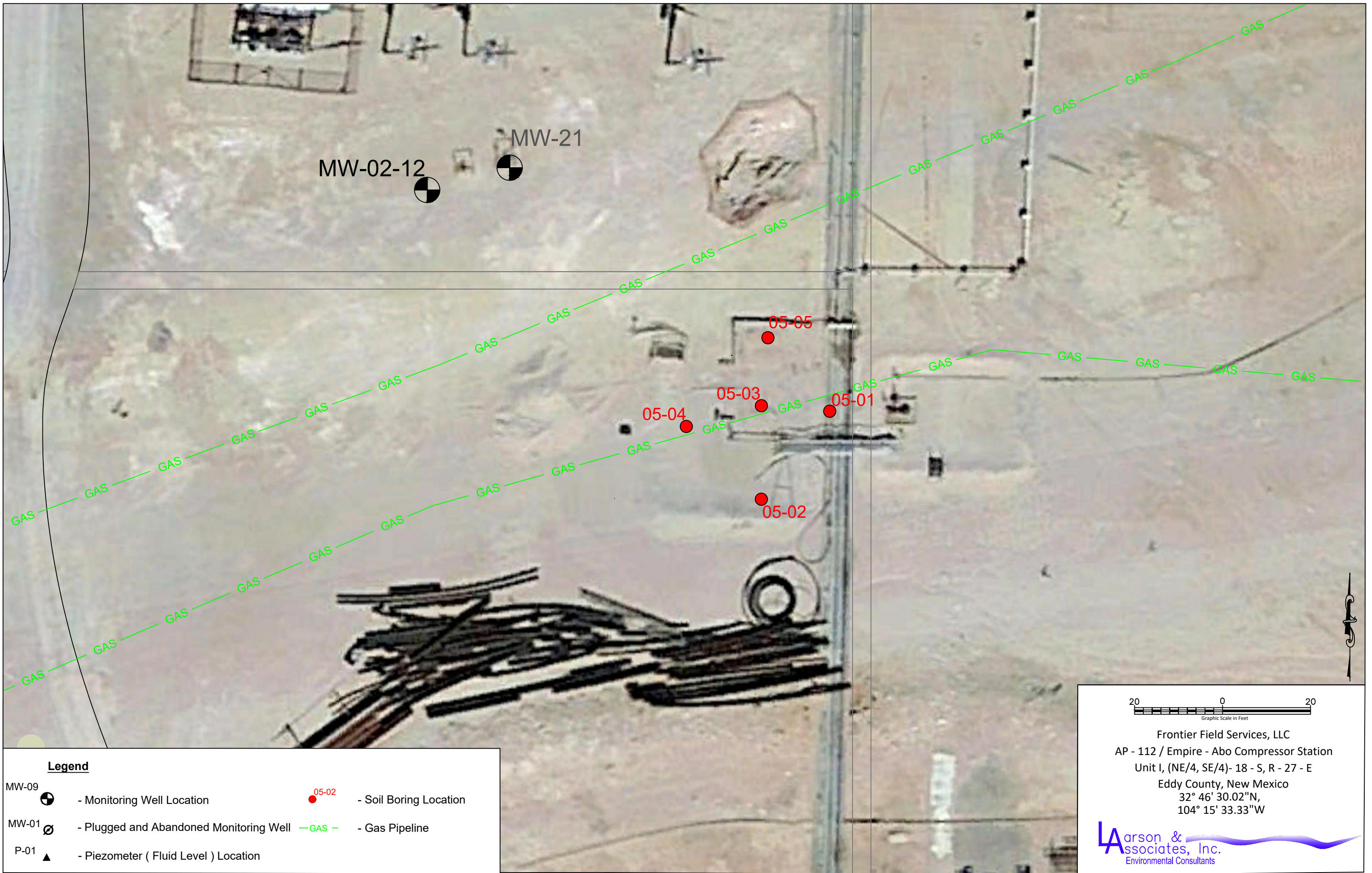
MW-09		- Monitoring Well Location
MW-01		- Plugged and Abandoned Monitoring Well
P-01		- Piezometer (Fluid Level) Location
03-03		- Soil Boring Location

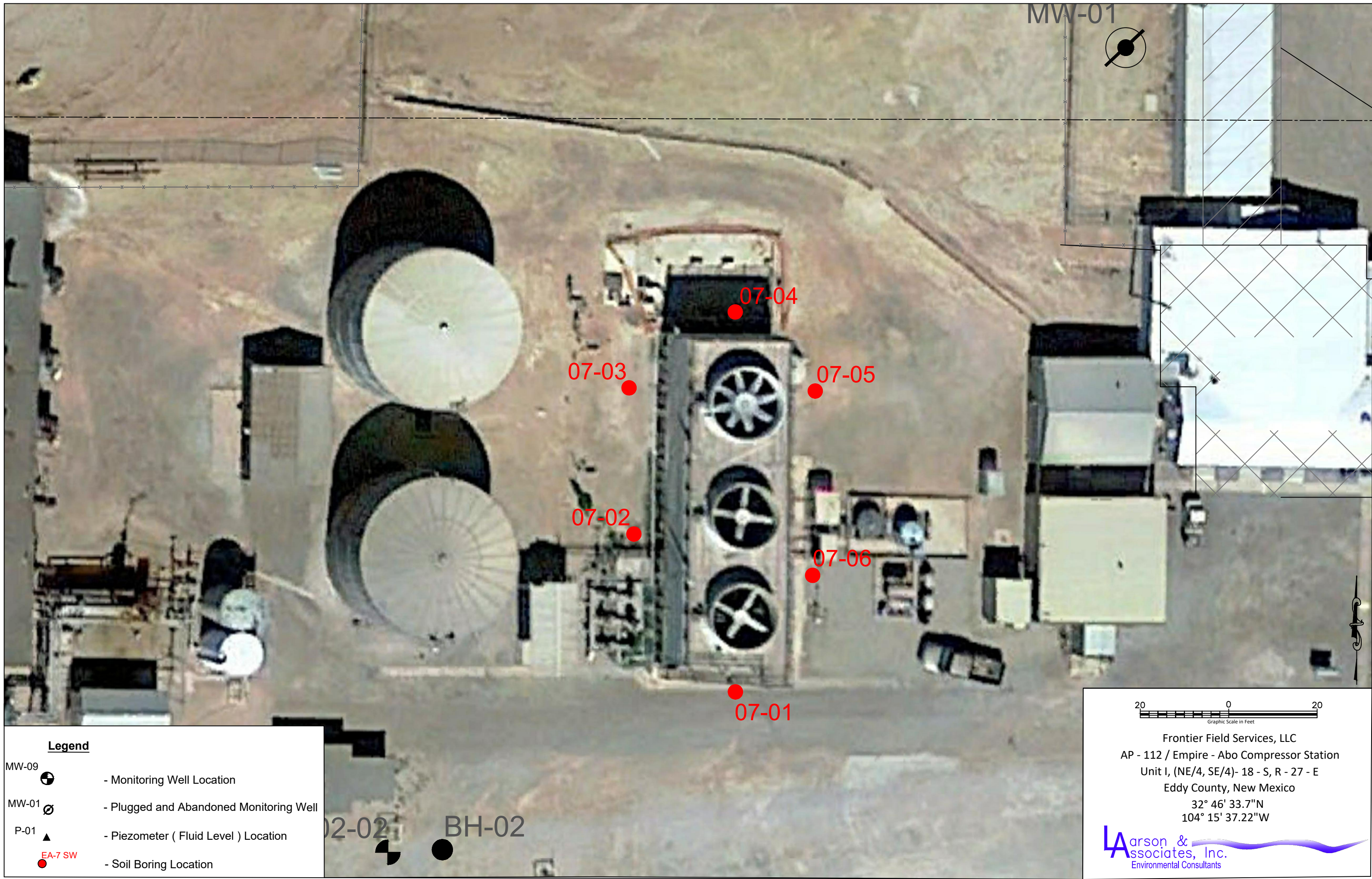
10 0 10
Graphic Scale in Feet

Frontier Field Services, LLC
AP - 112 / Empire - Abo Compressor Station
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico
32° 46' 32.72"N,
104° 15' 43.15"W

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Figure 3b - Anime Sump (EA-03)





Legend

MW-09  - Monitoring Well Location

MW-01  - Plugged and Abandoned Monitoring Well

P-01  - Piezometer (Fluid Level) Location

EA-7 SW  - Soil Boring Location

20 0 20
Graphic Scale in Feet

Frontier Field Services, LLC
AP - 112 / Empire - Abo Compressor Station
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico
32° 46' 33.7"N
104° 15' 37.22"W

Larson &
Associates, Inc.
Environmental Consultants

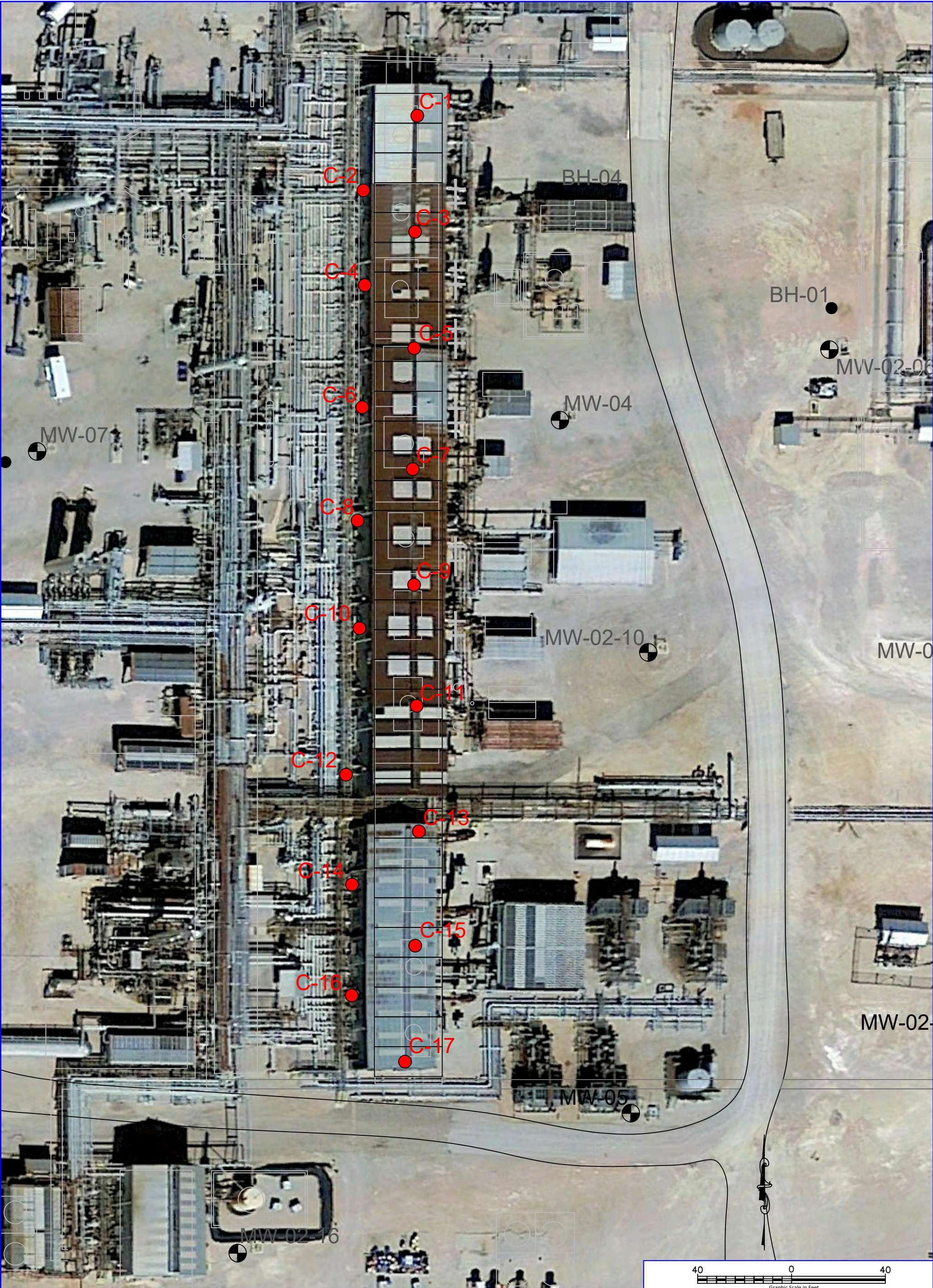
Figure 3d - Cooling Tower (EA-07)



Figure 3e - Lube Oil Tank (EA-08)



Figure 3f - PCB Area (EA-10)



Legend

MW-10

- Monitoring Well Location

MW-01

- Plugged and Abandoned Monitoring Well

C-1

- Soil Boring Location

Fence

Property Line

Draw

Road

40

0

40

Graphic Scale in Feet

Clark Building - Soil Samples
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico
32° 46' 33.7"N
104° 15' 37.22"W

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Figure 3g - Main Compressor (Clark) Building (EA-12)



Legend

MW-09

- Monitoring Well Location

MW-01

- Plugged and Abandoned Monitoring Well

P-01

- Piezometer (Fluid Level) Location

13-01

- Soil Boring Location

20

0

20

Graphic Scale in Feet

Frontier Field Services, LLC

AP - 112 / Empire - Abo Compressor Station

Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E

Eddy County, New Mexico

32° 46' 33.7"N

104° 15' 37.22"W

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Associates, Inc.

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Figure 3h - Compressor (Engine 9) Building (EA-13)

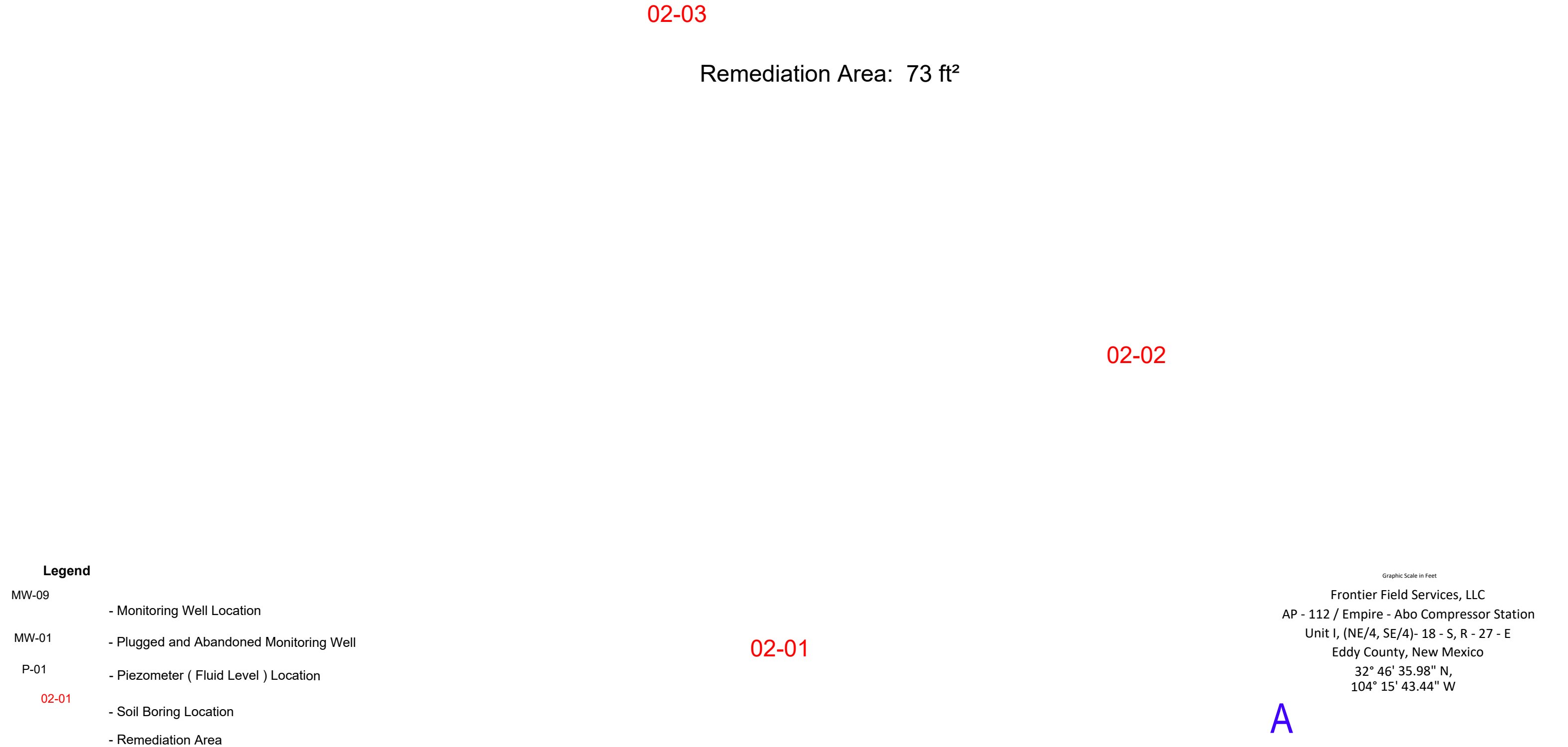


Figure 4a - Wastewater Tanks (EA-02) Showing Remediation Area

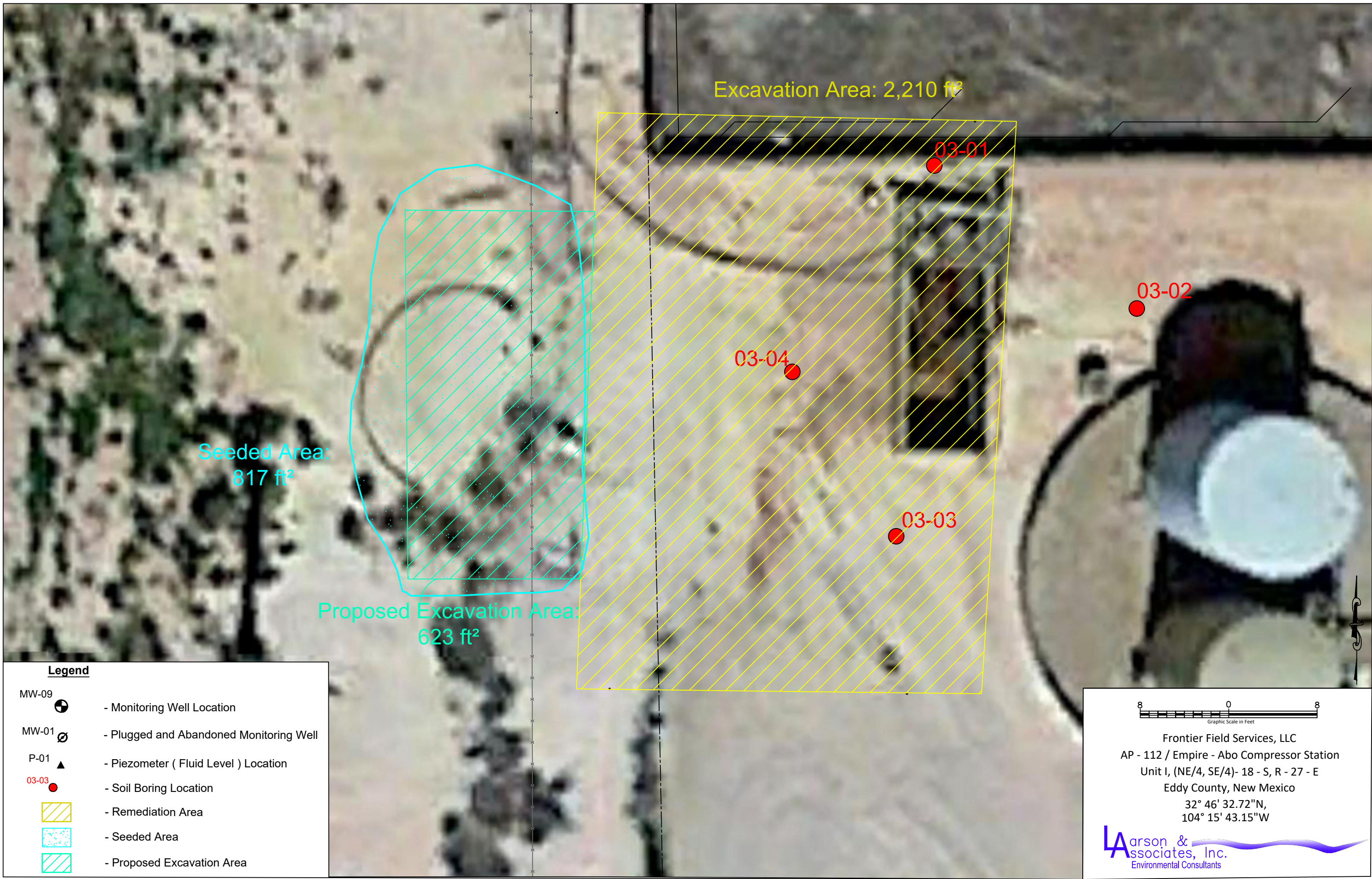
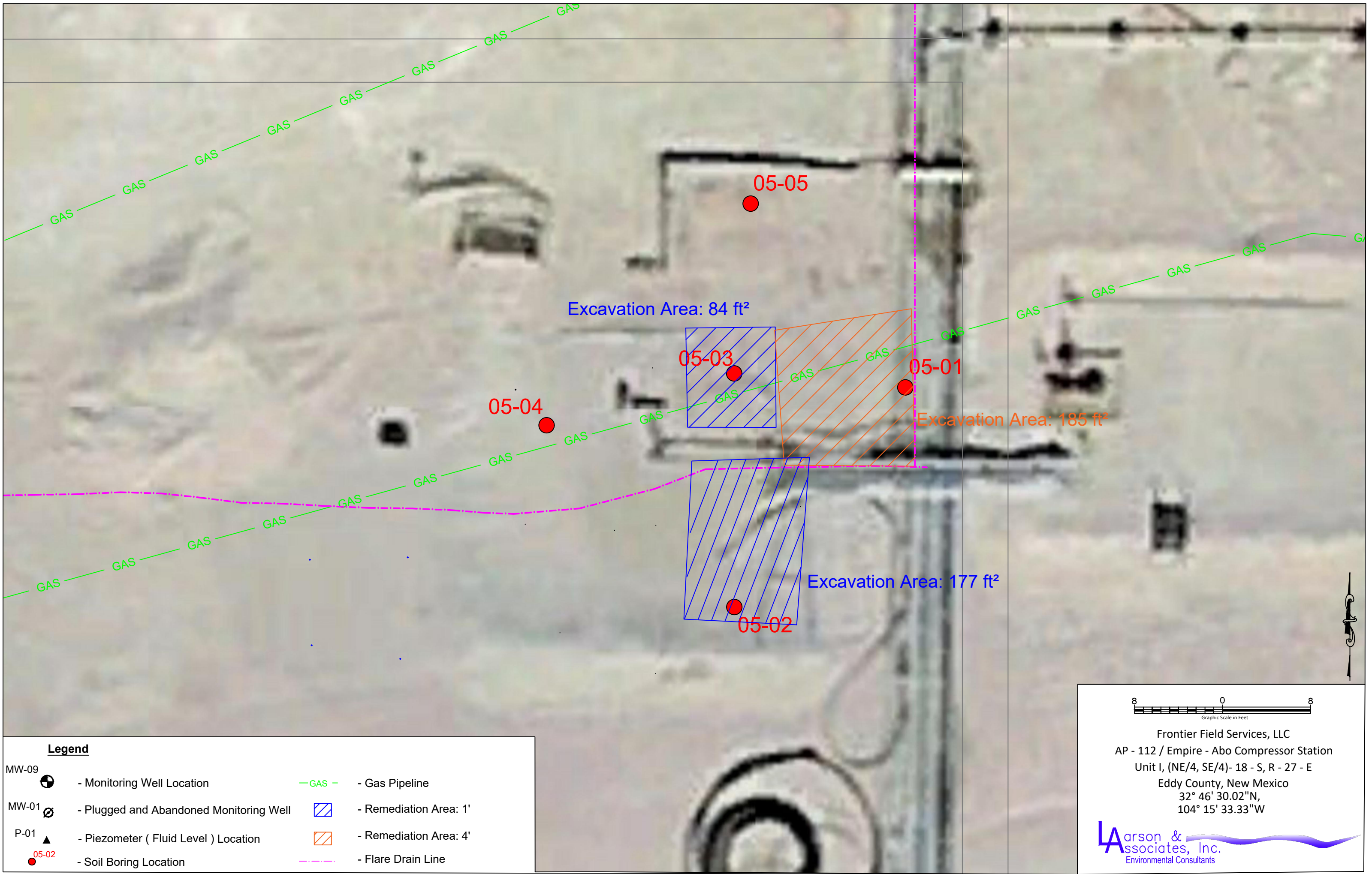


Figure 4b - Anime Sump (EA-03) Showing Remediation Area



Legend

MW-09

- Monitoring Well Location

MW-01

- Plugged and Abandoned Monitoring Well

P-01

- Piezometer (Fluid Level) Location

05-02

- Soil Boring Location

- Gas Pipeline

- Remediation Area: 1'

- Remediation Area: 4'

- Flare Drain Line

8

0

8

Graphic Scale in Feet

Frontier Field Services, LLC

AP - 112 / Empire - Abo Compressor Station

Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E

Eddy County, New Mexico

32° 46' 30.02"N,

104° 15' 33.33"W

L

arson &

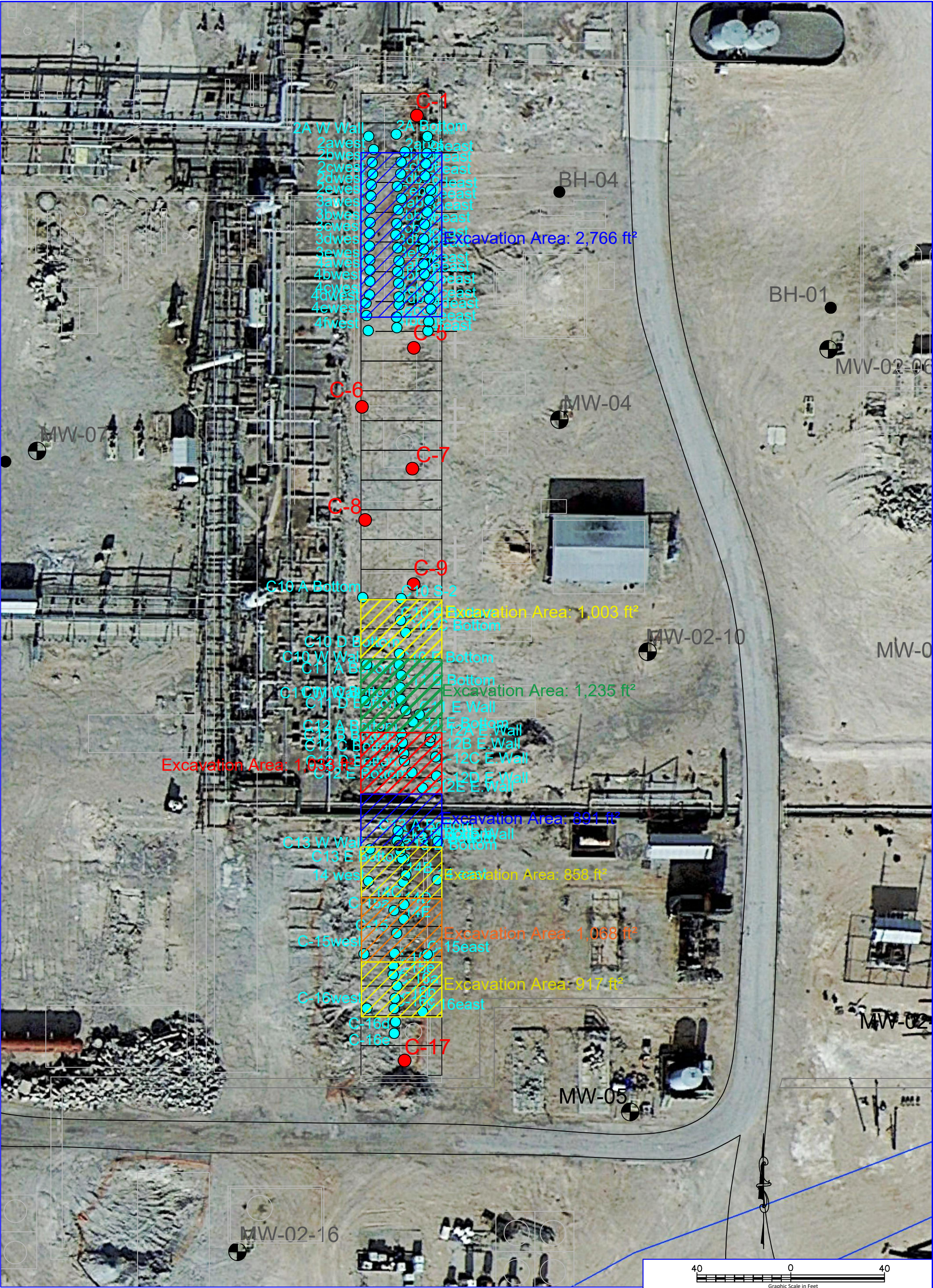
ssociates, Inc.

Environmental Consultants

Figure 4c - Slop Oil Tanks (EA-05) Showing Remediation Areas



Figure 4d - Cooling Tower (EA-07) Showing Remediation Areas

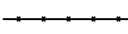


Legend

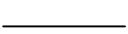
MW-10  - Monitoring Well Location

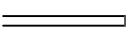
MW-01  - Plugged and Abandoned Monitoring Well

C-1  - Soil Boring Location

 Fence

 Property Line

 Draw

 Road

40 0 40

Graphic Scale in Feet

Clark Building - Soil Samples
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico
32° 46' 33.7"N
104° 15' 37.22"W

Larson &
associates, Inc.
Environmental Consultants

Figure 1 - Soil Sample Location Map

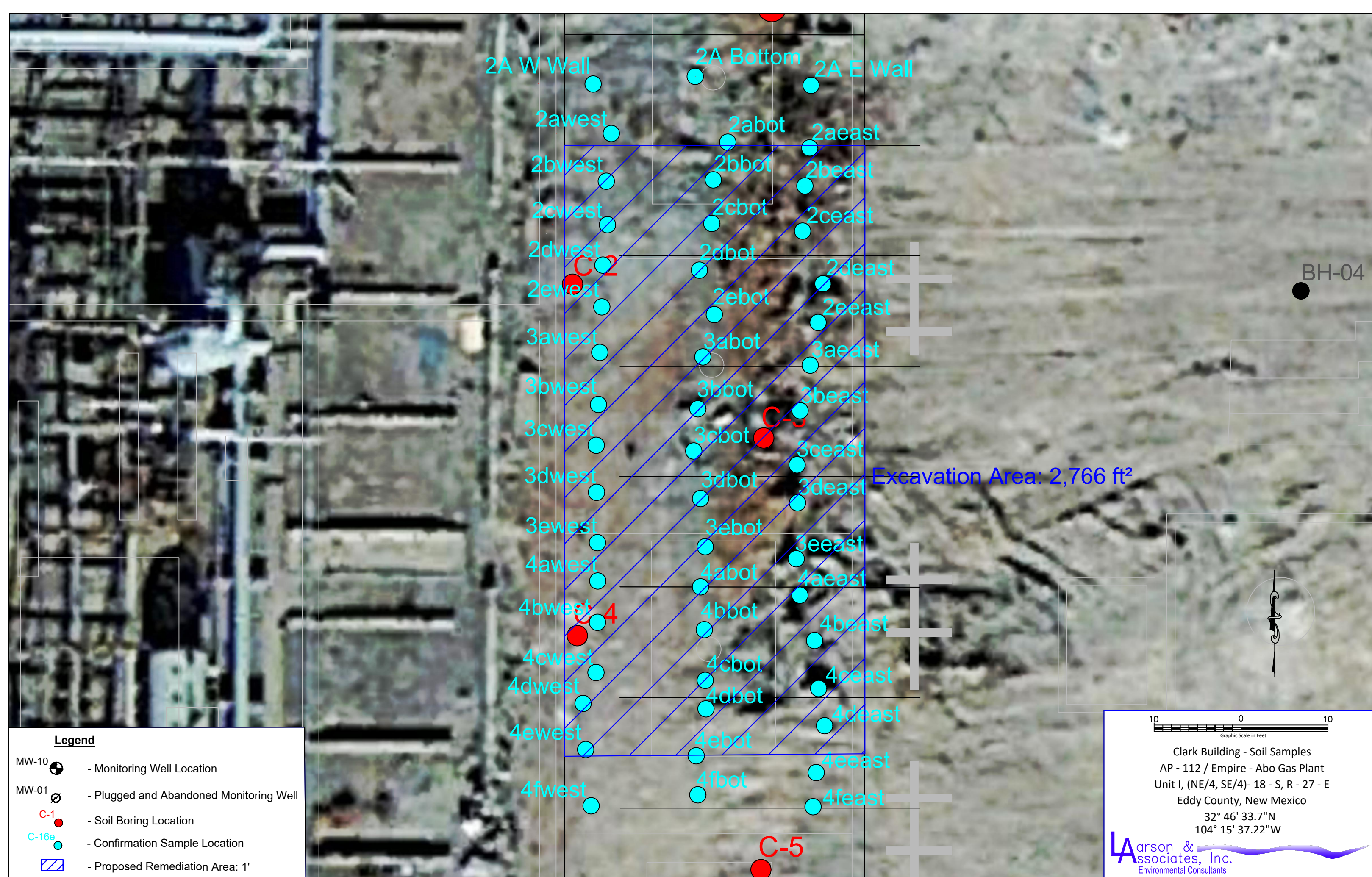


Figure 4e₁ - Main Compressor (Clark) Building (EA-12) Showing Remediation Area

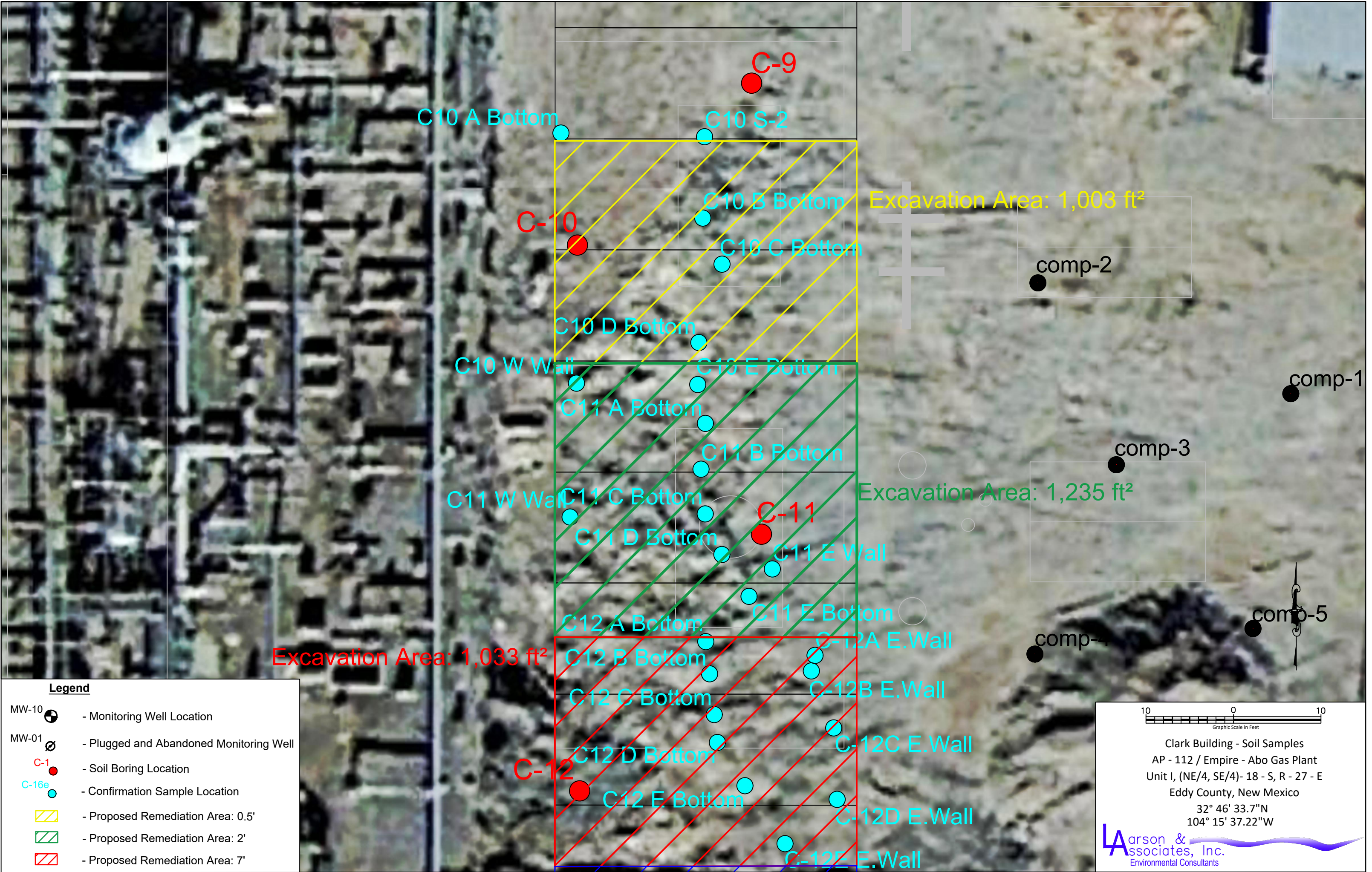


Figure 4e₂- Main Compressor (Clark) Building (EA-12) Showing Remediation Area

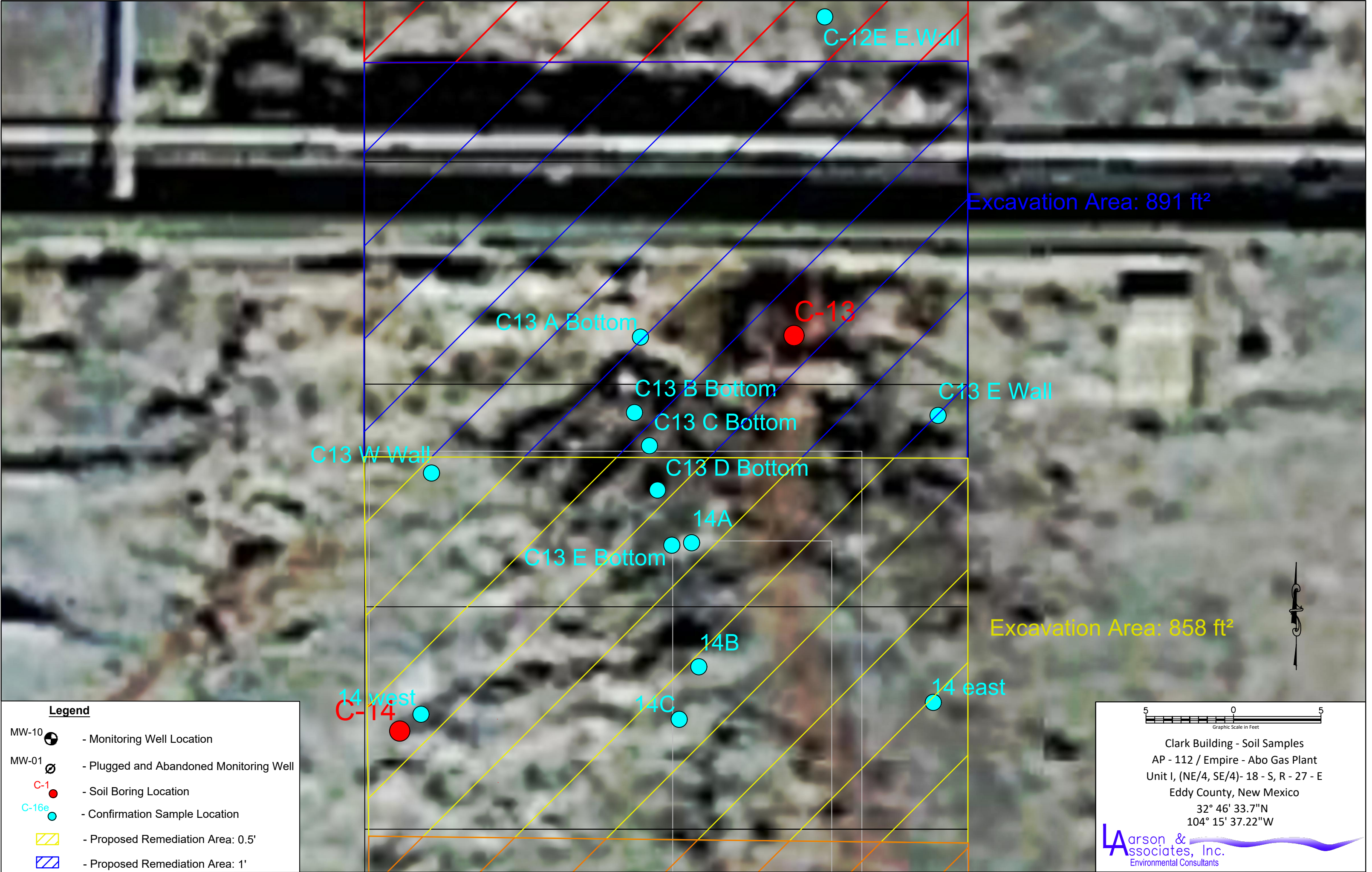


Figure 4e₃ - Main Compressor (Clark) Building (EA-12) Showing Remediation Area

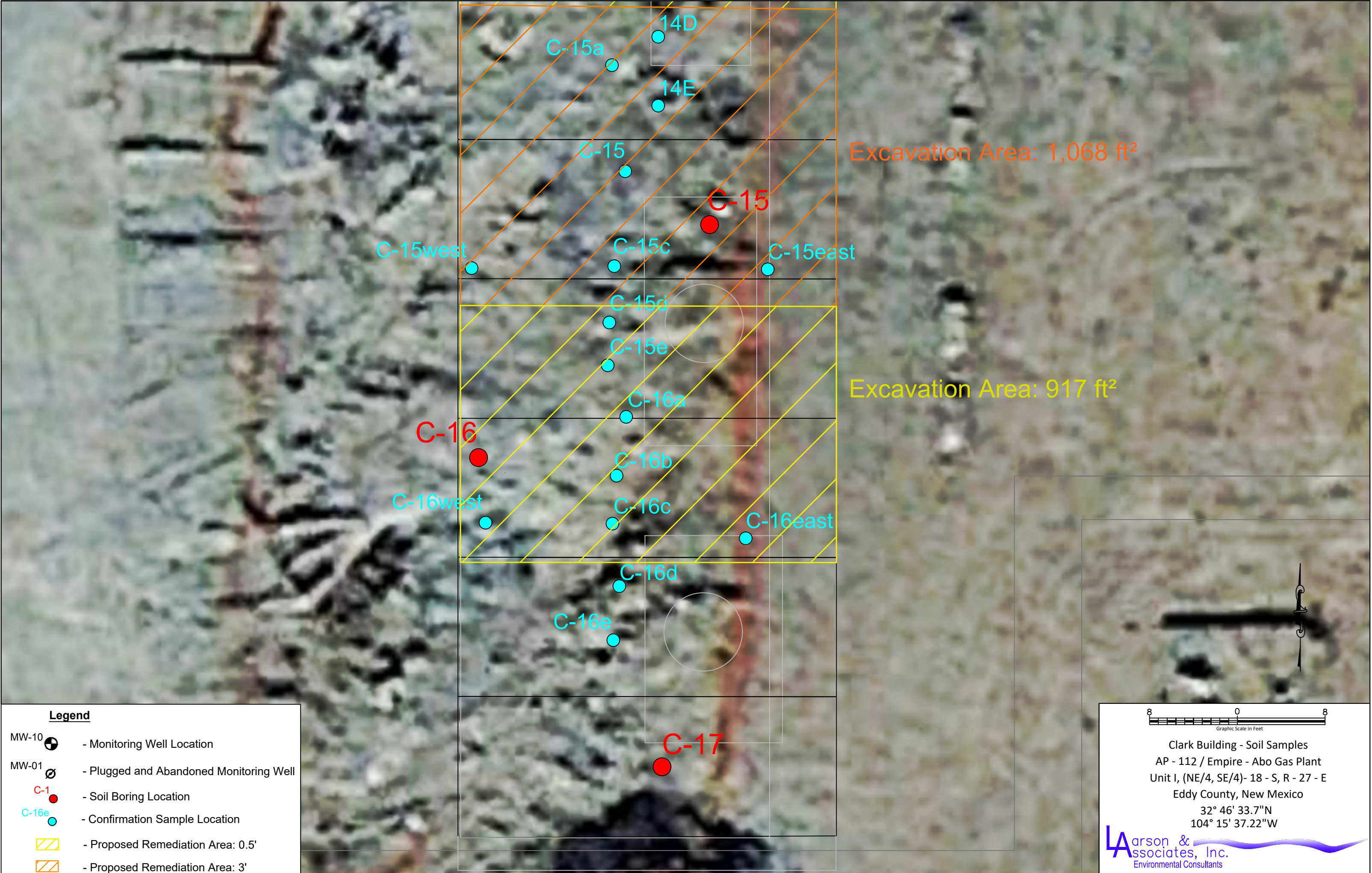


Figure 4e₄ - Main Compressor (Clark) Building (EA-12) Showing Remediation Area

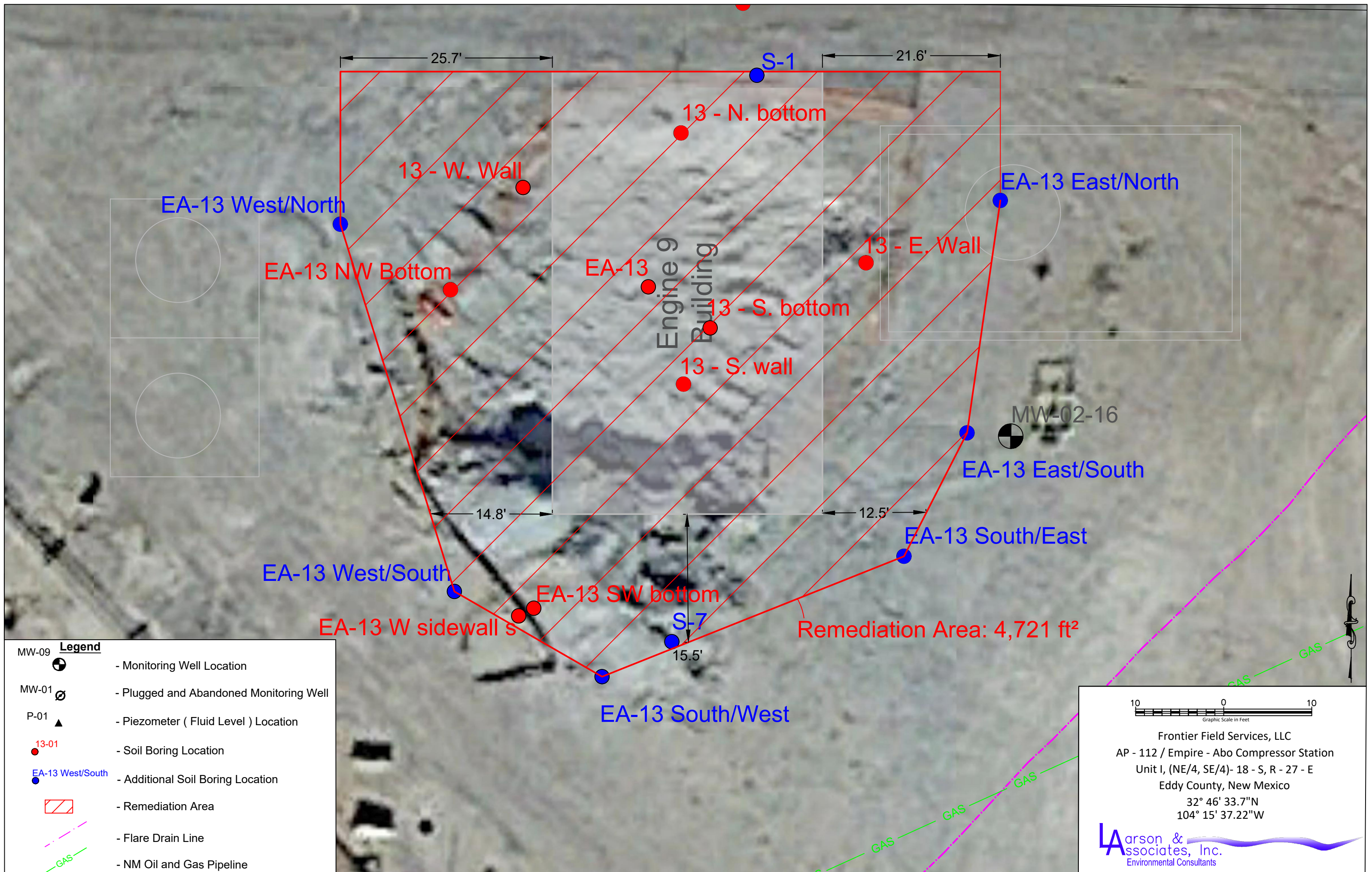


Figure 4f - Compressor (Engine 9) Building (EA-13) Showing Remediation Area

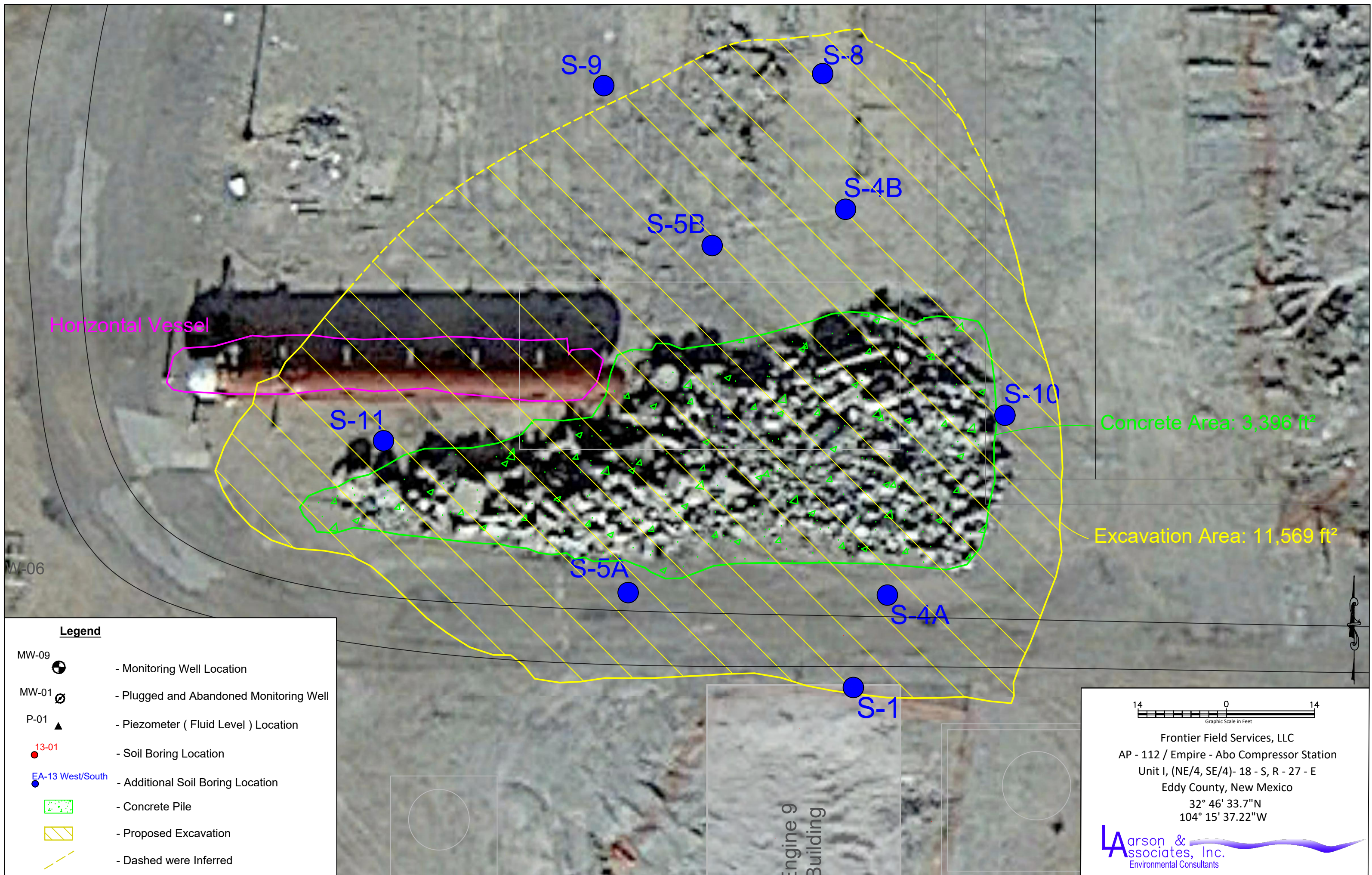


Figure 4g - Area North of Compressor (Engine 9) Building (EA-14) Deferral and Proposed Excavation Map

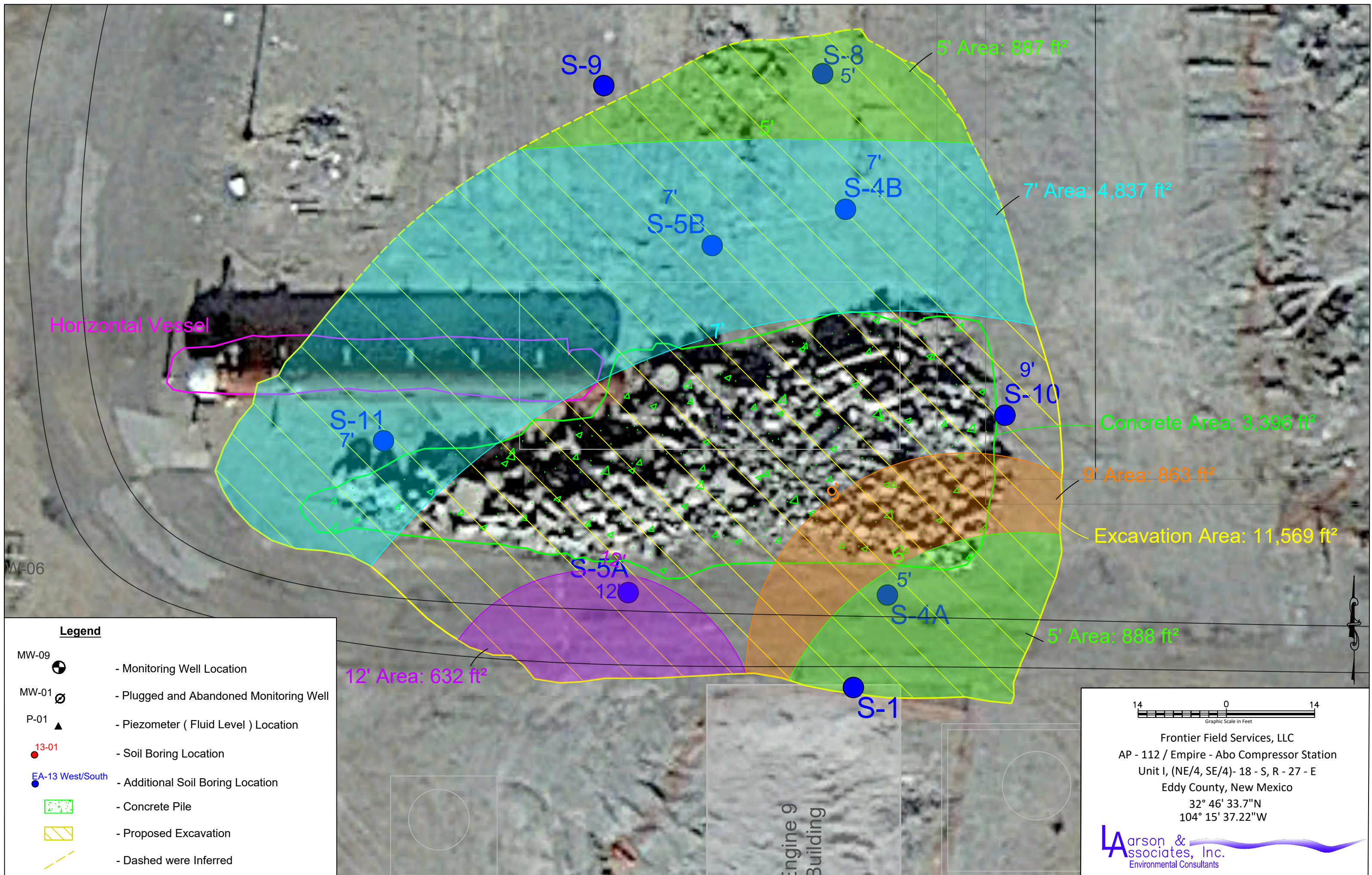


Figure 4h - Area North of Compressor (Engine 9) Building (EA-14) Deferral and Proposed Excavation Map



Figure 4I - Containment West (EA-04) Showing Excavation Area

Appendix A
OCD Correspondence

From: [Billings, Bradford, EMNRD](#)
To: [Mark Larson](#)
Cc: ["gstahnke@sugf.com"](#); [Darin Kennard](#)
Subject: RE: Backfill Variance Request - Empire Abo Gas Plant - AP-112, Eddy County, New Mexico
Date: Tuesday, April 14, 2020 10:39:32 AM
Attachments: [image002.png](#)

04/14/2020

Re; Request for crushed concrete for backfill

Mark,

Although a bit unorthodox, I see no issue per se with your plan. Sample as per indicated below is adequate. If an issue arises, set aside that portion of concrete, blending per se, of good concrete with "dirty" concrete should not be allowed. One additional request:

Please give all the concrete to be used a good water and soap wash down post crushing and before use. Small thing, but as the sampling could be with, I suspect large particles, it just seems a good extra touch for little effort. So that, and a little drying time ought to be fine.

Assuming all above can be attained, you have Oil Conservation Division (OCD) APPROVAL to proceed as outlined. Please keep a copy of this communication as no paper copy will follow. If there are any questions please contact as needed.

Stay and be safe in this odd time.

Sincerely,

Bradford Billings
EMNRD/OCD
Albuquerque
505-670-6549

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Mark Larson <Mark@laenvironmental.com>
Sent: Tuesday, April 14, 2020 8:12 AM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: 'gstahnke@sugf.com' <gstahnke@sugf.com>; Darin Kennard <dkennard@durangomidstream.com>
Subject: [EXT] Re: Backfill Variance Request - Empire Abo Gas Plant - AP-112, Eddy County, New

Mexico

Hello Bradford,

Please see email chain below from AKA Energy LLC (AKA) and Durango Midstream LLC (Durango) stating their commitments to using crushed concrete for backfilling excavations relating to the ongoing remediation at the Empire Abo Gas Plant. AKA and Durango propose collecting composite samples of crushed concrete at a frequency of one 5-spot composite sample per each approximate 2,000 cubic yards of concrete for analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH) and chloride by EPA SW-846 Methods 8021B, 8015 (GRO, DRO and ORO) and Method 300, respectively. A signed letter by an officer of Durango Midstream, as internal approval of the "owner", for using crushed concrete for backfill supported by the laboratory analysis, will be included in the final remediation report. Your concurrence with this commitment is appreciated. Please contact Graham Stahnke with AKA Energy at (970) 759-5712, or gstahnke@sugf.com, Darin Kennard with Durango Midstream at (346) 351-2790 or DKennard@durangomidstream.com or me if you have questions.

Respectfully,

Mark J. Larson, P.G.
President/Sr. Hydrogeologist
507 N. Marienfeld St., Suite 202
Midland, Texas 79701
Office – 432-687-0901
Cell – 432- 556-8656
Fax – 432-687-0456
mark@laenvironmental.com



"Serving the Permian Basin Since 2000" Please said use/activity of Durango Midstream will y awill be completed at a frequency of one (1) sample per 2,000 cubic yards of backfill material.

From: Stahnke, Graham <gstahnke@akaenergy.com>

Sent: Thursday, April 9, 2020 12:25 PM

To: Mark Larson <Mark@laenvironmental.com>

Subject: FW: Empire Abo Gas Plant - Backfill

Mark,

Durango Midstream has approved use of crushed concrete for backfill of the excavations at Empire Abo based on the language below. On behalf of Aka Energy Group, LLC, I also approve.

Thanks,
Graham

Graham Stahnke, PE, CSP
Sr. Environmental Compliance Specialist



Office: (720) 946-0244
Cell: (970) 759-5712

From: Darin Kennard <dkennard@durangomidstream.com>
Sent: Thursday, April 09, 2020 10:13 AM
To: Stahnke, Graham <gstahnke@akaenergy.com>
Cc: David Stone <dstone@durangomidstream.com>; Bryant, Coy <cbryant@redcedargathering.com>
Subject: [EXTERNAL] Empire Abo Gas Plant - Backfill

Graham,

Pursuant to our ongoing conversation regarding backfill at the Empire Abo Gas Plant, Durango Permian LLC (Durango) is the surface land owner and operator of the Empire Abo Gas Plant, and hereby approves of the use of recycled concrete for backfill of the Clark Building foundation excavation following remediation of hydrocarbon-impacted soils. Concrete proposed for use is below any actionable NMOCD level for contaminants of concern at this location. As a precautionary measure, composite sampling for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH) and chloride will be completed at a frequency of one (1) sample per 2,000 cubic yards of backfill material. The concrete will be crushed to an appropriate size to allow for compaction and grading as necessary for continued surface operations of the property as a natural gas processing and treating facility or a compressor station.

Thank you for your work at Empire Abo,

Sincerely,

DBK



Darin B. Kennard
Vice President & General Manager

Durango Midstream LLC
10077 Grogans Mill Road – Suite 300
The Woodlands, Texas 77380

Direct: (346) 351-2790
Mobile: (832) 388-8338
Email: DKennard@durangomidstream.com
<http://DurangoMidstream.com>

From: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Sent: Wednesday, March 4, 2020 3:56 PM
To: Mark Larson <Mark@laenvironmental.com>
Cc: gstahnke@sugf.com
Subject: RE: Backfill Variance Request - Empire Abo Gas Plant - AP-112, Eddy County, New Mexico

3/4/2020

Graham Stahnke – AKA Energy
Mark Larson – Larson & Associates, INC.

RE; The variance request as outlined below email string, for crushed concrete for backfill use.

The Oil Conservation Division (OCD) gives APPROVAL to request with the following conditions:

1. Must have letter, signed, included in remedial report detailing concrete use and the internal approval of the “owner” for said use/activity.
2. Concrete must not be derived from any areas that may have been subject to contaminants of concern for this location. Remedial report needs to attest to this requirement.

If the above conditions are agreeable and met, then please consider approval of variance granted. Please indicate in an email to me acceptance of conditions.

Thank you for your efforts.

Sincerely,

Bradford Billings
EMNRD/OCD
Santa Fe

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations

From: Mark Larson <Mark@laenvironmental.com>
Sent: Wednesday, March 4, 2020 1:55 PM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: 'gstahnke@sugf.com' <gstahnke@sugf.com>; cbryant@redcedargathering.com
Subject: [EXT] Re: Backfill Variance Request - Empire Abo Gas Plant - AP-112, Eddy County, New Mexico

Bradford,
AKA Energy Group LLC (AKA) and Durango Midstream Services LLC (Durango), as new owner of the Empire Abo Plant, have requested that we reach out to the OCD for a variance from 19.15.29.13(D)91) NMAC in order to use crushed concrete for filling the excavations relating to the approved remediation plan. This request is based on the foreseeable use of the plant, which Durango owns the surface, and planned expansion in areas that will be remediated. A considerable volume of concrete was reserved during plant demolition. Durango proposes to crush the concrete and backfill the excavations to ground surface to provide a substantial foundation for the planned expansions. Your approval of this request is appreciated and will be documented in the remediation report. Please contact Graham Stahnke with AKA Energy at (970) 759-5712 or gstahnke@sugf.com or me if you have questions.
Respectfully,

Mark J. Larson, P.G.
President/Sr. Hydrogeologist
507 N. Marienfeld St., Suite 202
Midland, Texas 79701
Office – 432-687-0901
Cell – 432- 556-8656
Fax – 432-687-0456
mark@laenvironmental.com



"Serving the Permian Basin Since 2000"

From: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Sent: Friday, February 14, 2020 12:38 PM
To: Mark Larson <Mark@laenvironmental.com>
Cc: gstahnke@sugf.com; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: RE: Re: Empire Abo Gas Plant - AP-112, Eddy County, New Mexico, Soil Investigation Report and Remediation Plan, February 6, 2020

2/14/2020

Graham Stahnke – SUGF
Mark Larson – LA Environmental

RE; Soil Investigation Report and Soil Remediation Plan for The empire Abo Gas Plant – AP-112 ---
Dated February 6, 2020

Following significant review on the above the following:

Soil Investigation Report component is Accepted.

Soil Remediation Plan as offered in report is APPROVED as written.

The Oil Conservation Division (OCD) appreciates the work effort applied to the reports. OCD looks forward to updates and reports (such as SVE component) as indicated in the document. If anything significantly untoward occurs OCD (myself) would appreciate an email update on circumstance.

It was stated in correspondence that you may begin work on the 17th of this month. If this is so, no additional notification of work beginning is needed. The Report and Work Plan will be uploaded to date base soon, as will this approval letter. And please, keep OCD informed of interactions with EPA.

Thank you once again for your effort and good luck.

Sincerely,

Bradford Billings
E.Spec.A
EMNRD/OCD
Santa Fe, NM

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

Appendix B
Lea Land Landfill Waste Disposal Summary

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
3/20/2020	135812	Empire ABO Gas Plant	117,760	58.88
3/20/2020	135813	Empire ABO Gas Plant	51,820	25.91
3/20/2020	135815	Empire ABO Gas Plant	124,700	62.35
3/20/2020	135816	Empire ABO Gas Plant	118,860	59.43
3/20/2020	135825	Empire ABO Gas Plant	124,180	62.09
3/20/2020	135826	Empire ABO Gas Plant	79,800	39.90
3/23/2020	135871	Empire ABO Gas Plant	134,000	67.00
3/23/2020	135872	Empire ABO Gas Plant	79,020	39.51
3/23/2020	135873	Empire ABO Gas Plant	38,180	19.09
3/23/2020	135874	Empire ABO Gas Plant	118,460	59.23
3/23/2020	135875	Empire ABO Gas Plant	109,320	54.66
3/23/2020	135876	Empire ABO Gas Plant	42,780	21.39
3/24/2020	135877	Empire ABO Gas Plant	171,380	85.69
3/24/2020	135897	Empire ABO Gas Plant	125,940	62.97
3/24/2020	135898	Empire ABO Gas Plant	122,820	61.41
3/24/2020	135899	Empire ABO Gas Plant	178,180	89.09
3/24/2020	135900	Empire ABO Gas Plant	142,620	71.31
3/25/2020	135944	Empire ABO Gas Plant	102,820	51.41
3/25/2020	135945	Empire ABO Gas Plant	163,280	81.64
3/25/2020	135946	Empire ABO Gas Plant	106,540	53.27
3/25/2020	135947	Empire ABO Gas Plant	118,880	59.44
3/25/2020	135948	Empire ABO Gas Plant	113,540	56.77
3/25/2020	135949	Empire ABO Gas Plant	79,820	39.91
3/25/2020	135950	Empire ABO Gas Plant	181,380	90.69
3/26/2020	135982	Empire ABO Gas Plant	162,960	81.48
3/26/2020	135983	Empire ABO Gas Plant	161,240	80.62
3/26/2020	135984	Empire ABO Gas Plant	173,240	86.62
3/26/2020	135985	Empire ABO Gas Plant	197,280	98.64
3/26/2020	135986	Empire ABO Gas Plant	87,400	43.70
3/26/2020	135987	Empire ABO Gas Plant	81,460	40.73
TOTALS:			3,609,660	1,804.83
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.B.

NON-HAZARDOUS WASTE MANIFEST

NO

135812

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ray Vega

SIGNATURE

DATE

3/20/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/20/2020

TIME

9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

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135813

1. PAGE ____ OF ____

2. TRAILER NO.

022

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

27,420 24,400

12. COMMENTS OR SPECIAL INSTRUCTIONS

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

to 51820

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14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Gyorgio 112

SIGNATURE

DATE

3/20/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Antonio Gonzalez

CELL NO.

DATE

3/20/2020

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135815

PAGE ____ OF ____

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 124,700

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

Erving Lopez

SIGNATURE

DATE

3/20/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Montalvo

CELL NO.

DATE 3/20/2020

TIME

9:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

135816

1. PAGE ___ OF ___

2. TRAILER NO.

021

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

118860

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL GARCIA

SIGNATURE

Paul Garcia

DATE 3/20/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO

DATE 3/20/2020

TIME

9:35

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

135825

PAGE ____ OF ____

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

42740 39460 41980

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

10 124180

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

TOMAS GANDARILLA

PRINTED/TYPED NAME

SIGNATURE

TOMAS GANDARILLA

DATE

3/20/2020

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Antela Montalva

CELL NO.

DATE 3/20/2020

TIME

10:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135826

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2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

to 49800

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Diana Constance

SIGNATURE

Diana Constance

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

✓

DATE 3/20/2020

TIME

10:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135871

1. PAGE ____ OF ____

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.		4. ADDRESS 25 Mercado St CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 3/23/2020	
	6. TNRCC I.D. NO.					
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non Hazardous, Non Regulated Waste				1	CM
R E C E I V E R	b. 49,520					
	c.					
	d. 41080 26,020 43,400					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO. 10134000	
T R A N S P O R T E R	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		
D I S P O S I T A R Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901			17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME L. Pearson SIGNATURE [Signature] DATE 3/23/2020			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 3/23/2020	TIME 9:30	

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135872**

1 PAGE OF

2. TRAILER NO.

011

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/23/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

25,620 26,020 27,380

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 79,020

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

**Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM**

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE **3/23/2020**

TIME **9:35**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

135873

1. PAGE ____ OF ____

2. TRAILER NO.

020

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/23/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

38180

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

8. CONTAINERS

No.

Type

1

CM

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

THOMAS GANDARILLA

SIGNATURE

THOMAS GANDARILLA

DATE

3/23/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Monzalez

CELL NO.

DATE 3/23/2020

TIME

9:40

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135874

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/23/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

32,960 37,440 48060

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TD 118460

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Jimmy Lopez

SIGNATURE

[Signature]

DATE

3/23/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

3/23/2020

TIME

9:50

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135875

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/23/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

32420

35,620

41280

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

10 109,320

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/23/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

PERMIT NO.

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO.

DATE

3/23/2020

TIME

9:50

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135876

1. PAGE OF

2. TRAILER NO.

021

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/23/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

42780

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

8. CONTAINERS

No.

Type

1

CM

9. TOTAL

QUANTITY

10. UNIT

Wt. Vol.

11. TEXAS

WASTE ID #

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL BANCIN

SIGNATURE

Paul Bancin

DATE

3/23/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO.

DATE 3/23/2020

TIME

10:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135877

1. PAGE OF

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/24/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

45,340

c.

d.

47,120 41,200 37,300

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TO 14,380

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/24/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

3/24/2020

TIME:

7:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135897

PAGE ____ OF ____

2. TRAILER NO

011

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/24/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 30620

c.

d. 32,960 31,220 31,140

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

10 175,940

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED TYPED NAME

SIGNATURE

DATE

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16

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

Dyane Constance
3/24/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/24/2020

TIME

00

Santos Gonzalez

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135898

1. PAGE ____ OF ____

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/24/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 28,300

c.

d. 33,280 28,720 32,520

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

10 122,820

8. CONTAINERS

No.

Type

1

CM

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/24/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/24/2020

TIME 8:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135899**

1. PAGE ____ OF ____

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.	4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/24/2020			
	PHONE NO.	CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:			8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	a. Non Hazardous, Non Regulated Waste			1	CM		
T R A N S P O R T E R S	b. 40760						
	c.						
	d. 45,960 47,840 43,620						
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO.		
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT						
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.		
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC						
	PRINTED/TYPED NAME			SIGNATURE		DATE	
D I S P O S I T Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)			
	NAME: LARSON & ASSOCIATES INC.			NAME:			
	TEXAS I.D. NO.			TEXAS I.D. NO.			
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:			
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901			EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material			
	PRINTED/TYPED NAME Trinity Larson			PRINTED/TYPED NAME			
	SIGNATURE [Signature]			SIGNATURE			
D I S P O S I T Y	DATE 3/24/2020			DATE			
	Lea Land, LLC			ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico			20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
D I S P O S I T Y	AUTHORIZED SIGNATURE Santos Montalvo			CELL NO.		DATE 3/24/2020	TIME 8:25

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135900**

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO

4. ADDRESS
25 Mercado St

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/24/2020

6. TNRCC I.D. NO

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. **Non Hazardous, Non Regulated Waste**

b.

c.

d. **51,380 44,260 11,980**

12. COMMENTS OR SPECIAL INSTRUCTIONS
EMPIRE ABO GAS PLANT

to 142620

13. WASTE PROFILE NO.

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME
JOE MONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. **TRANSPORTER (1)**
NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 687-0901**

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME **Ray Young**

SIGNATURE **[Signature]**

DATE

3/24/2020

17. **TRANSPORTER (2)**

NAME.

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT.

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature: Santos Gonzalez]

CELL NO.

DATE **3/24/2020**

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135944

1 PAGE OF

2. TRAILER NO.

022

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 24,780

c.

d. 24,960 23,860 24,270

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 102,820

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

Leopoldo Aguirre

SIGNATURE

DATE

3/25/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

3/25/2020

TIME

7:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135945**

1. PAGE ____ OF ____

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/25/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non Hazardous, Non Regulated Waste				1	CM
T R A N S P O R T E R S	b. 42,340					
	c.					
	d. 37,580 42,340 41,000					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO.	
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.			NAME:		
	TEXAS I.D. NO.			TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901			EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Gregorio Ruiz			PRINTED/TYPED NAME		
	SIGNATURE [Signature] DATE 3/25/2020			SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 3/25/2020	
D I S P O S I T Y	TIME 8:00					

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135946**

1. PAGE OF

2. TRAILER NO.

011

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. **Non Hazardous, Non Regulated Waste**

b. **27,280**

d. **26,060 25,060 28,140**

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

10 106,540

8. CONTAINERS
No. Type
1 CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO
(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)
NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 887-0901**

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME **Digna Constantino**

SIGNATURE **[Signature]** DATE **3/25/2020**

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO

DATE **3/25/2020**

TIME **8:05**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135947**

1. PAGE ____ OF ____

2. TRAILER NO.

044

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d. 39,420 36,440 42,720

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 118,880

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/25/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

**Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM**

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE **3/25/2020**

TIME **8:10**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135948

PAGE ____ OF ____

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

10 113,540

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Trinity Lopez

SIGNATURE

DATE

3/25/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montalvo

CELL NO.

DATE

3/25/2020

TIME

8:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135949**

1. PAGE OF

2. TRAILER NO.

021

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. **Non Hazardous, Non Regulated Waste**

b.

c.

d. **36,660 43,160**

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 79820

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME
JOE ONTIVEROS

PHONE NO.
(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. **TRANSPORTER (1)**

NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 887-0901**

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/25/2020

17. **TRANSPORTER (2)**

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE **3/25/2020**

TIME **8:25**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135950

PAGE ___ OF ___

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/25/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non Hazardous, Non Regulated Waste				1 CM	
T R A N S P O R T E R S	b. 49,480					
	c.					
	d. 40,860 44,800 45,940					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO.	
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.			NAME:		
	TEXAS I.D. NO.			TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 687-0901			EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED TYPED NAME X + Y/Loc Yano			PRINTED TYPED NAME		
	SIGNATURE X + Y/Loc Yano DATE 3/25/2020			SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes					
	AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO.		DATE 3/25/2020	TIME 8:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
044

NON-HAZARDOUS WASTE MANIFEST

NO

135983

1. PAGE ____ OF ____

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

4. ADDRESS

25 Mercado St.

STATE

ZIP

5. PICK-UP DATE

3/26/2020

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 41980

d. 38680 41300 39280

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

To 16240

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/26/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/26/2020

TIME

8:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

3DR
031

NON-HAZARDOUS WASTE MANIFEST

NO

135984

1 PAGE OF

2. TRAILER NO

G

3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY

STATE

ZIP

5. PICK-UP DATE

3/26/2020

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol

11. TEXAS
WASTE ID #

N

a. Non Hazardous, Non Regulated Waste

1

CM

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b. 41220

R

d. 42360 45800 43860

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

Te 173240

13. WASTE PROFILE NO.

T

14. NAME

IN CASE OF EMERGENCY OR SPILL, CONTACT

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

O

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

R

PRINTED/TYPED NAME

SIGNATURE

DATE

T

16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

R

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

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SIGNATURE

DATE

3/26/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/26/2020

TIME

8:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
029

NON-HAZARDOUS WASTE MANIFEST

NO

135985

1 PAGE OF

2. TRAILER NO.

G

3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY

STATE

ZIP

5. PICK-UP DATE

3/28/2020

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

N

a. Non Hazardous, Non Regulated Waste

1

CM

E

b. 48200

R

d. 47880 57560 43640

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 197280

T

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

O

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

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PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

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SIGNATURE

DATE

3/28/2020

S

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/28/2020

TIME

825

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
022

NON-HAZARDOUS WASTE MANIFEST

NO

135986

PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/26/2020

6. TNRCT ID NO

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TE 87400

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/26/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

3/24/2020

925

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135987

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/26/2020

6. INRC ID NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol

11. TEXAS
WASTE ID #

a. Non Hazardous, Non Regulated Waste

1

CM

b.

c.

d.

30 LAD 22,540 28,280

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

Te. 81460

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

TYLER YERGEN

SIGNATURE

TYLER YERGEN

DATE

3/26/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

8. 03/26/2020 10⁰⁰

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
2/18/2020	134821	Empire ABO Gas Plant	136,420	68.21
2/18/2020	134822	Empire ABO Gas Plant	137,900	68.95
2/19/2020	134854	Empire ABO Gas Plant	190,880	95.44
2/19/2020	134855	Empire ABO Gas Plant	90,060	45.03
2/19/2020	134856	Empire ABO Gas Plant	212,180	106.09
2/20/2020	134888	Empire ABO Gas Plant	186,680	93.34
2/20/2020	134889	Empire ABO Gas Plant	174,480	87.24
2/20/2020	134890	Empire ABO Gas Plant	147,880	73.94
2/21/2020	134930	Empire ABO Gas Plant	194,440	97.22
2/21/2020	134931	Empire ABO Gas Plant	103,620	51.81
2/21/2020	134941	Empire ABO Gas Plant	90,320	45.16
2/24/2020	134950	Empire ABO Gas Plant	124,580	62.29
2/24/2020	134951	Empire ABO Gas Plant	127,180	63.59
2/24/2020	134952	Empire ABO Gas Plant	141,180	70.59
2/25/2020	134977	Empire ABO Gas Plant	183,740	91.87
2/25/2020	134978	Empire ABO Gas Plant	184,380	92.19
2/25/2020	134987	Empire ABO Gas Plant	184,280	92.14
2/26/2020	135052	Empire ABO Gas Plant	78,140	39.07
2/26/2020	135053	Empire ABO Gas Plant	90,600	45.30
2/26/2020	135054	Empire ABO Gas Plant	80,660	40.33
2/27/2020	135076	Empire ABO Gas Plant	177,460	88.73
2/27/2020	135077	Empire ABO Gas Plant	159,580	79.79
2/27/2020	135078	Empire ABO Gas Plant	164,340	82.17
TOTALS:			3,360,980	1,680.49
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **134821**

1. PAGE ___ OF ___

2. TRAILER NO. **031**

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 125 Mercado St. Suite 201 CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 2/18/2020			
			6. TNRCC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1	CM		
T R A N S P O R T E R S	b.					
	c.					
	d. 39,580 48,360 48,480					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 136,420		13. WASTE PROFILE NO.			
D I S P O S I T A L Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		
D I S P O S I T A L Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. MARK LARSON IN CASE OF EMERGENCY CONTACT: (432) 687-0801 EMERGENCY PHONE:			17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED TYPED NAME Frank Lopez SIGNATURE [Signature] DATE 2/18/2020			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
D I S P O S I T A L Y	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 2/18/2020	TIME 9:45

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

134822

PAGE ____ OF ____

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

2/18/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

42,840

46,020

49,040

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 137,900

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

LARSON & ASSOCIATES INC

NAME:

TEXAS I.D. NO.

MARK LARSON

IN CASE OF EMERGENCY CONTACT:

(432) 687-0901

EMERGENCY PHONE:

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

2/18/2020

SIGNATURE

Ruben Gonzalez

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 2/18/2020

TIME

9:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

134854

1. PAGE ___ OF ___

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 2/19/2020			
	6. TNRCC I.D. NO.					
T R A N S P O R T E R S	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste		8. CONTAINERS No. Type 1 CM	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	b. 47,740					
	c.					
	d. 49,840 42,460 50840					
D I S P O S I T A L Y	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 190,880			13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME: JOE ONTIVEROS PHONE NO: (575) 887-4048 24-HOUR EMERGENCY NO.					
D I S P O S I T A L Y	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE DATE		
D I S P O S I T A L Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. MARK LARSON IN CASE OF EMERGENCY CONTACT: (432) 687-0801 EMERGENCY PHONE:			17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME: Tony Lopez SIGNATURE: [Signature] DATE: 2/19/2020			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED TYPED NAME SIGNATURE DATE		
D I S P O S I T A L Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
D I S P O S I T A L Y	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes:					
	AUTHORIZED SIGNATURE Santos Manzanarez		CELL NO.		DATE: 2/19/2020	TIME: 9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.R.

NON-HAZARDOUS WASTE MANIFEST

NO

134855

1 PAGE OF

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC	4. ADDRESS 25 Mercado St	5. PICK-UP DATE 2/19/2020			
	PHONE NO.	CITY STATE ZIP Durango CO 81301	6. TNRCC I.D. NO.			
N E R A T O R	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1 CM			
	b.					
	c.					
A T T R I B U T E R	d. 42,580 47,480					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.			
T R A N S P O R T E R S	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
D I S P O S I T A L Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		
D I S P O S I T A L Y	16. TRANSPORTER (1) LARSON & ASSOCIATES INC			17. TRANSPORTER (2)		
	NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901			NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
D I S P O S I T A L Y	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME: Ruben Gonzalez SIGNATURE: Ruben Gonzalez DATE: 2/19/2020			PRINTED/TYPED NAME: _____ SIGNATURE: _____ DATE: _____		
D I S P O S I T A L Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
D I S P O S I T A L Y	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE Santos Manzanola		CELL NO.		DATE: 2/19/2020	TIME: 9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

134856

1. PAGE ___ OF ___

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC	4. ADDRESS 25 Mercado St.	5. PICK-UP DATE 2/10/2020
	PHONE NO.	CITY Durango	STATE CO
		ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non-Hazardous, Non Regulated Waste	1. CM	
	b.		
	c. 50,540		
	d. 56,540 48,840 56,200		
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT	13. WASTE PROFILE NO.	
	TC 212180		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
	NAME JOE MONTIVEROS	PHONE NO. (575) 887-4048	24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC		
	PRINTED/TYPED NAME	SIGNATURE	DATE
T R A N S P O R T E R S	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. MARK LARSON IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:	17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:	
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE	19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE	
D I S P O S I T A L Y	Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.		
	AUTHORIZED SIGNATURE Santos Gonzalez	CELL NO.	DATE 2/10/2020
			TIME 9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-1048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SQR

NON-HAZARDOUS WASTE MANIFEST

NO

134888

1. PAGE ___ OF ___

2. TRAILER NO.

034

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

2/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

b. 51,820

d. 44,960 42,780 47,120

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 181,680

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16

TRANSPORTER (1)

LARSON & ASSOCIATES INC.

NAME:

TEXAS I.D. NO.

MARK LARSON

IN CASE OF EMERGENCY CONTACT:

(432) 687-0801

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

2/20/2020

SIGNATURE

Ruben Gonzalez

DATE

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS:

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Monica

CELL NO.

DATE 2/20/2020

TIME

8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

134889

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St
CITY Durango
STATE CO
ZIP 81301

5. PICK-UP DATE

2/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous Non Regulated Waste

b. 46,080

d. 45,020 42,480 40,900

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 174,480

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Tracy Lyser

SIGNATURE

DATE

2/20/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes:

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

2/20/2020

TIME

9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

134890

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St
CITY STATE ZIP
Durango CO 81301

5. PICK-UP DATE

2/20/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

47,820 48,120 51,940

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 147,880

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME: X Ray/Verger

SIGNATURE: X Ray/Verger

DATE

2/20/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montalvo

CELL NO.

/

DATE 2/20/2020

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

134930

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

91301

5. PICK-UP DATE

2/21/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

b. 51760

c.

d. 41960 50780, 49940

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TO 194440

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

LARSON & ASSOCIATES INC

NAME:

TEXAS I.D. NO.

MARK LARSON

IN CASE OF EMERGENCY CONTACT:

(432) 887-0901

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Trinity Lopez

SIGNATURE

DATE

2/21/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montaloz

CELL NO.

DATE 2/21/2020

TIME

9:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

134931

1. PAGE OF

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 2/21/2020		
			6. TNRCC I.D. NO.		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	Non Hazardous, Non Regulated Waste		1 CM		
	b.				
R E C E I V E R	c.				
	d. 53,660 49,960				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048				
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
T R A N S P O R T E R S	PRINTED/TYPED NAME		SIGNATURE		DATE
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0001		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Roy Vazquez SIGNATURE X [Signature] DATE 2/21/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED TYPED NAME SIGNATURE DATE		
D I S P O S I T A L Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE [Signature]		CELL NO. [Signature]	DATE 2/21/2020	TIME 11:50

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILFS EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

134941

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2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

2/21/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

43780 46540

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 910320

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

2/21/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS:

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Monica

CELL NO.

DATE

2/21/2020

TIME

12:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO **134950**

PAGE ____ OF ____

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.		4. ADDRESS 25 Mercado St CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 2/24/2020	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	Non Hazardous, Non Regulated Waste				1	CM
	b.					
R E C E I V E R	c.					
	d. 44,140 41,420 39,020					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 124580				13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
T R A N S P O R T E R S	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		
	DATE			DATE		
T R A N S P O R T E R S	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901			17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Tringler			PRINTED/TYPED NAME		
	SIGNATURE [Signature] DATE 2/24/2020			SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 2/24/2020	TIME 8:50

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

134951

1. PAGE ____ OF ____

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY STATE ZIP
Durango CO 81301

5. PICK-UP DATE

2/24/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 39,860

d. 44,360 39,960

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT We/Vol.

11. TEXAS WASTE ID

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 127,180

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME Ruben Gonzalez

SIGNATURE Ruben Gonzalez DATE 2/24/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 2/24/2020

TIME 8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

134952

PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

2/24/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

Ray Vazquez

SIGNATURE

[Signature]

DATE

2/24/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature: Santos Gonzalez]

CELL NO.

DATE 2/24/2020

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

NON-HAZARDOUS WASTE MANIFEST

NO

134977

1. PAGE ____ OF ____

2. TRAILER NO. **SDR #39**

GENERATOR	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 2/25/2020		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	Non Hazardous, Non Regulated Waste		1	CM	
	b. 32,380 34,140				
	d. 43,760 34,320 36,140				
AUTHORITY	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 183,440		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048				
TRANSPORTER	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC		PRINTED/TYPED NAME SIGNATURE DATE		
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TFXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
DISPOSAL	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE [Signature] DATE 2/25/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	20. COMMENTS		21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.		
DISPOSAL	22. AUTHORIZED SIGNATURE [Signature]		CELL NO.	DATE 2/25/2020	TIME 7:55

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

134978

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

2/25/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

33,120

34,140

c.

d.

44,420

34,320

33,380

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

10184380

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

James Larson

SIGNATURE

DATE

2/25/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

2/25/2020

TIME

7:05

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

134987

1. PAGE ____ OF ____

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 2/25/2020		
			6. TNRCC I.D. NO.		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	Non Hazardous, Non Regulated Waste		1 CM		
R E C E I V E R	b. 45,280				
	c.				
	d. 46,840 45,860 46,300				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 184,280		13. WASTE PROFILE NO.		
T R A N S P O R T E R	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. (575) 987-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME: L Roy Yano SIGNATURE: [Signature] DATE: 2/25/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME: _____ SIGNATURE: _____ DATE: _____		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS:		
D I S P O S I T Y	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE Santos Montalvo		CELL NO. /	DATE 2/25/2020	TIME 8:45

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135052

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC		4. ADDRESS 25 Mercado St		5. PICK-UP DATE 2/26/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non Hazardous, Non Regulated Waste				1	CM
	b.					
T R A N S P O R T E R S	c.					
	d. 37,620 40,520					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME: JOE ONTIVEROS PHONE NO: (575) 887-4048 24-HOUR EMERGENCY NO.					
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
D I S P O S I T A L Y	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME: Ruben Gonzalez SIGNATURE: Ruben Gonzalez DATE: 2/26/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED TYPED NAME: SIGNATURE: DATE:			
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
AUTHORIZED SIGNATURE: [Signature]		CELL NO.		DATE: 2/26/2020	TIME: 12:20	

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135053

1. PAGE OF

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

91301

5. PICK-UP DATE

2/26/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID #

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Thomas Gandarilla

SIGNATURE

Thomas Gandarilla

DATE

2/26/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

2/26/2020

TIME

12:40

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135054

1. PAGE ___ OF ___

2. TRAILER NO.

031

G

3. COMPANY NAME
AKA Energy Group LLC

4. ADDRESS
25 Mercado St

5. PICK-UP DATE
2/26/2020

PHONE NO.

CITY
Durango

STATE
CO

ZIP
81301

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

N

Non Hazardous, Non Regulated Waste

1

CM

E

b.

c.

R

d. 38,520 42,140

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

T

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

O

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

R

PRINTED/TYPED NAME

SIGNATURE

DATE

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16

TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 687-0901

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

2/28/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

D

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

F

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

I

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

S

AUTHORIZED SIGNATURE

CELL NO.

DATE 2/28/2020

TIME

12:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

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1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

2/27/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

b. 47,340

c.

d. 42,620 41,020 46,480

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 177460

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME Roy Yager

SIGNATURE [Signature] DATE 2/27/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

2/27/2020

TIME

8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135077

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 2/27/2020		
			6. TNRCC I.D. NO.		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	Non Hazardous, Non Regulated Waste		1 CM		
R E C E I V E R	b. 40860				
	c.				
	d. 40,560 39,040 39,120				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.		
T R A N S P O R T E R	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO (575) 887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T A R Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE Ruben Gonzalez DATE 2/27/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO.	DATE 2/27/2020	TIME 9:00	

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135078

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME
AKA Energy Group LLC
PHONE NO.

4. ADDRESS
25 Mercado St
CITY Durango STATE CO ZIP 91301

5. PICK-UP DATE
2/27/2020
6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

Non Hazardous, Non Regulated Waste

1

CM

b. 43320

c.

d. 41480 39620 39920

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 164340

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

2/27/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 2/27/2020

TIME

9:15

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
2/28/2020	135133	Empire ABO Gas Plant	163,940	81.97
2/28/2020	135134	Empire ABO Gas Plant	145,440	72.72
2/28/2020	135135	Empire ABO Gas Plant	125,760	62.88
2/28/2020	135136	Empire ABO Gas Plant	80,280	40.14
2/28/2020	135157	Empire ABO Gas Plant	74,480	37.24
3/2/2020	135185	Empire ABO Gas Plant	127,220	63.61
3/2/2020	135186	Empire ABO Gas Plant	138,020	69.01
3/2/2020	135187	Empire ABO Gas Plant	125,400	62.70
3/2/2020	135188	Empire ABO Gas Plant	93,380	46.69
3/2/2020	135189	Empire ABO Gas Plant	78,360	39.18
3/3/2020	135210	Empire ABO Gas Plant	159,460	79.73
3/3/2020	135211	Empire ABO Gas Plant	169,280	84.64
3/3/2020	135212	Empire ABO Gas Plant	138,640	69.32
3/3/2020	135213	Empire ABO Gas Plant	76,620	38.31
3/3/2020	135214	Empire ABO Gas Plant	68,080	34.04
3/5/2020	135251	Empire ABO Gas Plant	109,040	54.52
3/5/2020	135252	Empire ABO Gas Plant	73,360	36.68
3/5/2020	135253	Empire ABO Gas Plant	74,440	37.22
3/5/2020	135254	Empire ABO Gas Plant	123,120	61.56
3/5/2020	135255	Empire ABO Gas Plant	79,560	39.78
TOTALS:			2,223,880	1,111.94
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135133

1. PAGE ____ OF ____

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

2/28/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b. 41,320

c.

d. 41,480 38,620 42,520

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TO 1163940

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0801

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME: Ruben Gonzalez

SIGNATURE: Ruben Gonzalez DATE: 2/28/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Monica

CELL NO.

DATE

2/28/2020

TIME

8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.R.

NON-HAZARDOUS WASTE MANIFEST

NO

135134

1. PAGE ____ OF ____

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

2/28/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

45,180 500LTD 50,200

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 145440

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Roy Yengo

SIGNATURE

[Signature]

DATE

2/28/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

2/28/2020

TIME

9:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135135

1. PAGE ___ OF ___

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 2/28/2020		
	6. TNRCC I.D. NO.				
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste	1 CM			
T R A N S P O R T E R S	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT — to 125,710		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
D I S P O S I T A R Y	PRINTED/TYPED NAME		SIGNATURE		DATE
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME: <u>Immy Lopez</u> SIGNATURE: <u>[Signature]</u> DATE: <u>2/28/2020</u>		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME: _____ SIGNATURE: _____ DATE: _____		
	20. COMMENTS				
D I S P O S I T A R Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico				
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE <u>[Signature]</u>		CELL NO. <u>[Signature]</u>	DATE 2/28/2020	TIME 9:50

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135136

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO. ---

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

2/28/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Hazardous Non-Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

a.

1

CM

b.

c.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0801

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

2/28/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

2/28/2020

TIME

9:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62-180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135157

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

2/29/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

23,780 23,580 27,120

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 74480

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

Mark Larson

SIGNATURE

DATE

2/28/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montalv

CELL NO.

DATE

2/28/2020

TIME

10:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.R.

NON-HAZARDOUS WASTE MANIFEST

NO

135185

1. PAGE OF

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY Durango
STATE CO
ZIP 81301

5. PICK-UP DATE

3/2/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 124220

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

JOE ONTIVEROS

SIGNATURE

DATE

3/2/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos

CELL NO.

DATE

3/2/2020

TIME

9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135186**

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/2/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

42,320

47,040

48,660

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC138020

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 687-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME THOMAS GANDARI/IA

SIGNATURE THOMAS GANDARI/IA DATE 3/2/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME _____

SIGNATURE _____ DATE _____

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/2/2020

TIME 9:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135187

1. PAGE ___ OF ___

2. TRAILER NO.

031

G
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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/2/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous Non Regulated Waste

b.

c.

d.

40,320

42,860

42,220

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TO 125,400

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Tina Lopez

SIGNATURE

DATE

3/2/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO.

DATE

3/2/2020

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135188

1. PAGE ___ OF ___

2. TRAILER NO.

022

GENERATOR'S CERTIFICATION

3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

91301

5. PICK-UP DATE

3/2/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 93,380

TRANSPORTER'S CERTIFICATION

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

TRANSPORTER'S CERTIFICATION

16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/2/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

DISPOSAL SITE CERTIFICATION

PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/2/2020

TIME

9:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135189

1. PAGE ___ OF ___

2. TRAILER NO.

011

G
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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/2/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

27,700 25,280 25,380

TD 48,360

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT.

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL BARCIA

SIGNATURE

Paul Barcia

DATE

3/2/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Ante Monzaloz

CELL NO.

DATE

3/2/2020

TIME

10:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135210

1. PAGE ___ OF ___

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC	4. ADDRESS 25 Mercado St	5. PICK-UP DATE 3/3/2020			
	PHONE NO.	CITY Durango STATE CO ZIP 81301	6. TNRCC I.D. NO.			
T R A N S P O R T E R S	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1	CM		
	b. 43,110					
	c.					
D I S P O S I T A L Y	d. 37,600 37,740 40,900					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: TO 159,410		13. WASTE PROFILE NO.			
D I S P O S I T A L Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
D I S P O S I T A L Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
D I S P O S I T A L Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC			NAME:		
D I S P O S I T A L Y	TEXAS I.D. NO.			TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T A L Y	EMERGENCY PHONE: (432) 887-0901			EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
D I S P O S I T A L Y	PRINTED/TYPED NAME: Jimmy Lopez			PRINTED/TYPED NAME:		
	SIGNATURE: [Signature] DATE: 3/3/2020			SIGNATURE: DATE:		
D I S P O S I T A L Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS:			
D I S P O S I T A L Y	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE: [Signature]		CELL NO.		DATE: 3/3/2020	TIME: 7:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135211

1. PAGE ___ OF ___

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.		4. ADDRESS 25 Mercado St CITY Durango STATE CO ZIP 81301			5. PICK-UP DATE 3/3/2020			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste					8. CONTAINERS No. 1 Type CM	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	b. 38,420								
	c.								
	d. 46,300 44,740 39,820								
A T O R	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TO 169,280					13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME JOE QUINTEROS PHONE NO (575) 887-4048 24-HOUR EMERGENCY NO.								
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC								
T R A N S P O R T E R S	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901				17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Roy Larson SIGNATURE [Signature] DATE 3/3/2020				19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE [Signature] DATE				
	20. COMMENTS								
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM			PHONE: 575-887-4048			
	PERMIT NO WM-01-035 - New Mexico								
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.								
AUTHORIZED SIGNATURE Santos Gonzalez					CELL NO.		DATE 3/3/2020		TIME 7:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135212

1. PAGE OF

2. TRAILER NO.

039

G

3. COMPANY NAME
AKA Energy Group LLC

PHONE NO.

4. ADDRESS
25 Mercado St

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/3/2020

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

N

b. 32,320

E

c.

R

d. 37,740 36,420 31,860

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 138,640

T

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE GUTIERROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

O

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

R

PRINTED/TYPED NAME

SIGNATURE

DATE

T

16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0801

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

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18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME Ruben Gonzalez

SIGNATURE Ruben Gonzalez

DATE

3/3/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO

DATE 3/3/2020

TIME 05
8

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135213

1. PAGE ___ OF ___

2. TRAILER NO.

022

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/3/2020	6. TNRCC I.D. NO.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	a. Non Hazardous, Non Regulated Waste		1	CM	
	b.				
	c.				
T R A N S P O R T E R S	d. 29,560 25,220 21,840				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048				
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T A L Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0801		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Gregorio M R SIGNATURE X [Signature] DATE 3/3/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
AUTHORIZED SIGNATURE Santos Monzalez		CELL NO.	DATE 3/3/2020	TIME 9:25	

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

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1. PAGE ___ OF ___

2. TRAILER NO.

011

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3. COMPANY NAME
AKA Energy Group LLC

PHONE NO.

4. ADDRESS
25 Mercado St

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/3/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d. 27,380 21,500 19,140

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 68,080

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

1

CM

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16

TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Diana Llanos

SIGNATURE

[Signature]

3/3/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE 3/3/2020

TIME

9:30

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135251

1. PAGE ___ OF ___

2. TRAILER NO.

039

G

3. COMPANY NAME
AKA Energy Group LLC

4. ADDRESS
25 Mercado St.

5. PICK-UP DATE
3/5/2020

PHONE NO.

CITY
Durango

STATE
CO

ZIP
81301

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

N

a. Non-Hazardous, Non-Regulated Waste

1

CM

E

b.

c.

R

d. 31,560 36,920 40,560

A

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 109,040

T

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

O

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

R

PRINTED/TYPED NAME

SIGNATURE

DATE

T

16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

MARK LARSON

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

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18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME / Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/5/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE 3/5/2020

TIME 9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

135252

1. PAGE ___ OF ___

2. TRAILER NO. #031

G

3. COMPANY NAME
AKA Energy Group LLC

4. ADDRESS
25 Mercado St.

5. PICK-UP DATE
3/5/2020

PHONE NO.

CITY
Durango

STATE
CO

ZIP
81301

6. TNRCC I.D. NO.

E

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

8. CONTAINERS

9. TOTAL

10. UNIT

11. TEXAS

N

Non-Hazardous, Non-Regulated Waste

No.

Type

QUANTITY

Wt/Vol.

WASTE ID #

E

a.

b.

c.

R

d. 3236LD 41,000

12. COMBINES OR SPECIAL INSTRUCTIONS:

13. WASTE PROFILE NO.

A

EMPIRE 150 GAS PLANT

TC 73.36LD

T

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

O

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

R

PRINTED/TYPED NAME

SIGNATURE

DATE

T

16.

TRANSPORTER (1)

LARSON & ASSOCIATES INC

NAME:

TEXAS I.D. NO.

MARK LARSON

IN CASE OF EMERGENCY CONTACT:

(432) 887-0801

EMERGENCY PHONE:

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

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18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

Tringler

3/5/2020

SIGNATURE

DATE

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

DISPOSAL SITE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/5/2020

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135253

1. PAGE ___ OF ___

2. TRAILER NO.

022

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3. COMPANY NAME
AKA Energy Group LLC

PHONE NO.

4. ADDRESS
25 Mercado St

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/5/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non-Hazardous, Non-Regulated Waste

8. CONTAINERS
No. Type

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

a.

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/5/2020

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135254

1. PAGE ___ OF ___

2. TRAILER NO

029

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3. COMPANY NAME

AKA ENERGY Group, LLC

PHONE NO.

4. ADDRESS

25 MERCADO ST.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/5/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a.

b.

c.

d.

42,000 45,000 36,000

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 123,120

13. WASTE PROFILE NO

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

Roy Young

SIGNATURE

[Signature]

DATE

3/5/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE 3/5/2020

TIME

9:35

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135255

1. PAGE ___ OF ___

2. TRAILER NO.

011

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3. COMPANY NAME
AKA Energy Group LLC
PHONE NO.

4. ADDRESS
25 Mercado St
CITY Durango
STATE CO
ZIP 81301

5. PICK-UP DATE
3/5/2020
6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d. 338LD 23,220 22,480

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

To 19,5LD

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO
(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)
NAME: LARSON & ASSOCIATES INC.
TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: MARK LARSON
EMERGENCY PHONE: (432) 887-0801

17. TRANSPORTER (2)
NAME:
TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

Diana Constantino
3/5/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Montaloz

CELL NO.

DATE 3/5/2020

TIME

10:40

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
3/6/2020	135299	Empire ABO Gas Plant	126,820	63.41
3/6/2020	135300	Empire ABO Gas Plant	111,200	55.60
3/6/2020	135301	Empire ABO Gas Plant	125,560	62.78
3/6/2020	135302	Empire ABO Gas Plant	41,240	20.62
3/6/2020	135303	Empire ABO Gas Plant	65,600	32.80
3/9/2020	135349	Empire ABO Gas Plant	66,420	33.21
3/9/2020	135350	Empire ABO Gas Plant	106,460	53.23
3/9/2020	135351	Empire ABO Gas Plant	123,220	61.61
3/9/2020	135352	Empire ABO Gas Plant	59,980	29.99
3/9/2020	135353	Empire ABO Gas Plant	106,780	53.39
3/10/2020	135428	Empire ABO Gas Plant	120,320	60.16
3/10/2020	135429	Empire ABO Gas Plant	58,620	29.31
3/10/2020	135430	Empire ABO Gas Plant	108,720	54.36
3/10/2020	135431	Empire ABO Gas Plant	48,200	24.10
3/10/2020	135432	Empire ABO Gas Plant	91,280	45.64
3/11/2020	135491	Empire ABO Gas Plant	98,900	49.45
3/11/2020	135492	Empire ABO Gas Plant	117,740	58.87
3/11/2020	135493	Empire ABO Gas Plant	114,020	57.01
3/11/2020	135494	Empire ABO Gas Plant	68,120	34.06
3/12/2020	135495	Empire ABO Gas Plant	104,540	52.27
3/12/2020	135552	Empire ABO Gas Plant	104,800	52.40
3/12/2020	135553	Empire ABO Gas Plant	64,600	32.30
3/12/2020	135554	Empire ABO Gas Plant	113,360	56.68
3/12/2020	135555	Empire ABO Gas Plant	116,300	58.15
3/12/2020	135557	Empire ABO Gas Plant	127,680	63.84
TOTALS:			2,390,480	1,195.24
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135299

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/8/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

42,320

44,660

39,840

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

126,820

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/8/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/8/2020

TIME 9:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135300**

1. PAGE ____ OF ____

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/6/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNROCC I.D. NO.
N E M O S	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	Non Hazardous, Non Regulated Waste				1 CM	
	b.					
	c.					
R A T E R	d. 34420 43940 32820					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT					13. WASTE PROFILE NO.
T R A N S P O R T E R S	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
O F F I C E R	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME		SIGNATURE		DATE	
T R A N S P O R T E R S	16. TRANSPORTER (1)		17. TRANSPORTER (2)			
	NAME: LARSON & ASSOCIATES INC.		NAME:			
	TEXAS I.D. NO.		TEXAS I.D. NO.			
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:			
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material			
	PRINTED/TYPED NAME: Reuben Gonzalez		PRINTED/TYPED NAME:			
	SIGNATURE: Reuben Gonzalez DATE: 3/6/2020		SIGNATURE: DATE:			
D I S P O S I T Y	Lea Land, LLC		ADDRESS:		PHONE:	
			Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
D I S P O S I T Y	AUTHORIZED SIGNATURE: Santa Gonzalez		CELL NO.		DATE: 3/6/2020	TIME: 9:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135301

1. PAGE ___ OF ___

2. TRAILER NO.

031

G
E
N
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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/8/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 125,560

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PRINTED/TYPED NAME

SIGNATURE

DATE

3/8/2020

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/8/2020

TIME

9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135302**

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME
AKA Energy Group LLC.
PHONE NO.

4. ADDRESS
25 Mercado St.
CITY **Durango** STATE **CO** ZIP **81301**

5. PICK-UP DATE
3/8/2020
6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. **1** Type **CM**

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO
(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

DATE

16. TRANSPORTER (1)

NAME: **LARSON & ASSOCIATES INC.**
TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT **MARK LARSON**
EMERGENCY PHONE: **(432) 887-0901**

17. TRANSPORTER (2)

NAME:
TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO

DATE **3/8/2020**

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WLST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135303

1. PAGE ___ OF ___

2. TRAILER NO.

022

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/8/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

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16

TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/8/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/8/2020

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135349

PAGE OF

2. TRAILER NO.

022

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/8/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

23,420 22,580 20,420

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TO 66,420

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Leopoldo Aguilar

SIGNATURE

DATE

3/8/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/8/2020

TIME

9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135350

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/9/2020			
			6. TNRCC I.D. NO.			
T R A N S P O R T E R S	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1 CM			
	b.					
	c.					
D I S P O S I T A L Y	d. 37,080 37,100 32,280					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT LC 106,460		13. WASTE PROFILE NO.			
T R A N S P O R T E R S	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME JOE ONTIVEROS PHONE NO. (575) 887-4048 24-HOUR EMERGENCY NO.					
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
D I S P O S I T A L Y	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
D I S P O S I T A L Y	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE Ruben Gonzalez DATE 3/9/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE			
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
D I S P O S I T A L Y	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
D I S P O S I T A L Y	AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO.		DATE 3/9/2020	TIME 9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.R.

NON-HAZARDOUS WASTE MANIFEST

NO

135351

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/8/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 123,220

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PRINTED/TYPED NAME

SIGNATURE

DATE

3/8/2020

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/8/2020

TIME

9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135352

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/8/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

17,820 22,340 19,820

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 59980

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/9/2020

TIME 9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62.180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135353**

1. PAGE ___ OF ___

2. TRAILER NO. **031**

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.	4. ADDRESS 25 Mercado St.	5. PICK-UP DATE 3/6/2020		
	PHONE NO.	CITY Durango	STATE CO	ZIP 81301	
	6. TNRCC I.D. NO.				
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste		8. CONTAINERS No. 1 Type CM	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
T R A N S P O R T E R S	b.				
	c.				
	d. 36,380 37,620 32,780				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 10/6,780		13. WASTE PROFILE NO.		
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.		NAME:		
	TEXAS I.D. NO.		TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Gregorio M/L		PRINTED/TYPED NAME		
	SIGNATURE [Signature] DATE 3/9/2020		SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE [Signature]		CELL NO.	DATE 3/9/2020	TIME 9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135428

1. PAGE ___ OF ___

2. TRAILER NO.

Q39

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/10/2020
	6. TNRCC I.D. NO.		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No. Type	9. TOTAL QUANTITY
	Non Hazardous, Non Regulated Waste	1 CM	
	b.		
T R A N S P O R T E R S	c.		
	d. 34,580 39,520 46,220		
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT	13. WASTE PROFILE NO. 10 120320	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME JOE ONTIVEROS PHONE NO. (575) 887-4048 24-HOUR EMERGENCY NO.		
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC		
D I S P O S I T O R	PRINTED/TYPED NAME	SIGNATURE	DATE
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE Ruben Gonzalez DATE 3/10/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM
	PHONE: 575-887-4048		
D I S P O S I T O R	PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.		
	AUTHORIZED SIGNATURE Santa Gonzalez	CELL NO.	DATE 3/10/2020
	TIME 10:00		

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135429

1. PAGE ____ OF ____

2. TRAILER NO.

011

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/10/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

20120

20480

17720

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 58620

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Signature

SIGNATURE

3/10/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Signature

CELL NO.

DATE

3/10/2020

TIME

05

10.

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62, 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135430

1. PAGE ___ OF ___

2. TRAILER NO

03

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/10/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

b.

c.

d.

35,580 38520 34620

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 108720

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Travis Lopez

SIGNATURE

DATE

3/10/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO.

DATE

3/10/2020

TIME

10:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
022

NON-HAZARDOUS WASTE MANIFEST

NO **135431**

PAGE ___ OF ___

2. TRAILER NO.

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/10/2020				
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #	
	Non Hazardous, Non Regulated Waste				1 CM				
	b.								
T R A N S P O R T E R S	c.								
	d. 24,680 23,520								
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT					13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT								
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.				
D I S P O S I T A L Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC								
	PRINTED/TYPED NAME				SIGNATURE				DATE
	16. TRANSPORTER (1)				17. TRANSPORTER (2)				
	NAME: LARSON & ASSOCIATES INC.				NAME:				
	TEXAS I.D. NO.				TEXAS I.D. NO.				
D I S P O S I T A L Y	IN CASE OF EMERGENCY CONTACT: MARK LARSON				IN CASE OF EMERGENCY CONTACT				
	EMERGENCY PHONE: (432) 687-0901				EMERGENCY PHONE:				
	18. TRANSPORTER (1): Acknowledgment of receipt of material				19. TRANSPORTER (2): Acknowledgment of receipt of material				
	PRINTED/TYPED NAME: Lupolito Aguilar				PRINTED TYPED NAME				
	SIGNATURE: [Signature] DATE: 3/10/2020				SIGNATURE: DATE				
D I S P O S I T A L Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM			PHONE: 575-887-4048			
	PERMIT NO. WM-01-035 - New Mexico				20. COMMENTS				
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.								
	AUTHORIZED SIGNATURE: [Signature]				CELL NO.		DATE: 3/10/2020	TIME: 10:15	

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO **135432**

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/10/2020

6. TNRCC ID. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type
1 CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

45 D60 46 220

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TC 9/280

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 687-0901**

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Mark Larson

SIGNATURE

X [Signature]

DATE

3/10/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE **3/10/2020**

TIME

10:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S.D.B.

NON-HAZARDOUS WASTE MANIFEST

NO

135491

1. PAGE ___ OF ___

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/11/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

to 98,900

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME Ruben Gonzalez

SIGNATURE Ruben Gonzalez DATE 3/11/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

3/11/2020

TIME

9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILL MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135492

1. PAGE ____ OF ____

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/11/2020				
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #	
	Non Hazardous, Non Regulated Waste				1 CM				
	b.								
T R A N S P O R T E R S	c.								
	d. 39,900 36,020 41820								
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT					13. WASTE PROFILE NO. 117,740			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT								
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.				
D I S P O S I T Y	15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				PRINTED/TYPED NAME			SIGNATURE	DATE
	16. TRANSPORTER (1)				17. TRANSPORTER (2)				
	NAME: LARSON & ASSOCIATES INC.				NAME:				
	TEXAS I.D. NO.				TEXAS I.D. NO.				
	IN CASE OF EMERGENCY CONTACT: MARK LARSON				IN CASE OF EMERGENCY CONTACT:				
EMERGENCY PHONE: (432) 887-0901				EMERGENCY PHONE:					
18. TRANSPORTER (1): Acknowledgment of receipt of material				19. TRANSPORTER (2): Acknowledgment of receipt of material					
PRINTED/TYPED NAME X Gregorio Martinez				PRINTED/TYPED NAME					
SIGNATURE X [Signature]				SIGNATURE					
DATE 3/11/2020				DATE					
Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM			PHONE: 575-887-4048				
PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS							
21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.									
AUTHORIZED SIGNATURE [Signature]				CELL NO.		DATE 3/11/2020		TIME 9:20	

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135493**

1. PAGE ___ OF ___

2. TRAILER NO. **031**

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/11/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

1

CM

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16. **TRANSPORTER (1)**

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17. **TRANSPORTER (2)**

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/11/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

**Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM**

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/11/2020

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135494**

1. PAGE ___ OF ___

2. TRAILER NO. **022**

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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/11/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

1

CM

9. TOTAL

QUANTITY

10. UNIT

Wt. Vol.

11. TEXAS

WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

1068120

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/11/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

**Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM**

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE **3/11/2020**

TIME

9:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135495

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/13/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

1

CM

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/13/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/13/2020

TIME

8:45

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135552

1. PAGE ____ OF ____

2. TRAILER NO

039

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.
CITY STATE ZIP
Durango CO 81301

5. PICK-UP DATE

3/12/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

36,820 32,260 35,720

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 104800

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

SIGNATURE

Ruben Gonzalez

DATE

3/12/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Montalvo

CELL NO.

DATE

3/12/2020

TIME

8:50

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135553

1. PAGE ___ OF ___

2. TRAILER NO.

011

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/12/2020

6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

20,840 20680 23080

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TP 64,600

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TPXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PRINTED/TYPED NAME

SIGNATURE

DATE

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/12/2020

TIME

8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

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NON-HAZARDOUS WASTE MANIFEST

NO **135554**

1. PAGE OF

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.	4. ADDRESS 25 Mercado St.	5. PICK-UP DATE 3/12/2020	
	PHONE NO.	CITY Durango	STATE CO	ZIP 81301
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste		8. CONTAINERS No. 1 Type CM	9. TOTAL QUANTITY
	10. UNIT Wt/Vol.		11. TEXAS WASTE ID #	
T R A N S P O R T E R S	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT			
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048	
	24-HOUR EMERGENCY NO.			
D I S P O S I T Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC			
	PRINTED/TYPED NAME		SIGNATURE	
	DATE			
D I S P O S I T Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)	
	NAME: LARSON & ASSOCIATES INC.		NAME:	
	TEXAS I.D. NO.		TEXAS I.D. NO.	
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:	
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:	
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material	
	PRINTED/TYPED NAME Travis Lopez		PRINTED/TYPED NAME	
	SIGNATURE [Signature] DATE 3/12/2020		SIGNATURE DATE	
D I S P O S I T Y	Lea Land, LLC		ADDRESS:	
	Mile Marker 64, U.S. Hwy 62/180,		PHONE:	
	30 Miles East of Carlsbad, NM		575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS	
D I S P O S I T Y	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.			
	AUTHORIZED SIGNATURE [Signature]		CELL NO.	
	DATE 3/12/2020		TIME 10:05	

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135555

1. PAGE ___ OF ___

2. TRAILER NO.

021

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/12/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

39,420

c.

d.

40060 34,520

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

to 114,300

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL GARCIA

SIGNATURE

Paul Garcia

DATE

3/12/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montalvo

CELL NO.

DATE 3/12/2020

TIME 10:35

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDB

NON-HAZARDOUS WASTE MANIFEST

NO

135557

1. PAGE ___ OF ___

2. TRAILER NO.

020

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/12/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d.

42880

43320

41480

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 1276.80

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

TOMAS GANDARILLO

SIGNATURE

TOMAS GANDARILLO

DATE 3/12/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/12/2020

TIME

11:10

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
3/16/2020	135579	Empire ABO Gas Plant	162,200	81.10
3/16/2020	135606	Empire ABO Gas Plant	48,860	24.43
3/16/2020	135607	Empire ABO Gas Plant	120,140	60.07
3/16/2020	135608	Empire ABO Gas Plant	136,020	68.01
3/16/2020	135609	Empire ABO Gas Plant	89,940	44.97
3/17/2020	135633	Empire ABO Gas Plant	72,380	36.19
3/17/2020	135634	Empire ABO Gas Plant	156,400	78.20
3/17/2020	135635	Empire ABO Gas Plant	163,940	81.97
3/17/2020	135636	Empire ABO Gas Plant	171,240	85.62
3/17/2020	135637	Empire ABO Gas Plant	128,480	64.24
3/17/2020	135651	Empire ABO Gas Plant	81,280	40.64
3/17/2020	135668	Empire ABO Gas Plant	86,480	43.24
3/18/2020	135685	Empire ABO Gas Plant	168,820	84.41
3/18/2020	135686	Empire ABO Gas Plant	154,260	77.13
3/18/2020	135687	Empire ABO Gas Plant	116,340	58.17
3/18/2020	135688	Empire ABO Gas Plant	125,220	62.61
3/18/2020	135689	Empire ABO Gas Plant	87,180	43.59
3/18/2020	135690	Empire ABO Gas Plant	74,700	37.35
3/18/2020	135691	Empire ABO Gas Plant	136,160	68.08
3/19/2020	135748	Empire ABO Gas Plant	74,660	37.33
3/19/2020	135749	Empire ABO Gas Plant	81,740	40.87
3/19/2020	135750	Empire ABO Gas Plant	80,240	40.12
3/19/2020	135751	Empire ABO Gas Plant	81,260	40.63
3/19/2020	135752	Empire ABO Gas Plant	83,180	41.59
3/19/2020	135753	Empire ABO Gas Plant	125,560	62.78
TOTALS:			2,806,680	1,403.34
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135579

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.		4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 3/10/2020	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste				8. CONTAINERS No. Type 1 CM	9. TOTAL QUANTITY
	b. 44,380				10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	c. 36,460 34,580 44,780					
T R A N S P O R T E R D I S P O S I T Y	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TO 16,2200				13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048					
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
T R A N S P O R T E R D I S P O S I T Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901			17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE Ruben Gonzalez DATE 3/10/2020			19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	20. COMMENTS					
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico					
	AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO.		DATE 3/10/2020	TIME 8:45

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135606

1. PAGE ___ OF ___

2. TRAILER NO.

011

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 3/18/2020	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:			8. CONTAINERS No. Type	9. TOTAL QUANTITY
	Non Hazardous, Non Regulated Waste			1 CM	
	b.				
T R A N S P O R T E R S	c.				
	d. 21,640 27,220				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT			13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048				
D I S P O S I T Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Diane Constantino SIGNATURE Diane Constantino 3/18/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE Santa		CELL NO.	DATE 3/18/2020	TIME 8:55

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SQR

NON-HAZARDOUS WASTE MANIFEST

NO

135607

1. PAGE OF

2. TRAILER NO.

021

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/16/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 120,140

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL GARCIA

SIGNATURE

Paul Garcia

DATE

3/16/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Monzalez

CELL NO.

DATE

3/16/2020

TIME

9:45

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135608

1. PAGE ___ OF ___

2. TRAILER NO.

020

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/18/2020	
	6. TNRCC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol
	Non Hazardous Non Regulated Waste	1 CM		
R E C E I V E R	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TP 136,020		13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT			
	NAME JOE ONTIVEROS		24-HOUR EMERGENCY NO.	
	PHONE NO. (575) 887-4048			
T R A N S P O R T E R S	15. GENERATOR'S CERTIFICATION: I Herely declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC			
	PRINTED/TYPED NAME		SIGNATURE	
	DATE		DATE	
D I S C O L D S I T Y	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:	
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME TOMAS GANDARILVA SIGNATURE TOMAS GANDARILVA DATE 3/16/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE	
	20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herely certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.			
D I S C O L D S I T Y	ADDRESS: Lea Land, LLC		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico			
	AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO. 10-45	DATE 3/16/2020

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135609

1. PAGE ____ OF ____

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/16/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b.

c.

d.

41,820 48,120

8. CONTAINERS

No.

Type

1

CM

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

89,940

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Gregorio Martinez

SIGNATURE

[Signature]

DATE

3/16/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

3/16/2020

TIME

3:30

1.

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135633

1. PAGE ___ OF ___

2. TRAILER NO

022

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/17/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

b.

c.

d.

27,560 20,100 24,720

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 42380

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/17/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO

DATE 3/17/2020

TIME

8.00

LEA LAND DISPOSAL SITE NEW MEXICO

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135634**

1. PAGE OF

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/17/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

b. **42920**

c.

d. **44460 28480 40540**

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 156,400

13. WASTE PROFILE NO.

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. **TRANSPORTER (1)**

NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 887-0801**

17. **TRANSPORTER (2)**

NAME:

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME **Ruben Gonzalez**

SIGNATURE **Ruben Gonzalez** DATE **3/17/2020**

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Antonio Gonzalez

CELL NO.

DATE **3/17/2020**

TIME **8:05**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135635

PAGE ___ OF ___

2. TRAILER NO.

020

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/17/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b. 38,840

d. 40160 40,420 44,520

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 887-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME: TOMAS BANDARILLA

SIGNATURE: TOMAS BANDARILLA DATE: 3/17/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME:

SIGNATURE: DATE:

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE: 3/17/2020

TIME: 8:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135636

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/17/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

b. 47,080

c.

d. 4,410 36,120 46,580

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 171,240

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ray Yago

SIGNATURE

X

DATE

3/17/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos

CELL NO.

DATE

3/17/2020

TIME

8:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135637**

1. PAGE ___ OF ___

2. TRAILER NO. **021**

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3. COMPANY NAME
AKA Energy Group LLC.
PHONE NO.

4. ADDRESS
25 Mercado St.
CITY **Durango** STATE **CO** ZIP **81301**

5. PICK-UP DATE
3/17/2020
6. TNRC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. **1** Type **CM**

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.
(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: **LARSON & ASSOCIATES INC.**
TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: **MARK LARSON**
EMERGENCY PHONE: **(432) 687-0901**

17. TRANSPORTER (2)

NAME:
TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE **3/17/2020**

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE **3/17/2020**

TIME **8:30**

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62, 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135651**

PAGE ___ OF ___

2. TRAILER NO.

Oil

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.	4. ADDRESS 25 Mercado St.	5. PICK-UP DATE 3/17/2020			
	PHONE NO.	CITY Durango	STATE CO	ZIP 81301		
	6. TNRCC I.D. NO.					
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
T R A N S P O R T E R S	Non Hazardous, Non Regulated Waste		1	CM		
	b.					
	c.					
	d. 26,180 24,960 30,140					
D I S P O S I T Y	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
D I S P O S I T Y	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1)		17. TRANSPORTER (2)			
	NAME: LARSON & ASSOCIATES INC.		NAME:			
	TEXAS I.D. NO.		TEXAS I.D. NO.			
D I S P O S I T Y	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:			
	EMERGENCY PHONE: (432) 887-0801		EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material			
	PRINTED/TYPED NAME: Santa Gonzalez		PRINTED/TYPED NAME:			
D I S P O S I T Y	SIGNATURE: Santa Gonzalez		SIGNATURE:			
	DATE: 3/17/2020		DATE:			
	ADDRESS:		PHONE:			
	Lea Land, LLC		Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		575-887-4048	
D I S P O S I T Y	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE: Santa Gonzalez		CELL NO.		DATE: 3/17/2020	TIME: 9:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135668

1. PAGE ___ OF ___

2. TRAILER NO.

031

G
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3. COMPANY NAME

AKA Energy Group LLC

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/17/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED.

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/17/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO

DATE 3/17/2020

TIME

12:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62.180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135685**

1. PAGE ___ OF ___

2. TRAILER NO. **031**

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.		4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 3/18/2020	
					6. TNRCC I.D. NO.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1 CM			
T R A N S P O R T E R S	b. 41,460					
	c.					
	d. 38620 44860 43,880					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO. 10 168820			
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME		SIGNATURE		DATE	
D I S P O S I T Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)			
	NAME: LARSON & ASSOCIATES INC.		NAME:			
	TEXAS I.D. NO.		TEXAS I.D. NO.			
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:			
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0001		EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material			
	PRINTED/TYPED NAME Gregorio Mtz		PRINTED/TYPED NAME			
	SIGNATURE [Signature] DATE 3/18/2020		SIGNATURE DATE			
D I S P O S I T Y	3. COMPANY NAME Lea Land, LLC		4. ADDRESS Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		5. PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 3/18/2020	TIME 8:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135686

1. PAGE ___ OF ___

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/18/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

1

CM

b.

28,940

c.

d.

38,620 38,680 48,020

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 154260

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ruben Gonzalez

PRINTED/TYPED NAME

SIGNATURE

Ruben Gonzalez

DATE

3/18/2020

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Montalvo

CELL NO.

DATE

3/18/2020

TIME

8:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135687

1. PAGE ___ OF ___

2. TRAILER NO.

011

G
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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/18/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

1

CM

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol

11. TEXAS

WASTE ID#

b. 30340

c.

d. 28,240 28,880 28,880

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TO 116,340

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

3/18/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE 3/18/2020

TIME 8:25

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135688

1. PAGE ___ OF ___

2. TRAILER NO.

021

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/18/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 125,220

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

PAUL SANCIA

SIGNATURE

Paul Sancia

DATE 3/18/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

3/18/2020

TIME

9:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **135689**

1. PAGE OF

2. TRAILER NO. **020**

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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY **Durango** STATE **CO** ZIP **81301**

5. PICK-UP DATE
3/18/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1 CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO
(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 887-0901**

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

THOMAS GANDARILIA DATE **3/18/2020**

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Monzalez

CELL NO.

DATE **3/18/2020**

TIME **9:30**

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135690

1. PAGE ___ OF ___

2. TRAILER NO.

022

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/18/2020		
	6. TNRCC I.D. NO.				
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste	1 CM			
T R A N S P O R T E R S	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME JOE ONTIVEROS PHONE NO. (575) 887-4048 24-HOUR EMERGENCY NO.				
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1) NAME LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Rafael Aguilera SIGNATURE [Signature] DATE 3/18/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED TYPED NAME SIGNATURE DATE		
	20. COMMENTS				
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
D I S P O S I T Y	22. AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 3/18/2020
	TIME 9:35				

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SIDR

NON-HAZARDOUS WASTE MANIFEST

NO **135691**

1. PAGE ___ OF ___

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/18/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:					8. CONTAINERS No. Type
	Non Hazardous, Non Regulated Waste					1 CM
T R A N S P O R T E R S	b.					
	c.					
	d. 48,520 43,560 44080					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT					13. WASTE PROFILE NO.
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.			NAME:		
	TEXAS I.D. NO.			TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901			EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Ray Yagor			PRINTED/TYPED NAME		
	SIGNATURE [Signature] DATE 3/18/2020			SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 3/18/2020	TIME 9:40

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135748

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 3/18/2020			
			6. TNRC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1	CM		
	b.					
T R A N S P O R T E R S	c.					
	d. 39,280 35,380					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048					
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
D I S P O S I T Y	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ruben Gonzalez SIGNATURE Ruben Gonzalez DATE 3/18/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE			
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.						
AUTHORIZED SIGNATURE Santa Gonzalez		CELL NO.		DATE 3/18/2020	TIME 8:05	

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

135749

1. PAGE OF

2. TRAILER NO.

029

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.		4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 3/19/2020			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste				1	CM		
	b.							
T R A N S P O R T E R S	c.							
	d.							
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048							
D I S P O S I T Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				PRINTED/TYPED NAME SIGNATURE DATE			
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901				17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Ray Yungo SIGNATURE [Signature] DATE 3/19/2020				19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE			
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048			
PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS						
21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.								
AUTHORIZED SIGNATURE [Signature]				CELL NO.		DATE 3/19/2020		TIME 8:15

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135750

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/19/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt Vol.

11. TEXAS
WASTE ID #

b.

c.

d. 39,280 40,960

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TO 80240

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME

Gregorio Martinez

SIGNATURE

[Signature]

DATE

3/19/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

3/19/2020

TIME

8:20

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO

135751

1. PAGE OF

2. TRAILER NO.

021

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 3/19/2020		
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	Non Hazardous, Non Regulated Waste		1 CM		
	b. c. d. 36,080 45180				
T R A N S P O R T E R S	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
D I S P O S I T Y	PRINTED/TYPED NAME		SIGNATURE		DATE
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 887-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME PAUL G. LARSON SIGNATURE Paul G. Larson DATE 3/19/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE		
	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
A U T H O R I Z E D	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE Dantas		CELL NO. Dontaluz	DATE 3/19/2020	TIME 8:45

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-1257

SOR

NON-HAZARDOUS WASTE MANIFEST

NO **135752**

1. PAGE ____ OF ____

2. TRAILER NO.

022

G
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3. COMPANY NAME
AKA Energy Group LLC.

PHONE NO.

4. ADDRESS
25 Mercado St.

CITY
Durango

STATE
CO

ZIP
81301

5. PICK-UP DATE
3/19/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS
No. Type
1 CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol.

11. TEXAS
WASTE ID #

b.

c.

d. **29760 23840 29580**

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

TC 83180

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME
JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16. TRANSPORTER (1)

NAME: **LARSON & ASSOCIATES INC.**

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: **MARK LARSON**

EMERGENCY PHONE: **(432) 887-0801**

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/19/2020

19. **TRANSPORTER (2):** Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/19/2020

TIME

9:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62.180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

3DR

NON-HAZARDOUS WASTE MANIFEST

NO **135753**

1. PAGE ___ OF ___

2. TRAILER NO. **020**

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 3/18/2020	6. TNRCC I.D. NO.	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED: Non Hazardous, Non Regulated Waste		8. CONTAINERS No. 1 Type CM	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	b.				
	c.				
	d. 42020 39,560 43980				
12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT			13. WASTE PROFILE NO. TC 125,560		
T R A N S P O R T E R S	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.
D I S P O S I T A R Y	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T A R Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.		NAME:		
	TEXAS I.D. NO.		TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T A R Y	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME THOMAS GANDARILHA		PRINTED/TYPED NAME		
	SIGNATURE THOMAS GANDARILHA DATE 3/18/2020		SIGNATURE DATE		
D I S P O S I T A R Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
	AUTHORIZED SIGNATURE Santos Gonzalez		CELL NO.	DATE 3/18/2020	TIME 9:10

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
3/27/2020	136008	Empire ABO Gas Plant	170,580	85.29
3/27/2020	136009	Empire ABO Gas Plant	95,900	47.95
3/27/2020	136010	Empire ABO Gas Plant	153,760	76.88
3/30/2020	136070	Empire ABO Gas Plant	117,360	58.68
3/30/2020	136071	Empire ABO Gas Plant	149,960	74.98
3/30/2020	136089	Empire ABO Gas Plant	83,920	41.96
3/31/2020	136123	Empire ABO Gas Plant	126,300	63.15
3/31/2020	136125	Empire ABO Gas Plant	132,780	66.39
3/31/2020	136126	Empire ABO Gas Plant	141,200	70.60
4/1/2020	136188	Empire ABO Gas Plant	55,960	27.98
4/2/2020	136204	Empire ABO Gas Plant	150,580	75.29
4/2/2020	136205	Empire ABO Gas Plant	151,240	75.62
TOTALS:			1,529,540	764.77
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
039

NON-HAZARDOUS WASTE MANIFEST

NO

136008

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/27/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b. 39480

c.

d. 38320 45960 46820

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 170580

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Gregorio MTR

SIGNATURE

DATE

3/27/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

3/27/2020

800

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136009

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/27/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

48760 47140

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

TC 95900

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0801

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Irving Lopez

SIGNATURE

DATE

3/27/2020

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

Joe Ontiveros

3/27/2020

805

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 U.S. HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR
029

NON-HAZARDOUS WASTE MANIFEST

NO

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/27/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

53840 50560 49360

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TC 153760

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Ray Yeager

SIGNATURE

DATE

3/27/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO

DATE

TIME

3/27/2020

850

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **136070**

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.		4. ADDRESS 25 Mercado St.		5. PICK-UP DATE 3/30/2020	
	PHONE NO.		CITY Durango	STATE CO	ZIP 81301	6. TNRCC I.D. NO.
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:				8. CONTAINERS No. Type	9. TOTAL QUANTITY
	a. Non Hazardous, Non Regulated Waste				1	CM
T R A N S P O R T E R S	b.					
	c.					
	d. 42600 29340 45420					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT				13. WASTE PROFILE NO. TC 117360	
D I S P O S I T Y	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME			SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)			17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.			NAME:		
	TEXAS I.D. NO.			TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON			IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 687-0901			EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material			19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Gregorio Martinez			PRINTED/TYPED NAME		
	SIGNATURE X DATE 3/30/2020			SIGNATURE DATE		
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE Santos Manzanor			CELL NO.	DATE 3/30/2020	TIME 9:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136071

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/30/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d. 52,680 46,700 50,580

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

T 149960

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC.

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Thomas Gandarilla

PRINTED/TYPED NAME

SIGNATURE

Thomas Gandarilla

DATE

3/30/2020

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santos Gonzalez

CELL NO.

DATE

3/30/2020

TIME

9:35

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136089

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/30/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

Non Hazardous, Non Regulated Waste

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

13. WASTE PROFILE NO.

To 83920

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO.

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

LARSON & ASSOCIATES INC.

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

MARK LARSON

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Sam Ruppke

SIGNATURE

Sam Ruppke

DATE

3/30/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Antonio Gonzalez

CELL NO.

DATE

3/30/2020

TIME

11:45

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136123

1. PAGE ___ OF ___

2. TRAILER NO.

039

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/31/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TC 126,300

8. CONTAINERS

No.

Type

9. TOTAL QUANTITY

10. UNIT Wt/Vol.

11. TEXAS WASTE ID

1

CM

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

3/31/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

3/31/2020

TIME

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136125

1. PAGE ___ OF ___

2. TRAILER NO.

031

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3. COMPANY NAME

AKA Energy Group LLC.
PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

STATE

ZIP

Durango

CO

81301

5. PICK-UP DATE

3/31/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TC 132,780

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
Wt/Vol

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO.

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

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16. TRANSPORTER (1)

NAME: LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT: MARK LARSON

EMERGENCY PHONE: (432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED TYPED NAME Sam Rudke

SIGNATURE Sam Rudke DATE 3/31/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

CELL NO.

DATE

TIME

Santos Gonzalez

/

3/31/2020

9:35

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62. 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SOP

NON-HAZARDOUS WASTE MANIFEST

NO

136126

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

3/31/2020

6. TNRC ID NO

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

41,160 39,620 60,420
TC 141,200

8. CONTAINERS
No. Type

1

CM

9. TOTAL
QUANTITY

10. UNIT
We Vol.

11. TEXAS
WASTE ID #

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16.

TRANSPORTER (1)

NAME

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0801

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Thomas Gandarria

PRINTED/TYPED NAME

SIGNATURE

Thomas Gandarria 3/31/2020

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Santa Gonzalez

CELL NO.

DATE

3/31/2020

9.40

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136188

1. PAGE ___ OF ___

2. TRAILER NO.

029

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

4/1/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

55,960

12. COMMENTS OR SPECIAL INSTRUCTIONS:

EMPIRE ABO GAS PLANT

8. CONTAINERS

No.

Type

9. TOTAL

QUANTITY

10. UNIT

Wt/Vol.

11. TEXAS

WASTE ID #

1

CM

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

PHONE NO

24-HOUR EMERGENCY NO.

JOE ONTIVEROS

(575) 887-4048

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

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16

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 887-0901

17.

TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

L. Roy / page

SIGNATURE

X [Signature]

DATE

4/1/2020

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED TYPED NAME

SIGNATURE

DATE

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Lea Land, LLC

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

PERMIT NO.

WM-01-035 - New Mexico

20. COMMENTS

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

[Signature]

CELL NO.

DATE

4/1/2020

TIME

1:50

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO **136204**

1. PAGE ___ OF ___

2. TRAILER NO. **039**

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY Durango STATE CO ZIP 81301	5. PICK-UP DATE 4/2/2020			
			6. TNRCC I.D. NO.			
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. 1 Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1 CM			
T R A N S P O R T E R S	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 150,580		13. WASTE PROFILE NO.			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
D I S P O S I T A R Y	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME [Signature] SIGNATURE [Signature] DATE 4/2/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE			
	20. COMMENTS					
D I S P O S I T A R Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico					
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.	DATE 4/2/2020	TIME 8:55	

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62.180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

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031

NON-HAZARDOUS WASTE MANIFEST

NO **136205**

1. PAGE ___ OF ___

2. TRAILER NO.

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301		5. PICK-UP DATE 4/2/2020	
	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.
	a. Non Hazardous, Non Regulated Waste		1	CM	
	b.				
T R A N S P O R T E R S	c.				
	d. 47,660 50580 53,000				
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT TC 151,240			13. WASTE PROFILE NO.	
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT				
D I S P O S I T Y	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.
	15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC				
	PRINTED/TYPED NAME		SIGNATURE		DATE
D I S P O S I T Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)		
	NAME: LARSON & ASSOCIATES INC.		NAME:		
	TEXAS I.D. NO.		TEXAS I.D. NO.		
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:		
D I S P O S I T Y	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:		
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material		
	PRINTED/TYPED NAME Michael Manzanera		PRINTED/TYPED NAME		
	SIGNATURE [Signature] DATE 4/2/2020		SIGNATURE DATE		
D I S P O S I T Y	ADDRESS: Lea Land, LLC		PHONE: 575-887-4048		
	Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM				
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS		
	21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.				
D I S P O S I T Y	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 4/2/2020
					TIME

AKA Energy Weights Statement

<i>Receive Date</i>	<i>Manifest Number</i>	<i>Lease Name</i>	<i>Weight (lbs.)</i>	<i>Weight (Tons)</i>
4/3/2020	136232	Empire ABO Gas Plant	101,220	50.61
4/3/2020	136233	Empire ABO Gas Plant	172,280	86.14
4/8/2020	136289	Empire ABO Gas Plant	22,580	11.29
<i>TOTALS:</i>			296,080	148.04
			<i>lbs.</i>	<i>Tons</i>

Lea Land Landfill New Mexico

Mile Market # 64 US Highway 62/180

30 miles East of Carlsbad, NM * (505) 887-4048

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136232

1. PAGE ___ OF ___

2. TRAILER NO.

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3. COMPANY NAME

AKA Energy Group LLC.

PHONE NO.

4. ADDRESS

25 Mercado St.

CITY

Durango

STATE

CO

ZIP

81301

5. PICK-UP DATE

4/3/2020

6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

a. Non Hazardous, Non Regulated Waste

b.

c.

d.

46,080 55,140

12. COMMENTS OR SPECIAL INSTRUCTIONS:
EMPIRE ABO GAS PLANT

TC 101,220

13. WASTE PROFILE NO.

14.

IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME

JOE ONTIVEROS

PHONE NO

(575) 887-4048

24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME

SIGNATURE

DATE

16.

TRANSPORTER (1)

NAME:

LARSON & ASSOCIATES INC.

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

MARK LARSON

EMERGENCY PHONE:

(432) 687-0901

18. TRANSPORTER (1): Acknowledgment of receipt of material

PRINTED/TYPED NAME

Gregorio Ortiz

SIGNATURE

X

DATE

4/3/2020

17. TRANSPORTER (2)

NAME:

TEXAS I.D. NO.

IN CASE OF EMERGENCY CONTACT:

EMERGENCY PHONE:

19. TRANSPORTER (2): Acknowledgment of receipt of material

PRINTED/TYPED NAME

SIGNATURE

DATE

PERMIT NO.

WM-01-035 - New Mexico

ADDRESS:

Mile Marker 64, U.S. Hwy 62/180,
30 Miles East of Carlsbad, NM

PHONE:

575-887-4048

21. DISPOSAL FACILITY'S CERTIFICATION: I hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

Antonio Gonzalez

CELL NO.

DATE

4/3/2020

TIME

9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136233

1. PAGE ___ OF ___

2. TRAILER NO.

031

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC. PHONE NO.	4. ADDRESS 25 Mercado St. CITY STATE ZIP Durango CO 81301	5. PICK-UP DATE 4/3/2020			
			6. TNRCC I.D. NO.			
T R A N S P O R T E R S	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	a. Non Hazardous, Non Regulated Waste		1 CM			
	b.					
	c.					
D I S P O S I T Y	d. 51,400 54,080 6,6800					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT		13. WASTE PROFILE NO. 1c 172280			
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT NAME PHONE NO. 24-HOUR EMERGENCY NO. JOE ONTIVEROS (575) 887-4048					
D I S P O S I T Y	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME		SIGNATURE		DATE	
	16. TRANSPORTER (1) NAME: LARSON & ASSOCIATES INC. TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: MARK LARSON EMERGENCY PHONE: (432) 687-0901		17. TRANSPORTER (2) NAME: TEXAS I.D. NO. IN CASE OF EMERGENCY CONTACT: EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material PRINTED/TYPED NAME Macitael Montano SIGNATURE Macitael Montano DATE 4/3/2020		19. TRANSPORTER (2): Acknowledgment of receipt of material PRINTED/TYPED NAME SIGNATURE DATE			
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
D I S P O S I T Y	AUTHORIZED SIGNATURE Santos Montano		CELL NO.		DATE 4/3/2020	TIME 9:00

GENERATOR: COPIES 1 & 6

DISPOSAL SITE: COPIES 2 & 3

TRANSPORTERS: COPIES 4 & 5

COPY 1

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62 180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST

NO

136289

1. PAGE ___ OF ___

2. TRAILER NO.

039

G E N E R A T O R	3. COMPANY NAME AKA Energy Group LLC.	4. ADDRESS 25 Mercado St.	5. PICK-UP DATE 4/8/2020			
	PHONE NO.	CITY Durango STATE CO ZIP 81301	6. TNRCC I.D. NO.			
T R A N S P O R T E R D I S P O S I T Y	7. NAME OR DESCRIPTION OF WASTE SHIPPED:		8. CONTAINERS No. Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
	Non Hazardous, Non Regulated Waste		1 CM			
	b.					
	c.					
	d. 22,580					
	12. COMMENTS OR SPECIAL INSTRUCTIONS: EMPIRE ABO GAS PLANT			13. WASTE PROFILE NO.		
	14. IN CASE OF EMERGENCY OR SPILL, CONTACT					
	NAME JOE ONTIVEROS		PHONE NO. (575) 887-4048		24-HOUR EMERGENCY NO.	
	15. GENERATOR'S CERTIFICATION: I Herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC					
	PRINTED/TYPED NAME		SIGNATURE		DATE	
T R A N S P O R T E R D I S P O S I T Y	16. TRANSPORTER (1)		17. TRANSPORTER (2)			
	NAME: LARSON & ASSOCIATES INC.		NAME:			
	TEXAS I.D. NO.		TEXAS I.D. NO.			
	IN CASE OF EMERGENCY CONTACT: MARK LARSON		IN CASE OF EMERGENCY CONTACT:			
	EMERGENCY PHONE: (432) 887-0901		EMERGENCY PHONE:			
	18. TRANSPORTER (1): Acknowledgment of receipt of material		19. TRANSPORTER (2): Acknowledgment of receipt of material			
	PRINTED/TYPED NAME Gregorio M		PRINTED/TYPED NAME			
	SIGNATURE [Signature] DATE 4/8/2020		SIGNATURE DATE			
D I S P O S I T Y	Lea Land, LLC		ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM		PHONE: 575-887-4048	
	PERMIT NO. WM-01-035 - New Mexico		20. COMMENTS			
	21. DISPOSAL FACILITY'S CERTIFICATION: I Herby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.					
	AUTHORIZED SIGNATURE [Signature]		CELL NO.		DATE 4/8/2020	TIME 9:30

Appendix C
Laboratory Reports



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-001	653189-002	653189-003	653189-004	653189-005	653189-006
	Field Id:	2A East	2A Bot	2A West	2B East	2B Bot	2B West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:19	02.20.2020 12:19	02.20.2020 12:19	02.20.2020 12:20	02.20.2020 12:20	02.20.2020 12:20
BTEX by EPA 8021B	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 00:27	02.21.2020 00:47	02.21.2020 01:07	02.21.2020 01:28	02.21.2020 01:48	02.21.2020 02:09
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.0198 0.0198	<0.00399 0.00399	<0.00395 0.00395	<0.00399 0.00399	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.20.2020 19:17	02.20.2020 19:36	02.20.2020 19:42	02.20.2020 19:48	02.20.2020 19:54	02.20.2020 20:12
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	<10.0 10.0	<10.1 10.1	164 10.0	13.2 9.92	12.1 9.88	68.8 9.98
TPH by SW8015 Mod	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 03:01	02.21.2020 12:42	02.21.2020 12:42	02.21.2020 05:17	02.21.2020 06:16	02.21.2020 07:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.2 50.2	<50.2 50.2	<50.0 50.0	<50.1 50.1	<50.2 50.2
	Diesel Range Organics (DRO)	<50.0 50.0	3670 50.2	784 50.2	341 50.0	441 50.1	249 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	1460 50.2	276 50.2	93.8 50.0	130 50.1	103 50.2
Total TPH		<50.0 50.0	5130 50.2	1060 50.2	435 50.0	571 50.1	352 50.2

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

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

John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-007	653189-008	653189-009	653189-010	653189-011	653189-012
	Field Id:	2C East	2C Bot	2C West	2D East	2D Bot	2D West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:21	02.20.2020 12:21	02.20.2020 12:21	02.20.2020 12:22	02.20.2020 12:22	02.20.2020 12:22
BTEX by EPA 8021B	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 02:29	02.21.2020 02:50	02.21.2020 03:10	02.21.2020 03:30	02.21.2020 04:32	02.21.2020 04:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
	Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
m,p-Xylenes		<0.00401 0.00401	<0.00401 0.00401	<0.0198 0.0198	<0.00401 0.00401	<0.00402 0.00402	<0.0198 0.0198
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.20.2020 20:18	02.20.2020 20:24	02.20.2020 20:30	02.20.2020 20:36	02.20.2020 20:42	02.20.2020 21:00
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	13.3 9.94	15.6 9.96	11.4 9.96	20.4 9.98	15.4 9.92	16.6 9.92
TPH by SW8015 Mod	Extracted:	02.20.2020 17:00	02.20.2020 17:30	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 04:58	02.21.2020 18:13	02.21.2020 08:12	02.21.2020 05:37	02.21.2020 05:37	02.21.2020 07:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9	<49.8 49.8	<50.2 50.2	<49.8 49.8	<49.9 49.9	<50.2 50.2
	Diesel Range Organics (DRO)	143 49.9	<49.8 49.8	1380 50.2	106 49.8	228 49.9	1120 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	740 50.2	<49.8 49.8	321 49.9	924 50.2
Total TPH		143 49.9	<49.8 49.8	2120 50.2	106 49.8	549 49.9	2040 50.2

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

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

John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-013	653189-014	653189-015	653189-016	653189-017	653189-018
	Field Id:	2E East	2E Bot	2E West	3A East	3A Bot	3A West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:23	02.20.2020 12:23	02.20.2020 12:23	02.20.2020 12:24	02.20.2020 12:24	02.20.2020 12:24
BTEX by EPA 8021B	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 05:12	02.21.2020 05:33	02.21.2020 05:53	02.21.2020 06:14	02.21.2020 06:34	02.21.2020 06:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
	Toluene	<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.0198 0.0198	<0.00399 0.00399	<0.00402 0.00402	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00990 0.00990	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.20.2020 21:09	02.20.2020 21:35	02.20.2020 21:44	02.20.2020 21:52	02.20.2020 22:01	02.20.2020 22:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	12.2 10.0	21.9 9.98	12.8 9.92	19.3 9.88	19.4 9.98	22.7 9.88
TPH by SW8015 Mod	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00
	Analyzed:	02.21.2020 05:56	02.21.2020 05:56	02.21.2020 07:52	02.21.2020 06:35	02.21.2020 06:54	02.21.2020 07:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	<50.2 50.2	<50.1 50.1	<49.8 49.8	<50.2 50.2	<49.9 49.9
	Diesel Range Organics (DRO)	77.6 50.1	336 50.2	1150 50.1	363 49.8	412 50.2	224 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	236 50.2	937 50.1	122 49.8	376 50.2	116 49.9
Total TPH		77.6 50.1	572 50.2	2090 50.1	485 49.8	788 50.2	340 49.9

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

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

John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-019	653189-020	653189-021	653189-022	653189-023	653189-024
	Field Id:	3B East	3B Bot	3B West	3C East	3C Bot	3C West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:25	02.20.2020 12:25	02.20.2020 12:25	02.20.2020 12:26	02.20.2020 12:26	02.20.2020 12:26
BTEX by EPA 8021B	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00
	Analyzed:	02.21.2020 07:15	02.21.2020 07:35	02.21.2020 00:44	02.21.2020 01:05	02.21.2020 01:25	02.21.2020 01:46
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00401 0.00401	<0.00402 0.00402	<0.00391 0.00391	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00196 0.00196	<0.00199 0.00199
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.20.2020 22:19	02.20.2020 22:27	02.21.2020 08:36	02.20.2020 23:41	02.20.2020 23:50	02.20.2020 23:59
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<9.98 9.98	20.7 9.98	102 X 10.0	<9.98 9.98	10.2 9.92	42.9 9.98
TPH by SW8015 Mod	Extracted:	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:00	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15
	Analyzed:	02.21.2020 04:39	02.21.2020 06:16	02.21.2020 13:02	02.21.2020 09:30	02.21.2020 10:10	02.21.2020 10:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.1 50.1	<50.1 50.1	<50.0 50.0	<50.2 50.2	<50.1 50.1
Diesel Range Organics (DRO)		<49.8 49.8	297 50.1	1640 50.1	95.6 50.0	116 50.2	58.7 50.1
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	169 50.1	661 50.1	56.2 50.0	79.8 50.2	<50.1 50.1
Total TPH		<49.8 49.8	466 50.1	2300 50.1	152 50.0	196 50.2	58.7 50.1

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John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-025	653189-026	653189-027	653189-028	653189-029	653189-030
	Field Id:	3D East	3D Bot	3D West	3E East	3E Bot	3E West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:27	02.20.2020 12:27	02.20.2020 12:27	02.20.2020 12:28	02.20.2020 12:28	02.20.2020 12:28
BTEX by EPA 8021B	Extracted:	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00
	Analyzed:	02.21.2020 02:06	02.21.2020 02:26	02.21.2020 02:47	02.21.2020 03:07	02.21.2020 03:28	02.21.2020 03:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
	Toluene	<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.0202 0.0202	<0.00398 0.00398	<0.00392 0.00392	<0.00402 0.00402
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.0101 0.0101	<0.00199 0.00199	<0.00196 0.00196	<0.00201 0.00201
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.21.2020 00:08	02.21.2020 00:36	02.21.2020 00:45	02.21.2020 00:54	02.21.2020 01:03	02.21.2020 01:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	<9.92 9.92	<9.92 9.92	<9.98 9.98	10.9 9.92	11.8 9.96	18.3 9.94
TPH by SW8015 Mod	Extracted:	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15
	Analyzed:	02.21.2020 10:29	02.21.2020 10:29	02.21.2020 13:42	02.21.2020 14:01	02.21.2020 10:49	02.21.2020 12:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	<50.2 50.2	<49.9 49.9	<50.2 50.2	<50.1 50.1	<50.2 50.2
	Diesel Range Organics (DRO)	95.6 50.1	300 50.2	579 49.9	1230 50.2	214 50.1	394 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	213 50.2	325 49.9	492 50.2	104 50.1	299 50.2
Total TPH		95.6 50.1	513 50.2	904 49.9	1720 50.2	318 50.1	693 50.2

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John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-031		653189-032		653189-033		653189-034		653189-035		653189-036		
	Field Id:	4A East		4A Bot		4A West		4B East		4B Bot		4B West		
	Depth:	0.5- ft		1- ft		0.5- ft		0.5- ft		1- ft		0.5- ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	02.20.2020 12:29		02.20.2020 12:29		02.20.2020 12:29		02.20.2020 12:30		02.20.2020 12:30		02.20.2020 12:30		
BTEX by EPA 8021B		Extracted:	02.20.2020 18:00		02.20.2020 18:00		02.20.2020 18:00		02.20.2020 18:00		02.20.2020 18:00		02.20.2020 18:00	
		Analyzed:	02.21.2020 04:49		02.21.2020 05:10		02.21.2020 05:30		02.21.2020 05:50		02.21.2020 06:11		02.21.2020 06:31	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403	<0.00402	0.00402	<0.00403	0.00403	<0.00402	0.00402	<0.0200	0.0200	
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.0100	0.0100	
Chloride by EPA 300		Extracted:	02.20.2020 17:30		02.20.2020 17:30		02.20.2020 17:30		02.20.2020 17:30		02.20.2020 17:30		02.20.2020 17:30	
		Analyzed:	02.21.2020 01:22		02.21.2020 01:49		02.21.2020 01:59		02.21.2020 02:26		02.21.2020 02:35		02.21.2020 02:45	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.98	9.98	11.2	9.92	<9.98	9.98	<9.88	9.88	14.6	9.98	21.7	9.92	
TPH by SW8015 Mod		Extracted:	02.20.2020 17:15		02.20.2020 17:15		02.20.2020 17:15		02.20.2020 17:15		02.20.2020 17:15		02.20.2020 17:15	
		Analyzed:	02.21.2020 13:22		02.21.2020 10:49		02.21.2020 14:01		02.21.2020 11:21		02.21.2020 11:21		02.21.2020 13:22	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.0	50.0	<49.9	49.9	<50.2	50.2	<50.1	50.1	<50.0	50.0	
Diesel Range Organics (DRO)		918	50.1	279	50.0	492	49.9	138	50.2	299	50.1	552	50.0	
Motor Oil Range Hydrocarbons (MRO)		417	50.1	129	50.0	308	49.9	66.9	50.2	204	50.1	542	50.0	
Total TPH		1340	50.1	408	50.0	800	49.9	205	50.2	503	50.1	1090	50.0	

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John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-037	653189-038	653189-039	653189-040	653189-041	653189-042
	Field Id:	4C East	4C Bot	4C West	4D East	4D Bot	4D West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:31	02.20.2020 12:31	02.20.2020 12:31	02.20.2020 12:32	02.20.2020 12:32	02.20.2020 12:32
BTEX by EPA 8021B	Extracted:	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 18:00	02.20.2020 20:00	02.20.2020 20:00
	Analyzed:	02.21.2020 06:52	02.21.2020 07:12	02.21.2020 07:32	02.21.2020 07:53	02.21.2020 10:39	02.21.2020 11:00
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
	Toluene	<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
Ethylbenzene		<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
m,p-Xylenes		<0.0198 0.0198	<0.00399 0.00399	<0.0198 0.0198	<0.0202 0.0202	<0.00400 0.00400	<0.0198 0.0198
o-Xylene		<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
Total Xylenes		<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
Total BTEX		<0.00990 0.00990	<0.00200 0.00200	<0.00990 0.00990	<0.0101 0.0101	<0.00200 0.00200	<0.00990 0.00990
Chloride by EPA 300	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.21.2020 07:30	02.21.2020 07:30
	Analyzed:	02.21.2020 02:54	02.21.2020 03:03	02.21.2020 03:12	02.21.2020 03:22	02.21.2020 09:36	02.21.2020 09:54
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	11.5 9.90	13.2 10.1	42.8 9.94	93.6 9.92	11.3 9.98	<9.92 9.92
TPH by SW8015 Mod	Extracted:	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:15	02.20.2020 17:30
	Analyzed:	02.21.2020 13:42	02.21.2020 11:40	02.21.2020 12:00	02.21.2020 12:23	02.21.2020 12:00	02.21.2020 19:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.3 50.3	<49.8 49.8	<50.0 50.0
	Diesel Range Organics (DRO)	1640 50.2	224 50.2	249 50.1	622 50.3	238 49.8	397 50.0
Motor Oil Range Hydrocarbons (MRO)		1210 50.2	114 50.2	239 50.1	610 50.3	119 49.8	177 50.0
Total TPH		2850 50.2	338 50.2	488 50.1	1230 50.3	357 49.8	574 50.0

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John Builes
Project Manager



Certificate of Analysis Summary 653189

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: Artesia

Date Received in Lab: Thu 02.20.2020 15:25

Report Date: 02.24.2020 14:03

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653189-043	653189-044	653189-045	653189-046	653189-047	653189-048
	Field Id:	4E East	4E Bot	4E West	4F East	4F Bot	4F West
	Depth:	0.5- ft	1- ft	0.5- ft	0.5- ft	1- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	02.20.2020 12:33	02.20.2020 12:33	02.20.2020 12:33	02.20.2020 12:34	02.20.2020 12:34	02.20.2020 12:34
BTEX by EPA 8021B	Extracted:	02.20.2020 20:00	02.20.2020 20:00	02.20.2020 20:00	02.20.2020 20:00	02.20.2020 20:00	02.20.2020 20:00
	Analyzed:	02.21.2020 11:20	02.21.2020 11:41	02.21.2020 12:01	02.21.2020 12:22	02.21.2020 12:42	02.21.2020 13:03
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100
	Toluene	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100
Ethylbenzene	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100	<0.0100 0.0100
m,p-Xylenes	<0.0200 0.0200	<0.0196 0.0196	<0.0198 0.0198	<0.0200 0.0200	<0.0198 0.0198	<0.0200 0.0200	<0.0200 0.0200
o-Xylene	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100	<0.0100 0.0100
Total Xylenes	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100	<0.0100 0.0100
Total BTEX	<0.0100 0.0100	<0.00980 0.00980	<0.00990 0.00990	<0.0100 0.0100	<0.00990 0.00990	<0.0100 0.0100	<0.0100 0.0100
Chloride by EPA 300	Extracted:	02.21.2020 07:30	02.21.2020 07:30	02.21.2020 07:30	02.21.2020 07:30	02.21.2020 07:30	02.21.2020 07:30
	Analyzed:	02.21.2020 10:00	02.21.2020 10:06	02.21.2020 10:11	02.21.2020 10:28	02.21.2020 10:34	02.21.2020 10:40
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	92.0 9.98	10.9 10.0	12.8 9.88	<9.90 9.90	10.4 9.98	41.6 9.88
TPH by SW8015 Mod	Extracted:	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30	02.20.2020 17:30
	Analyzed:	02.21.2020 19:12	02.21.2020 19:32	02.21.2020 20:11	02.21.2020 19:12	02.21.2020 19:32	02.21.2020 19:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	<50.0 50.0	<50.0 50.0	<249 249	<49.9 49.9	<50.1 50.1
	Diesel Range Organics (DRO)	836 50.1	988 50.0	526 50.0	5810 249	837 49.9	1080 50.1
Motor Oil Range Hydrocarbons (MRO)	1050 50.1	559 50.0	629 50.0	5250 249	563 49.9	1140 50.1	
Total TPH	1890 50.1	1550 50.0	1160 50.0	11100 249	1400 49.9	2220 50.1	

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John Builes
Project Manager



Analytical Report 653189

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire ABO

06-0141-11

02.24.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.24.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653189**

Empire ABO

Project Address: Artesia

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653189. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653189 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink, appearing to read 'JB', is written over a horizontal line.

John Builes
Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
2A East	S	02.20.2020 12:19	0.5 ft	653189-001
2A Bot	S	02.20.2020 12:19	1 ft	653189-002
2A West	S	02.20.2020 12:19	0.5 ft	653189-003
2B East	S	02.20.2020 12:20	0.5 ft	653189-004
2B Bot	S	02.20.2020 12:20	1 ft	653189-005
2B West	S	02.20.2020 12:20	0.5 ft	653189-006
2C East	S	02.20.2020 12:21	0.5 ft	653189-007
2C Bot	S	02.20.2020 12:21	1 ft	653189-008
2C West	S	02.20.2020 12:21	0.5 ft	653189-009
2D East	S	02.20.2020 12:22	0.5 ft	653189-010
2D Bot	S	02.20.2020 12:22	1 ft	653189-011
2D West	S	02.20.2020 12:22	0.5 ft	653189-012
2E East	S	02.20.2020 12:23	0.5 ft	653189-013
2E Bot	S	02.20.2020 12:23	1 ft	653189-014
2E West	S	02.20.2020 12:23	0.5 ft	653189-015
3A East	S	02.20.2020 12:24	0.5 ft	653189-016
3A Bot	S	02.20.2020 12:24	1 ft	653189-017
3A West	S	02.20.2020 12:24	0.5 ft	653189-018
3B East	S	02.20.2020 12:25	0.5 ft	653189-019
3B Bot	S	02.20.2020 12:25	1 ft	653189-020
3B West	S	02.20.2020 12:25	0.5 ft	653189-021
3C East	S	02.20.2020 12:26	0.5 ft	653189-022
3C Bot	S	02.20.2020 12:26	1 ft	653189-023
3C West	S	02.20.2020 12:26	0.5 ft	653189-024
3D East	S	02.20.2020 12:27	0.5 ft	653189-025
3D Bot	S	02.20.2020 12:27	1 ft	653189-026
3D West	S	02.20.2020 12:27	0.5 ft	653189-027
3E East	S	02.20.2020 12:28	0.5 ft	653189-028
3E Bot	S	02.20.2020 12:28	1 ft	653189-029
3E West	S	02.20.2020 12:28	0.5 ft	653189-030
4A East	S	02.20.2020 12:29	0.5 ft	653189-031
4A Bot	S	02.20.2020 12:29	1 ft	653189-032
4A West	S	02.20.2020 12:29	0.5 ft	653189-033
4B East	S	02.20.2020 12:30	0.5 ft	653189-034
4B Bot	S	02.20.2020 12:30	1 ft	653189-035
4B West	S	02.20.2020 12:30	0.5 ft	653189-036
4C East	S	02.20.2020 12:31	0.5 ft	653189-037
4C Bot	S	02.20.2020 12:31	1 ft	653189-038
4C West	S	02.20.2020 12:31	0.5 ft	653189-039
4D East	S	02.20.2020 12:32	0.5 ft	653189-040
4D Bot	S	02.20.2020 12:32	1 ft	653189-041
4D West	S	02.20.2020 12:32	0.5 ft	653189-042
4E East	S	02.20.2020 12:33	0.5 ft	653189-043



Sample Cross Reference 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

4E Bot	S	02.20.2020 12:33	1 ft	653189-044
4E West	S	02.20.2020 12:33	0.5 ft	653189-045
4F East	S	02.20.2020 12:34	0.5 ft	653189-046
4F Bot	S	02.20.2020 12:34	1 ft	653189-047
4F West	S	02.20.2020 12:34	0.5 ft	653189-048



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire ABO*

Project ID: 06-0141-11
Work Order Number(s): 653189

Report Date: 02.24.2020
Date Received: 02.20.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117192 BTEX by EPA 8021B

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

Batch: LBA-3117193 BTEX by EPA 8021B

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

Batch: LBA-3117220 Chloride by EPA 300

Lab Sample ID 653189-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 653189-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -040.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3117363 BTEX by EPA 8021B

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



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: 2A East
Lab Sample Id: 653189-001

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	02.20.2020 19:17	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117215

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 03:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.21.2020 03:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.21.2020 03:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.21.2020 03:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.21.2020 03:01	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 03:01	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2A East**
Lab Sample Id: 653189-001

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.2020 00:27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 00:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 00:27		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.21.2020 00:27		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2A Bot**
Lab Sample Id: 653189-002

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	02.20.2020 19:36	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 12:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	3670	50.2	mg/kg	02.21.2020 12:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1460	50.2	mg/kg	02.21.2020 12:42		1
Total TPH	PHC635	5130	50.2	mg/kg	02.21.2020 12:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.21.2020 12:42	
o-Terphenyl	84-15-1	107	%	70-135	02.21.2020 12:42	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2A Bot**
Lab Sample Id: 653189-002

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Seq Number: 3117193

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 00:47	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 00:47	
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.21.2020 00:47	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2A West**
Lab Sample Id: 653189-003

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	164	10.0	mg/kg	02.20.2020 19:42		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 12:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	784	50.2	mg/kg	02.21.2020 12:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	276	50.2	mg/kg	02.21.2020 12:42		1
Total TPH	PHC635	1060	50.2	mg/kg	02.21.2020 12:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.21.2020 12:42	
o-Terphenyl	84-15-1	110	%	70-135	02.21.2020 12:42	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2A West**
Lab Sample Id: 653189-003

Matrix: Soil
Date Collected: 02.20.2020 12:19

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Seq Number: 3117193

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.2020 01:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 01:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 01:07		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 01:07		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B East**
Lab Sample Id: 653189-004

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.2	9.92	mg/kg	02.20.2020 19:48		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 05:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	341	50.0	mg/kg	02.21.2020 05:17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	93.8	50.0	mg/kg	02.21.2020 05:17		1
Total TPH	PHC635	435	50.0	mg/kg	02.21.2020 05:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 05:17	
o-Terphenyl	84-15-1	102	%	70-135	02.21.2020 05:17	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B East**
Lab Sample Id: 653189-004

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	02.21.2020 01:28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.21.2020 01:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 01:28		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.21.2020 01:28		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B Bot**
Lab Sample Id: 653189-005

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.1	9.88	mg/kg	02.20.2020 19:54		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 06:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	441	50.1	mg/kg	02.21.2020 06:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	130	50.1	mg/kg	02.21.2020 06:16		1
Total TPH	PHC635	571	50.1	mg/kg	02.21.2020 06:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 06:16	
o-Terphenyl	84-15-1	98	%	70-135	02.21.2020 06:16	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B Bot**
Lab Sample Id: 653189-005

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.2020 01:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 01:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 01:48	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 01:48	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B West**
Lab Sample Id: 653189-006

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	68.8	9.98	mg/kg	02.20.2020 20:12		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 07:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	249	50.2	mg/kg	02.21.2020 07:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	103	50.2	mg/kg	02.21.2020 07:33		1
Total TPH	PHC635	352	50.2	mg/kg	02.21.2020 07:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.21.2020 07:33	
o-Terphenyl	84-15-1	106	%	70-135	02.21.2020 07:33	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2B West**
Lab Sample Id: 653189-006

Matrix: Soil
Date Collected: 02.20.2020 12:20

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 02:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 02:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 02:09		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 02:09		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: 2C East
Lab Sample Id: 653189-007

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.3	9.94	mg/kg	02.20.2020 20:18		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 04:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	143	49.9	mg/kg	02.21.2020 04:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.21.2020 04:58	U	1
Total TPH	PHC635	143	49.9	mg/kg	02.21.2020 04:58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.21.2020 04:58	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 04:58	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: 2C East
Lab Sample Id: 653189-007

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 02:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 02:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.21.2020 02:29		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 02:29		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2C Bot**
Lab Sample Id: 653189-008

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.6	9.96	mg/kg	02.20.2020 20:24		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 18:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.21.2020 18:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.21.2020 18:13	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.21.2020 18:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.21.2020 18:13	
o-Terphenyl	84-15-1	108	%	70-135	02.21.2020 18:13	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2C Bot**
Lab Sample Id: 653189-008

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Seq Number: 3117193

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 02:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 02:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.21.2020 02:50	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 02:50	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2C West**
Lab Sample Id: 653189-009

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	9.96	mg/kg	02.20.2020 20:30		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 08:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	1380	50.2	mg/kg	02.21.2020 08:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	740	50.2	mg/kg	02.21.2020 08:12		1
Total TPH	PHC635	2120	50.2	mg/kg	02.21.2020 08:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.21.2020 08:12	
o-Terphenyl	84-15-1	100	%	70-135	02.21.2020 08:12	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: 2C West
Lab Sample Id: 653189-009

Matrix: Soil
Date Collected: 02.20.2020 12:21

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Seq Number: 3117193

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 03:10	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 03:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 03:10	
4-Bromofluorobenzene	460-00-4	83	%	70-130	02.21.2020 03:10	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D East**
Lab Sample Id: 653189-010

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.4	9.98	mg/kg	02.20.2020 20:36		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 05:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	106	49.8	mg/kg	02.21.2020 05:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.21.2020 05:37	U	1
Total TPH	PHC635	106	49.8	mg/kg	02.21.2020 05:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.21.2020 05:37	
o-Terphenyl	84-15-1	96	%	70-135	02.21.2020 05:37	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D East**
Lab Sample Id: 653189-010

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 03:30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 03:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.21.2020 03:30		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 03:30		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D Bot**
Lab Sample Id: 653189-011

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.4	9.92	mg/kg	02.20.2020 20:42		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 05:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	228	49.9	mg/kg	02.21.2020 05:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	321	49.9	mg/kg	02.21.2020 05:37		1
Total TPH	PHC635	549	49.9	mg/kg	02.21.2020 05:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 05:37	
o-Terphenyl	84-15-1	107	%	70-135	02.21.2020 05:37	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D Bot**
Lab Sample Id: 653189-011

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 04:32	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 04:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.21.2020 04:32		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 04:32		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D West**
Lab Sample Id: 653189-012

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.6	9.92	mg/kg	02.20.2020 21:00		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 07:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	1120	50.2	mg/kg	02.21.2020 07:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	924	50.2	mg/kg	02.21.2020 07:52		1
Total TPH	PHC635	2040	50.2	mg/kg	02.21.2020 07:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 07:52	
o-Terphenyl	84-15-1	96	%	70-135	02.21.2020 07:52	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2D West**
Lab Sample Id: 653189-012

Matrix: Soil
Date Collected: 02.20.2020 12:22

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 04:52	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 04:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.21.2020 04:52		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 04:52		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: 2E East
Lab Sample Id: 653189-013

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.2	10.0	mg/kg	02.20.2020 21:09		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 05:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	77.6	50.1	mg/kg	02.21.2020 05:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.21.2020 05:56	U	1
Total TPH	PHC635	77.6	50.1	mg/kg	02.21.2020 05:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.21.2020 05:56	
o-Terphenyl	84-15-1	100	%	70-135	02.21.2020 05:56	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2E East**
Lab Sample Id: 653189-013

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 05:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 05:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.21.2020 05:12		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 05:12		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2E Bot**
Lab Sample Id: 653189-014

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.9	9.98	mg/kg	02.20.2020 21:35		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 05:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	336	50.2	mg/kg	02.21.2020 05:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	236	50.2	mg/kg	02.21.2020 05:56		1
Total TPH	PHC635	572	50.2	mg/kg	02.21.2020 05:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.21.2020 05:56	
o-Terphenyl	84-15-1	111	%	70-135	02.21.2020 05:56	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2E Bot**
Lab Sample Id: 653189-014

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Seq Number: 3117193

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 05:33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 05:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.21.2020 05:33	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 05:33	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2E West**
Lab Sample Id: 653189-015

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3117218

Prep Method: E300P
% Moisture:
Date Prep: 02.20.2020 17:30
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	9.92	mg/kg	02.20.2020 21:44		1

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3117261

Prep Method: SW8015P
% Moisture:
Date Prep: 02.20.2020 17:00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 07:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	1150	50.1	mg/kg	02.21.2020 07:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	937	50.1	mg/kg	02.21.2020 07:52		1
Total TPH	PHC635	2090	50.1	mg/kg	02.21.2020 07:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.21.2020 07:52	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 07:52	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **2E West**
Lab Sample Id: 653189-015

Matrix: Soil
Date Collected: 02.20.2020 12:23

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 05:53	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 05:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 05:53		
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.21.2020 05:53		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A East**
Lab Sample Id: 653189-016

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.3	9.88	mg/kg	02.20.2020 21:52		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 06:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	363	49.8	mg/kg	02.21.2020 06:35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	122	49.8	mg/kg	02.21.2020 06:35		1
Total TPH	PHC635	485	49.8	mg/kg	02.21.2020 06:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 06:35	
o-Terphenyl	84-15-1	106	%	70-135	02.21.2020 06:35	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A East**
Lab Sample Id: 653189-016

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.2020 06:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 06:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.21.2020 06:14		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 06:14		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A Bot**
Lab Sample Id: 653189-017

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.4	9.98	mg/kg	02.20.2020 22:01		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 06:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	412	50.2	mg/kg	02.21.2020 06:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	376	50.2	mg/kg	02.21.2020 06:54		1
Total TPH	PHC635	788	50.2	mg/kg	02.21.2020 06:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.21.2020 06:54	
o-Terphenyl	84-15-1	102	%	70-135	02.21.2020 06:54	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A Bot**
Lab Sample Id: 653189-017

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 06:34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 06:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 06:34		
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.21.2020 06:34		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A West**
Lab Sample Id: 653189-018

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.7	9.88	mg/kg	02.20.2020 22:10		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 07:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	224	49.9	mg/kg	02.21.2020 07:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	116	49.9	mg/kg	02.21.2020 07:33		1
Total TPH	PHC635	340	49.9	mg/kg	02.21.2020 07:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 07:33	
o-Terphenyl	84-15-1	98	%	70-135	02.21.2020 07:33	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3A West**
Lab Sample Id: 653189-018

Matrix: Soil
Date Collected: 02.20.2020 12:24

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 06:55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 06:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 06:55		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 06:55		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B East**
Lab Sample Id: 653189-019

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.20.2020 22:19	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 04:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.21.2020 04:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.21.2020 04:39	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.21.2020 04:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.21.2020 04:39	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 04:39	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B East**
Lab Sample Id: 653189-019

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.21.2020 07:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.21.2020 07:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.21.2020 07:15		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 07:15		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B Bot**
Lab Sample Id: 653189-020

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117218

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.7	9.98	mg/kg	02.20.2020 22:27		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 06:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	297	50.1	mg/kg	02.21.2020 06:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	169	50.1	mg/kg	02.21.2020 06:16		1
Total TPH	PHC635	466	50.1	mg/kg	02.21.2020 06:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.21.2020 06:16	
o-Terphenyl	84-15-1	108	%	70-135	02.21.2020 06:16	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B Bot**
Lab Sample Id: 653189-020

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117193

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 07:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 07:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 07:35		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 07:35		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B West**
Lab Sample Id: 653189-021

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	10.0	mg/kg	02.21.2020 08:36	X	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117261

Date Prep: 02.20.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 13:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	1640	50.1	mg/kg	02.21.2020 13:02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	661	50.1	mg/kg	02.21.2020 13:02		1
Total TPH	PHC635	2300	50.1	mg/kg	02.21.2020 13:02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.21.2020 13:02	
o-Terphenyl	84-15-1	94	%	70-135	02.21.2020 13:02	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3B West**
Lab Sample Id: 653189-021

Matrix: Soil
Date Collected: 02.20.2020 12:25

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 00:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 00:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.21.2020 00:44		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.21.2020 00:44		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C East**
Lab Sample Id: 653189-022

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.20.2020 23:41	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 09:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	95.6	50.0	mg/kg	02.21.2020 09:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	56.2	50.0	mg/kg	02.21.2020 09:30		1
Total TPH	PHC635	152	50.0	mg/kg	02.21.2020 09:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.21.2020 09:30	
o-Terphenyl	84-15-1	108	%	70-135	02.21.2020 09:30	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C East**
Lab Sample Id: 653189-022

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 01:05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 01:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.21.2020 01:05		
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.21.2020 01:05		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C Bot**
Lab Sample Id: 653189-023

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.2	9.92	mg/kg	02.20.2020 23:50		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 10:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	116	50.2	mg/kg	02.21.2020 10:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	79.8	50.2	mg/kg	02.21.2020 10:10		1
Total TPH	PHC635	196	50.2	mg/kg	02.21.2020 10:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.21.2020 10:10	
o-Terphenyl	84-15-1	97	%	70-135	02.21.2020 10:10	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C Bot**
Lab Sample Id: 653189-023

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1
m,p-Xylenes	179601-23-1	<0.00391	0.00391	mg/kg	02.21.2020 01:25	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1
Total Xylenes	1330-20-7	<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1
Total BTEX		<0.00196	0.00196	mg/kg	02.21.2020 01:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 01:25	
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.21.2020 01:25	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C West**
Lab Sample Id: 653189-024

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.9	9.98	mg/kg	02.20.2020 23:59		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 10:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	58.7	50.1	mg/kg	02.21.2020 10:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.21.2020 10:10	U	1
Total TPH	PHC635	58.7	50.1	mg/kg	02.21.2020 10:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.21.2020 10:10	
o-Terphenyl	84-15-1	107	%	70-135	02.21.2020 10:10	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3C West**
Lab Sample Id: 653189-024

Matrix: Soil
Date Collected: 02.20.2020 12:26

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.21.2020 01:46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.21.2020 01:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 01:46		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.21.2020 01:46		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D East**
Lab Sample Id: 653189-025

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.21.2020 00:08	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 10:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	95.6	50.1	mg/kg	02.21.2020 10:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.21.2020 10:29	U	1
Total TPH	PHC635	95.6	50.1	mg/kg	02.21.2020 10:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	02.21.2020 10:29	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 10:29	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D East**
Lab Sample Id: 653189-025

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 02:06	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 02:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 02:06		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 02:06		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D Bot**
Lab Sample Id: 653189-026

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.21.2020 00:36	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 10:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	300	50.2	mg/kg	02.21.2020 10:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	213	50.2	mg/kg	02.21.2020 10:29		1
Total TPH	PHC635	513	50.2	mg/kg	02.21.2020 10:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.21.2020 10:29	
o-Terphenyl	84-15-1	107	%	70-135	02.21.2020 10:29	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D Bot**
Lab Sample Id: 653189-026

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.2020 02:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 02:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 02:26		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 02:26		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D West**
Lab Sample Id: 653189-027

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.21.2020 00:45	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 13:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	579	49.9	mg/kg	02.21.2020 13:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	325	49.9	mg/kg	02.21.2020 13:42		1
Total TPH	PHC635	904	49.9	mg/kg	02.21.2020 13:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 13:42	
o-Terphenyl	84-15-1	106	%	70-135	02.21.2020 13:42	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3D West**
Lab Sample Id: 653189-027

Matrix: Soil
Date Collected: 02.20.2020 12:27

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
Toluene	108-88-3	<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
Ethylbenzene	100-41-4	<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
m,p-Xylenes	179601-23-1	<0.0202	0.0202	mg/kg	02.21.2020 02:47	U	1
o-Xylene	95-47-6	<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
Total Xylenes	1330-20-7	<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
Total BTEX		<0.0101	0.0101	mg/kg	02.21.2020 02:47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 02:47		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 02:47		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E East**
Lab Sample Id: 653189-028

Matrix: Soil
Date Collected: 02.20.2020 12:28

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	9.92	mg/kg	02.21.2020 00:54		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 14:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	1230	50.2	mg/kg	02.21.2020 14:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	492	50.2	mg/kg	02.21.2020 14:01		1
Total TPH	PHC635	1720	50.2	mg/kg	02.21.2020 14:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 14:01	
o-Terphenyl	84-15-1	100	%	70-135	02.21.2020 14:01	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E East**
Lab Sample Id: 653189-028

Matrix: Soil
Date Collected: 02.20.2020 12:28

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.21.2020 03:07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.21.2020 03:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 03:07		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 03:07		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E Bot**
Lab Sample Id: 653189-029

Matrix: Soil
Date Collected: 02.20.2020 12:28

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.8	9.96	mg/kg	02.21.2020 01:03		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 10:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	214	50.1	mg/kg	02.21.2020 10:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	104	50.1	mg/kg	02.21.2020 10:49		1
Total TPH	PHC635	318	50.1	mg/kg	02.21.2020 10:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.2020 10:49	
o-Terphenyl	84-15-1	98	%	70-135	02.21.2020 10:49	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E Bot**
Lab Sample Id: 653189-029

Matrix: Soil
Date Collected: 02.20.2020 12:28

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1
m,p-Xylenes	179601-23-1	<0.00392	0.00392	mg/kg	02.21.2020 03:28	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1
Total Xylenes	1330-20-7	<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1
Total BTEX		<0.00196	0.00196	mg/kg	02.21.2020 03:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 03:28	
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 03:28	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E West**

Matrix: Soil

Date Received: 02.20.2020 15:25

Lab Sample Id: 653189-030

Date Collected: 02.20.2020 12:28

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:30

Basis: Wet Weight

Seq Number: 3117220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.3	9.94	mg/kg	02.21.2020 01:13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.20.2020 17:15

Basis: Wet Weight

Seq Number: 3117308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 12:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	394	50.2	mg/kg	02.21.2020 12:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	299	50.2	mg/kg	02.21.2020 12:23		1
Total TPH	PHC635	693	50.2	mg/kg	02.21.2020 12:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 12:23	
o-Terphenyl	84-15-1	105	%	70-135	02.21.2020 12:23	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **3E West**
Lab Sample Id: 653189-030

Matrix: Soil
Date Collected: 02.20.2020 12:28

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 03:48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 03:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.21.2020 03:48		
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.21.2020 03:48		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A East**
Lab Sample Id: 653189-031

Matrix: Soil
Date Collected: 02.20.2020 12:29

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3117220

Prep Method: E300P
% Moisture:
Date Prep: 02.20.2020 17:30
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.21.2020 01:22	U	1

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3117308

Prep Method: SW8015P
% Moisture:
Date Prep: 02.20.2020 17:15
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 13:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	918	50.1	mg/kg	02.21.2020 13:22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	417	50.1	mg/kg	02.21.2020 13:22		1
Total TPH	PHC635	1340	50.1	mg/kg	02.21.2020 13:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.21.2020 13:22	
o-Terphenyl	84-15-1	96	%	70-135	02.21.2020 13:22	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A East**
Lab Sample Id: 653189-031

Matrix: Soil
Date Collected: 02.20.2020 12:29

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 04:49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 04:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 04:49		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 04:49		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A Bot** Matrix: Soil Date Received: 02.20.2020 15:25
Lab Sample Id: 653189-032 Date Collected: 02.20.2020 12:29 Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 02.20.2020 17:30 Basis: Wet Weight
Seq Number: 3117220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.2	9.92	mg/kg	02.21.2020 01:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 02.20.2020 17:15 Basis: Wet Weight
Seq Number: 3117308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 10:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	279	50.0	mg/kg	02.21.2020 10:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	129	50.0	mg/kg	02.21.2020 10:49		1
Total TPH	PHC635	408	50.0	mg/kg	02.21.2020 10:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.21.2020 10:49	
o-Terphenyl	84-15-1	107	%	70-135	02.21.2020 10:49	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A Bot**
Lab Sample Id: 653189-032

Matrix: Soil
Date Collected: 02.20.2020 12:29

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.21.2020 05:10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.21.2020 05:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.21.2020 05:10	
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.21.2020 05:10	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A West**
Lab Sample Id: 653189-033

Matrix: Soil
Date Collected: 02.20.2020 12:29

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.21.2020 01:59	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 14:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	492	49.9	mg/kg	02.21.2020 14:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	308	49.9	mg/kg	02.21.2020 14:01		1
Total TPH	PHC635	800	49.9	mg/kg	02.21.2020 14:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.21.2020 14:01	
o-Terphenyl	84-15-1	104	%	70-135	02.21.2020 14:01	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4A West**
Lab Sample Id: 653189-033

Matrix: Soil
Date Collected: 02.20.2020 12:29

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 05:30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 05:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.21.2020 05:30		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 05:30		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B East**
Lab Sample Id: 653189-034

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	02.21.2020 02:26	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 11:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	138	50.2	mg/kg	02.21.2020 11:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	66.9	50.2	mg/kg	02.21.2020 11:21		1
Total TPH	PHC635	205	50.2	mg/kg	02.21.2020 11:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.21.2020 11:21	
o-Terphenyl	84-15-1	104	%	70-135	02.21.2020 11:21	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B East**
Lab Sample Id: 653189-034

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.21.2020 05:50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.21.2020 05:50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 05:50		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 05:50		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B Bot**
Lab Sample Id: 653189-035

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	9.98	mg/kg	02.21.2020 02:35		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 11:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	299	50.1	mg/kg	02.21.2020 11:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	204	50.1	mg/kg	02.21.2020 11:21		1
Total TPH	PHC635	503	50.1	mg/kg	02.21.2020 11:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 11:21	
o-Terphenyl	84-15-1	109	%	70-135	02.21.2020 11:21	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B Bot**
Lab Sample Id: 653189-035

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.21.2020 06:11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.21.2020 06:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.21.2020 06:11		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 06:11		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B West**
Lab Sample Id: 653189-036

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.7	9.92	mg/kg	02.21.2020 02:45		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 13:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	552	50.0	mg/kg	02.21.2020 13:22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	542	50.0	mg/kg	02.21.2020 13:22		1
Total TPH	PHC635	1090	50.0	mg/kg	02.21.2020 13:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 13:22	
o-Terphenyl	84-15-1	104	%	70-135	02.21.2020 13:22	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4B West**
Lab Sample Id: 653189-036

Matrix: Soil
Date Collected: 02.20.2020 12:30

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.21.2020 06:31	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.21.2020 06:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.21.2020 06:31	
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.21.2020 06:31	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C East**
Lab Sample Id: 653189-037

Matrix: Soil
Date Collected: 02.20.2020 12:31

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.5	9.90	mg/kg	02.21.2020 02:54		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 13:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	1640	50.2	mg/kg	02.21.2020 13:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1210	50.2	mg/kg	02.21.2020 13:42		1
Total TPH	PHC635	2850	50.2	mg/kg	02.21.2020 13:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.21.2020 13:42	
o-Terphenyl	84-15-1	93	%	70-135	02.21.2020 13:42	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C East**
Lab Sample Id: 653189-037

Matrix: Soil
Date Collected: 02.20.2020 12:31

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 06:52	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 06:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 06:52	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 06:52	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C Bot**
Lab Sample Id: 653189-038

Matrix: Soil
Date Collected: 02.20.2020 12:31

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.2	10.1	mg/kg	02.21.2020 03:03		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.21.2020 11:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	224	50.2	mg/kg	02.21.2020 11:40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	114	50.2	mg/kg	02.21.2020 11:40		1
Total TPH	PHC635	338	50.2	mg/kg	02.21.2020 11:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.21.2020 11:40	
o-Terphenyl	84-15-1	104	%	70-135	02.21.2020 11:40	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C Bot**
Lab Sample Id: 653189-038

Matrix: Soil
Date Collected: 02.20.2020 12:31

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.2020 07:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 07:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 07:12	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.21.2020 07:12	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C West**

Matrix: Soil

Date Received: 02.20.2020 15:25

Lab Sample Id: 653189-039

Date Collected: 02.20.2020 12:31

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 17:30

Basis: Wet Weight

Seq Number: 3117220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.8	9.94	mg/kg	02.21.2020 03:12		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.20.2020 17:15

Basis: Wet Weight

Seq Number: 3117308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 12:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	249	50.1	mg/kg	02.21.2020 12:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	239	50.1	mg/kg	02.21.2020 12:00		1
Total TPH	PHC635	488	50.1	mg/kg	02.21.2020 12:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 12:00	
o-Terphenyl	84-15-1	106	%	70-135	02.21.2020 12:00	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4C West**
Lab Sample Id: 653189-039

Matrix: Soil
Date Collected: 02.20.2020 12:31

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 07:32	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 07:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.21.2020 07:32		
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.21.2020 07:32		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D East**
Lab Sample Id: 653189-040

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117220

Date Prep: 02.20.2020 17:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	93.6	9.92	mg/kg	02.21.2020 03:22		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.21.2020 12:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	622	50.3	mg/kg	02.21.2020 12:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	610	50.3	mg/kg	02.21.2020 12:23		1
Total TPH	PHC635	1230	50.3	mg/kg	02.21.2020 12:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.21.2020 12:23	
o-Terphenyl	84-15-1	97	%	70-135	02.21.2020 12:23	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D East**
Lab Sample Id: 653189-040

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117192

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1
Toluene	108-88-3	<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1
Ethylbenzene	100-41-4	<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1
m,p-Xylenes	179601-23-1	<0.0202	0.0202	mg/kg	02.21.2020 07:53	U	1
o-Xylene	95-47-6	<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1
Total Xylenes	1330-20-7	<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1
Total BTEX		<0.0101	0.0101	mg/kg	02.21.2020 07:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.21.2020 07:53	
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.21.2020 07:53	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D Bot**
Lab Sample Id: 653189-041

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.3	9.98	mg/kg	02.21.2020 09:36		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117308

Date Prep: 02.20.2020 17:15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 12:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	238	49.8	mg/kg	02.21.2020 12:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	119	49.8	mg/kg	02.21.2020 12:00		1
Total TPH	PHC635	357	49.8	mg/kg	02.21.2020 12:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.2020 12:00	
o-Terphenyl	84-15-1	101	%	70-135	02.21.2020 12:00	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D Bot**
Lab Sample Id: 653189-041

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117363

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.21.2020 10:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.2020 10:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 10:39		
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.21.2020 10:39		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D West**
Lab Sample Id: 653189-042

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	02.21.2020 09:54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 19:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	397	50.0	mg/kg	02.21.2020 19:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	177	50.0	mg/kg	02.21.2020 19:52		1
Total TPH	PHC635	574	50.0	mg/kg	02.21.2020 19:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.21.2020 19:52	
o-Terphenyl	84-15-1	121	%	70-135	02.21.2020 19:52	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4D West**
Lab Sample Id: 653189-042

Matrix: Soil
Date Collected: 02.20.2020 12:32

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Seq Number: 3117363

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 11:00	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 11:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 11:00	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 11:00	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E East**
Lab Sample Id: 653189-043

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.0	9.98	mg/kg	02.21.2020 10:00		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 19:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	836	50.1	mg/kg	02.21.2020 19:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1050	50.1	mg/kg	02.21.2020 19:12		1
Total TPH	PHC635	1890	50.1	mg/kg	02.21.2020 19:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.21.2020 19:12	
o-Terphenyl	84-15-1	108	%	70-135	02.21.2020 19:12	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E East**
Lab Sample Id: 653189-043

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Seq Number: 3117363

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.21.2020 11:20	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.21.2020 11:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	02.21.2020 11:20	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 11:20	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E Bot**
Lab Sample Id: 653189-044

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	10.0	mg/kg	02.21.2020 10:06		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 19:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	988	50.0	mg/kg	02.21.2020 19:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	559	50.0	mg/kg	02.21.2020 19:32		1
Total TPH	PHC635	1550	50.0	mg/kg	02.21.2020 19:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.21.2020 19:32	
o-Terphenyl	84-15-1	103	%	70-135	02.21.2020 19:32	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E Bot**
Lab Sample Id: 653189-044

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Seq Number: 3117363

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1
Toluene	108-88-3	<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1
Ethylbenzene	100-41-4	<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1
m,p-Xylenes	179601-23-1	<0.0196	0.0196	mg/kg	02.21.2020 11:41	U	1
o-Xylene	95-47-6	<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1
Total Xylenes	1330-20-7	<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1
Total BTEX		<0.00980	0.00980	mg/kg	02.21.2020 11:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.21.2020 11:41	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 11:41	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E West**
Lab Sample Id: 653189-045

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	9.88	mg/kg	02.21.2020 10:11		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.21.2020 20:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	526	50.0	mg/kg	02.21.2020 20:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	629	50.0	mg/kg	02.21.2020 20:11		1
Total TPH	PHC635	1160	50.0	mg/kg	02.21.2020 20:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	02.21.2020 20:11	
o-Terphenyl	84-15-1	112	%	70-135	02.21.2020 20:11	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4E West**
Lab Sample Id: 653189-045

Matrix: Soil
Date Collected: 02.20.2020 12:33

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117363

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 12:01	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 12:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.21.2020 12:01		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 12:01		



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F East**
Lab Sample Id: 653189-046

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	02.21.2020 10:28	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<249	249	mg/kg	02.21.2020 19:12	U	5
Diesel Range Organics (DRO)	C10C28DRO	5810	249	mg/kg	02.21.2020 19:12		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	5250	249	mg/kg	02.21.2020 19:12		5
Total TPH	PHC635	11100	249	mg/kg	02.21.2020 19:12		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	02.21.2020 19:12	
o-Terphenyl	84-15-1	99	%	70-135	02.21.2020 19:12	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F East**
Lab Sample Id: 653189-046

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Seq Number: 3117363

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.21.2020 12:22	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.21.2020 12:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	80	%	70-130	02.21.2020 12:22	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.21.2020 12:22	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F Bot**
Lab Sample Id: 653189-047

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.4	9.98	mg/kg	02.21.2020 10:34		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.21.2020 19:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	837	49.9	mg/kg	02.21.2020 19:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	563	49.9	mg/kg	02.21.2020 19:32		1
Total TPH	PHC635	1400	49.9	mg/kg	02.21.2020 19:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.21.2020 19:32	
o-Terphenyl	84-15-1	111	%	70-135	02.21.2020 19:32	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F Bot**
Lab Sample Id: 653189-047

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Seq Number: 3117363

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 12:42	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 12:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.21.2020 12:42	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.2020 12:42	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F West**
Lab Sample Id: 653189-048

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117377

Date Prep: 02.21.2020 07:30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	41.6	9.88	mg/kg	02.21.2020 10:40		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117366

Date Prep: 02.20.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.2020 19:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	1080	50.1	mg/kg	02.21.2020 19:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1140	50.1	mg/kg	02.21.2020 19:52		1
Total TPH	PHC635	2220	50.1	mg/kg	02.21.2020 19:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.21.2020 19:52	
o-Terphenyl	84-15-1	103	%	70-135	02.21.2020 19:52	



Certificate of Analytical Results 653189

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **4F West**
Lab Sample Id: 653189-048

Matrix: Soil
Date Collected: 02.20.2020 12:34

Date Received: 02.20.2020 15:25
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117363

Prep Method: SW5030B

% Moisture:

Date Prep: 02.20.2020 20:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.21.2020 13:03	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.21.2020 13:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.2020 13:03		
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.21.2020 13:03		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: Chloride by EPA 300

Seq Number: 3117218

MB Sample Id: 7697178-1-BLK

Matrix: Solid

LCS Sample Id: 7697178-1-BKS

Prep Method: E300P

Date Prep: 02.20.2020

LCSD Sample Id: 7697178-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	268	107	269	108	90-110	0	20	mg/kg	02.20.2020 19:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3117220

MB Sample Id: 7697180-1-BLK

Matrix: Solid

LCS Sample Id: 7697180-1-BKS

Prep Method: E300P

Date Prep: 02.20.2020

LCSD Sample Id: 7697180-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	267	107	267	107	90-110	0	20	mg/kg	02.20.2020 23:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3117377

MB Sample Id: 7697183-1-BLK

Matrix: Solid

LCS Sample Id: 7697183-1-BKS

Prep Method: E300P

Date Prep: 02.21.2020

LCSD Sample Id: 7697183-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	265	106	266	106	90-110	0	20	mg/kg	02.21.2020 09:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3117218

Parent Sample Id: 653189-001

Matrix: Soil

MS Sample Id: 653189-001 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653189-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.38	200	223	107	224	107	90-110	0	20	mg/kg	02.20.2020 19:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3117218

Parent Sample Id: 653189-011

Matrix: Soil

MS Sample Id: 653189-011 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653189-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.4	198	228	107	233	109	90-110	2	20	mg/kg	02.20.2020 20:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3117220

Parent Sample Id: 653189-021

Matrix: Soil

MS Sample Id: 653189-021 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653189-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	201	325	111	330	113	90-110	2	20	mg/kg	02.21.2020 08:42	X

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: Chloride by EPA 300

Seq Number: 3117220

Parent Sample Id: 653189-031

Matrix: Soil

MS Sample Id: 653189-031 S

Prep Method: E300P

Date Prep: 02.20.2020

MSD Sample Id: 653189-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.90	201	227	108	228	109	90-110	0	20	mg/kg	02.21.2020 01:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3117377

Parent Sample Id: 653189-041

Matrix: Soil

MS Sample Id: 653189-041 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653189-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.3	200	220	104	227	108	90-110	3	20	mg/kg	02.21.2020 09:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3117377

Parent Sample Id: 653208-002

Matrix: Soil

MS Sample Id: 653208-002 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653208-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	407	200	621	107	626	110	90-110	1	20	mg/kg	02.21.2020 13:31	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117215

MB Sample Id: 7697186-1-BLK

Matrix: Solid

LCS Sample Id: 7697186-1-BKS

Prep Method: SW8015P

Date Prep: 02.20.2020

LCSD Sample Id: 7697186-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	906	91	873	87	70-135	4	35	mg/kg	02.20.2020 23:07	
Diesel Range Organics (DRO)	<50.0	1000	997	100	898	90	70-135	10	35	mg/kg	02.20.2020 23:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		121		110		70-135	%	02.20.2020 23:07
o-Terphenyl	106		115		106		70-135	%	02.20.2020 23:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117261

MB Sample Id: 7697192-1-BLK

Matrix: Solid

LCS Sample Id: 7697192-1-BKS

Prep Method: SW8015P

Date Prep: 02.20.2020

LCSD Sample Id: 7697192-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	883	88	934	93	70-135	6	35	mg/kg	02.21.2020 04:19	
Diesel Range Organics (DRO)	<50.0	1000	922	92	1010	101	70-135	9	35	mg/kg	02.21.2020 04:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		114		122		70-135	%	02.21.2020 04:19
o-Terphenyl	118		108		116		70-135	%	02.21.2020 04:19

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117308

MB Sample Id: 7697206-1-BLK

Matrix: Solid

LCS Sample Id: 7697206-1-BKS

Prep Method: SW8015P

Date Prep: 02.20.2020

LCSD Sample Id: 7697206-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	888	89	876	88	70-135	1	35	mg/kg	02.21.2020 09:11	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	978	98	70-135	13	35	mg/kg	02.21.2020 09:11	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane	99		118			124		70-135		%	02.21.2020 09:11	
o-Terphenyl	109		124			103		70-135		%	02.21.2020 09:11	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117366

MB Sample Id: 7697277-1-BLK

Matrix: Solid

LCS Sample Id: 7697277-1-BKS

Prep Method: SW8015P

Date Prep: 02.20.2020

LCSD Sample Id: 7697277-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	850	85	821	82	70-135	3	35	mg/kg	02.21.2020 17:54	
Diesel Range Organics (DRO)	<50.0	1000	1030	103	930	93	70-135	10	35	mg/kg	02.21.2020 17:54	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	104		113			104			70-135	%	02.21.2020 17:54	
o-Terphenyl	116		115			107			70-135	%	02.21.2020 17:54	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117215

Matrix: Solid

MB Sample Id: 7697186-1-BLK

Prep Method: SW8015P

Date Prep: 02.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.20.2020 23:07	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117261

Matrix: Solid

MB Sample Id: 7697192-1-BLK

Prep Method: SW8015P

Date Prep: 02.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.21.2020 04:00	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117308

Matrix: Solid

MB Sample Id: 7697206-1-BLK

Prep Method: SW8015P

Date Prep: 02.20.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.21.2020 15:20	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117366

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.20.2020

MB Sample Id: 7697277-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

02.24.2020 11:23

Flag**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3117215

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.20.2020

Parent Sample Id: 653098-022

MS Sample Id: 653098-022 S

MSD Sample Id: 653098-022 SD

Parameter**Parent
Result****Spike
Amount****MS
Result****MS
%Rec****MSD
Result****MSD
%Rec****Limits****%RPD****RPD
Limit****Units****Analysis
Date****Flag**

Gasoline Range Hydrocarbons (GRO)

<50.2

1000

1070

107

936

94

70-135

13

35

mg/kg

02.20.2020 23:46

Diesel Range Organics (DRO)

<50.2

1000

1110

111

1050

105

70-135

6

35

mg/kg

02.20.2020 23:46

Surrogate**MS
%Rec****MS
Flag****MSD
%Rec****MSD
Flag****Limits****Units****Analysis
Date**

1-Chlorooctane

127

121

70-135

%

02.20.2020 23:46

o-Terphenyl

133

121

70-135

%

02.20.2020 23:46

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117261

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.20.2020

Parent Sample Id: 653189-019

MS Sample Id: 653189-019 S

MSD Sample Id: 653189-019 SD

Parameter**Parent
Result****Spike
Amount****MS
Result****MS
%Rec****MSD
Result****MSD
%Rec****Limits****%RPD****RPD
Limit****Units****Analysis
Date****Flag**

Gasoline Range Hydrocarbons (GRO)

<50.0

999

910

91

964

97

70-135

6

35

mg/kg

02.21.2020 04:39

Diesel Range Organics (DRO)

<50.0

999

998

100

1000

100

70-135

0

35

mg/kg

02.21.2020 04:39

Surrogate**MS
%Rec****MS
Flag****MSD
%Rec****MSD
Flag****Limits****Units****Analysis
Date**

1-Chlorooctane

122

125

70-135

%

02.21.2020 04:39

o-Terphenyl

120

119

70-135

%

02.21.2020 04:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117308

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.20.2020

Parent Sample Id: 653189-022

MS Sample Id: 653189-022 S

MSD Sample Id: 653189-022 SD

Parameter**Parent
Result****Spike
Amount****MS
Result****MS
%Rec****MSD
Result****MSD
%Rec****Limits****%RPD****RPD
Limit****Units****Analysis
Date****Flag**

Gasoline Range Hydrocarbons (GRO)

<50.1

1000

1220

122

1050

105

70-135

15

35

mg/kg

02.21.2020 09:50

Diesel Range Organics (DRO)

95.6

1000

1370

127

1250

115

70-135

9

35

mg/kg

02.21.2020 09:50

Surrogate**MS
%Rec****MS
Flag****MSD
%Rec****MSD
Flag****Limits****Units****Analysis
Date**

1-Chlorooctane

127

118

70-135

%

02.21.2020 09:50

o-Terphenyl

110

119

70-135

%

02.21.2020 09:50

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3117366

Parent Sample Id: 653189-008

Matrix: Soil

MS Sample Id: 653189-008 S

Prep Method: SW8015P

Date Prep: 02.20.2020

MSD Sample Id: 653189-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	825	82	985	99	70-135	18	35	mg/kg	02.21.2020 18:33	
Diesel Range Organics (DRO)	<50.3	1010	957	95	1020	103	70-135	6	35	mg/kg	02.21.2020 18:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		120		70-135	%	02.21.2020 18:33
o-Terphenyl	107		119		70-135	%	02.21.2020 18:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117193

MB Sample Id: 7697164-1-BLK

Matrix: Solid

LCS Sample Id: 7697164-1-BKS

Prep Method: SW5030B

Date Prep: 02.20.2020

LCSD Sample Id: 7697164-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.0977	98	70-130	3	35	mg/kg	02.20.2020 22:45	
Toluene	<0.00200	0.100	0.0992	99	0.0951	95	70-130	4	35	mg/kg	02.20.2020 22:45	
Ethylbenzene	<0.00200	0.100	0.0959	96	0.0918	92	71-129	4	35	mg/kg	02.20.2020 22:45	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.189	95	70-135	5	35	mg/kg	02.20.2020 22:45	
o-Xylene	<0.00200	0.100	0.0992	99	0.0950	95	71-133	4	35	mg/kg	02.20.2020 22:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		104		70-130	%	02.20.2020 22:45
4-Bromofluorobenzene	95		93		96		70-130	%	02.20.2020 22:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117192

MB Sample Id: 7697165-1-BLK

Matrix: Solid

LCS Sample Id: 7697165-1-BKS

Prep Method: SW5030B

Date Prep: 02.20.2020

LCSD Sample Id: 7697165-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.116	116	70-130	3	35	mg/kg	02.20.2020 23:02	
Toluene	<0.00200	0.100	0.104	104	0.106	106	70-130	2	35	mg/kg	02.20.2020 23:02	
Ethylbenzene	<0.00200	0.100	0.100	100	0.102	102	71-129	2	35	mg/kg	02.20.2020 23:02	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.199	100	70-135	2	35	mg/kg	02.20.2020 23:02	
o-Xylene	<0.00200	0.100	0.0998	100	0.101	101	71-133	1	35	mg/kg	02.20.2020 23:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		110		110		70-130	%	02.20.2020 23:02
4-Bromofluorobenzene	92		90		89		70-130	%	02.20.2020 23:02

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117363

MB Sample Id: 7697168-1-BLK

Matrix: Solid

LCS Sample Id: 7697168-1-BKS

Prep Method: SW5030B

Date Prep: 02.20.2020

LCSD Sample Id: 7697168-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.0983	98	70-130	6	35	mg/kg	02.21.2020 08:57	
Toluene	<0.00200	0.100	0.0991	99	0.0944	94	70-130	5	35	mg/kg	02.21.2020 08:57	
Ethylbenzene	<0.00200	0.100	0.0938	94	0.0901	90	71-129	4	35	mg/kg	02.21.2020 08:57	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.185	93	70-135	4	35	mg/kg	02.21.2020 08:57	
o-Xylene	<0.00200	0.100	0.0975	98	0.0933	93	71-133	4	35	mg/kg	02.21.2020 08:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		104		70-130	%	02.21.2020 08:57
4-Bromofluorobenzene	94		91		93		70-130	%	02.21.2020 08:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117193

Parent Sample Id: 653189-001

Matrix: Soil

MS Sample Id: 653189-001 S

Prep Method: SW5030B

Date Prep: 02.20.2020

MSD Sample Id: 653189-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.102	102	70-130	8	35	mg/kg	02.20.2020 23:25	
Toluene	<0.00200	0.100	0.104	104	0.0975	98	70-130	6	35	mg/kg	02.20.2020 23:25	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0922	92	71-129	5	35	mg/kg	02.20.2020 23:25	
m,p-Xylenes	<0.00401	0.200	0.199	100	0.188	94	70-135	6	35	mg/kg	02.20.2020 23:25	
o-Xylene	<0.00200	0.100	0.101	101	0.0950	95	71-133	6	35	mg/kg	02.20.2020 23:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	02.20.2020 23:25
4-Bromofluorobenzene	95		95		70-130	%	02.20.2020 23:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117192

Parent Sample Id: 653189-021

Matrix: Soil

MS Sample Id: 653189-021 S

Prep Method: SW5030B

Date Prep: 02.20.2020

MSD Sample Id: 653189-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.117	118	0.112	112	70-130	4	35	mg/kg	02.20.2020 23:43	
Toluene	<0.00198	0.0992	0.102	103	0.0915	92	70-130	11	35	mg/kg	02.20.2020 23:43	
Ethylbenzene	<0.00198	0.0992	0.0923	93	0.0757	76	71-129	20	35	mg/kg	02.20.2020 23:43	
m,p-Xylenes	<0.00397	0.198	0.181	91	0.147	74	70-135	21	35	mg/kg	02.20.2020 23:43	
o-Xylene	<0.00198	0.0992	0.0916	92	0.0737	74	71-133	22	35	mg/kg	02.20.2020 23:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		111		70-130	%	02.20.2020 23:43
4-Bromofluorobenzene	86		85		70-130	%	02.20.2020 23:43

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653189

Larson and Associates, Inc. Empire ABO

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117363

Parent Sample Id: 653189-041

Matrix: Soil

MS Sample Id: 653189-041 S

Prep Method: SW5030B

Date Prep: 02.20.2020

MSD Sample Id: 653189-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0982	98	0.0994	100	70-130	1	35	mg/kg	02.21.2020 09:38	
Toluene	<0.00200	0.0998	0.0904	91	0.0910	91	70-130	1	35	mg/kg	02.21.2020 09:38	
Ethylbenzene	<0.00200	0.0998	0.0823	82	0.0832	83	71-129	1	35	mg/kg	02.21.2020 09:38	
m,p-Xylenes	<0.00399	0.200	0.166	83	0.169	85	70-135	2	35	mg/kg	02.21.2020 09:38	
o-Xylene	<0.00200	0.0998	0.0843	84	0.0851	85	71-133	1	35	mg/kg	02.21.2020 09:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.21.2020 09:38
4-Bromofluorobenzene	93		92		70-130	%	02.21.2020 09:38

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No: 053189

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Carlsbad, NM (432) 704-5440
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Project Manager:		Bill to: (if different)	
Company Name:		Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

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

Project Name:		Turn Around		Pres. Code	ANALYSIS REQUEST																Preservative Codes				
Project Number:		Routine	☐		Number of Containers	TPH Reils - GPO, DRO, OIL BTEX chloride																MeOH: Me			
Project Location		Rush:																				None: NO			
Sampler's Name:		Due Date:																				HNO3: HN			
PO #:		Quote #:																			H2SO4: H2				
SAMPLE RECEIPT		Temp Blank:	Yes No	Wet Ice:	Yes No																			HCL: HL	
Temperature (°C):				Thermometer ID																		NaOH: Na			
Received Intact:		Yes No																			Zn Acetate+ NaOH: Zn				
Cooler Custody Seals:		Yes No N/A	Correction Factor:																		TAT starts the day received by the lab, if received by 4:00pm				
Sample Custody Seals:		Yes No N/A	Total Containers:																		Sample Comments				
Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth																				
	2D Bot	S	2/20/20	12:22	0.5'		X	X	X																
	2D West			12:22	0.5'																				
	2E East			12:23	0.5'																				
	2E Bot			12:23	0.5'																				
	2E West			12:23	0.5'																				
	3A East			12:24	0.5'																				
	3A Bot			12:24	1'																				
	3A West			12:24	0.5'																				
	3B East			12:25	0.5'																				
	3B Bot			12:25	1'																				

Total 200.7 / 6010 200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		2/20/20 12:25	2		
3		5	4		
5			6		



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 02/20/2020 03:25:00 PM

Work Order #: 653189

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02/20/2020

Checklist reviewed by:


Holly Taylor

Date: 02/22/2020



Certificate of Analysis Summary 653335

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Artesia

Date Received in Lab: Fri 02.21.2020 13:49
Report Date: 02.24.2020 14:50
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653335-001	653335-002				
	Field Id:	C12 West	C12 West				
	Depth:	5- ft	10- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	02.21.2020 12:50	02.21.2020 12:51				
BTEX by EPA 8021B	Extracted:	02.21.2020 17:00	02.21.2020 17:00				
	Analyzed:	02.22.2020 01:57	02.22.2020 02:18				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	3.72 1.00	1.55 1.00				
	Toluene	0.435 0.250	0.867 0.501				
	Ethylbenzene	16.5 1.00	3.89 1.00				
	m,p-Xylenes	11.1 2.00	3.14 2.00				
	o-Xylene	3.05 1.00	0.656 0.501				
	Total Xylenes	14.2 1.00	3.80 0.501				
	Total BTEX	34.8 0.250	10.1 0.501				
Chloride by EPA 300	Extracted:	02.21.2020 14:25	02.21.2020 14:25				
	Analyzed:	02.21.2020 21:16	02.21.2020 21:22				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	26.8 9.96	28.9 9.98				
TPH By SW8015 Mod	Extracted:	02.21.2020 17:30	02.21.2020 17:30				
	Analyzed:	02.22.2020 10:48	02.22.2020 10:48				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	649 50.3	765 50.2				
	Diesel Range Organics (DRO)	4500 50.3	4950 50.2				
	Motor Oil Range Hydrocarbons (MRO)	2010 50.3	401 50.2				
	Total TPH	7160 50.3	6120 50.2				

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

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

John Builes
Project Manager



Analytical Report 653335

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire ABO

06-0141-11

02.24.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.24.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653335**

Empire ABO

Project Address: Artesia

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653335. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653335 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink, appearing to read 'JB', is written over a horizontal line.

John Builes
Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 653335

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C12 West	S	02.21.2020 12:50	5 ft	653335-001
C12 West	S	02.21.2020 12:51	10 ft	653335-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire ABO

Project ID: 06-0141-11
Work Order Number(s): 653335

Report Date: 02.24.2020
Date Received: 02.21.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117367 BTEX by EPA 8021B

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



Certificate of Analytical Results 653335

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 West**

Matrix: Soil

Date Received: 02.21.2020 13:49

Lab Sample Id: 653335-001

Date Collected: 02.21.2020 12:50

Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.2020 14:25

Basis: Wet Weight

Seq Number: 3117383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.8	9.96	mg/kg	02.21.2020 21:16		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.21.2020 17:30

Basis: Wet Weight

Seq Number: 3117413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	649	50.3	mg/kg	02.22.2020 10:48		1
Diesel Range Organics (DRO)	C10C28DRO	4500	50.3	mg/kg	02.22.2020 10:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2010	50.3	mg/kg	02.22.2020 10:48		1
Total TPH	PHC635	7160	50.3	mg/kg	02.22.2020 10:48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.22.2020 10:48	
o-Terphenyl	84-15-1	119	%	70-135	02.22.2020 10:48	



Certificate of Analytical Results 653335

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 West**

Matrix: Soil

Date Received: 02.21.2020 13:49

Lab Sample Id: 653335-001

Date Collected: 02.21.2020 12:50

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Seq Number: 3117367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	3.72	1.00	mg/kg	02.22.2020 01:57		500
Toluene	108-88-3	0.435	0.250	mg/kg	02.22.2020 01:57		500
Ethylbenzene	100-41-4	16.5	1.00	mg/kg	02.22.2020 01:57		500
m,p-Xylenes	179601-23-1	11.1	2.00	mg/kg	02.22.2020 01:57		500
o-Xylene	95-47-6	3.05	1.00	mg/kg	02.22.2020 01:57		500
Total Xylenes	1330-20-7	14.2	1.00	mg/kg	02.22.2020 01:57		500
Total BTEX		34.8	0.250	mg/kg	02.22.2020 01:57		500
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.22.2020 01:57		
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.22.2020 01:57		



Certificate of Analytical Results 653335

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 West**

Matrix: Soil

Date Received: 02.21.2020 13:49

Lab Sample Id: 653335-002

Date Collected: 02.21.2020 12:51

Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.2020 14:25

Basis: Wet Weight

Seq Number: 3117383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.9	9.98	mg/kg	02.21.2020 21:22		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.21.2020 17:30

Basis: Wet Weight

Seq Number: 3117413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	765	50.2	mg/kg	02.22.2020 10:48		1
Diesel Range Organics (DRO)	C10C28DRO	4950	50.2	mg/kg	02.22.2020 10:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	401	50.2	mg/kg	02.22.2020 10:48		1
Total TPH	PHC635	6120	50.2	mg/kg	02.22.2020 10:48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	02.22.2020 10:48	
o-Terphenyl	84-15-1	118	%	70-135	02.22.2020 10:48	



Certificate of Analytical Results 653335

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 West**

Matrix: Soil

Date Received: 02.21.2020 13:49

Lab Sample Id: 653335-002

Date Collected: 02.21.2020 12:51

Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Seq Number: 3117367

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	1.55	1.00	mg/kg	02.22.2020 02:18		500
Toluene	108-88-3	0.867	0.501	mg/kg	02.22.2020 02:18		500
Ethylbenzene	100-41-4	3.89	1.00	mg/kg	02.22.2020 02:18		500
m,p-Xylenes	179601-23-1	3.14	2.00	mg/kg	02.22.2020 02:18		500
o-Xylene	95-47-6	0.656	0.501	mg/kg	02.22.2020 02:18		500
Total Xylenes	1330-20-7	3.80	0.501	mg/kg	02.22.2020 02:18		500
Total BTEX		10.1	0.501	mg/kg	02.22.2020 02:18		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	02.22.2020 02:18	
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.22.2020 02:18	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 653335

Larson and Associates, Inc. Empire ABO

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

MB Sample Id: 7697200-1-BLK

Matrix: Solid

LCS Sample Id: 7697200-1-BKS

Prep Method: E300P

Date Prep: 02.21.2020

LCSD Sample Id: 7697200-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	260	104	90-110	2	20	mg/kg	02.21.2020 18:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

Parent Sample Id: 653254-001

Matrix: Soil

MS Sample Id: 653254-001 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.46	200	209	102	211	103	90-110	1	20	mg/kg	02.21.2020 18:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3117383

Parent Sample Id: 653318-001

Matrix: Soil

MS Sample Id: 653318-001 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653318-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	118	200	333	108	336	109	90-110	1	20	mg/kg	02.21.2020 20:10	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117413

MB Sample Id: 7697318-1-BLK

Matrix: Solid

LCS Sample Id: 7697318-1-BKS

Prep Method: SW8015P

Date Prep: 02.21.2020

LCSD Sample Id: 7697318-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	836	84	915	92	70-135	9	35	mg/kg	02.22.2020 07:14	
Diesel Range Organics (DRO)	<50.0	1000	917	92	1000	100	70-135	9	35	mg/kg	02.22.2020 07:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		122		70-135	%	02.22.2020 07:14
o-Terphenyl	116		113		120		70-135	%	02.22.2020 07:14

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117413

Matrix: Solid

MB Sample Id: 7697318-1-BLK

Prep Method: SW8015P

Date Prep: 02.21.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.22.2020 06:55	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653335

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117413

Parent Sample Id: 653209-013

Matrix: Soil

MS Sample Id: 653209-013 S

Prep Method: SW8015P

Date Prep: 02.21.2020

MSD Sample Id: 653209-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	963	96	858	86	70-135	12	35	mg/kg	02.22.2020 07:34	
Diesel Range Organics (DRO)	<50.2	1000	1050	105	955	96	70-135	9	35	mg/kg	02.22.2020 07:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		114		70-135	%	02.22.2020 07:34
o-Terphenyl	127		115		70-135	%	02.22.2020 07:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117367

MB Sample Id: 7697231-1-BLK

Matrix: Solid

LCS Sample Id: 7697231-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.2020

LCSD Sample Id: 7697231-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.100	100	70-130	4	35	mg/kg	02.21.2020 19:30	
Toluene	<0.00200	0.100	0.101	101	0.0976	98	70-130	3	35	mg/kg	02.21.2020 19:30	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0943	94	71-129	3	35	mg/kg	02.21.2020 19:30	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.195	98	70-135	3	35	mg/kg	02.21.2020 19:30	
o-Xylene	<0.00200	0.100	0.101	101	0.0977	98	71-133	3	35	mg/kg	02.21.2020 19:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		104		70-130	%	02.21.2020 19:30
4-Bromofluorobenzene	97		93		94		70-130	%	02.21.2020 19:30

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117367

Parent Sample Id: 653332-001

Matrix: Soil

MS Sample Id: 653332-001 S

Prep Method: SW5030B

Date Prep: 02.21.2020

MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0891	88	0.0848	85	70-130	5	35	mg/kg	02.21.2020 20:11	
Toluene	<0.00202	0.101	0.0827	82	0.0788	79	70-130	5	35	mg/kg	02.21.2020 20:11	
Ethylbenzene	<0.00202	0.101	0.0816	81	0.0773	77	71-129	5	35	mg/kg	02.21.2020 20:11	
m,p-Xylenes	<0.00404	0.202	0.166	82	0.157	79	70-135	6	35	mg/kg	02.21.2020 20:11	
o-Xylene	<0.00202	0.101	0.0844	84	0.0799	80	71-133	5	35	mg/kg	02.21.2020 20:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.21.2020 20:11
4-Bromofluorobenzene	94		95		70-130	%	02.21.2020 20:11

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Larson and Associates, Inc.

Date/ Time Received: 02/21/2020 01:49:00 PM

Work Order #: 653335

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	9.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

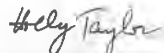
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02/21/2020

Checklist reviewed by:


Holly Taylor

Date: 02/22/2020



Certificate of Analysis Summary 653337

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Artesia

Date Received in Lab: Fri 02.21.2020 13:49
Report Date: 02.24.2020 14:49
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653337-001	653337-002	653337-003	653337-004		
	Field Id:	C12 Bot	C12 Bot	C12 Bot	C12 Bot		
	Depth:	12- ft	15- ft	18- ft	20- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	02.21.2020 12:52	02.21.2020 12:53	02.21.2020 12:51	02.21.2020 12:55		
BTEX by EPA 8021B	Extracted:	02.21.2020 17:00	02.21.2020 17:00	02.21.2020 17:00	02.21.2020 17:00		
	Analyzed:	02.21.2020 23:14	02.21.2020 23:35	02.21.2020 23:55	02.22.2020 01:37		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00990 0.00990	0.00706 0.00229	0.0163 0.00952	<0.00231 0.00231		
	Toluene	<0.00990 0.00990	0.0111 0.00917	<0.00952 0.00952	0.00454 0.00278		
	Ethylbenzene	<0.00990 0.00990	0.0984 0.00917	<0.00952 0.00952	0.00745 0.00463		
	m,p-Xylenes	<0.0198 0.0198	<0.0183 0.0183	<0.0190 0.0190	0.0306 0.0185		
	o-Xylene	<0.00990 0.00990	0.0204 0.00917	<0.00952 0.00952	0.00991 0.00926		
	Total Xylenes	<0.00990 0.00990	0.0204 0.00917	<0.00952 0.00952	0.0405 0.00926		
	Total BTEX	<0.00990 0.00990	0.137 0.00229	0.0163 0.00952	0.0525 0.00231		
Chloride by EPA 300	Extracted:	02.21.2020 18:11	02.21.2020 18:11	02.21.2020 18:11	02.21.2020 18:11		
	Analyzed:	02.21.2020 22:29	02.21.2020 22:35	02.21.2020 22:54	02.21.2020 23:00		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	21.1 9.92	39.6 9.92	98.1 49.9	91.2 49.8		
TPH By SW8015 Mod	Extracted:	02.21.2020 17:30	02.21.2020 17:30	02.21.2020 17:30	02.21.2020 17:00		
	Analyzed:	02.22.2020 10:29	02.22.2020 11:08	02.22.2020 10:29	02.21.2020 23:27		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	161 50.2	<50.1 50.1	<49.8 49.8		
	Diesel Range Organics (DRO)	583 50.1	2450 50.2	233 50.1	247 49.8		
	Motor Oil Range Hydrocarbons (MRO)	51.4 50.1	502 50.2	<50.1 50.1	56.7 49.8		
	Total TPH	634 50.1	3110 50.2	233 50.1	304 49.8		

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

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

John Builes
Project Manager



Analytical Report 653337

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire ABO

06-0141-11

02.24.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.24.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653337**

Empire ABO

Project Address: Artesia

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653337. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653337 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink, appearing to read 'JB', is written over a horizontal line.

John Builes
Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C12 Bot	S	02.21.2020 12:52	12 ft	653337-001
C12 Bot	S	02.21.2020 12:53	15 ft	653337-002
C12 Bot	S	02.21.2020 12:51	18 ft	653337-003
C12 Bot	S	02.21.2020 12:55	20 ft	653337-004



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire ABO

Project ID: 06-0141-11
Work Order Number(s): 653337

Report Date: 02.24.2020
Date Received: 02.21.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117367 BTEX by EPA 8021B

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



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-001

Matrix: Soil
Date Collected: 02.21.2020 12:52

Date Received: 02.21.2020 13:49
Sample Depth: 12 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117384

Date Prep: 02.21.2020 18:11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.1	9.92	mg/kg	02.21.2020 22:29		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.22.2020 10:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	583	50.1	mg/kg	02.22.2020 10:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	51.4	50.1	mg/kg	02.22.2020 10:29		1
Total TPH	PHC635	634	50.1	mg/kg	02.22.2020 10:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.22.2020 10:29	
o-Terphenyl	84-15-1	119	%	70-135	02.22.2020 10:29	



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-001

Matrix: Soil
Date Collected: 02.21.2020 12:52

Date Received: 02.21.2020 13:49
Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117367

Prep Method: SW5030B

% Moisture:

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.21.2020 23:14	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.21.2020 23:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.21.2020 23:14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.21.2020 23:14	



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-002

Matrix: Soil
Date Collected: 02.21.2020 12:53

Date Received: 02.21.2020 13:49
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117384

Date Prep: 02.21.2020 18:11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	39.6	9.92	mg/kg	02.21.2020 22:35		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	161	50.2	mg/kg	02.22.2020 11:08		1
Diesel Range Organics (DRO)	C10C28DRO	2450	50.2	mg/kg	02.22.2020 11:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	502	50.2	mg/kg	02.22.2020 11:08		1
Total TPH	PHC635	3110	50.2	mg/kg	02.22.2020 11:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.22.2020 11:08	
o-Terphenyl	84-15-1	119	%	70-135	02.22.2020 11:08	



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-002

Matrix: Soil
Date Collected: 02.21.2020 12:53

Date Received: 02.21.2020 13:49
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117367

Prep Method: SW5030B

% Moisture:

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00706	0.00229	mg/kg	02.21.2020 23:35		1
Toluene	108-88-3	0.0111	0.00917	mg/kg	02.21.2020 23:35		1
Ethylbenzene	100-41-4	0.0984	0.00917	mg/kg	02.21.2020 23:35		1
m,p-Xylenes	179601-23-1	<0.0183	0.0183	mg/kg	02.21.2020 23:35	U	1
o-Xylene	95-47-6	0.0204	0.00917	mg/kg	02.21.2020 23:35		1
Total Xylenes	1330-20-7	0.0204	0.00917	mg/kg	02.21.2020 23:35		1
Total BTEX		0.137	0.00229	mg/kg	02.21.2020 23:35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.21.2020 23:35		
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.21.2020 23:35		



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-003

Matrix: Soil
Date Collected: 02.21.2020 12:51

Date Received: 02.21.2020 13:49
Sample Depth: 18 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117384

Date Prep: 02.21.2020 18:11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.1	49.9	mg/kg	02.21.2020 22:54		5

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117413

Date Prep: 02.21.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.22.2020 10:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	233	50.1	mg/kg	02.22.2020 10:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.22.2020 10:29	U	1
Total TPH	PHC635	233	50.1	mg/kg	02.22.2020 10:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.22.2020 10:29	
o-Terphenyl	84-15-1	110	%	70-135	02.22.2020 10:29	



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-003

Matrix: Soil
Date Collected: 02.21.2020 12:51

Date Received: 02.21.2020 13:49
Sample Depth: 18 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117367

Prep Method: SW5030B

% Moisture:

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0163	0.00952	mg/kg	02.21.2020 23:55		1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	02.21.2020 23:55	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	02.21.2020 23:55	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	02.21.2020 23:55	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	02.21.2020 23:55	U	1
Total Xylenes	1330-20-7	<0.00952	0.00952	mg/kg	02.21.2020 23:55	U	1
Total BTEX		0.0163	0.00952	mg/kg	02.21.2020 23:55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	02.21.2020 23:55		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.21.2020 23:55		



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-004

Matrix: Soil
Date Collected: 02.21.2020 12:55

Date Received: 02.21.2020 13:49
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117384

Date Prep: 02.21.2020 18:11

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	91.2	49.8	mg/kg	02.21.2020 23:00		5

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117398

Date Prep: 02.21.2020 17:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.21.2020 23:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	247	49.8	mg/kg	02.21.2020 23:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	56.7	49.8	mg/kg	02.21.2020 23:27		1
Total TPH	PHC635	304	49.8	mg/kg	02.21.2020 23:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.21.2020 23:27	
o-Terphenyl	84-15-1	106	%	70-135	02.21.2020 23:27	



Certificate of Analytical Results 653337

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **C12 Bot**
Lab Sample Id: 653337-004

Matrix: Soil
Date Collected: 02.21.2020 12:55

Date Received: 02.21.2020 13:49
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3117367

Prep Method: SW5030B

% Moisture:

Date Prep: 02.21.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00231	0.00231	mg/kg	02.22.2020 01:37	U	1
Toluene	108-88-3	0.00454	0.00278	mg/kg	02.22.2020 01:37		1
Ethylbenzene	100-41-4	0.00745	0.00463	mg/kg	02.22.2020 01:37		1
m,p-Xylenes	179601-23-1	0.0306	0.0185	mg/kg	02.22.2020 01:37		1
o-Xylene	95-47-6	0.00991	0.00926	mg/kg	02.22.2020 01:37		1
Total Xylenes	1330-20-7	0.0405	0.00926	mg/kg	02.22.2020 01:37		1
Total BTEX		0.0525	0.00231	mg/kg	02.22.2020 01:37		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.22.2020 01:37		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.22.2020 01:37		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 653337

Larson and Associates, Inc. Empire ABO

Analytical Method: Chloride by EPA 300

Seq Number: 3117384

MB Sample Id: 7697232-1-BLK

Matrix: Solid

LCS Sample Id: 7697232-1-BKS

Prep Method: E300P

Date Prep: 02.21.2020

LCSD Sample Id: 7697232-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	258	103	90-110	0	20	mg/kg	02.21.2020 21:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3117384

Parent Sample Id: 653326-003

Matrix: Soil

MS Sample Id: 653326-003 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653326-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5370	201	5560	95	5560	95	90-110	0	20	mg/kg	02.21.2020 23:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3117384

Parent Sample Id: 653332-001

Matrix: Soil

MS Sample Id: 653332-001 S

Prep Method: E300P

Date Prep: 02.21.2020

MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.3	200	255	109	247	105	90-110	3	20	mg/kg	02.21.2020 22:05	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117398

MB Sample Id: 7697305-1-BLK

Matrix: Solid

LCS Sample Id: 7697305-1-BKS

Prep Method: SW8015P

Date Prep: 02.21.2020

LCSD Sample Id: 7697305-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	849	85	813	81	70-135	4	35	mg/kg	02.21.2020 22:28	
Diesel Range Organics (DRO)	<50.0	1000	995	100	1010	101	70-135	1	35	mg/kg	02.21.2020 22:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		112		105		70-135	%	02.21.2020 22:28
o-Terphenyl	117		117		106		70-135	%	02.21.2020 22:28

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117413

MB Sample Id: 7697318-1-BLK

Matrix: Solid

LCS Sample Id: 7697318-1-BKS

Prep Method: SW8015P

Date Prep: 02.21.2020

LCSD Sample Id: 7697318-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	836	84	915	92	70-135	9	35	mg/kg	02.22.2020 07:14	
Diesel Range Organics (DRO)	<50.0	1000	917	92	1000	100	70-135	9	35	mg/kg	02.22.2020 07:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		122		70-135	%	02.22.2020 07:14
o-Terphenyl	116		113		120		70-135	%	02.22.2020 07:14

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 653337

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117398

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.21.2020

MB Sample Id: 7697305-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

02.24.2020 11:43

Flag**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3117413

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.21.2020

MB Sample Id: 7697318-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

**MB
Result**

<50.0

Units

mg/kg

**Analysis
Date**

02.22.2020 06:55

Flag**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3117398

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.21.2020

Parent Sample Id: 653329-001

MS Sample Id: 653329-001 S

MSD Sample Id: 653329-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<50.2

**Spike
Amount**

1000

**MS
Result**

928

**MS
%Rec**

93

**MSD
Result**

918

**MSD
%Rec**

91

Limits

70-135

%RPD

1

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

02.21.2020 23:07

Flag

Diesel Range Organics (DRO)

<50.2

1000

1120

112

1060

105

70-135

6

35

mg/kg

02.21.2020 23:07

Surrogate

1-Chlorooctane

**MS
%Rec**

124

**MS
Flag****MSD
%Rec**

123

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

02.21.2020 23:07

o-Terphenyl

126

129

70-135

%

02.21.2020 23:07

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117413

Matrix: Soil

Prep Method: SW8015P

Date Prep: 02.21.2020

Parent Sample Id: 653209-013

MS Sample Id: 653209-013 S

MSD Sample Id: 653209-013 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

**Parent
Result**

<50.2

**Spike
Amount**

1000

**MS
Result**

963

**MS
%Rec**

96

**MSD
Result**

858

**MSD
%Rec**

86

Limits

70-135

%RPD

12

**RPD
Limit**

35

Units

mg/kg

**Analysis
Date**

02.22.2020 07:34

Flag

Diesel Range Organics (DRO)

<50.2

1000

1050

105

955

96

70-135

9

35

mg/kg

02.22.2020 07:34

Surrogate

1-Chlorooctane

**MS
%Rec**

129

**MS
Flag****MSD
%Rec**

114

**MSD
Flag****Limits**

70-135

Units

%

**Analysis
Date**

02.22.2020 07:34

o-Terphenyl

127

115

70-135

%

02.22.2020 07:34

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



QC Summary 653337

Larson and Associates, Inc. Empire ABO

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117367

MB Sample Id: 7697231-1-BLK

Matrix: Solid

LCS Sample Id: 7697231-1-BKS

Prep Method: SW5030B

Date Prep: 02.21.2020

LCSD Sample Id: 7697231-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.100	100	70-130	4	35	mg/kg	02.21.2020 19:30	
Toluene	<0.00200	0.100	0.101	101	0.0976	98	70-130	3	35	mg/kg	02.21.2020 19:30	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0943	94	71-129	3	35	mg/kg	02.21.2020 19:30	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.195	98	70-135	3	35	mg/kg	02.21.2020 19:30	
o-Xylene	<0.00200	0.100	0.101	101	0.0977	98	71-133	3	35	mg/kg	02.21.2020 19:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		104		70-130	%	02.21.2020 19:30
4-Bromofluorobenzene	97		93		94		70-130	%	02.21.2020 19:30

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117367

Parent Sample Id: 653332-001

Matrix: Soil

MS Sample Id: 653332-001 S

Prep Method: SW5030B

Date Prep: 02.21.2020

MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0891	88	0.0848	85	70-130	5	35	mg/kg	02.21.2020 20:11	
Toluene	<0.00202	0.101	0.0827	82	0.0788	79	70-130	5	35	mg/kg	02.21.2020 20:11	
Ethylbenzene	<0.00202	0.101	0.0816	81	0.0773	77	71-129	5	35	mg/kg	02.21.2020 20:11	
m,p-Xylenes	<0.00404	0.202	0.166	82	0.157	79	70-135	6	35	mg/kg	02.21.2020 20:11	
o-Xylene	<0.00202	0.101	0.0844	84	0.0799	80	71-133	5	35	mg/kg	02.21.2020 20:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.21.2020 20:11
4-Bromofluorobenzene	94		95		70-130	%	02.21.2020 20:11

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Larson and Associates, Inc.

Date/ Time Received: 02/21/2020 01:49:00 PM

Work Order #: 653337

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	9.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

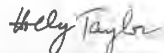
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02/21/2020

Checklist reviewed by:


Holly Taylor

Date: 02/22/2020



Certificate of Analysis Summary 653662

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-141-11
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-25-20 03:33 pm
Report Date: 26-FEB-20
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653662-001		653662-002		653662-003		653662-004		653662-005		653662-006	
	Field Id:	13-N. Bottom		13-N. Wall		13-E. Wall		13-S. Wall		13-S. Wall		13-S. Bottom	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-25-20 14:15		Feb-25-20 14:25		Feb-25-20 14:24		Feb-25-20 14:26		Feb-25-20 14:28		Feb-25-20 14:22	
BTEX by EPA 8021B	Extracted:	Feb-25-20 16:00		Feb-25-20 16:00		Feb-25-20 16:00		Feb-25-20 16:00		Feb-25-20 16:00		Feb-25-20 16:00	
	Analyzed:	Feb-26-20 09:16		Feb-26-20 09:36		Feb-26-20 09:57		Feb-26-20 10:17		Feb-26-20 10:38		Feb-26-20 10:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0192	0.0192	0.0263	0.0156	0.0312	0.0192	0.0858	0.0833	<0.00207	0.00207	<0.0156	0.0156
Toluene		0.0785	0.0769	0.154	0.0625	0.486	0.0769	0.428	0.0833	<0.00826	0.00826	0.104	0.0625
Ethylbenzene		0.930	0.0769	1.55	0.0625	1.83	0.0769	0.979	0.0833	<0.00826	0.00826	0.765	0.0625
m,p-Xylenes		1.28	0.154	2.36	0.125	3.80	0.154	2.03	0.167	<0.0165	0.0165	1.50	0.125
o-Xylene		0.758	0.0769	0.841	0.0625	1.51	0.0769	0.629	0.0833	<0.00826	0.00826	0.686	0.0625
Total Xylenes		2.04	0.0769	3.20	0.0625	5.31	0.0769	2.66	0.0833	<0.00826	0.00826	2.19	0.0625
Total BTEX		3.05	0.0192	4.93	0.0156	7.66	0.0192	4.15	0.0833	<0.00207	0.00207	3.06	0.0156
Chloride by EPA 300	Extracted:	Feb-25-20 17:00		Feb-25-20 17:00		Feb-25-20 17:00		Feb-25-20 17:00		Feb-25-20 17:00		Feb-25-20 17:00	
	Analyzed:	Feb-25-20 18:01		Feb-25-20 18:06		Feb-25-20 18:12		Feb-25-20 18:41		Feb-25-20 18:47		Feb-25-20 18:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		14.1	9.88	<9.96	9.96	31.4	9.96	25.2	10.0	14.1	9.88	12.3	9.96
TPH By SW8015 Mod	Extracted:	Feb-25-20 17:30		Feb-25-20 17:30		Feb-25-20 17:30		Feb-25-20 17:30		Feb-25-20 17:30		Feb-25-20 17:30	
	Analyzed:	Feb-26-20 08:23		Feb-26-20 08:43		Feb-26-20 08:43		Feb-26-20 09:03		Feb-26-20 09:03		Feb-26-20 09:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		121	75.2	319	249	192	74.9	156	75.4	95.4	75.3	126	74.8
Diesel Range Organics (DRO)		1650	251	6540	249	3110	250	2720	251	6940	251	3280	249
Motor Oil Range Hydrocarbons (MRO)		303	251	721	249	1070	250	820	251	1370	251	1020	249
Total TPH		2070	75.2	7580	249	4370	74.9	3700	75.4	8410	75.3	4430	74.8

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 653662

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-141-11
Contact: Mark Larson
Project Location: NM

Date Received in Lab: Tue Feb-25-20 03:33 pm
Report Date: 26-FEB-20
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653662-007					
	Field Id:	13-S1					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Feb-25-20 14:30					
BTEX by EPA 8021B	Extracted:	Feb-25-20 16:00					
	Analyzed:	Feb-26-20 11:18					
	Units/RL:	mg/kg RL					
Benzene		0.715 0.0588					
Toluene		0.559 0.0588					
Ethylbenzene		4.39 0.0588					
m,p-Xylenes		3.74 0.118					
o-Xylene		1.03 0.0588					
Total Xylenes		4.77 0.0588					
Total BTEX		10.4 0.0588					
Chloride by EPA 300	Extracted:	Feb-25-20 17:00					
	Analyzed:	Feb-25-20 18:58					
	Units/RL:	mg/kg RL					
Chloride		11.5 9.94					
TPH By SW8015 Mod	Extracted:	Feb-25-20 17:30					
	Analyzed:	Feb-26-20 09:42					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		642 250					
Diesel Range Organics (DRO)		16300 250					
Motor Oil Range Hydrocarbons (MRO)		1390 250					
Total TPH		18300 250					

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

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

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 653662

**for
Larson and Associates, Inc.**

Project Manager: Mark Larson

Empire Abo

06-141-11

26-FEB-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



26-FEB-20

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653662**

Empire Abo

Project Address: NM

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653662. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653662 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
13-N. Bottom	S	02-25-20 14:15		653662-001
13-N. Wall	S	02-25-20 14:25		653662-002
13-E. Wall	S	02-25-20 14:24		653662-003
13-S. Wall	S	02-25-20 14:26		653662-004
13-S. Wall	S	02-25-20 14:28		653662-005
13-S. Bottom	S	02-25-20 14:22		653662-006
13-S1	S	02-25-20 14:30		653662-007



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo*

Project ID: 06-141-11
Work Order Number(s): 653662

Report Date: 26-FEB-20
Date Received: 02/25/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117673 BTEX by EPA 8021B

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



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-N. Bottom**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-001

Date Collected: 02.25.20 14.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.1	9.88	mg/kg	02.25.20 18.01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	121	75.2	mg/kg	02.26.20 08.23		5
Diesel Range Organics (DRO)	C10C28DRO	1650	251	mg/kg	02.26.20 08.23		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	303	251	mg/kg	02.26.20 08.23		5
Total TPH	PHC635	2070	75.2	mg/kg	02.26.20 08.23		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	02.26.20 08.23		
o-Terphenyl	84-15-1	116	%	70-135	02.26.20 08.23		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-N. Bottom**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-001

Date Collected: 02.25.20 14.15

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0192	0.0192	mg/kg	02.26.20 09.16	U	1
Toluene	108-88-3	0.0785	0.0769	mg/kg	02.26.20 09.16		1
Ethylbenzene	100-41-4	0.930	0.0769	mg/kg	02.26.20 09.16		1
m,p-Xylenes	179601-23-1	1.28	0.154	mg/kg	02.26.20 09.16		1
o-Xylene	95-47-6	0.758	0.0769	mg/kg	02.26.20 09.16		1
Total Xylenes	1330-20-7	2.04	0.0769	mg/kg	02.26.20 09.16		1
Total BTEX		3.05	0.0192	mg/kg	02.26.20 09.16		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.26.20 09.16		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.26.20 09.16		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 13-N. Wall

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-002

Date Collected: 02.25.20 14.25

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	02.25.20 18.06	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	319	249	mg/kg	02.26.20 08.43		5
Diesel Range Organics (DRO)	C10C28DRO	6540	249	mg/kg	02.26.20 08.43		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	721	249	mg/kg	02.26.20 08.43		5
Total TPH	PHC635	7580	249	mg/kg	02.26.20 08.43		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	02.26.20 08.43		
o-Terphenyl	84-15-1	123	%	70-135	02.26.20 08.43		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-N. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-002

Date Collected: 02.25.20 14.25

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0263	0.0156	mg/kg	02.26.20 09.36		1
Toluene	108-88-3	0.154	0.0625	mg/kg	02.26.20 09.36		1
Ethylbenzene	100-41-4	1.55	0.0625	mg/kg	02.26.20 09.36		1
m,p-Xylenes	179601-23-1	2.36	0.125	mg/kg	02.26.20 09.36		1
o-Xylene	95-47-6	0.841	0.0625	mg/kg	02.26.20 09.36		1
Total Xylenes	1330-20-7	3.20	0.0625	mg/kg	02.26.20 09.36		1
Total BTEX		4.93	0.0156	mg/kg	02.26.20 09.36		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	02.26.20 09.36		
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.26.20 09.36		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-E. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-003

Date Collected: 02.25.20 14.24

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	31.4	9.96	mg/kg	02.25.20 18.12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	192	74.9	mg/kg	02.26.20 08.43		5
Diesel Range Organics (DRO)	C10C28DRO	3110	250	mg/kg	02.26.20 08.43		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1070	250	mg/kg	02.26.20 08.43		5
Total TPH	PHC635	4370	74.9	mg/kg	02.26.20 08.43		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	02.26.20 08.43		
o-Terphenyl	84-15-1	120	%	70-135	02.26.20 08.43		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-E. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-003

Date Collected: 02.25.20 14.24

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0312	0.0192	mg/kg	02.26.20 09.57		1
Toluene	108-88-3	0.486	0.0769	mg/kg	02.26.20 09.57		1
Ethylbenzene	100-41-4	1.83	0.0769	mg/kg	02.26.20 09.57		1
m,p-Xylenes	179601-23-1	3.80	0.154	mg/kg	02.26.20 09.57		1
o-Xylene	95-47-6	1.51	0.0769	mg/kg	02.26.20 09.57		1
Total Xylenes	1330-20-7	5.31	0.0769	mg/kg	02.26.20 09.57		1
Total BTEX		7.66	0.0192	mg/kg	02.26.20 09.57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	02.26.20 09.57		
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.26.20 09.57		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 13-S. Wall

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-004

Date Collected: 02.25.20 14.26

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.2	10.0	mg/kg	02.25.20 18.41		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	156	75.4	mg/kg	02.26.20 09.03		5
Diesel Range Organics (DRO)	C10C28DRO	2720	251	mg/kg	02.26.20 09.03		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	820	251	mg/kg	02.26.20 09.03		5
Total TPH	PHC635	3700	75.4	mg/kg	02.26.20 09.03		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	02.26.20 09.03		
o-Terphenyl	84-15-1	120	%	70-135	02.26.20 09.03		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-004

Date Collected: 02.25.20 14.26

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0858	0.0833	mg/kg	02.26.20 10.17		1
Toluene	108-88-3	0.428	0.0833	mg/kg	02.26.20 10.17		1
Ethylbenzene	100-41-4	0.979	0.0833	mg/kg	02.26.20 10.17		1
m,p-Xylenes	179601-23-1	2.03	0.167	mg/kg	02.26.20 10.17		1
o-Xylene	95-47-6	0.629	0.0833	mg/kg	02.26.20 10.17		1
Total Xylenes	1330-20-7	2.66	0.0833	mg/kg	02.26.20 10.17		1
Total BTEX		4.15	0.0833	mg/kg	02.26.20 10.17		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.26.20 10.17		
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.26.20 10.17		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-005

Date Collected: 02.25.20 14.28

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.1	9.88	mg/kg	02.25.20 18.47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	95.4	75.3	mg/kg	02.26.20 09.03		5
Diesel Range Organics (DRO)	C10C28DRO	6940	251	mg/kg	02.26.20 09.03		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1370	251	mg/kg	02.26.20 09.03		5
Total TPH	PHC635	8410	75.3	mg/kg	02.26.20 09.03		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	02.26.20 09.03		
o-Terphenyl	84-15-1	112	%	70-135	02.26.20 09.03		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S. Wall**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-005

Date Collected: 02.25.20 14.28

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00207	0.00207	mg/kg	02.26.20 10.38	U	1
Toluene	108-88-3	<0.00826	0.00826	mg/kg	02.26.20 10.38	U	1
Ethylbenzene	100-41-4	<0.00826	0.00826	mg/kg	02.26.20 10.38	U	1
m,p-Xylenes	179601-23-1	<0.0165	0.0165	mg/kg	02.26.20 10.38	U	1
o-Xylene	95-47-6	<0.00826	0.00826	mg/kg	02.26.20 10.38	U	1
Total Xylenes	1330-20-7	<0.00826	0.00826	mg/kg	02.26.20 10.38	U	1
Total BTEX		<0.00207	0.00207	mg/kg	02.26.20 10.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.26.20 10.38		
1,4-Difluorobenzene	540-36-3	101	%	70-130	02.26.20 10.38		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S. Bottom**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-006

Date Collected: 02.25.20 14.22

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 17.00

Basis: Wet Weight

Seq Number: 3117676

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.3	9.96	mg/kg	02.25.20 18.53		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 02.25.20 17.30

Basis: Wet Weight

Seq Number: 3117697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	126	74.8	mg/kg	02.26.20 09.22		5
Diesel Range Organics (DRO)	C10C28DRO	3280	249	mg/kg	02.26.20 09.22		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1020	249	mg/kg	02.26.20 09.22		5
Total TPH	PHC635	4430	74.8	mg/kg	02.26.20 09.22		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	02.26.20 09.22		
o-Terphenyl	84-15-1	121	%	70-135	02.26.20 09.22		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S. Bottom**

Matrix: Soil

Date Received: 02.25.20 15.33

Lab Sample Id: 653662-006

Date Collected: 02.25.20 14.22

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0156	0.0156	mg/kg	02.26.20 10.58	U	1
Toluene	108-88-3	0.104	0.0625	mg/kg	02.26.20 10.58		1
Ethylbenzene	100-41-4	0.765	0.0625	mg/kg	02.26.20 10.58		1
m,p-Xylenes	179601-23-1	1.50	0.125	mg/kg	02.26.20 10.58		1
o-Xylene	95-47-6	0.686	0.0625	mg/kg	02.26.20 10.58		1
Total Xylenes	1330-20-7	2.19	0.0625	mg/kg	02.26.20 10.58		1
Total BTEX		3.06	0.0156	mg/kg	02.26.20 10.58		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.26.20 10.58		
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.26.20 10.58		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 13-S1
Lab Sample Id: 653662-007

Matrix: Soil
Date Collected: 02.25.20 14.30

Date Received: 02.25.20 15.33

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3117676

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 02.25.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.5	9.94	mg/kg	02.25.20 18.58		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3117697

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 02.25.20 17.30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	642	250	mg/kg	02.26.20 09.42		5
Diesel Range Organics (DRO)	C10C28DRO	16300	250	mg/kg	02.26.20 09.42		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1390	250	mg/kg	02.26.20 09.42		5
Total TPH	PHC635	18300	250	mg/kg	02.26.20 09.42		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	02.26.20 09.42		
o-Terphenyl	84-15-1	116	%	70-135	02.26.20 09.42		



Certificate of Analytical Results 653662

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **13-S1**
Lab Sample Id: 653662-007

Matrix: Soil
Date Collected: 02.25.20 14.30

Date Received: 02.25.20 15.33

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.25.20 16.00

Basis: Wet Weight

Seq Number: 3117673

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.715	0.0588	mg/kg	02.26.20 11.18		1
Toluene	108-88-3	0.559	0.0588	mg/kg	02.26.20 11.18		1
Ethylbenzene	100-41-4	4.39	0.0588	mg/kg	02.26.20 11.18		1
m,p-Xylenes	179601-23-1	3.74	0.118	mg/kg	02.26.20 11.18		1
o-Xylene	95-47-6	1.03	0.0588	mg/kg	02.26.20 11.18		1
Total Xylenes	1330-20-7	4.77	0.0588	mg/kg	02.26.20 11.18		1
Total BTEX		10.4	0.0588	mg/kg	02.26.20 11.18		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	02.26.20 11.18		
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.26.20 11.18		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 653662

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3117676

MB Sample Id: 7697408-1-BLK

Matrix: Solid

LCS Sample Id: 7697408-1-BKS

Prep Method: E300P

Date Prep: 02.25.20

LCSD Sample Id: 7697408-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	250	100	256	102	90-110	2	20	mg/kg	02.25.20 13:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3117676

Parent Sample Id: 653581-005

Matrix: Soil

MS Sample Id: 653581-005 S

Prep Method: E300P

Date Prep: 02.25.20

MSD Sample Id: 653581-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	154	200	373	110	370	107	90-110	1	20	mg/kg	02.25.20 14:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3117676

Parent Sample Id: 653662-003

Matrix: Soil

MS Sample Id: 653662-003 S

Prep Method: E300P

Date Prep: 02.25.20

MSD Sample Id: 653662-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.4	199	229	99	218	94	90-110	5	20	mg/kg	02.25.20 18:18	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117697

MB Sample Id: 7697467-1-BLK

Matrix: Solid

LCS Sample Id: 7697467-1-BKS

Prep Method: SW8015P

Date Prep: 02.25.20

LCSD Sample Id: 7697467-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1100	110	1240	124	70-135	12	35	mg/kg	02.26.20 06:45	
Diesel Range Organics (DRO)	<50.0	1000	1320	132	1310	131	70-135	1	35	mg/kg	02.26.20 06:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		125		120		70-135	%	02.26.20 06:45
o-Terphenyl	130		116		116		70-135	%	02.26.20 06:45

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117697

Matrix: Solid

MB Sample Id: 7697467-1-BLK

Prep Method: SW8015P

Date Prep: 02.25.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.26.20 06:45	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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



QC Summary 653662

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117697

Parent Sample Id: 653655-001

Matrix: Soil

MS Sample Id: 653655-001 S

Prep Method: SW8015P

Date Prep: 02.25.20

MSD Sample Id: 653655-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1060	106	923	93	70-135	14	35	mg/kg	02.26.20 07:23	
Diesel Range Organics (DRO)	<50.1	1000	1160	116	1060	107	70-135	9	35	mg/kg	02.26.20 07:23	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		119		70-135	%	02.26.20 07:23
o-Terphenyl	133		126		70-135	%	02.26.20 07:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117673

MB Sample Id: 7697461-1-BLK

Matrix: Solid

LCS Sample Id: 7697461-1-BKS

Prep Method: SW5030B

Date Prep: 02.25.20

LCSD Sample Id: 7697461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.111	111	70-130	2	35	mg/kg	02.25.20 17:51	
Toluene	<0.00200	0.100	0.105	105	0.106	106	70-130	1	35	mg/kg	02.25.20 17:51	
Ethylbenzene	<0.00200	0.100	0.101	101	0.102	102	71-129	1	35	mg/kg	02.25.20 17:51	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.210	105	70-135	0	35	mg/kg	02.25.20 17:51	
o-Xylene	<0.00200	0.100	0.104	104	0.105	105	71-133	1	35	mg/kg	02.25.20 17:51	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		105		70-130	%	02.25.20 17:51
4-Bromofluorobenzene	96		94		94		70-130	%	02.25.20 17:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117673

Parent Sample Id: 653655-001

Matrix: Soil

MS Sample Id: 653655-001 S

Prep Method: SW5030B

Date Prep: 02.25.20

MSD Sample Id: 653655-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.129	130	70-130	21	35	mg/kg	02.25.20 18:32	
Toluene	<0.00200	0.100	0.101	101	0.123	124	70-130	20	35	mg/kg	02.25.20 18:32	
Ethylbenzene	<0.00200	0.100	0.0968	97	0.118	119	71-129	20	35	mg/kg	02.25.20 18:32	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.242	122	70-135	19	35	mg/kg	02.25.20 18:32	
o-Xylene	<0.00200	0.100	0.0995	100	0.120	121	71-133	19	35	mg/kg	02.25.20 18:32	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		70-130	%	02.25.20 18:32
4-Bromofluorobenzene	100		93		70-130	%	02.25.20 18:32

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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

CHAIN-OF-CUSTODY



P=PAINT
SL=SLUDGE
OT=OTHER

mst

of Containers

PRESERVATION

HCl

 HNO_3

H_2SO_4 , ☐ NaOH ☐

ICE

UNPRESERVED

ANALYSES

ANALYSES
TEXT-MTR
TRPH

ANALYSES
EXT MTBE ☐
TRPH 418.1 ☐
GASOL ☐

SE ☐ TPH 10
418.1 ☐ CASOLINE MOD
DIESEL -

TPH 1005 ☐ TPH
NE MOD 8015 ☒
ESEL - MOD 801
OIL - MOD P
OC

☐ TPH 1006
☒ MOD 8015
☒ MOD 8015
☒ MOD 8015
☐ OC 8260
☐ SVOC

1006 ☐
15 ☒
260 ☐
VOC 8270 ☐ PA
8081 PEST
8081

PAH 8270
PESTICIDES
PCBS
BLP

8270 ☐ HOLD
SIDES ☐ 8151 H
PCBS ☐
BLP - METALS
CLP - P

☐ HOLDPAH ☐
☐ 8151 HERBICIDE ☐
☐ METALS (RCRA) ☐
☐ CLP - PEST ☐
☐ TOTAL ME ☐
☐ LEAK ☐

☐ HERBICIDES

☐ TOLP VOC ☐
☐ RB ☐ Semi-VOC ☐
☐ LS (RCRA) ☐ OT
☐ TOTAL ☐ D.W. ☐
☐ RCI ☐ TOX ☐
☐ TDS ☐ TS

☐ VOC ☐
☐ Semi-VOC ☐
☐ A) ☐ OTHER LISTED
☐ D.W. 200.8 ☐
☐ FLASHPOINT
☐ TOX ☐ TSS ☐ % A
☐ SDS ☐ pH ☐ HEX
☐ EXP

☐ MER LIST ☐
☐ 0.8 ☐ TCLP ☐
☐ FLASHPOINT ☐
☐ % MOISTURE ☐
☐ HEXAVALENT ☐
☐ EXPLOSIVES ☐
☐ CHLOR ☐

☐ GLP ☐
☐ NT ☐
☐ DISTURE ☐ CYAN
☐ VALENT CHROM
☐ OSIVES ☐ PECH
☐ CHLORIDE ☒ AN

☐ CYANIDE ☐
☐ CHROMIUM ☐
☐ PEROCHLORATE ☐
☒ JEWEL ANIONS ☐

FIELD

ALKALINITY ☐

FIELD NO

NOTES

FIELD NOTES

1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

LABORATORY:

OTHER ☐

☒ HAND DELIVERED



Certificate of Analysis Summary 653832

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Wed Feb-26-20 03:46 pm

Report Date: 27-FEB-20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653832-001					
	Field Id:	C-2A bottom					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Feb-26-20 09:35					
BTEX by EPA 8021B	Extracted:	Feb-26-20 17:00					
	Analyzed:	Feb-26-20 21:10					
	Units/RL:	mg/kg RL					
Benzene		<0.00990 0.00990					
Toluene		<0.00990 0.00990					
Ethylbenzene		<0.00990 0.00990					
m,p-Xylenes		<0.0198 0.0198					
o-Xylene		<0.00990 0.00990					
Total Xylenes		<0.00990 0.00990					
Total BTEX		<0.00990 0.00990					
Chloride by EPA 300	Extracted:	Feb-26-20 20:19					
	Analyzed:	Feb-26-20 23:22					
	Units/RL:	mg/kg RL					
Chloride		<20.0 20.0					
TPH By SW8015 Mod	Extracted:	Feb-26-20 17:00					
	Analyzed:	Feb-26-20 22:54					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<74.9 74.9					
Diesel Range Organics (DRO)		922 250					
Motor Oil Range Hydrocarbons (MRO)		442 250					
Total TPH		1360 74.9					

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

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

Holly Taylor
Project Manager

Analytical Report 653832

**for
Larson and Associates, Inc.**

Project Manager: Mark Larson

Empire Abo-Durango Midstream

06-0141-11

27-FEB-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



27-FEB-20

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653832**

Empire Abo-Durango Midstream

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653832. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653832 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 653832

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-2A bottom	S	02-26-20 09:35		653832-001



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo-Durango Midstream*

Project ID: 06-0141-11
Work Order Number(s): 653832

Report Date: 27-FEB-20
Date Received: 02/26/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117847 BTEX by EPA 8021B

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



Certificate of Analytical Results 653832

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-2A bottom**

Matrix: Soil

Date Received: 02.26.20 15.46

Lab Sample Id: 653832-001

Date Collected: 02.26.20 09.35

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 20.19

Basis: Wet Weight

Seq Number: 3117863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<20.0	20.0	mg/kg	02.26.20 23.22	U	2

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.26.20 17.00

Basis: Wet Weight

Seq Number: 3117835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	02.26.20 22.54	U	5
Diesel Range Organics (DRO)	C10C28DRO	922	250	mg/kg	02.26.20 22.54		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	442	250	mg/kg	02.26.20 22.54		5
Total TPH	PHC635	1360	74.9	mg/kg	02.26.20 22.54		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	02.26.20 22.54		
o-Terphenyl	84-15-1	110	%	70-135	02.26.20 22.54		



Certificate of Analytical Results 653832

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-2A bottom**

Matrix: Soil

Date Received: 02.26.20 15.46

Lab Sample Id: 653832-001

Date Collected: 02.26.20 09.35

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.26.20 17.00

Basis: Wet Weight

Seq Number: 3117847

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
Toluene	108-88-3	<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
Ethylbenzene	100-41-4	<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
m,p-Xylenes	179601-23-1	<0.0198	0.0198	mg/kg	02.26.20 21.10	U	1
o-Xylene	95-47-6	<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
Total Xylenes	1330-20-7	<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
Total BTEX		<0.00990	0.00990	mg/kg	02.26.20 21.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.26.20 21.10		
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.26.20 21.10		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 653832

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

MB Sample Id: 7697573-1-BLK

Matrix: Solid

LCS Sample Id: 7697573-1-BKS

Prep Method: E300P

Date Prep: 02.26.20

LCSD Sample Id: 7697573-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	264	106	90-110	2	20	mg/kg	02.26.20 21:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

Parent Sample Id: 653827-019

Matrix: Soil

MS Sample Id: 653827-019 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653827-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	144	200	358	107	359	108	90-110	0	20	mg/kg	02.26.20 21:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3117863

Parent Sample Id: 653827-029

Matrix: Soil

MS Sample Id: 653827-029 S

Prep Method: E300P

Date Prep: 02.26.20

MSD Sample Id: 653827-029 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	232	201	454	110	420	94	90-110	8	20	mg/kg	02.26.20 23:04	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117835

MB Sample Id: 7697510-1-BLK

Matrix: Solid

LCS Sample Id: 7697510-1-BKS

Prep Method: SW8015P

Date Prep: 02.26.20

LCSD Sample Id: 7697510-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1090	109	1040	104	70-135	5	35	mg/kg	02.26.20 17:41	
Diesel Range Organics (DRO)	<50.0	1000	1290	129	1260	126	70-135	2	35	mg/kg	02.26.20 17:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		125		128		70-135	%	02.26.20 17:41
o-Terphenyl	102		112		110		70-135	%	02.26.20 17:41

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117835

Matrix: Solid

MB Sample Id: 7697510-1-BLK

Prep Method: SW8015P

Date Prep: 02.26.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.26.20 17:22	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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



QC Summary 653832

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: TPH By SW8015 Mod

Seq Number: 3117835

Parent Sample Id: 653719-001

Matrix: Soil

MS Sample Id: 653719-001 S

Prep Method: SW8015P

Date Prep: 02.26.20

MSD Sample Id: 653719-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	735	74	946	95	70-135	25	35	mg/kg	02.26.20 18:55	
Diesel Range Organics (DRO)	<50.2	1000	895	90	1090	109	70-135	20	35	mg/kg	02.26.20 18:55	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		117		70-135	%	02.26.20 18:55
o-Terphenyl	97		124		70-135	%	02.26.20 18:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117847

MB Sample Id: 7697498-1-BLK

Matrix: Solid

LCS Sample Id: 7697498-1-BKS

Prep Method: SW5030B

Date Prep: 02.26.20

LCSD Sample Id: 7697498-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.108	108	70-130	2	35	mg/kg	02.26.20 13:21	
Toluene	<0.00200	0.100	0.102	102	0.103	103	70-130	1	35	mg/kg	02.26.20 13:21	
Ethylbenzene	<0.00200	0.100	0.0973	97	0.0989	99	71-129	2	35	mg/kg	02.26.20 13:21	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.204	102	70-135	1	35	mg/kg	02.26.20 13:21	
o-Xylene	<0.00200	0.100	0.100	100	0.102	102	71-133	2	35	mg/kg	02.26.20 13:21	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		105		70-130	%	02.26.20 13:21
4-Bromofluorobenzene	94		94		94		70-130	%	02.26.20 13:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3117847

Parent Sample Id: 653719-001

Matrix: Soil

MS Sample Id: 653719-001 S

Prep Method: SW5030B

Date Prep: 02.26.20

MSD Sample Id: 653719-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.114	115	0.0885	89	70-130	25	35	mg/kg	02.26.20 14:02	
Toluene	<0.00198	0.0992	0.107	108	0.0822	82	70-130	26	35	mg/kg	02.26.20 14:02	
Ethylbenzene	<0.00198	0.0992	0.0984	99	0.0752	75	71-129	27	35	mg/kg	02.26.20 14:02	
m,p-Xylenes	<0.00397	0.198	0.200	101	0.154	77	70-135	26	35	mg/kg	02.26.20 14:02	
o-Xylene	<0.00198	0.0992	0.0978	99	0.0770	77	71-133	24	35	mg/kg	02.26.20 14:02	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	02.26.20 14:02
4-Bromofluorobenzene	92		100		70-130	%	02.26.20 14:02

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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

653 832

No 0591

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 02/26/2020 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: Empire Ave - Durango MidstreamLAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

TRRP report?

☐ Yes ☒ No

S=SOIL

W=WATER

A=AIR

P=PAINT

SL=SLUDGE

OT=OTHER

PRESERVATION

HCl

HNO₃H₂SO₄

NaOH

ICE

UNPRESERVED

ANALYSES

BTEX ☒ MTBE ☒TRPH 418.1 ☒ TPH 1005 ☒ TPH 1006 ☒GASOLINE MOD 8015 ☒DIESEL - MOD 8015 ☒OIL - MOD 8015 ☒VOC 8280 ☒SVOC 8270 ☒8081 PESTICIDES ☒8082 PCBS ☒TBLP - METALS (RCRA) ☒TCLP - PEST ☒ HERB ☒ HOLDPAH ☒TOTAL METALS (RCRA) ☒ OTHER LIST ☒LEAD - TOTAL ☒ D.W. 200.8 ☒ TCLP ☒RCI ☒ TOX ☒ FLASHPOINT ☒TDS ☒ TSS ☒ % MOISTURE ☒ CYANIDE ☒PH ☒ HEXAVALENT CHROMIUM ☒EXPLOSIVES ☒ PECHLORATE ☒CHLORIDE ☒ ANIONS ☒ ALKALINITY ☒

FIELD NOTES

C-2A Bottom

Lab #

Date

Time

Matrix

of Containers

HCl

HNO₃H₂SO₄

NaOH

ICE

UNPRESERVED

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

NORMAL ☐1 DAY ☒2 DAY ☐OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 6.4 THERM#: T-NM004CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED☐ CARRIER BILL # _____☒ HAND DELIVERED



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 02/26/2020 03:46:00 PM

Work Order #: 653832

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02/26/2020

Checklist reviewed by:


Holly Taylor

Date: 02/27/2020



Certificate of Analysis Summary 653985

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: NM

Date Received in Lab: Thu Feb-27-20 03:03 pm

Report Date: 28-FEB-20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653985-001	653985-002	653985-003	653985-004	653985-005	653985-006
	Field Id:	C12 -A Bot. (15')	C12 -B Bot. (15')	C12 -C Bot. (15')	C12 -D Bot. (15')	C12 -E Bot. (15')	C12 -A E.Wall (15')
	Depth:	15- ft	15- ft	15- ft	15- ft	15- ft	15- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-27-20 12:50	Feb-27-20 12:52	Feb-27-20 12:54	Feb-27-20 12:56	Feb-27-20 12:58	Feb-27-20 13:02
BTEX by EPA 8021B	Extracted:	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32
	Analyzed:	Feb-27-20 22:37	Feb-28-20 00:39	Feb-27-20 22:57	Feb-28-20 00:59	Feb-27-20 23:58	Feb-28-20 01:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00201 0.00201	<0.00481 0.00481	<0.00200 0.00200	<0.0278 0.0278	<0.00202 0.00202	<0.00510 0.00510
	Toluene	<0.00201 0.00201	<0.00481 0.00481	<0.00200 0.00200	0.336 0.111	<0.00202 0.00202	0.0157 0.00510
Ethylbenzene		<0.00201 0.00201	0.0202 0.0192	<0.00200 0.00200	6.72 0.111	<0.00202 0.00202	0.0543 0.0204
m,p-Xylenes		<0.00402 0.00402	0.0435 0.0385	<0.00399 0.00399	9.51 0.222	<0.00404 0.00404	0.0676 0.0408
o-Xylene		<0.00201 0.00201	0.0304 0.0192	<0.00200 0.00200	2.38 0.111	<0.00202 0.00202	0.0420 0.0204
Total Xylenes		<0.00201 0.00201	0.0739 0.0192	<0.00200 0.00200	11.9 0.111	<0.00202 0.00202	0.110 0.0204
Total BTEX		<0.00201 0.00201	0.0941 0.00481	<0.00200 0.00200	18.9 0.0278	<0.00202 0.00202	0.180 0.00510
Chloride by EPA 300	Extracted:	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35
	Analyzed:	Feb-27-20 19:49	Feb-27-20 20:12	Feb-27-20 20:19	Feb-27-20 20:27	Feb-27-20 20:34	Feb-27-20 20:42
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	15.8 9.88	11.2 9.92	25.8 9.98	<9.88 9.88	13.2 9.96	<9.86 9.86
TPH By SW8015 Mod	Extracted:	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00
	Analyzed:	Feb-27-20 22:35	Feb-27-20 22:35	Feb-27-20 23:35	Feb-27-20 23:35	Feb-27-20 23:55	Feb-27-20 23:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<75.4 75.4	<49.9 49.9	188 75.2	<49.8 49.8	<75.2 75.2
	Diesel Range Organics (DRO)	827 50.0	367 251	420 49.9	1060 251	81.7 49.8	2520 251
Motor Oil Range Hydrocarbons (MRO)		81.7 50.0	<75.4 75.4	<49.9 49.9	206 75.2	<49.8 49.8	322 75.2
Total TPH		909 50.0	367 75.4	420 49.9	1450 75.2	81.7 49.8	2840 75.2

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

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 653985

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location: NM

Date Received in Lab: Thu Feb-27-20 03:03 pm

Report Date: 28-FEB-20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	653985-007	653985-008	653985-009	653985-010		
	Field Id:	C12 -B E.Wall (15')	C12 -C E.Wall (15')	C12 -D E.Wall (15')	C12 -E E.Wall (15')		
	Depth:	15- ft	15- ft	15- ft	15- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Feb-27-20 13:05	Feb-27-20 13:07	Feb-27-20 13:09	Feb-27-20 13:15		
BTEX by EPA 8021B	Extracted:	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32	Feb-27-20 17:32		
	Analyzed:	Feb-28-20 00:19	Feb-28-20 01:40	Feb-28-20 02:01	Feb-28-20 02:21		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00202 0.00202	<0.0167 0.0167	<0.00625 0.00625	<0.0250 0.0250		
	Toluene	<0.00202 0.00202	0.146 0.0667	<0.00625 0.00625	<0.0250 0.0250		
Ethylbenzene		<0.00202 0.00202	1.57 0.0667	0.0770 0.0250	0.105 0.0250		
m,p-Xylenes		<0.00403 0.00403	1.48 0.133	0.107 0.0500	0.117 0.0500		
o-Xylene		0.00331 0.00202	0.356 0.0667	0.0449 0.0250	0.0665 0.0250		
Total Xylenes		0.00331 0.00202	1.84 0.0667	0.152 0.0250	0.184 0.0250		
Total BTEX		0.00331 0.00202	3.55 0.0167	0.229 0.00625	0.289 0.0250		
Chloride by EPA 300	Extracted:	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35	Feb-27-20 18:35		
	Analyzed:	Feb-27-20 20:50	Feb-27-20 21:14	Feb-27-20 21:22	Feb-27-20 21:46		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	<9.98 9.98	<10.1 10.1	<10.1 10.1	<10.0 10.0		
TPH By SW8015 Mod	Extracted:	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00	Feb-27-20 16:00		
	Analyzed:	Feb-28-20 00:15	Feb-28-20 00:15	Feb-28-20 00:35	Feb-28-20 00:35		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	79.0 75.2	93.4 75.2	<74.9 74.9		
	Diesel Range Organics (DRO)	556 50.1	1070 251	620 251	831 250		
Motor Oil Range Hydrocarbons (MRO)		73.3 50.1	240 75.2	190 75.2	200 74.9		
Total TPH		629 50.1	1390 75.2	903 75.2	1030 74.9		

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

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

Holly Taylor
Project Manager

Analytical Report 653985

**for
Larson and Associates, Inc.**

Project Manager: Mark Larson

Empire Abo-Durango Midstream

06-0141-11

28-FEB-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



28-FEB-20

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **653985**

Empire Abo-Durango Midstream

Project Address: NM

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 653985. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 653985 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C12 -A Bot. (15')	S	02-27-20 12:50	15 ft	653985-001
C12 -B Bot. (15')	S	02-27-20 12:52	15 ft	653985-002
C12 -C Bot. (15')	S	02-27-20 12:54	15 ft	653985-003
C12 -D Bot. (15')	S	02-27-20 12:56	15 ft	653985-004
C12 -E Bot. (15')	S	02-27-20 12:58	15 ft	653985-005
C12 -A E.Wall (15')	S	02-27-20 13:02	15 ft	653985-006
C12 -B E.Wall (15')	S	02-27-20 13:05	15 ft	653985-007
C12 -C E.Wall (15')	S	02-27-20 13:07	15 ft	653985-008
C12 -D E.Wall (15')	S	02-27-20 13:09	15 ft	653985-009
C12 -E E.Wall (15')	S	02-27-20 13:15	15 ft	653985-010



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo-Durango Midstream*

Project ID: 06-0141-11
Work Order Number(s): 653985

Report Date: 28-FEB-20
Date Received: 02/27/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118009 BTEX by EPA 8021B

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



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -A Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-001

Date Collected: 02.27.20 12.50

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.8	9.88	mg/kg	02.27.20 19.49		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 22.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	827	50.0	mg/kg	02.27.20 22.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	81.7	50.0	mg/kg	02.27.20 22.35		1
Total TPH	PHC635	909	50.0	mg/kg	02.27.20 22.35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	73	%	70-135	02.27.20 22.35		
o-Terphenyl	84-15-1	82	%	70-135	02.27.20 22.35		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -A Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-001

Date Collected: 02.27.20 12.50

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.27.20 22.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.27.20 22.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.27.20 22.37		
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.27.20 22.37		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -B Bot. (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-002

Date Collected: 02.27.20 12.52

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.2	9.92	mg/kg	02.27.20 20.12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.4	75.4	mg/kg	02.27.20 22.35	U	5
Diesel Range Organics (DRO)	C10C28DRO	367	251	mg/kg	02.27.20 22.35		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<75.4	75.4	mg/kg	02.27.20 22.35	U	5
Total TPH	PHC635	367	75.4	mg/kg	02.27.20 22.35		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	02.27.20 22.35		
o-Terphenyl	84-15-1	101	%	70-135	02.27.20 22.35		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -B Bot. (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-002

Date Collected: 02.27.20 12.52

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00481	0.00481	mg/kg	02.28.20 00.39	U	1
Toluene	108-88-3	<0.00481	0.00481	mg/kg	02.28.20 00.39	U	1
Ethylbenzene	100-41-4	0.0202	0.0192	mg/kg	02.28.20 00.39		1
m,p-Xylenes	179601-23-1	0.0435	0.0385	mg/kg	02.28.20 00.39		1
o-Xylene	95-47-6	0.0304	0.0192	mg/kg	02.28.20 00.39		1
Total Xylenes	1330-20-7	0.0739	0.0192	mg/kg	02.28.20 00.39		1
Total BTEX		0.0941	0.00481	mg/kg	02.28.20 00.39		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92		%	70-130	02.28.20 00.39	
1,4-Difluorobenzene	540-36-3	108		%	70-130	02.28.20 00.39	



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -C Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-003

Date Collected: 02.27.20 12.54

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.8	9.98	mg/kg	02.27.20 20.19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 23.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	420	49.9	mg/kg	02.27.20 23.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 23.35	U	1
Total TPH	PHC635	420	49.9	mg/kg	02.27.20 23.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.27.20 23.35	
o-Terphenyl	84-15-1	120	%	70-135	02.27.20 23.35	



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -C Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-003

Date Collected: 02.27.20 12.54

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 22.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 22.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.27.20 22.57		
1,4-Difluorobenzene	540-36-3	109	%	70-130	02.27.20 22.57		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -D Bot. (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-004

Date Collected: 02.27.20 12.56

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	02.27.20 20.27	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	188	75.2	mg/kg	02.27.20 23.35		5
Diesel Range Organics (DRO)	C10C28DRO	1060	251	mg/kg	02.27.20 23.35		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	206	75.2	mg/kg	02.27.20 23.35		5
Total TPH	PHC635	1450	75.2	mg/kg	02.27.20 23.35		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	93	%	70-135	02.27.20 23.35		
o-Terphenyl	84-15-1	106	%	70-135	02.27.20 23.35		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -D Bot. (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-004

Date Collected: 02.27.20 12.56

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0278	0.0278	mg/kg	02.28.20 00.59	U	1
Toluene	108-88-3	0.336	0.111	mg/kg	02.28.20 00.59		1
Ethylbenzene	100-41-4	6.72	0.111	mg/kg	02.28.20 00.59		1
m,p-Xylenes	179601-23-1	9.51	0.222	mg/kg	02.28.20 00.59		1
o-Xylene	95-47-6	2.38	0.111	mg/kg	02.28.20 00.59		1
Total Xylenes	1330-20-7	11.9	0.111	mg/kg	02.28.20 00.59		1
Total BTEX		18.9	0.0278	mg/kg	02.28.20 00.59		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.28.20 00.59		
1,4-Difluorobenzene	540-36-3	102	%	70-130	02.28.20 00.59		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -E Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-005

Date Collected: 02.27.20 12.58

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.2	9.96	mg/kg	02.27.20 20.34		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	81.7	49.8	mg/kg	02.27.20 23.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 23.55	U	1
Total TPH	PHC635	81.7	49.8	mg/kg	02.27.20 23.55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	02.27.20 23.55		
o-Terphenyl	84-15-1	114	%	70-135	02.27.20 23.55		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -E Bot. (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-005

Date Collected: 02.27.20 12.58

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.27.20 23.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.27.20 23.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	02.27.20 23.58		
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.27.20 23.58		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -A E.Wall (15')

Lab Sample Id: 653985-006

Matrix: Soil

Date Collected: 02.27.20 13.02

Date Received: 02.27.20 15.03

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118024

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 02.27.20 18.35

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	02.27.20 20.42	U	1

Analytical Method: TPH By SW8015 Mod

Tech: MAB

Analyst: CAC

Seq Number: 3118014

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 02.27.20 16.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.2	75.2	mg/kg	02.27.20 23.55	U	5
Diesel Range Organics (DRO)	C10C28DRO	2520	251	mg/kg	02.27.20 23.55		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	322	75.2	mg/kg	02.27.20 23.55		5
Total TPH	PHC635	2840	75.2	mg/kg	02.27.20 23.55		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	02.27.20 23.55		
o-Terphenyl	84-15-1	107	%	70-135	02.27.20 23.55		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -A E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-006

Date Collected: 02.27.20 13.02

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00510	0.00510	mg/kg	02.28.20 01.20	U	1
Toluene	108-88-3	0.0157	0.00510	mg/kg	02.28.20 01.20		1
Ethylbenzene	100-41-4	0.0543	0.0204	mg/kg	02.28.20 01.20		1
m,p-Xylenes	179601-23-1	0.0676	0.0408	mg/kg	02.28.20 01.20		1
o-Xylene	95-47-6	0.0420	0.0204	mg/kg	02.28.20 01.20		1
Total Xylenes	1330-20-7	0.110	0.0204	mg/kg	02.28.20 01.20		1
Total BTEX		0.180	0.00510	mg/kg	02.28.20 01.20		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	02.28.20 01.20		
4-Bromofluorobenzene	460-00-4	88	%	70-130	02.28.20 01.20		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -B E.Wall (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-007

Date Collected: 02.27.20 13.05

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	02.27.20 20.50	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.28.20 00.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	556	50.1	mg/kg	02.28.20 00.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	73.3	50.1	mg/kg	02.28.20 00.15		1
Total TPH	PHC635	629	50.1	mg/kg	02.28.20 00.15		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	02.28.20 00.15		
o-Terphenyl	84-15-1	118	%	70-135	02.28.20 00.15		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -B E.Wall (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-007

Date Collected: 02.27.20 13.05

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.28.20 00.19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.28.20 00.19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.28.20 00.19	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.28.20 00.19	U	1
o-Xylene	95-47-6	0.00331	0.00202	mg/kg	02.28.20 00.19		1
Total Xylenes	1330-20-7	0.00331	0.00202	mg/kg	02.28.20 00.19		1
Total BTEX		0.00331	0.00202	mg/kg	02.28.20 00.19		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.28.20 00.19		
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.28.20 00.19		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -C E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-008

Date Collected: 02.27.20 13.07

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	02.27.20 21.14	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	79.0	75.2	mg/kg	02.28.20 00.15		5
Diesel Range Organics (DRO)	C10C28DRO	1070	251	mg/kg	02.28.20 00.15		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	240	75.2	mg/kg	02.28.20 00.15		5
Total TPH	PHC635	1390	75.2	mg/kg	02.28.20 00.15		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	02.28.20 00.15		
o-Terphenyl	84-15-1	103	%	70-135	02.28.20 00.15		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -C E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-008

Date Collected: 02.27.20 13.07

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0167	0.0167	mg/kg	02.28.20 01.40	U	1
Toluene	108-88-3	0.146	0.0667	mg/kg	02.28.20 01.40		1
Ethylbenzene	100-41-4	1.57	0.0667	mg/kg	02.28.20 01.40		1
m,p-Xylenes	179601-23-1	1.48	0.133	mg/kg	02.28.20 01.40		1
o-Xylene	95-47-6	0.356	0.0667	mg/kg	02.28.20 01.40		1
Total Xylenes	1330-20-7	1.84	0.0667	mg/kg	02.28.20 01.40		1
Total BTEX		3.55	0.0167	mg/kg	02.28.20 01.40		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	02.28.20 01.40		
1,4-Difluorobenzene	540-36-3	108	%	70-130	02.28.20 01.40		



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -D E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-009

Date Collected: 02.27.20 13.09

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	02.27.20 21.22	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	93.4	75.2	mg/kg	02.28.20 00.35		5
Diesel Range Organics (DRO)	C10C28DRO	620	251	mg/kg	02.28.20 00.35		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	190	75.2	mg/kg	02.28.20 00.35		5
Total TPH	PHC635	903	75.2	mg/kg	02.28.20 00.35		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	02.28.20 00.35		
o-Terphenyl	84-15-1	122	%	70-135	02.28.20 00.35		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C12 -D E.Wall (15')**

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-009

Date Collected: 02.27.20 13.09

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00625	0.00625	mg/kg	02.28.20 02.01	U	1
Toluene	108-88-3	<0.00625	0.00625	mg/kg	02.28.20 02.01	U	1
Ethylbenzene	100-41-4	0.0770	0.0250	mg/kg	02.28.20 02.01		1
m,p-Xylenes	179601-23-1	0.107	0.0500	mg/kg	02.28.20 02.01		1
o-Xylene	95-47-6	0.0449	0.0250	mg/kg	02.28.20 02.01		1
Total Xylenes	1330-20-7	0.152	0.0250	mg/kg	02.28.20 02.01		1
Total BTEX		0.229	0.00625	mg/kg	02.28.20 02.01		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90		%	70-130	02.28.20 02.01	
1,4-Difluorobenzene	540-36-3	105		%	70-130	02.28.20 02.01	



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -E E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-010

Date Collected: 02.27.20 13.15

Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 18.35

Basis: Wet Weight

Seq Number: 3118024

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	02.27.20 21.46	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: MAB

% Moisture:

Analyst: CAC

Date Prep: 02.27.20 16.00

Basis: Wet Weight

Seq Number: 3118014

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	02.28.20 00.35	U	5
Diesel Range Organics (DRO)	C10C28DRO	831	250	mg/kg	02.28.20 00.35		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	200	74.9	mg/kg	02.28.20 00.35		5
Total TPH	PHC635	1030	74.9	mg/kg	02.28.20 00.35		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	02.28.20 00.35		
o-Terphenyl	84-15-1	110	%	70-135	02.28.20 00.35		



Certificate of Analytical Results 653985

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C12 -E E.Wall (15')

Matrix: Soil

Date Received: 02.27.20 15.03

Lab Sample Id: 653985-010

Date Collected: 02.27.20 13.15

Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.27.20 17.32

Basis: Wet Weight

Seq Number: 3118009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0250	0.0250	mg/kg	02.28.20 02.21	U	1
Toluene	108-88-3	<0.0250	0.0250	mg/kg	02.28.20 02.21	U	1
Ethylbenzene	100-41-4	0.105	0.0250	mg/kg	02.28.20 02.21		1
m,p-Xylenes	179601-23-1	0.117	0.0500	mg/kg	02.28.20 02.21		1
o-Xylene	95-47-6	0.0665	0.0250	mg/kg	02.28.20 02.21		1
Total Xylenes	1330-20-7	0.184	0.0250	mg/kg	02.28.20 02.21		1
Total BTEX		0.289	0.0250	mg/kg	02.28.20 02.21		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88		%	70-130	02.28.20 02.21	
1,4-Difluorobenzene	540-36-3	104		%	70-130	02.28.20 02.21	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 653985

Larson and Associates, Inc.
Empire Abo-Durango Midstream

Analytical Method: Chloride by EPA 300

Seq Number: 3118024

MB Sample Id: 7697679-1-BLK

Matrix: Solid

LCS Sample Id: 7697679-1-BKS

Prep Method: E300P

Date Prep: 02.27.20

LCSD Sample Id: 7697679-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	264	106	90-110	1	20	mg/kg	02.27.20 18:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3118024

Parent Sample Id: 653975-013

Matrix: Soil

MS Sample Id: 653975-013 S

Prep Method: E300P

Date Prep: 02.27.20

MSD Sample Id: 653975-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	225	200	436	106	444	109	90-110	2	20	mg/kg	02.27.20 19:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3118024

Parent Sample Id: 653985-007

Matrix: Soil

MS Sample Id: 653985-007 S

Prep Method: E300P

Date Prep: 02.27.20

MSD Sample Id: 653985-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.75	200	224	107	222	106	90-110	1	20	mg/kg	02.27.20 20:58	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118014

MB Sample Id: 7697671-1-BLK

Matrix: Solid

LCS Sample Id: 7697671-1-BKS

Prep Method: SW8015P

Date Prep: 02.27.20

LCSD Sample Id: 7697671-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	868	87	882	88	70-135	2	35	mg/kg	02.27.20 20:16	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1030	103	70-135	2	35	mg/kg	02.27.20 20:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		126		113		70-135	%	02.27.20 20:16
o-Terphenyl	118		116		116		70-135	%	02.27.20 20:16

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118014

Matrix: Solid

MB Sample Id: 7697671-1-BLK

Prep Method: SW8015P

Date Prep: 02.27.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.27.20 19:56	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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



QC Summary 653985

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118014

Parent Sample Id: 653975-009

Matrix: Soil

MS Sample Id: 653975-009 S

Prep Method: SW8015P

Date Prep: 02.27.20

MSD Sample Id: 653975-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	988	98	802	80	70-135	21	35	mg/kg	02.27.20 20:56	
Diesel Range Organics (DRO)	<50.3	1010	1080	107	951	95	70-135	13	35	mg/kg	02.27.20 20:56	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	79		102		70-135	%	02.27.20 20:56
o-Terphenyl	83		96		70-135	%	02.27.20 20:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118009

MB Sample Id: 7697670-1-BLK

Matrix: Solid

LCS Sample Id: 7697670-1-BKS

Prep Method: SW5030B

Date Prep: 02.27.20

LCSD Sample Id: 7697670-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.120	120	0.118	118	70-130	2	35	mg/kg	02.27.20 18:12	
Toluene	<0.00200	0.100	0.111	111	0.110	110	70-130	1	35	mg/kg	02.27.20 18:12	
Ethylbenzene	<0.00200	0.100	0.107	107	0.105	105	71-129	2	35	mg/kg	02.27.20 18:12	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.207	104	70-135	1	35	mg/kg	02.27.20 18:12	
o-Xylene	<0.00200	0.100	0.105	105	0.104	104	71-133	1	35	mg/kg	02.27.20 18:12	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		110		70-130	%	02.27.20 18:12
4-Bromofluorobenzene	93		90		91		70-130	%	02.27.20 18:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118009

Parent Sample Id: 653975-009

Matrix: Soil

MS Sample Id: 653975-009 S

Prep Method: SW5030B

Date Prep: 02.27.20

MSD Sample Id: 653975-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.115	115	0.121	121	70-130	5	35	mg/kg	02.28.20 08:30	
Toluene	<0.00200	0.0998	0.106	106	0.101	101	70-130	5	35	mg/kg	02.28.20 08:30	
Ethylbenzene	<0.00200	0.0998	0.103	103	0.107	107	71-129	4	35	mg/kg	02.28.20 08:30	
m,p-Xylenes	<0.00399	0.200	0.198	99	0.216	108	70-135	9	35	mg/kg	02.28.20 08:30	
o-Xylene	<0.00200	0.0998	0.0977	98	0.112	112	71-133	14	35	mg/kg	02.28.20 08:30	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		70-130	%	02.28.20 08:30
4-Bromofluorobenzene	88		88		70-130	%	02.28.20 08:30

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to: mark@laenvironmental.com

DATE: 02/27/2020 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 653985

PROJECT LOCATION OR NAME: Empire Ave - Downtown Midtown

LAI PROJECT #: 06-0141-11 COLLECTOR: JEC

[illegible]



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 02/27/2020 03:03:00 PM

Work Order #: 653985

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02/27/2020

Checklist reviewed by:


Holly Taylor

Date: 02/28/2020



Certificate of Analysis Summary 654298

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon Mar-02-20 04:01 pm

Report Date: 03-MAR-20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	654298-001	654298-002	654298-003	654298-004	654298-005	654298-006
	Field Id:	C-12 S3	C-14A	C-14B	C-14C	C-14D	C-14E
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-02-20 09:37	Mar-02-20 09:39	Mar-02-20 09:40	Mar-02-20 09:41	Mar-02-20 09:42	Mar-02-20 09:43
BTEX by EPA 8021B	Extracted:	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:23	Mar-02-20 17:23
	Analyzed:	Mar-02-20 22:12	Mar-02-20 22:32	Mar-02-20 23:13	Mar-02-20 23:33	Mar-02-20 18:59	Mar-03-20 09:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0250 0.0250	<0.00250 0.00250	<0.00200 0.00200	0.0248 0.00971	<0.00200 0.00200	<0.00667 0.00667
	Toluene	0.102 0.100	<0.00250 0.00250	<0.00200 0.00200	0.00825 0.00243	0.00258 0.00200	<0.00667 0.00667
Ethylbenzene		0.913 0.100	0.0470 0.0100	0.0791 0.00200	0.586 0.00971	0.0200 0.00200	<0.00667 0.00667
m,p-Xylenes		1.69 0.200	0.0784 0.0200	0.105 0.00401	0.567 0.0194	0.00816 0.00399	<0.0133 0.0133
o-Xylene		0.693 0.100	0.0598 0.0100	0.0118 0.00200	0.212 0.00971	0.00204 0.00200	<0.00667 0.00667
Total Xylenes		2.38 0.100	0.138 0.0100	0.117 0.00200	0.779 0.00971	0.0102 0.00200	<0.00667 0.00667
Total BTEX		3.40 0.0250	0.185 0.00250	0.196 0.00200	1.40 0.00243	0.0328 0.00200	<0.00667 0.00667
Chloride by EPA 300	Extracted:	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00
	Analyzed:	Mar-02-20 19:42	Mar-02-20 19:59	Mar-02-20 20:05	Mar-02-20 20:11	Mar-02-20 20:17	Mar-02-20 20:35
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	16.6 9.96	19.5 9.94	31.4 10.1	41.1 10.0	26.2 10.0	18.4 9.92
TPH By SW8015 Mod	Extracted:	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19
	Analyzed:	Mar-02-20 21:17	Mar-02-20 21:37	Mar-02-20 22:18	Mar-02-20 22:38	Mar-02-20 22:59	Mar-02-20 23:19
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	273 249	145 75.0	91.8 75.2	138 75.4	111 75.1	81.9 74.6
	Diesel Range Organics (DRO)	1130 249	6040 250	3160 251	7250 251	6250 250	7040 249
Motor Oil Range Hydrocarbons (MRO)		370 249	995 250	757 251	1140 251	1040 250	982 249
Total TPH		1770 249	7180 75.0	4010 75.2	8530 75.4	7400 75.1	8100 74.6

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

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 654298

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon Mar-02-20 04:01 pm

Report Date: 03-MAR-20

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	654298-007	654298-008	654298-009	654298-010	654298-011	654298-012
	<i>Field Id:</i>	C-14 East	C-14 West	C-4C East	C-4F East	C-15A	C-15B
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-02-20 09:44	Mar-02-20 09:45	Mar-02-20 10:30	Mar-02-20 10:31	Mar-02-20 14:31	Mar-02-20 14:32
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-02-20 17:23	Mar-02-20 17:23			Mar-02-20 17:23	Mar-02-20 17:23
	<i>Analyzed:</i>	Mar-02-20 19:19	Mar-02-20 19:40			Mar-02-20 21:01	Mar-02-20 21:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200			<0.00909 0.00909	<0.0100 0.0100
Toluene		<0.00200 0.00200	<0.00200 0.00200			<0.00909 0.00909	0.0181 0.0100
Ethylbenzene		<0.00200 0.00200	0.0449 0.00200			0.134 0.00909	0.126 0.0100
m,p-Xylenes		<0.00401 0.00401	0.0362 0.00399			0.172 0.0182	0.157 0.0200
o-Xylene		<0.00200 0.00200	0.00994 0.00200			0.0366 0.00909	0.0513 0.0100
Total Xylenes		<0.00200 0.00200	0.0461 0.00200			0.209 0.00909	0.208 0.0100
Total BTEX		<0.00200 0.00200	0.0910 0.00200			0.343 0.00909	0.352 0.0100
Chloride by EPA 300	<i>Extracted:</i>	Mar-02-20 17:00	Mar-02-20 17:00			Mar-02-20 17:00	Mar-02-20 17:00
	<i>Analyzed:</i>	Mar-02-20 20:41	Mar-02-20 20:47			Mar-02-20 20:53	Mar-02-20 20:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			mg/kg RL	mg/kg RL
Chloride		<9.98 9.98	29.7 10.0			<10.1 10.1	<10.1 10.1
TPH By SW8015 Mod	<i>Extracted:</i>	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19	Mar-02-20 16:19
	<i>Analyzed:</i>	Mar-02-20 23:39	Mar-03-20 00:00	Mar-03-20 00:20	Mar-03-20 00:40	Mar-03-20 01:00	Mar-03-20 01:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<75.2 75.2	<75.2 75.2	<75.4 75.4	<75.1 75.1	231 75.2	169 74.9
Diesel Range Organics (DRO)		4200 251	4760 251	2720 251	1970 250	5210 251	5650 250
Motor Oil Range Hydrocarbons (MRO)		1120 251	1700 251	1850 251	1130 250	875 251	948 250
Total TPH		5320 75.2	6460 75.2	4570 75.4	3100 75.1	6320 75.2	6770 74.9

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

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Holly Taylor
Project Manager



Certificate of Analysis Summary 654298

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon Mar-02-20 04:01 pm

Report Date: 03-MAR-20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	654298-013	654298-014	654298-015	654298-016	654298-017	654298-018
	Field Id:	C-15C	C-15D	C-15E	C-15 West	C-15 East	C-16A
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-02-20 14:33	Mar-02-20 14:34	Mar-02-20 14:35	Mar-02-20 14:36	Mar-02-20 14:36	Mar-02-20 14:37
BTEX by EPA 8021B	Extracted:	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23
	Analyzed:	Mar-02-20 21:42	Mar-02-20 23:04	Mar-02-20 23:24	Mar-03-20 09:37	Mar-02-20 20:00	Mar-03-20 09:58
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00833 0.00833	<0.0100 0.0100	<0.00909 0.00909	<0.00813 0.00813	<0.00199 0.00199	<0.00901 0.00901
	Toluene	<0.00833 0.00833	<0.0100 0.0100	<0.00909 0.00909	<0.00813 0.00813	0.00236 0.00199	<0.00901 0.00901
Ethylbenzene		0.106 0.00833	0.0506 0.0100	0.0211 0.00909	<0.00813 0.00813	0.00449 0.00199	0.0741 0.00901
m,p-Xylenes		0.0771 0.0167	0.0371 0.0200	0.0201 0.0182	<0.0163 0.0163	<0.00398 0.00398	0.0699 0.0180
o-Xylene		0.0363 0.00833	0.0322 0.0100	<0.00909 0.00909	<0.00813 0.00813	0.00270 0.00199	0.0494 0.00901
Total Xylenes		0.113 0.00833	0.0693 0.0100	0.0201 0.00909	<0.00813 0.00813	0.00270 0.00199	0.119 0.00901
Total BTEX		0.219 0.00833	0.120 0.0100	0.0412 0.00909	<0.00813 0.00813	0.00955 0.00199	0.193 0.00901
Chloride by EPA 300	Extracted:	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00
	Analyzed:	Mar-02-20 21:05	Mar-02-20 21:23	Mar-02-20 21:29	Mar-02-20 21:46	Mar-02-20 21:53	Mar-02-20 21:59
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	<10.0 10.0	<9.96 9.96	<9.96 9.96	14.5 9.98	36.4 9.96	11.4 9.96
TPH By SW8015 Mod	Extracted:	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20
	Analyzed:	Mar-02-20 21:58	Mar-02-20 22:18	Mar-02-20 22:59	Mar-03-20 10:17	Mar-02-20 23:39	Mar-03-20 00:00
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	303 249	298 249	136 75.0	<50.2 50.2	86.8 50.0	56.3 50.1
	Diesel Range Organics (DRO)	6170 249	6510 249	2440 250	1010 50.2	3990 50.0	2210 50.1
Motor Oil Range Hydrocarbons (MRO)		817 249	781 249	318 250	373 50.2	687 50.0	399 50.1
Total TPH		7290 249	7590 249	2890 75.0	1380 50.2	4760 50.0	2670 50.1

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Holly Taylor
Project Manager



Certificate of Analysis Summary 654298

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon Mar-02-20 04:01 pm

Report Date: 03-MAR-20

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	654298-019	654298-020	654298-021	654298-022	654298-023	654298-024
	<i>Field Id:</i>	C-16B	C-16C	C-16D	C-16E	C-16 West	C-16 East
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-02-20 14:38	Mar-02-20 14:39	Mar-02-20 14:40	Mar-02-20 14:41	Mar-02-20 14:42	Mar-02-20 14:43
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23	Mar-02-20 17:23
	<i>Analyzed:</i>	Mar-03-20 00:25	Mar-03-20 00:46	Mar-03-20 10:18	Mar-02-20 20:21	Mar-02-20 18:39	Mar-03-20 10:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00877 0.00877	<0.00833 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Toluene		<0.00877 0.00877	<0.00833 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		<0.00877 0.00877	0.0210 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		<0.0175 0.0175	<0.0167 0.0167	<0.00399 0.00399	<0.00399 0.00399	<0.00396 0.00396	<0.00397 0.00397
o-Xylene		<0.00877 0.00877	0.00983 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes		<0.00877 0.00877	0.00983 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		<0.00877 0.00877	0.0308 0.00833	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 17:00	Mar-02-20 18:00	Mar-02-20 18:00
	<i>Analyzed:</i>	Mar-02-20 22:05	Mar-02-20 22:11	Mar-02-20 22:17	Mar-02-20 22:24	Mar-02-20 23:01	Mar-02-20 23:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<9.90 9.90	14.5 10.0	11.0 10.0	11.0 10.1	16.2 10.0	110 50.0
TPH By SW8015 Mod	<i>Extracted:</i>	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20	Mar-02-20 16:20
	<i>Analyzed:</i>	Mar-03-20 00:20	Mar-03-20 00:40	Mar-03-20 01:00	Mar-03-20 01:21	Mar-03-20 01:41	Mar-03-20 10:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		119 75.4	94.6 74.8	78.8 75.3	<50.3 50.3	<50.2 50.2	<74.9 74.9
Diesel Range Organics (DRO)		3630 251	2660 249	3410 251	1070 50.3	1370 50.2	4020 250
Motor Oil Range Hydrocarbons (MRO)		883 251	748 249	2700 251	712 50.3	455 50.2	1160 250
Total TPH		4630 75.4	3500 74.8	6190 75.3	1780 50.3	1830 50.2	5180 74.9

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Holly Taylor
Project Manager

Analytical Report 654298

**for
Larson and Associates, Inc.**

Project Manager: Mark Larson

Empire Abo

06-0141-11

03-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



03-MAR-20

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **654298**
Empire Abo
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654298. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 654298 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is fluid and cursive, with the first name 'Holly' and last name 'Taylor' clearly distinguishable.

Holly Taylor
Project Manager

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

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Sample Cross Reference 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-12 S3	S	03-02-20 09:37	ft	654298-001
C-14A	S	03-02-20 09:39	ft	654298-002
C-14B	S	03-02-20 09:40	ft	654298-003
C-14C	S	03-02-20 09:41	ft	654298-004
C-14D	S	03-02-20 09:42	ft	654298-005
C-14E	S	03-02-20 09:43	ft	654298-006
C-14 East	S	03-02-20 09:44	ft	654298-007
C-14 West	S	03-02-20 09:45	ft	654298-008
C-4C East	S	03-02-20 10:30	ft	654298-009
C-4F East	S	03-02-20 10:31	ft	654298-010
C-15A	S	03-02-20 14:31	ft	654298-011
C-15B	S	03-02-20 14:32	ft	654298-012
C-15C	S	03-02-20 14:33	ft	654298-013
C-15D	S	03-02-20 14:34	ft	654298-014
C-15E	S	03-02-20 14:35	ft	654298-015
C-15 West	S	03-02-20 14:36	ft	654298-016
C-15 East	S	03-02-20 14:36	ft	654298-017
C-16A	S	03-02-20 14:37	ft	654298-018
C-16B	S	03-02-20 14:38	ft	654298-019
C-16C	S	03-02-20 14:39	ft	654298-020
C-16D	S	03-02-20 14:40	ft	654298-021
C-16E	S	03-02-20 14:41	ft	654298-022
C-16 West	S	03-02-20 14:42	ft	654298-023
C-16 East	S	03-02-20 14:43	ft	654298-024



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo*

Project ID: 06-0141-11
Work Order Number(s): 654298

Report Date: 03-MAR-20
Date Received: 03/02/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118296 BTEX by EPA 8021B

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

Batch: LBA-3118353 BTEX by EPA 8021B

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



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-12 S3
Lab Sample Id: 654298-001

Matrix: Soil
Date Collected: 03.02.20 09.37

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.6	9.96	mg/kg	03.02.20 19.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	273	249	mg/kg	03.02.20 21.17		5
Diesel Range Organics (DRO)	C10C28DRO	1130	249	mg/kg	03.02.20 21.17		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	370	249	mg/kg	03.02.20 21.17		5
Total TPH	PHC635	1770	249	mg/kg	03.02.20 21.17		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	03.02.20 21.17		
o-Terphenyl	84-15-1	123	%	70-135	03.02.20 21.17		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-12 S3
Lab Sample Id: 654298-001

Matrix: Soil
Date Collected: 03.02.20 09.37

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118296

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0250	0.0250	mg/kg	03.02.20 22.12	U	1
Toluene	108-88-3	0.102	0.100	mg/kg	03.02.20 22.12		1
Ethylbenzene	100-41-4	0.913	0.100	mg/kg	03.02.20 22.12		1
m,p-Xylenes	179601-23-1	1.69	0.200	mg/kg	03.02.20 22.12		1
o-Xylene	95-47-6	0.693	0.100	mg/kg	03.02.20 22.12		1
Total Xylenes	1330-20-7	2.38	0.100	mg/kg	03.02.20 22.12		1
Total BTEX		3.40	0.0250	mg/kg	03.02.20 22.12		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.02.20 22.12		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.02.20 22.12		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14A**
Lab Sample Id: 654298-002

Matrix: Soil
Date Collected: 03.02.20 09.39

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.5	9.94	mg/kg	03.02.20 19.59		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	145	75.0	mg/kg	03.02.20 21.37		5
Diesel Range Organics (DRO)	C10C28DRO	6040	250	mg/kg	03.02.20 21.37		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	995	250	mg/kg	03.02.20 21.37		5
Total TPH	PHC635	7180	75.0	mg/kg	03.02.20 21.37		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	125	%	70-135	03.02.20 21.37		
o-Terphenyl	84-15-1	127	%	70-135	03.02.20 21.37		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14A**
Lab Sample Id: 654298-002

Matrix: Soil
Date Collected: 03.02.20 09.39

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118296

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00250	0.00250	mg/kg	03.02.20 22.32	U	1
Toluene	108-88-3	<0.00250	0.00250	mg/kg	03.02.20 22.32	U	1
Ethylbenzene	100-41-4	0.0470	0.0100	mg/kg	03.02.20 22.32		1
m,p-Xylenes	179601-23-1	0.0784	0.0200	mg/kg	03.02.20 22.32		1
o-Xylene	95-47-6	0.0598	0.0100	mg/kg	03.02.20 22.32		1
Total Xylenes	1330-20-7	0.138	0.0100	mg/kg	03.02.20 22.32		1
Total BTEX		0.185	0.00250	mg/kg	03.02.20 22.32		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88		%	70-130	03.02.20 22.32	
1,4-Difluorobenzene	540-36-3	108		%	70-130	03.02.20 22.32	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14B**
Lab Sample Id: 654298-003

Matrix: Soil
Date Collected: 03.02.20 09.40

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	31.4	10.1	mg/kg	03.02.20 20.05		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	91.8	75.2	mg/kg	03.02.20 22.18		5
Diesel Range Organics (DRO)	C10C28DRO	3160	251	mg/kg	03.02.20 22.18		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	757	251	mg/kg	03.02.20 22.18		5
Total TPH	PHC635	4010	75.2	mg/kg	03.02.20 22.18		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	03.02.20 22.18		
o-Terphenyl	84-15-1	118	%	70-135	03.02.20 22.18		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14B**
Lab Sample Id: 654298-003

Matrix: Soil
Date Collected: 03.02.20 09.40

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118296

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 23.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.02.20 23.13	U	1
Ethylbenzene	100-41-4	0.0791	0.00200	mg/kg	03.02.20 23.13		1
m,p-Xylenes	179601-23-1	0.105	0.00401	mg/kg	03.02.20 23.13		1
o-Xylene	95-47-6	0.0118	0.00200	mg/kg	03.02.20 23.13		1
Total Xylenes	1330-20-7	0.117	0.00200	mg/kg	03.02.20 23.13		1
Total BTEX		0.196	0.00200	mg/kg	03.02.20 23.13		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76		%	70-130	03.02.20 23.13	
1,4-Difluorobenzene	540-36-3	110		%	70-130	03.02.20 23.13	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14C**
Lab Sample Id: 654298-004

Matrix: Soil
Date Collected: 03.02.20 09.41

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	41.1	10.0	mg/kg	03.02.20 20.11		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 16.19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	138	75.4	mg/kg	03.02.20 22.38		5
Diesel Range Organics (DRO)	C10C28DRO	7250	251	mg/kg	03.02.20 22.38		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1140	251	mg/kg	03.02.20 22.38		5
Total TPH	PHC635	8530	75.4	mg/kg	03.02.20 22.38		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	03.02.20 22.38		
o-Terphenyl	84-15-1	111	%	70-135	03.02.20 22.38		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14C**
Lab Sample Id: 654298-004

Matrix: Soil
Date Collected: 03.02.20 09.41

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118296

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0248	0.00971	mg/kg	03.02.20 23.33		1
Toluene	108-88-3	0.00825	0.00243	mg/kg	03.02.20 23.33		1
Ethylbenzene	100-41-4	0.586	0.00971	mg/kg	03.02.20 23.33		1
m,p-Xylenes	179601-23-1	0.567	0.0194	mg/kg	03.02.20 23.33		1
o-Xylene	95-47-6	0.212	0.00971	mg/kg	03.02.20 23.33		1
Total Xylenes	1330-20-7	0.779	0.00971	mg/kg	03.02.20 23.33		1
Total BTEX		1.40	0.00243	mg/kg	03.02.20 23.33		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.02.20 23.33		
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.02.20 23.33		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14D**
Lab Sample Id: 654298-005

Matrix: Soil
Date Collected: 03.02.20 09.42

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.2	10.0	mg/kg	03.02.20 20.17		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 16.19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	111	75.1	mg/kg	03.02.20 22.59		5
Diesel Range Organics (DRO)	C10C28DRO	6250	250	mg/kg	03.02.20 22.59		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1040	250	mg/kg	03.02.20 22.59		5
Total TPH	PHC635	7400	75.1	mg/kg	03.02.20 22.59		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	03.02.20 22.59		
o-Terphenyl	84-15-1	113	%	70-135	03.02.20 22.59		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14D**
Lab Sample Id: 654298-005

Matrix: Soil
Date Collected: 03.02.20 09.42

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 18.59	U	1
Toluene	108-88-3	0.00258	0.00200	mg/kg	03.02.20 18.59		1
Ethylbenzene	100-41-4	0.0200	0.00200	mg/kg	03.02.20 18.59		1
m,p-Xylenes	179601-23-1	0.00816	0.00399	mg/kg	03.02.20 18.59		1
o-Xylene	95-47-6	0.00204	0.00200	mg/kg	03.02.20 18.59		1
Total Xylenes	1330-20-7	0.0102	0.00200	mg/kg	03.02.20 18.59		1
Total BTEX		0.0328	0.00200	mg/kg	03.02.20 18.59		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	03.02.20 18.59		
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.02.20 18.59		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14E**
Lab Sample Id: 654298-006

Matrix: Soil
Date Collected: 03.02.20 09.43

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.4	9.92	mg/kg	03.02.20 20.35		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 16.19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	81.9	74.6	mg/kg	03.02.20 23.19		5
Diesel Range Organics (DRO)	C10C28DRO	7040	249	mg/kg	03.02.20 23.19		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	982	249	mg/kg	03.02.20 23.19		5
Total TPH	PHC635	8100	74.6	mg/kg	03.02.20 23.19		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	03.02.20 23.19		
o-Terphenyl	84-15-1	108	%	70-135	03.02.20 23.19		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14E**
Lab Sample Id: 654298-006

Matrix: Soil
Date Collected: 03.02.20 09.43

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
Toluene	108-88-3	<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
Ethylbenzene	100-41-4	<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
m,p-Xylenes	179601-23-1	<0.0133	0.0133	mg/kg	03.03.20 09.17	U	1
o-Xylene	95-47-6	<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
Total Xylenes	1330-20-7	<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
Total BTEX		<0.00667	0.00667	mg/kg	03.03.20 09.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.03.20 09.17		
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.03.20 09.17		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-007

Date Collected: 03.02.20 09.44

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118299

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	03.02.20 20.41	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Seq Number: 3118317

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.2	75.2	mg/kg	03.02.20 23.39	U	5
Diesel Range Organics (DRO)	C10C28DRO	4200	251	mg/kg	03.02.20 23.39		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1120	251	mg/kg	03.02.20 23.39		5
Total TPH	PHC635	5320	75.2	mg/kg	03.02.20 23.39		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	03.02.20 23.39	
o-Terphenyl	84-15-1	98	%	70-135	03.02.20 23.39	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-007

Date Collected: 03.02.20 09.44

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.02.20 19.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.02.20 19.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.02.20 19.19		
4-Bromofluorobenzene	460-00-4	77	%	70-130	03.02.20 19.19		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 West**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-008

Date Collected: 03.02.20 09.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118299

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.7	10.0	mg/kg	03.02.20 20.47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Seq Number: 3118317

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.2	75.2	mg/kg	03.03.20 00.00	U	5
Diesel Range Organics (DRO)	C10C28DRO	4760	251	mg/kg	03.03.20 00.00		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1700	251	mg/kg	03.03.20 00.00		5
Total TPH	PHC635	6460	75.2	mg/kg	03.03.20 00.00		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	03.03.20 00.00		
o-Terphenyl	84-15-1	120	%	70-135	03.03.20 00.00		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 West**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-008

Date Collected: 03.02.20 09.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 19.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.02.20 19.40	U	1
Ethylbenzene	100-41-4	0.0449	0.00200	mg/kg	03.02.20 19.40		1
m,p-Xylenes	179601-23-1	0.0362	0.00399	mg/kg	03.02.20 19.40		1
o-Xylene	95-47-6	0.00994	0.00200	mg/kg	03.02.20 19.40		1
Total Xylenes	1330-20-7	0.0461	0.00200	mg/kg	03.02.20 19.40		1
Total BTEX		0.0910	0.00200	mg/kg	03.02.20 19.40		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73		%	70-130	03.02.20 19.40	
1,4-Difluorobenzene	540-36-3	108		%	70-130	03.02.20 19.40	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-4C East

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-009

Date Collected: 03.02.20 10.30

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Seq Number: 3118317

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.4	75.4	mg/kg	03.03.20 00.20	U	5
Diesel Range Organics (DRO)	C10C28DRO	2720	251	mg/kg	03.03.20 00.20		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1850	251	mg/kg	03.03.20 00.20		5
Total TPH	PHC635	4570	75.4	mg/kg	03.03.20 00.20		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	03.03.20 00.20		
o-Terphenyl	84-15-1	113	%	70-135	03.03.20 00.20		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-4F East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-010

Date Collected: 03.02.20 10.31

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Seq Number: 3118317

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<75.1	75.1	mg/kg	03.03.20 00.40	U	5
Diesel Range Organics (DRO)	C10C28DRO	1970	250	mg/kg	03.03.20 00.40		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1130	250	mg/kg	03.03.20 00.40		5
Total TPH	PHC635	3100	75.1	mg/kg	03.03.20 00.40		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	03.03.20 00.40		
o-Terphenyl	84-15-1	119	%	70-135	03.03.20 00.40		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15A**
Lab Sample Id: 654298-011

Matrix: Soil
Date Collected: 03.02.20 14.31

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	03.02.20 20.53	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	231	75.2	mg/kg	03.03.20 01.00		5
Diesel Range Organics (DRO)	C10C28DRO	5210	251	mg/kg	03.03.20 01.00		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	875	251	mg/kg	03.03.20 01.00		5
Total TPH	PHC635	6320	75.2	mg/kg	03.03.20 01.00		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	119	%	70-135	03.03.20 01.00		
o-Terphenyl	84-15-1	120	%	70-135	03.03.20 01.00		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15A**
Lab Sample Id: 654298-011

Matrix: Soil
Date Collected: 03.02.20 14.31

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00909	0.00909	mg/kg	03.02.20 21.01	U	1
Toluene	108-88-3	<0.00909	0.00909	mg/kg	03.02.20 21.01	U	1
Ethylbenzene	100-41-4	0.134	0.00909	mg/kg	03.02.20 21.01		1
m,p-Xylenes	179601-23-1	0.172	0.0182	mg/kg	03.02.20 21.01		1
o-Xylene	95-47-6	0.0366	0.00909	mg/kg	03.02.20 21.01		1
Total Xylenes	1330-20-7	0.209	0.00909	mg/kg	03.02.20 21.01		1
Total BTEX		0.343	0.00909	mg/kg	03.02.20 21.01		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99		%	70-130	03.02.20 21.01	
1,4-Difluorobenzene	540-36-3	104		%	70-130	03.02.20 21.01	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15B**
Lab Sample Id: 654298-012

Matrix: Soil
Date Collected: 03.02.20 14.32

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	03.02.20 20.59	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118317

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.19

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	169	74.9	mg/kg	03.03.20 01.21		5
Diesel Range Organics (DRO)	C10C28DRO	5650	250	mg/kg	03.03.20 01.21		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	948	250	mg/kg	03.03.20 01.21		5
Total TPH	PHC635	6770	74.9	mg/kg	03.03.20 01.21		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	03.03.20 01.21		
o-Terphenyl	84-15-1	121	%	70-135	03.03.20 01.21		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15B**
Lab Sample Id: 654298-012

Matrix: Soil
Date Collected: 03.02.20 14.32

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	03.02.20 21.22	U	1
Toluene	108-88-3	0.0181	0.0100	mg/kg	03.02.20 21.22		1
Ethylbenzene	100-41-4	0.126	0.0100	mg/kg	03.02.20 21.22		1
m,p-Xylenes	179601-23-1	0.157	0.0200	mg/kg	03.02.20 21.22		1
o-Xylene	95-47-6	0.0513	0.0100	mg/kg	03.02.20 21.22		1
Total Xylenes	1330-20-7	0.208	0.0100	mg/kg	03.02.20 21.22		1
Total BTEX		0.352	0.0100	mg/kg	03.02.20 21.22		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.02.20 21.22		
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.02.20 21.22		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-15C
Lab Sample Id: 654298-013

Matrix: Soil
Date Collected: 03.02.20 14.33

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	03.02.20 21.05	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	303	249	mg/kg	03.02.20 21.58		5
Diesel Range Organics (DRO)	C10C28DRO	6170	249	mg/kg	03.02.20 21.58		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	817	249	mg/kg	03.02.20 21.58		5
Total TPH	PHC635	7290	249	mg/kg	03.02.20 21.58		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	03.02.20 21.58		
o-Terphenyl	84-15-1	127	%	70-135	03.02.20 21.58		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15C**
Lab Sample Id: 654298-013

Matrix: Soil
Date Collected: 03.02.20 14.33

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00833	0.00833	mg/kg	03.02.20 21.42	U	1
Toluene	108-88-3	<0.00833	0.00833	mg/kg	03.02.20 21.42	U	1
Ethylbenzene	100-41-4	0.106	0.00833	mg/kg	03.02.20 21.42		1
m,p-Xylenes	179601-23-1	0.0771	0.0167	mg/kg	03.02.20 21.42		1
o-Xylene	95-47-6	0.0363	0.00833	mg/kg	03.02.20 21.42		1
Total Xylenes	1330-20-7	0.113	0.00833	mg/kg	03.02.20 21.42		1
Total BTEX		0.219	0.00833	mg/kg	03.02.20 21.42		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99		%	70-130	03.02.20 21.42	
4-Bromofluorobenzene	460-00-4	95		%	70-130	03.02.20 21.42	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15D**
Lab Sample Id: 654298-014

Matrix: Soil
Date Collected: 03.02.20 14.34

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	03.02.20 21.23	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	298	249	mg/kg	03.02.20 22.18		5
Diesel Range Organics (DRO)	C10C28DRO	6510	249	mg/kg	03.02.20 22.18		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	781	249	mg/kg	03.02.20 22.18		5
Total TPH	PHC635	7590	249	mg/kg	03.02.20 22.18		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	121	%	70-135	03.02.20 22.18		
o-Terphenyl	84-15-1	135	%	70-135	03.02.20 22.18		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15D**
Lab Sample Id: 654298-014

Matrix: Soil
Date Collected: 03.02.20 14.34

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	03.02.20 23.04	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	03.02.20 23.04	U	1
Ethylbenzene	100-41-4	0.0506	0.0100	mg/kg	03.02.20 23.04		1
m,p-Xylenes	179601-23-1	0.0371	0.0200	mg/kg	03.02.20 23.04		1
o-Xylene	95-47-6	0.0322	0.0100	mg/kg	03.02.20 23.04		1
Total Xylenes	1330-20-7	0.0693	0.0100	mg/kg	03.02.20 23.04		1
Total BTEX		0.120	0.0100	mg/kg	03.02.20 23.04		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92		%	70-130	03.02.20 23.04	
1,4-Difluorobenzene	540-36-3	104		%	70-130	03.02.20 23.04	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-15E
Lab Sample Id: 654298-015

Matrix: Soil
Date Collected: 03.02.20 14.35

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	03.02.20 21.29	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	136	75.0	mg/kg	03.02.20 22.59		5
Diesel Range Organics (DRO)	C10C28DRO	2440	250	mg/kg	03.02.20 22.59		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	318	250	mg/kg	03.02.20 22.59		5
Total TPH	PHC635	2890	75.0	mg/kg	03.02.20 22.59		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	03.02.20 22.59		
o-Terphenyl	84-15-1	127	%	70-135	03.02.20 22.59		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15E**
Lab Sample Id: 654298-015

Matrix: Soil
Date Collected: 03.02.20 14.35

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00909	0.00909	mg/kg	03.02.20 23.24	U	1
Toluene	108-88-3	<0.00909	0.00909	mg/kg	03.02.20 23.24	U	1
Ethylbenzene	100-41-4	0.0211	0.00909	mg/kg	03.02.20 23.24		1
m,p-Xylenes	179601-23-1	0.0201	0.0182	mg/kg	03.02.20 23.24		1
o-Xylene	95-47-6	<0.00909	0.00909	mg/kg	03.02.20 23.24	U	1
Total Xylenes	1330-20-7	0.0201	0.00909	mg/kg	03.02.20 23.24		1
Total BTEX		0.0412	0.00909	mg/kg	03.02.20 23.24		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104		%	70-130	03.02.20 23.24	
4-Bromofluorobenzene	460-00-4	101		%	70-130	03.02.20 23.24	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15 West**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-016

Date Collected: 03.02.20 14.36

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118299

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.5	9.98	mg/kg	03.02.20 21.46		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Seq Number: 3118289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.03.20 10.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	1010	50.2	mg/kg	03.03.20 10.17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	373	50.2	mg/kg	03.03.20 10.17		1
Total TPH	PHC635	1380	50.2	mg/kg	03.03.20 10.17		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-135	03.03.20 10.17		
o-Terphenyl	84-15-1	117	%	70-135	03.03.20 10.17		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-15 West

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-016

Date Collected: 03.02.20 14.36

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
Toluene	108-88-3	<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
Ethylbenzene	100-41-4	<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
m,p-Xylenes	179601-23-1	<0.0163	0.0163	mg/kg	03.03.20 09.37	U	1
o-Xylene	95-47-6	<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
Total Xylenes	1330-20-7	<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
Total BTEX		<0.00813	0.00813	mg/kg	03.03.20 09.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.03.20 09.37		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.03.20 09.37		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-15 East

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-017

Date Collected: 03.02.20 14.36

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Seq Number: 3118299

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.4	9.96	mg/kg	03.02.20 21.53		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Seq Number: 3118289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	86.8	50.0	mg/kg	03.02.20 23.39		1
Diesel Range Organics (DRO)	C10C28DRO	3990	50.0	mg/kg	03.02.20 23.39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	687	50.0	mg/kg	03.02.20 23.39		1
Total TPH	PHC635	4760	50.0	mg/kg	03.02.20 23.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	03.02.20 23.39	
o-Terphenyl	84-15-1	122	%	70-135	03.02.20 23.39	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-15 East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-017

Date Collected: 03.02.20 14.36

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.02.20 20.00	U	1
Toluene	108-88-3	0.00236	0.00199	mg/kg	03.02.20 20.00		1
Ethylbenzene	100-41-4	0.00449	0.00199	mg/kg	03.02.20 20.00		1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.02.20 20.00	U	1
o-Xylene	95-47-6	0.00270	0.00199	mg/kg	03.02.20 20.00		1
Total Xylenes	1330-20-7	0.00270	0.00199	mg/kg	03.02.20 20.00		1
Total BTEX		0.00955	0.00199	mg/kg	03.02.20 20.00		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.02.20 20.00		
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.02.20 20.00		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16A**
Lab Sample Id: 654298-018

Matrix: Soil
Date Collected: 03.02.20 14.37

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	9.96	mg/kg	03.02.20 21.59		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	56.3	50.1	mg/kg	03.03.20 00.00		1
Diesel Range Organics (DRO)	C10C28DRO	2210	50.1	mg/kg	03.03.20 00.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	399	50.1	mg/kg	03.03.20 00.00		1
Total TPH	PHC635	2670	50.1	mg/kg	03.03.20 00.00		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	128	%	70-135	03.03.20 00.00		
o-Terphenyl	84-15-1	124	%	70-135	03.03.20 00.00		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16A**
Lab Sample Id: 654298-018

Matrix: Soil
Date Collected: 03.02.20 14.37

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00901	0.00901	mg/kg	03.03.20 09.58	U	1
Toluene	108-88-3	<0.00901	0.00901	mg/kg	03.03.20 09.58	U	1
Ethylbenzene	100-41-4	0.0741	0.00901	mg/kg	03.03.20 09.58		1
m,p-Xylenes	179601-23-1	0.0699	0.0180	mg/kg	03.03.20 09.58		1
o-Xylene	95-47-6	0.0494	0.00901	mg/kg	03.03.20 09.58		1
Total Xylenes	1330-20-7	0.119	0.00901	mg/kg	03.03.20 09.58		1
Total BTEX		0.193	0.00901	mg/kg	03.03.20 09.58		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92		%	70-130	03.03.20 09.58	
1,4-Difluorobenzene	540-36-3	104		%	70-130	03.03.20 09.58	



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16B**
Lab Sample Id: 654298-019

Matrix: Soil
Date Collected: 03.02.20 14.38

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	03.02.20 22.05	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	119	75.4	mg/kg	03.03.20 00.20		5
Diesel Range Organics (DRO)	C10C28DRO	3630	251	mg/kg	03.03.20 00.20		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	883	251	mg/kg	03.03.20 00.20		5
Total TPH	PHC635	4630	75.4	mg/kg	03.03.20 00.20		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	122	%	70-135	03.03.20 00.20		
o-Terphenyl	84-15-1	119	%	70-135	03.03.20 00.20		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16B**
Lab Sample Id: 654298-019

Matrix: Soil
Date Collected: 03.02.20 14.38

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
Toluene	108-88-3	<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
Ethylbenzene	100-41-4	<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
m,p-Xylenes	179601-23-1	<0.0175	0.0175	mg/kg	03.03.20 00.25	U	1
o-Xylene	95-47-6	<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
Total Xylenes	1330-20-7	<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
Total BTEX		<0.00877	0.00877	mg/kg	03.03.20 00.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.03.20 00.25		
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.03.20 00.25		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16C**
Lab Sample Id: 654298-020

Matrix: Soil
Date Collected: 03.02.20 14.39

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Date Prep: 03.02.20 17.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.5	10.0	mg/kg	03.02.20 22.11		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	94.6	74.8	mg/kg	03.03.20 00.40		5
Diesel Range Organics (DRO)	C10C28DRO	2660	249	mg/kg	03.03.20 00.40		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	748	249	mg/kg	03.03.20 00.40		5
Total TPH	PHC635	3500	74.8	mg/kg	03.03.20 00.40		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	03.03.20 00.40		
o-Terphenyl	84-15-1	124	%	70-135	03.03.20 00.40		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16C**
Lab Sample Id: 654298-020

Matrix: Soil
Date Collected: 03.02.20 14.39

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00833	0.00833	mg/kg	03.03.20 00.46	U	1
Toluene	108-88-3	<0.00833	0.00833	mg/kg	03.03.20 00.46	U	1
Ethylbenzene	100-41-4	0.0210	0.00833	mg/kg	03.03.20 00.46		1
m,p-Xylenes	179601-23-1	<0.0167	0.0167	mg/kg	03.03.20 00.46	U	1
o-Xylene	95-47-6	0.00983	0.00833	mg/kg	03.03.20 00.46		1
Total Xylenes	1330-20-7	0.00983	0.00833	mg/kg	03.03.20 00.46		1
Total BTEX		0.0308	0.00833	mg/kg	03.03.20 00.46		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.03.20 00.46		
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.03.20 00.46		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16D**
Lab Sample Id: 654298-021

Matrix: Soil
Date Collected: 03.02.20 14.40

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.0	10.0	mg/kg	03.02.20 22.17		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 16.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	78.8	75.3	mg/kg	03.03.20 01.00		5
Diesel Range Organics (DRO)	C10C28DRO	3410	251	mg/kg	03.03.20 01.00		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2700	251	mg/kg	03.03.20 01.00		5
Total TPH	PHC635	6190	75.3	mg/kg	03.03.20 01.00		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	116	%	70-135	03.03.20 01.00		
o-Terphenyl	84-15-1	128	%	70-135	03.03.20 01.00		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16D**
Lab Sample Id: 654298-021

Matrix: Soil
Date Collected: 03.02.20 14.40

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.03.20 10.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.03.20 10.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.03.20 10.18		
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.03.20 10.18		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16E**
Lab Sample Id: 654298-022

Matrix: Soil
Date Collected: 03.02.20 14.41

Date Received: 03.02.20 16.01

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118299

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.0	10.1	mg/kg	03.02.20 22.24		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118289

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 03.02.20 16.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.03.20 01.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	1070	50.3	mg/kg	03.03.20 01.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	712	50.3	mg/kg	03.03.20 01.21		1
Total TPH	PHC635	1780	50.3	mg/kg	03.03.20 01.21		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	03.03.20 01.21		
o-Terphenyl	84-15-1	119	%	70-135	03.03.20 01.21		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-16E
Lab Sample Id: 654298-022

Matrix: Soil
Date Collected: 03.02.20 14.41

Date Received: 03.02.20 16.01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.02.20 20.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.02.20 20.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.02.20 20.21		
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.02.20 20.21		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16 West**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-023

Date Collected: 03.02.20 14.42

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 18.00

Basis: Wet Weight

Seq Number: 3118304

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.2	10.0	mg/kg	03.02.20 23.01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Seq Number: 3118289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.03.20 01.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	1370	50.2	mg/kg	03.03.20 01.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	455	50.2	mg/kg	03.03.20 01.41		1
Total TPH	PHC635	1830	50.2	mg/kg	03.03.20 01.41		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	121	%	70-135	03.03.20 01.41		
o-Terphenyl	84-15-1	116	%	70-135	03.03.20 01.41		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16 West**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-023

Date Collected: 03.02.20 14.42

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.02.20 18.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.02.20 18.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	80	%	70-130	03.02.20 18.39		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.02.20 18.39		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16 East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-024

Date Collected: 03.02.20 14.43

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 18.00

Basis: Wet Weight

Seq Number: 3118304

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	110	50.0	mg/kg	03.02.20 23.19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.02.20 16.20

Basis: Wet Weight

Seq Number: 3118289

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	03.03.20 10.37	U	5
Diesel Range Organics (DRO)	C10C28DRO	4020	250	mg/kg	03.03.20 10.37		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1160	250	mg/kg	03.03.20 10.37		5
Total TPH	PHC635	5180	74.9	mg/kg	03.03.20 10.37		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	117	%	70-135	03.03.20 10.37		
o-Terphenyl	84-15-1	135	%	70-135	03.03.20 10.37		



Certificate of Analytical Results 654298

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16 East**

Matrix: Soil

Date Received: 03.02.20 16.01

Lab Sample Id: 654298-024

Date Collected: 03.02.20 14.43

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.02.20 17.23

Basis: Wet Weight

Seq Number: 3118353

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.03.20 10.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.03.20 10.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	70	%	70-130	03.03.20 10.39		
1,4-Difluorobenzene	540-36-3	122	%	70-130	03.03.20 10.39		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3118299

MB Sample Id: 7697905-1-BLK

Matrix: Solid

LCS Sample Id: 7697905-1-BKS

Prep Method: E300P

Date Prep: 03.02.20

LCSD Sample Id: 7697905-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	252	101	90-110	0	20	mg/kg	03.02.20 19:30	

Analytical Method: Chloride by EPA 300

Seq Number: 3118304

MB Sample Id: 7697906-1-BLK

Matrix: Solid

LCS Sample Id: 7697906-1-BKS

Prep Method: E300P

Date Prep: 03.02.20

LCSD Sample Id: 7697906-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	99.2	99	99.7	100	90-110	1	20	mg/kg	03.02.20 22:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3118299

Parent Sample Id: 654298-001

Matrix: Soil

MS Sample Id: 654298-001 S

Prep Method: E300P

Date Prep: 03.02.20

MSD Sample Id: 654298-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.6	200	216	100	214	99	90-110	1	20	mg/kg	03.02.20 19:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3118299

Parent Sample Id: 654298-013

Matrix: Soil

MS Sample Id: 654298-013 S

Prep Method: E300P

Date Prep: 03.02.20

MSD Sample Id: 654298-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.0	200	211	101	211	101	90-110	0	20	mg/kg	03.02.20 21:11	

Analytical Method: Chloride by EPA 300

Seq Number: 3118304

Parent Sample Id: 654298-023

Matrix: Soil

MS Sample Id: 654298-023 S

Prep Method: E300P

Date Prep: 03.02.20

MSD Sample Id: 654298-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.2	201	214	98	212	98	90-110	1	20	mg/kg	03.02.20 23:07	

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118317

MB Sample Id: 7697940-1-BLK

Matrix: Solid

LCS Sample Id: 7697940-1-BKS

Prep Method: SW8015P

Date Prep: 03.02.20

LCSD Sample Id: 7697940-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	784	78	850	85	70-135	8	35	mg/kg	03.02.20 17:13	
Diesel Range Organics (DRO)	<50.0	1000	838	84	943	94	70-135	12	35	mg/kg	03.02.20 17:13	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	87		94		105		70-135	%	03.02.20 17:13			
o-Terphenyl	98		95		109		70-135	%	03.02.20 17:13			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118289

MB Sample Id: 7697918-1-BLK

Matrix: Solid

LCS Sample Id: 7697918-1-BKS

Prep Method: SW8015P

Date Prep: 03.02.20

LCSD Sample Id: 7697918-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	905	91	947	95	70-135	5	35	mg/kg	03.02.20 17:13	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1040	104	70-135	3	35	mg/kg	03.02.20 17:13	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	106		131		118		70-135	%	03.02.20 17:13			
o-Terphenyl	116		122		121		70-135	%	03.02.20 17:13			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118317

Matrix: Solid

MB Sample Id: 7697940-1-BLK

Prep Method: SW8015P

Date Prep: 03.02.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.02.20 16:53	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118289

Matrix: Solid

MB Sample Id: 7697918-1-BLK

Prep Method: SW8015P

Date Prep: 03.02.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.02.20 16:53	

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



QC Summary 654298

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118317

Parent Sample Id: 654218-001

Matrix: Soil

MS Sample Id: 654218-001 S

Prep Method: SW8015P

Date Prep: 03.02.20

MSD Sample Id: 654218-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	1030	103	1070	108	70-135	4	35	mg/kg	03.02.20 18:14	
Diesel Range Organics (DRO)	<50.0	999	1140	114	1200	121	70-135	5	35	mg/kg	03.02.20 18:14	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		132		70-135	%	03.02.20 18:14
o-Terphenyl	132		120		70-135	%	03.02.20 18:14

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118289

Parent Sample Id: 654217-002

Matrix: Soil

MS Sample Id: 654217-002 S

Prep Method: SW8015P

Date Prep: 03.02.20

MSD Sample Id: 654217-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	949	95	963	96	70-135	1	35	mg/kg	03.02.20 18:14	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	1070	107	70-135	3	35	mg/kg	03.02.20 18:14	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		120		70-135	%	03.02.20 18:14
o-Terphenyl	123		122		70-135	%	03.02.20 18:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118296

MB Sample Id: 7697872-1-BLK

Matrix: Solid

LCS Sample Id: 7697872-1-BKS

Prep Method: SW5030B

Date Prep: 03.02.20

LCSD Sample Id: 7697872-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.118	118	0.117	117	70-130	1	35	mg/kg	03.02.20 13:42	
Toluene	<0.00200	0.100	0.107	107	0.106	106	70-130	1	35	mg/kg	03.02.20 13:42	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0986	99	71-129	2	35	mg/kg	03.02.20 13:42	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.188	94	70-135	3	35	mg/kg	03.02.20 13:42	
o-Xylene	<0.00200	0.100	0.0998	100	0.0981	98	71-133	2	35	mg/kg	03.02.20 13:42	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		111		111		70-130	%	03.02.20 13:42
4-Bromofluorobenzene	89		90		89		70-130	%	03.02.20 13:42

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118353

MB Sample Id: 7697907-1-BLK

Matrix: Solid

LCS Sample Id: 7697907-1-BKS

Prep Method: SW5030B

Date Prep: 03.02.20

LCSD Sample Id: 7697907-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.109	109	70-130	8	35	mg/kg	03.02.20 15:48	
Toluene	<0.00200	0.100	0.0959	96	0.104	104	70-130	8	35	mg/kg	03.02.20 15:48	
Ethylbenzene	<0.00200	0.100	0.0918	92	0.0988	99	71-129	7	35	mg/kg	03.02.20 15:48	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.204	102	70-135	8	35	mg/kg	03.02.20 15:48	
o-Xylene	<0.00200	0.100	0.0946	95	0.102	102	71-133	8	35	mg/kg	03.02.20 15:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		106		70-130	%	03.02.20 15:48
4-Bromofluorobenzene	98		96		90		70-130	%	03.02.20 15:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118296

Parent Sample Id: 654217-002

Matrix: Soil

MS Sample Id: 654217-002 S

Prep Method: SW5030B

Date Prep: 03.02.20

MSD Sample Id: 654217-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.124	123	0.115	114	70-130	8	35	mg/kg	03.02.20 14:23	
Toluene	<0.00202	0.101	0.112	111	0.105	104	70-130	6	35	mg/kg	03.02.20 14:23	
Ethylbenzene	<0.00202	0.101	0.109	108	0.101	100	71-129	8	35	mg/kg	03.02.20 14:23	
m,p-Xylenes	<0.00404	0.202	0.209	103	0.196	97	70-135	6	35	mg/kg	03.02.20 14:23	
o-Xylene	<0.00202	0.101	0.107	106	0.100	99	71-133	7	35	mg/kg	03.02.20 14:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	03.02.20 14:23
4-Bromofluorobenzene	92		93		70-130	%	03.02.20 14:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118353

Parent Sample Id: 654298-023

Matrix: Soil

MS Sample Id: 654298-023 S

Prep Method: SW5030B

Date Prep: 03.02.20

MSD Sample Id: 654298-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.100	101	0.0976	99	70-130	2	35	mg/kg	03.03.20 08:16	
Toluene	<0.00199	0.0994	0.0958	96	0.0927	94	70-130	3	35	mg/kg	03.03.20 08:16	
Ethylbenzene	<0.00199	0.0994	0.0907	91	0.0889	90	71-129	2	35	mg/kg	03.03.20 08:16	
m,p-Xylenes	<0.00398	0.199	0.186	93	0.183	92	70-135	2	35	mg/kg	03.03.20 08:16	
o-Xylene	<0.00199	0.0994	0.0936	94	0.0928	94	71-133	1	35	mg/kg	03.03.20 08:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		70-130	%	03.03.20 08:16
4-Bromofluorobenzene	93		90		70-130	%	03.03.20 08:16

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

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3/2/2020 PAGE 2 OF 2
PO#: _____ LAB WORK ORDER#: 054298
PROJECT LOCATION OR NAME: Empire ABO
LAI PROJECT #: 06-0141-11 COLLECTOR: RN

Data Reported to:

[illegible]



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03/02/2020 04:01:00 PM

Work Order #: 654298

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03/02/2020

Checklist reviewed by:


Holly Taylor

Date: 03/03/2020



Certificate of Analysis Summary 654742

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id:

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.05.2020 16:11

Report Date: 03.06.2020 12:30

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	654742-001	654742-002	654742-003	654742-004	654742-005	654742-006
	Field Id:	05-02 B	05-02 SW	C-11 E	C-11 East	C-4C East	C-4F East
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.05.2020 09:58	03.05.2020 10:01	03.05.2020 11:37	03.05.2020 11:41	03.05.2020 11:56	03.05.2020 12:06
BTEX by EPA 8021B	Extracted:	03.05.2020 17:12	03.05.2020 17:12				
	Analyzed:	03.06.2020 04:35	03.06.2020 04:55				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00200 0.00200				
Toluene		<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	03.05.2020 17:00	03.05.2020 17:00				
	Analyzed:	03.05.2020 17:55	03.05.2020 18:12				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		20.3 9.96	121 9.92				
TPH By SW8015 Mod	Extracted:	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00
	Analyzed:	03.05.2020 19:22	03.05.2020 19:43	03.05.2020 20:03	03.05.2020 21:43	03.05.2020 21:23	03.05.2020 22:24
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.2 50.2	<49.9 49.9	<50.3 50.3
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	403 50.2	614 50.2	234 49.9	658 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	328 50.2	414 49.9	638 50.3
Total TPH		<50.2 50.2	<50.0 50.0	403 50.2	942 50.2	648 49.9	1300 50.3

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

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 654742

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id:

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.05.2020 16:11

Report Date: 03.06.2020 12:30

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	654742-007	654742-008	654742-009	654742-010	654742-011	654742-012
	<i>Field Id:</i>	C-10 East	C-13 A	C-13 C	C-13 East	C-14 A	C-14 B
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.05.2020 13:59	03.05.2020 14:47	03.05.2020 14:48	03.05.2020 14:49	03.05.2020 14:50	03.05.2020 14:51
TPH By SW8015 Mod	<i>Extracted:</i>	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00
	<i>Analyzed:</i>	03.05.2020 20:23	03.05.2020 20:43	03.05.2020 22:03	03.05.2020 19:22	03.05.2020 22:03	03.05.2020 21:43
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.3 50.3	<50.2 50.2	196 126	308 50.3	96.7 50.2
Diesel Range Organics (DRO)		<50.3 50.3	94.9 50.3	1220 50.2	3130 251	2600 50.3	2520 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.3 50.3	322 50.2	2620 251	515 50.3	268 50.2
Total TPH		<50.3 50.3	94.9 50.3	1540 50.2	5950 126	3420 50.3	2880 50.2

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 654742

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id:

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.05.2020 16:11

Report Date: 03.06.2020 12:30

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	654742-013	654742-014	654742-015	654742-016	654742-017	
	Field Id:	C-14 C	C-14 D	C-14 E	C-14 West	C-14 East	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	03.05.2020 14:52	03.05.2020 14:53	03.05.2020 14:54	03.05.2020 14:56	03.05.2020 14:55	
TPH By SW8015 Mod	Extracted:	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	03.05.2020 17:00	
	Analyzed:	03.05.2020 21:23	03.05.2020 21:03	03.05.2020 19:43	03.05.2020 20:03	03.05.2020 20:23	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		96.3 50.0	<50.2 50.2	<50.2 50.2	<50.2 50.2	58.4 49.8	
Diesel Range Organics (DRO)		4160 50.0	1420 50.2	661 50.2	426 50.2	763 49.8	
Motor Oil Range Hydrocarbons (MRO)		417 50.0	181 50.2	332 50.2	217 50.2	263 49.8	
Total TPH		4670 50.0	1600 50.2	993 50.2	643 50.2	1080 49.8	

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

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Holly Taylor
Project Manager



Analytical Report 654742

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

03.06.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.06.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **654742**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654742. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 654742 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
05-02 B	S	03.05.2020 09:58		654742-001
05-02 SW	S	03.05.2020 10:01		654742-002
C-11 E	S	03.05.2020 11:37		654742-003
C-11 East	S	03.05.2020 11:41		654742-004
C-4C East	S	03.05.2020 11:56		654742-005
C-4F East	S	03.05.2020 12:06		654742-006
C-10 East	S	03.05.2020 13:59		654742-007
C-13 A	S	03.05.2020 14:47		654742-008
C-13 C	S	03.05.2020 14:48		654742-009
C-13 East	S	03.05.2020 14:49		654742-010
C-14 A	S	03.05.2020 14:50		654742-011
C-14 B	S	03.05.2020 14:51		654742-012
C-14 C	S	03.05.2020 14:52		654742-013
C-14 D	S	03.05.2020 14:53		654742-014
C-14 E	S	03.05.2020 14:54		654742-015
C-14 West	S	03.05.2020 14:56		654742-016
C-14 East	S	03.05.2020 14:55		654742-017



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID:
Work Order Number(s): 654742

Report Date: 03.06.2020
Date Received: 03.05.2020

Sample receipt non conformances and comments:

Client (Eduardo Chavez) called 3/6/20, 08:00, to ask for all analyses to be reported only for the first two samples (001, 002). Samples 003 through 017 will need only TPH.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118716 BTEX by EPA 8021B

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



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **05-02 B**
Lab Sample Id: 654742-001

Matrix: Soil
Date Collected: 03.05.2020 09:58

Date Received: 03.05.2020 16:11

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3118717

Prep Method: E300P

% Moisture:

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.3	9.96	mg/kg	03.05.2020 17:55		1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118719

Prep Method: SW8015P

% Moisture:

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 19:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.05.2020 19:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.05.2020 19:22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.05.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.05.2020 19:22	
o-Terphenyl	84-15-1	99	%	70-135	03.05.2020 19:22	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **05-02 B**
Lab Sample Id: 654742-001

Matrix: Soil
Date Collected: 03.05.2020 09:58

Date Received: 03.05.2020 16:11

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.05.2020 17:12

Basis: Wet Weight

Seq Number: 3118716

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.06.2020 04:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.2020 04:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.06.2020 04:35		
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.06.2020 04:35		



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 05-02 SW

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-002

Date Collected: 03.05.2020 10:01

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118717

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	9.92	mg/kg	03.05.2020 18:12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.05.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.05.2020 19:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.05.2020 19:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.05.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.05.2020 19:43	
o-Terphenyl	84-15-1	96	%	70-135	03.05.2020 19:43	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 05-02 SW

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-002

Date Collected: 03.05.2020 10:01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.05.2020 17:12

Basis: Wet Weight

Seq Number: 3118716

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.06.2020 04:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.2020 04:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.2020 04:55		
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.06.2020 04:55		



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-11 E**
Lab Sample Id: 654742-003

Matrix: Soil
Date Collected: 03.05.2020 11:37

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 20:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	403	50.2	mg/kg	03.05.2020 20:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.05.2020 20:03	U	1
Total TPH	PHC635	403	50.2	mg/kg	03.05.2020 20:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.05.2020 20:03	
o-Terphenyl	84-15-1	98	%	70-135	03.05.2020 20:03	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-11 East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-004

Date Collected: 03.05.2020 11:41

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 21:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	614	50.2	mg/kg	03.05.2020 21:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	328	50.2	mg/kg	03.05.2020 21:43		1
Total TPH	PHC635	942	50.2	mg/kg	03.05.2020 21:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.05.2020 21:43	
o-Terphenyl	84-15-1	98	%	70-135	03.05.2020 21:43	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-4C East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-005

Date Collected: 03.05.2020 11:56

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.05.2020 21:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	234	49.9	mg/kg	03.05.2020 21:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	414	49.9	mg/kg	03.05.2020 21:23		1
Total TPH	PHC635	648	49.9	mg/kg	03.05.2020 21:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.05.2020 21:23	
o-Terphenyl	84-15-1	97	%	70-135	03.05.2020 21:23	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-4F East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-006

Date Collected: 03.05.2020 12:06

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.05.2020 22:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	658	50.3	mg/kg	03.05.2020 22:24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	638	50.3	mg/kg	03.05.2020 22:24		1
Total TPH	PHC635	1300	50.3	mg/kg	03.05.2020 22:24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.05.2020 22:24	
o-Terphenyl	84-15-1	96	%	70-135	03.05.2020 22:24	



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Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-10 East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-007

Date Collected: 03.05.2020 13:59

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.05.2020 20:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.05.2020 20:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.05.2020 20:23	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.05.2020 20:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.05.2020 20:23	
o-Terphenyl	84-15-1	96	%	70-135	03.05.2020 20:23	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-13 A**
Lab Sample Id: 654742-008

Matrix: Soil
Date Collected: 03.05.2020 14:47

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3118719

Prep Method: SW8015P

% Moisture:

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.05.2020 20:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	94.9	50.3	mg/kg	03.05.2020 20:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.05.2020 20:43	U	1
Total TPH	PHC635	94.9	50.3	mg/kg	03.05.2020 20:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.05.2020 20:43	
o-Terphenyl	84-15-1	96	%	70-135	03.05.2020 20:43	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-13 C**
Lab Sample Id: 654742-009

Matrix: Soil
Date Collected: 03.05.2020 14:48

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118719

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 22:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	1220	50.2	mg/kg	03.05.2020 22:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	322	50.2	mg/kg	03.05.2020 22:03		1
Total TPH	PHC635	1540	50.2	mg/kg	03.05.2020 22:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.05.2020 22:03	
o-Terphenyl	84-15-1	101	%	70-135	03.05.2020 22:03	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-13 East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-010

Date Collected: 03.05.2020 14:49

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	196	126	mg/kg	03.05.2020 19:22		5
Diesel Range Organics (DRO)	C10C28DRO	3130	251	mg/kg	03.05.2020 19:22		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2620	251	mg/kg	03.05.2020 19:22		5
Total TPH	PHC635	5950	126	mg/kg	03.05.2020 19:22		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.05.2020 19:22	
o-Terphenyl	84-15-1	102	%	70-135	03.05.2020 19:22	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 A**
Lab Sample Id: 654742-011

Matrix: Soil
Date Collected: 03.05.2020 14:50

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	308	50.3	mg/kg	03.05.2020 22:03		1
Diesel Range Organics (DRO)	C10C28DRO	2600	50.3	mg/kg	03.05.2020 22:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	515	50.3	mg/kg	03.05.2020 22:03		1
Total TPH	PHC635	3420	50.3	mg/kg	03.05.2020 22:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.05.2020 22:03	
o-Terphenyl	84-15-1	107	%	70-135	03.05.2020 22:03	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 B**
Lab Sample Id: 654742-012

Matrix: Soil
Date Collected: 03.05.2020 14:51

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	96.7	50.2	mg/kg	03.05.2020 21:43		1
Diesel Range Organics (DRO)	C10C28DRO	2520	50.2	mg/kg	03.05.2020 21:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	268	50.2	mg/kg	03.05.2020 21:43		1
Total TPH	PHC635	2880	50.2	mg/kg	03.05.2020 21:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.05.2020 21:43	
o-Terphenyl	84-15-1	111	%	70-135	03.05.2020 21:43	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 C**
Lab Sample Id: 654742-013

Matrix: Soil
Date Collected: 03.05.2020 14:52

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	96.3	50.0	mg/kg	03.05.2020 21:23		1
Diesel Range Organics (DRO)	C10C28DRO	4160	50.0	mg/kg	03.05.2020 21:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	417	50.0	mg/kg	03.05.2020 21:23		1
Total TPH	PHC635	4670	50.0	mg/kg	03.05.2020 21:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.05.2020 21:23	
o-Terphenyl	84-15-1	108	%	70-135	03.05.2020 21:23	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 D**
Lab Sample Id: 654742-014

Matrix: Soil
Date Collected: 03.05.2020 14:53

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 21:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	1420	50.2	mg/kg	03.05.2020 21:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	181	50.2	mg/kg	03.05.2020 21:03		1
Total TPH	PHC635	1600	50.2	mg/kg	03.05.2020 21:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.05.2020 21:03	
o-Terphenyl	84-15-1	110	%	70-135	03.05.2020 21:03	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 E**
Lab Sample Id: 654742-015

Matrix: Soil
Date Collected: 03.05.2020 14:54

Date Received: 03.05.2020 16:11

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	661	50.2	mg/kg	03.05.2020 19:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	332	50.2	mg/kg	03.05.2020 19:43		1
Total TPH	PHC635	993	50.2	mg/kg	03.05.2020 19:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.05.2020 19:43	
o-Terphenyl	84-15-1	116	%	70-135	03.05.2020 19:43	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 West**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-016

Date Collected: 03.05.2020 14:56

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.05.2020 20:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	426	50.2	mg/kg	03.05.2020 20:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	217	50.2	mg/kg	03.05.2020 20:03		1
Total TPH	PHC635	643	50.2	mg/kg	03.05.2020 20:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.05.2020 20:03	
o-Terphenyl	84-15-1	116	%	70-135	03.05.2020 20:03	



Certificate of Analytical Results 654742

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-14 East**

Matrix: Soil

Date Received: 03.05.2020 16:11

Lab Sample Id: 654742-017

Date Collected: 03.05.2020 14:55

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.05.2020 17:00

Basis: Wet Weight

Seq Number: 3118727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	58.4	49.8	mg/kg	03.05.2020 20:23		1
Diesel Range Organics (DRO)	C10C28DRO	763	49.8	mg/kg	03.05.2020 20:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	263	49.8	mg/kg	03.05.2020 20:23		1
Total TPH	PHC635	1080	49.8	mg/kg	03.05.2020 20:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.05.2020 20:23	
o-Terphenyl	84-15-1	109	%	70-135	03.05.2020 20:23	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3118717

MB Sample Id: 7698178-1-BLK

Matrix: Solid

LCS Sample Id: 7698178-1-BKS

Prep Method: E300P

Date Prep: 03.05.2020

LCSD Sample Id: 7698178-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	263	105	265	106	90-110	1	20	mg/kg	03.05.2020 16:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3118717

Parent Sample Id: 654705-001

Matrix: Soil

MS Sample Id: 654705-001 S

Prep Method: E300P

Date Prep: 03.05.2020

MSD Sample Id: 654705-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1750	201	1930	90	1930	90	90-110	0	20	mg/kg	03.05.2020 16:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3118717

Parent Sample Id: 654742-001

Matrix: Soil

MS Sample Id: 654742-001 S

Prep Method: E300P

Date Prep: 03.05.2020

MSD Sample Id: 654742-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.3	200	240	110	241	110	90-110	0	20	mg/kg	03.05.2020 18:01	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118719

MB Sample Id: 7698213-1-BLK

Matrix: Solid

LCS Sample Id: 7698213-1-BKS

Prep Method: SW8015P

Date Prep: 03.05.2020

LCSD Sample Id: 7698213-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	870	87	902	90	70-135	4	35	mg/kg	03.05.2020 11:39	
Diesel Range Organics (DRO)	<50.0	1000	816	82	826	83	70-135	1	35	mg/kg	03.05.2020 11:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		99		113		70-135	%	03.05.2020 11:39
o-Terphenyl	96		100		101		70-135	%	03.05.2020 11:39

Analytical Method: TPH By SW8015 Mod

Seq Number: 3118727

MB Sample Id: 7698215-1-BLK

Matrix: Solid

LCS Sample Id: 7698215-1-BKS

Prep Method: SW8015P

Date Prep: 03.05.2020

LCSD Sample Id: 7698215-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	848	85	826	83	70-135	3	35	mg/kg	03.05.2020 11:39	
Diesel Range Organics (DRO)	<50.0	1000	821	82	797	80	70-135	3	35	mg/kg	03.05.2020 11:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		96		94		70-135	%	03.05.2020 11:39
o-Terphenyl	100		104		101		70-135	%	03.05.2020 11:39

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



QC Summary 654742

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod
Seq Number: 3118719

Matrix: Solid
MB Sample Id: 7698213-1-BLK

Prep Method: SW8015P
Date Prep: 03.05.2020

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.05.2020 11:19	

Analytical Method: TPH By SW8015 Mod
Seq Number: 3118727

Matrix: Solid
MB Sample Id: 7698215-1-BLK

Prep Method: SW8015P
Date Prep: 03.05.2020

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.05.2020 11:19	

Analytical Method: TPH By SW8015 Mod
Seq Number: 3118719
Parent Sample Id: 654705-001

Matrix: Soil
MS Sample Id: 654705-001 S

Prep Method: SW8015P
Date Prep: 03.05.2020
MSD Sample Id: 654705-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	942	94	957	96	70-135	2	35	mg/kg	03.05.2020 15:38	
Diesel Range Organics (DRO)	<50.1	1000	846	85	865	87	70-135	2	35	mg/kg	03.05.2020 15:38	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		119		70-135	%	03.05.2020 15:38
o-Terphenyl	102		104		70-135	%	03.05.2020 15:38

Analytical Method: TPH By SW8015 Mod
Seq Number: 3118727
Parent Sample Id: 654705-002

Matrix: Soil
MS Sample Id: 654705-002 S

Prep Method: SW8015P
Date Prep: 03.05.2020
MSD Sample Id: 654705-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	909	91	876	88	70-135	4	35	mg/kg	03.05.2020 15:38	
Diesel Range Organics (DRO)	<50.2	1000	868	87	838	84	70-135	4	35	mg/kg	03.05.2020 15:38	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		99		70-135	%	03.05.2020 15:38
o-Terphenyl	106		104		70-135	%	03.05.2020 15:38

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118716

MB Sample Id: 7698212-1-BLK

Matrix: Solid

LCS Sample Id: 7698212-1-BKS

Prep Method: SW5030B

Date Prep: 03.05.2020

LCSD Sample Id: 7698212-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.113	113	70-130	5	35	mg/kg	03.06.2020 02:53	
Toluene	<0.00200	0.100	0.103	103	0.107	107	70-130	4	35	mg/kg	03.06.2020 02:53	
Ethylbenzene	<0.00200	0.100	0.0969	97	0.0997	100	71-129	3	35	mg/kg	03.06.2020 02:53	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.203	102	70-135	2	35	mg/kg	03.06.2020 02:53	
o-Xylene	<0.00200	0.100	0.101	101	0.104	104	71-133	3	35	mg/kg	03.06.2020 02:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		108		70-130	%	03.06.2020 02:53
4-Bromofluorobenzene	93		93		92		70-130	%	03.06.2020 02:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118716

Parent Sample Id: 654742-001

Matrix: Soil

MS Sample Id: 654742-001 S

Prep Method: SW5030B

Date Prep: 03.05.2020

MSD Sample Id: 654742-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.0938	94	70-130	8	35	mg/kg	03.06.2020 03:34	
Toluene	<0.00200	0.100	0.0955	96	0.0901	90	70-130	6	35	mg/kg	03.06.2020 03:34	
Ethylbenzene	<0.00200	0.100	0.0906	91	0.0859	86	71-129	5	35	mg/kg	03.06.2020 03:34	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.176	88	70-135	6	35	mg/kg	03.06.2020 03:34	
o-Xylene	<0.00200	0.100	0.0938	94	0.0880	88	71-133	6	35	mg/kg	03.06.2020 03:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.06.2020 03:34
4-Bromofluorobenzene	91		94		70-130	%	03.06.2020 03:34

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

Nº 1061

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/05/2020

PAGE 2 OF 2

PO#:

LAB WORK ORDER#: 1054742

PROJECT LOCATION OR NAME: Empire Abo

LAI PROJECT #: 06-0141-11

COLLECTOR: EL/RN

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE:
Time zone/State:

MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESERVED

ANALYSES

BTEX ☐ MTBE ☐
TPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8280 ☐
SVOC 8270 ☐ PAH 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8082 PESTICIDES ☐ 8151 HERBICIDES ☐
TBLP - METALS (RCRA) ☐ TOLP VOC ☐
TOTAL METALS (RCRA) ☐ HERB ☐ Semi-VOC ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ TOLP ☐
RCL ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PESTICIDES ☐
CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

C-14 West

03/5/20

14:50

S

1

X

X

X

X

X

X

X

X

X

X

X

X

X

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C-14 East

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14:55

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1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

TOTAL 2

RELINQUISHED BY: (Signature)

DATE/TIME

03-05-20/1611

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

NORMAL ☐

1 DAY ☒ Rush!

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 67 THERM#: T-NM-007

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED

☐ CARRIER BILL #

☒ HAND DELIVERED

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.05.2020 04.11.00 PM

Work Order #: 654742

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

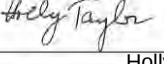
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.05.2020

Checklist reviewed by:


Holly Taylor

Date: 03.06.2020



Certificate of Analysis Summary 654916

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.09.2020 09:41

Report Date: 03.10.2020 16:43

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	654916-001	654916-002				
	Field Id:	ABO 05-01 B	ABO 05-01 SW				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	03.06.2020 13:20	03.06.2020 13:22				
BTEX by EPA 8021B	Extracted:	03.10.2020 08:00	03.10.2020 08:00				
	Analyzed:	03.10.2020 13:22	03.10.2020 13:42				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		0.376 0.199	<0.0998 0.0998				
Toluene		20.3 0.199	1.60 0.0998				
Ethylbenzene		24.9 0.199	0.243 0.0998				
m,p-Xylenes		6.66 0.398	1.29 0.200				
o-Xylene		16.9 0.199	4.66 0.0998				
Total Xylenes		23.6 0.199	5.95 0.0998				
Total BTEX		69.1 0.199	7.79 0.0998				
Chloride by EPA 300	Extracted:	03.09.2020 11:45	03.09.2020 11:45				
	Analyzed:	03.09.2020 19:29	03.09.2020 19:35				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		115 50.0	121 49.6				
TPH by SW8015 Mod	Extracted:	03.09.2020 17:00	03.09.2020 17:00				
	Analyzed:	03.10.2020 05:34	03.10.2020 04:37				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		2020 249	1280 50.0				
Diesel Range Organics (DRO)		5000 249	6340 X 50.0				
Motor Oil Range Hydrocarbons (MRO)		997 249	676 50.0				
Total TPH		8020 249	8300 50.0				

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

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

Holly Taylor
Project Manager



Analytical Report 654916

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.10.2020

Collected By: Client



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

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

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

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



03.10.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **654916**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654916. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 654916 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is fluid and cursive, with the first name 'Holly' and last name 'Taylor' clearly distinguishable.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 654916

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
ABO 05-01 B	S	03.06.2020 13:20		654916-001
ABO 05-01 SW	S	03.06.2020 13:22		654916-002



CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo*

Project ID: 06-0141-11
Work Order Number(s): 654916

Report Date: 03.10.2020
Date Received: 03.09.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119005 TPH by SW8015 Mod

Lab Sample ID 654916-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 654916-001, -002. The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3119095 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 654916-002, 654916-001.

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



Certificate of Analytical Results 654916

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **ABO 05-01 B**

Matrix: Soil

Date Received: 03.09.2020 09:41

Lab Sample Id: 654916-001

Date Collected: 03.06.2020 13:20

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.09.2020 11:45

Basis: Wet Weight

Seq Number: 3119026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	115	50.0	mg/kg	03.09.2020 19:29		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119005

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2020	249	mg/kg	03.10.2020 05:34		5
Diesel Range Organics (DRO)	C10C28DRO	5000	249	mg/kg	03.10.2020 05:34		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	997	249	mg/kg	03.10.2020 05:34		5
Total TPH	PHC635	8020	249	mg/kg	03.10.2020 05:34		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.10.2020 05:34	
o-Terphenyl	84-15-1	104	%	70-135	03.10.2020 05:34	



Certificate of Analytical Results 654916

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **ABO 05-01 B**

Matrix: Soil

Date Received: 03.09.2020 09:41

Lab Sample Id: 654916-001

Date Collected: 03.06.2020 13:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.2020 08:00

Basis: Wet Weight

Seq Number: 3119095

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.376	0.199	mg/kg	03.10.2020 13:22		100
Toluene	108-88-3	20.3	0.199	mg/kg	03.10.2020 13:22		100
Ethylbenzene	100-41-4	24.9	0.199	mg/kg	03.10.2020 13:22		100
m,p-Xylenes	179601-23-1	6.66	0.398	mg/kg	03.10.2020 13:22		100
o-Xylene	95-47-6	16.9	0.199	mg/kg	03.10.2020 13:22		100
Total Xylenes	1330-20-7	23.6	0.199	mg/kg	03.10.2020 13:22		100
Total BTEX		69.1	0.199	mg/kg	03.10.2020 13:22		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	303	%	70-130	03.10.2020 13:22	**
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.10.2020 13:22	



Certificate of Analytical Results 654916

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **ABO 05-01 SW**

Matrix: Soil

Date Received: 03.09.2020 09:41

Lab Sample Id: 654916-002

Date Collected: 03.06.2020 13:22

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 03.09.2020 11:45

Basis: Wet Weight

Seq Number: 3119026

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	121	49.6	mg/kg	03.09.2020 19:35		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119005

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1280	50.0	mg/kg	03.10.2020 04:37		1
Diesel Range Organics (DRO)	C10C28DRO	6340	50.0	mg/kg	03.10.2020 04:37	X	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	676	50.0	mg/kg	03.10.2020 04:37		1
Total TPH	PHC635	8300	50.0	mg/kg	03.10.2020 04:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.10.2020 04:37	
o-Terphenyl	84-15-1	116	%	70-135	03.10.2020 04:37	



Certificate of Analytical Results 654916

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **ABO 05-01 SW**

Matrix: Soil

Date Received: 03.09.2020 09:41

Lab Sample Id: 654916-002

Date Collected: 03.06.2020 13:22

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.2020 08:00

Basis: Wet Weight

Seq Number: 3119095

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0998	0.0998	mg/kg	03.10.2020 13:42	U	50
Toluene	108-88-3	1.60	0.0998	mg/kg	03.10.2020 13:42		50
Ethylbenzene	100-41-4	0.243	0.0998	mg/kg	03.10.2020 13:42		50
m,p-Xylenes	179601-23-1	1.29	0.200	mg/kg	03.10.2020 13:42		50
o-Xylene	95-47-6	4.66	0.0998	mg/kg	03.10.2020 13:42		50
Total Xylenes	1330-20-7	5.95	0.0998	mg/kg	03.10.2020 13:42		50
Total BTEX		7.79	0.0998	mg/kg	03.10.2020 13:42		50
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	156	%	70-130	03.10.2020 13:42	**	
1,4-Difluorobenzene	540-36-3	90	%	70-130	03.10.2020 13:42		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 654916

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3119026

MB Sample Id: 7698369-1-BLK

Matrix: Solid

LCS Sample Id: 7698369-1-BKS

Prep Method: E300P

Date Prep: 03.09.2020

LCSD Sample Id: 7698369-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	258	103	90-110	0	20	mg/kg	03.09.2020 16:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3119026

Parent Sample Id: 654582-002

Matrix: Soil

MS Sample Id: 654582-002 S

Prep Method: E300P

Date Prep: 03.09.2020

MSD Sample Id: 654582-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.97	249	260	104	261	105	90-110	0	20	mg/kg	03.09.2020 16:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3119026

Parent Sample Id: 654862-007

Matrix: Soil

MS Sample Id: 654862-007 S

Prep Method: E300P

Date Prep: 03.09.2020

MSD Sample Id: 654862-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.1	251	281	106	275	104	90-110	2	20	mg/kg	03.09.2020 18:14	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119005

MB Sample Id: 7698421-1-BLK

Matrix: Solid

LCS Sample Id: 7698421-1-BKS

Prep Method: SW8015P

Date Prep: 03.09.2020

LCSD Sample Id: 7698421-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	927	93	951	95	70-135	3	20	mg/kg	03.10.2020 03:59	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1060	106	70-135	3	20	mg/kg	03.10.2020 03:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		104		107		70-135	%	03.10.2020 03:59
o-Terphenyl	87		103		108		70-135	%	03.10.2020 03:59

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119005

Matrix: Solid

MB Sample Id: 7698421-1-BLK

Prep Method: SW8015P

Date Prep: 03.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.2020 03:40	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 654916

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119005

Parent Sample Id: 654916-002

Matrix: Soil

MS Sample Id: 654916-002 S

Prep Method: SW8015P

Date Prep: 03.09.2020

MSD Sample Id: 654916-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	1280	998	2250	97	2260	98	70-135	0	20	mg/kg	03.10.2020 04:56	
Diesel Range Organics (DRO)	6340	998	7810	147	7800	147	70-135	0	20	mg/kg	03.10.2020 04:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		122		70-135	%	03.10.2020 04:56
o-Terphenyl	110		113		70-135	%	03.10.2020 04:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119095

MB Sample Id: 7698506-1-BLK

Matrix: Solid

LCS Sample Id: 7698506-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.2020

LCSD Sample Id: 7698506-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.113	113	0.104	104	70-130	8	35	mg/kg	03.10.2020 08:42	
Toluene	<0.00200	0.0998	0.117	117	0.104	104	70-130	12	35	mg/kg	03.10.2020 08:42	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.100	100	70-130	13	35	mg/kg	03.10.2020 08:42	
m,p-Xylenes	<0.00101	0.200	0.224	112	0.197	99	70-130	13	35	mg/kg	03.10.2020 08:42	
o-Xylene	<0.00200	0.0998	0.109	109	0.0989	99	70-130	10	35	mg/kg	03.10.2020 08:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		104		103		70-130	%	03.10.2020 08:42
4-Bromofluorobenzene	84		102		96		70-130	%	03.10.2020 08:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119095

Parent Sample Id: 654948-001

Matrix: Soil

MS Sample Id: 654948-001 S

Prep Method: SW5030B

Date Prep: 03.10.2020

MSD Sample Id: 654948-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000615	0.100	0.116	115	0.112	111	70-130	4	35	mg/kg	03.10.2020 09:22	
Toluene	0.00626	0.100	0.103	97	0.0961	90	70-130	7	35	mg/kg	03.10.2020 09:22	
Ethylbenzene	0.00203	0.100	0.0822	80	0.0761	74	70-130	8	35	mg/kg	03.10.2020 09:22	
m,p-Xylenes	0.00762	0.200	0.163	78	0.149	70	70-130	9	35	mg/kg	03.10.2020 09:22	
o-Xylene	0.00446	0.100	0.0807	76	0.0752	71	70-130	7	35	mg/kg	03.10.2020 09:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		109		70-130	%	03.10.2020 09:22
4-Bromofluorobenzene	98		97		70-130	%	03.10.2020 09:22

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: Empire HbD

LAI PROJECT #: 0670141-71 COLLECTOR: EC

Data Reported to:

[illegible]

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.09.2020 09.41.00 AM

Work Order #: 654916

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

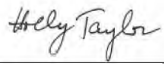
Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-6.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:	 Brianna Teel	Date: 03.09.2020
Checklist reviewed by:	 Holly Taylor	Date: 03.10.2020



Certificate of Analysis Summary 655051

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.09.2020 15:17

Report Date: 03.10.2020 14:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	655051-001	655051-002	655051-003	655051-004	655051-005	655051-006
	<i>Field Id:</i>	C-13 West	C-14A	C-14B	C-14C	C-15A	C-15B
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.09.2020 09:07	03.09.2020 09:09	03.09.2020 09:15	03.09.2020 09:19	03.09.2020 13:35	03.09.2020 13:37
TPH By SW8015 Mod	<i>Extracted:</i>	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00
	<i>Analyzed:</i>	03.10.2020 07:50	03.10.2020 05:49	03.10.2020 07:30	03.10.2020 07:10	03.10.2020 06:09	03.10.2020 06:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		266 50.1	<50.1 50.1	73.2 50.1	51.3 50.0	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		2430 50.1	344 50.1	978 50.1	829 50.0	246 50.2	110 50.2
Motor Oil Range Hydrocarbons (MRO)		192 50.1	<50.1 50.1	82.1 50.1	75.9 50.0	<50.2 50.2	<50.2 50.2
Total TPH		2890 50.1	344 50.1	1130 50.1	956 50.0	246 50.2	110 50.2

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 655051

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.09.2020 15:17

Report Date: 03.10.2020 14:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	655051-007	655051-008	655051-009	655051-010	655051-011	655051-012
	<i>Field Id:</i>	C-15C	C-15D	C-15E	C-15 West	C-16A	C-16B
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.09.2020 13:40	03.09.2020 13:41	03.09.2020 13:44	03.09.2020 13:47	03.09.2020 13:51	03.09.2020 13:52
TPH By SW8015 Mod	<i>Extracted:</i>	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00
	<i>Analyzed:</i>	03.10.2020 06:50	03.10.2020 07:10	03.10.2020 07:30	03.10.2020 07:50	03.10.2020 05:09	03.10.2020 05:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	65.6 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		62.7 50.0	444 50.0	636 50.0	1700 50.0	102 50.0	144 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	79.3 50.0	107 50.0	346 50.0	<50.0 50.0	<50.0 50.0
Total TPH		62.7 50.0	523 50.0	743 50.0	2110 50.0	102 50.0	144 50.0

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Holly Taylor
Project Manager



Certificate of Analysis Summary 655051

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.09.2020 15:17

Report Date: 03.10.2020 14:07

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655051-013	655051-014	655051-015	655051-016		
	Field Id:	C-16C	C-16 East	13- S.E.B	13- S.W.B		
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	03.09.2020 13:54	03.09.2020 13:56	03.09.2020 14:16	03.09.2020 14:17		
TPH By SW8015 Mod	Extracted:	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00	03.09.2020 17:00		
	Analyzed:	03.10.2020 05:49	03.10.2020 06:09	03.10.2020 06:29	03.10.2020 06:50		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	69.9 50.0		
Diesel Range Organics (DRO)		<50.0 50.0	199 50.0	365 50.0	881 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	75.3 50.0	53.1 50.0	112 50.0		
Total TPH		<50.0 50.0	274 50.0	418 50.0	1060 50.0		

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

Holly Taylor
Project Manager



Analytical Report 655051

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo-Durango Midstream

06-0141-11

03.10.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.10.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **655051**

Empire Abo-Durango Midstream

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655051. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655051 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-13 West	S	03.09.2020 09:07		655051-001
C-14A	S	03.09.2020 09:09		655051-002
C-14B	S	03.09.2020 09:15		655051-003
C-14C	S	03.09.2020 09:19		655051-004
C-15A	S	03.09.2020 13:35		655051-005
C-15B	S	03.09.2020 13:37		655051-006
C-15C	S	03.09.2020 13:40		655051-007
C-15D	S	03.09.2020 13:41		655051-008
C-15E	S	03.09.2020 13:44		655051-009
C-15 West	S	03.09.2020 13:47		655051-010
C-16A	S	03.09.2020 13:51		655051-011
C-16B	S	03.09.2020 13:52		655051-012
C-16C	S	03.09.2020 13:54		655051-013
C-16 East	S	03.09.2020 13:56		655051-014
13- S.E.B	S	03.09.2020 14:16		655051-015
13- S.W.B	S	03.09.2020 14:17		655051-016



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo-Durango Midstream

Project ID: 06-0141-11
Work Order Number(s): 655051

Report Date: 03.10.2020
Date Received: 03.09.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-13 West**

Matrix: Soil

Date Received: 03.09.2020 15:17

Lab Sample Id: 655051-001

Date Collected: 03.09.2020 09:07

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119055

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	266	50.1	mg/kg	03.10.2020 07:50		1
Diesel Range Organics (DRO)	C10C28DRO	2430	50.1	mg/kg	03.10.2020 07:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	192	50.1	mg/kg	03.10.2020 07:50		1
Total TPH	PHC635	2890	50.1	mg/kg	03.10.2020 07:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.10.2020 07:50	
o-Terphenyl	84-15-1	121	%	70-135	03.10.2020 07:50	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-14A**
Lab Sample Id: 655051-002

Matrix: Soil
Date Collected: 03.09.2020 09:09

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119055

Prep Method: SW8015P

% Moisture:

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.2020 05:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	344	50.1	mg/kg	03.10.2020 05:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.2020 05:49	U	1
Total TPH	PHC635	344	50.1	mg/kg	03.10.2020 05:49		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	03.10.2020 05:49		
o-Terphenyl	84-15-1	115	%	70-135	03.10.2020 05:49		



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-14B**
Lab Sample Id: 655051-003

Matrix: Soil
Date Collected: 03.09.2020 09:15

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119055

Prep Method: SW8015P

% Moisture:

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	73.2	50.1	mg/kg	03.10.2020 07:30		1
Diesel Range Organics (DRO)	C10C28DRO	978	50.1	mg/kg	03.10.2020 07:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	82.1	50.1	mg/kg	03.10.2020 07:30		1
Total TPH	PHC635	1130	50.1	mg/kg	03.10.2020 07:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.10.2020 07:30	
o-Terphenyl	84-15-1	116	%	70-135	03.10.2020 07:30	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-14C**
Lab Sample Id: 655051-004

Matrix: Soil
Date Collected: 03.09.2020 09:19

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119055

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	51.3	50.0	mg/kg	03.10.2020 07:10		1
Diesel Range Organics (DRO)	C10C28DRO	829	50.0	mg/kg	03.10.2020 07:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	75.9	50.0	mg/kg	03.10.2020 07:10		1
Total TPH	PHC635	956	50.0	mg/kg	03.10.2020 07:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.10.2020 07:10	
o-Terphenyl	84-15-1	124	%	70-135	03.10.2020 07:10	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-15A**
Lab Sample Id: 655051-005

Matrix: Soil
Date Collected: 03.09.2020 13:35

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119055

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.2020 06:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	246	50.2	mg/kg	03.10.2020 06:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.2020 06:09	U	1
Total TPH	PHC635	246	50.2	mg/kg	03.10.2020 06:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.10.2020 06:09	
o-Terphenyl	84-15-1	114	%	70-135	03.10.2020 06:09	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-15B**
Lab Sample Id: 655051-006

Matrix: Soil
Date Collected: 03.09.2020 13:37

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119055

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.2020 06:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	110	50.2	mg/kg	03.10.2020 06:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.2020 06:29	U	1
Total TPH	PHC635	110	50.2	mg/kg	03.10.2020 06:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.10.2020 06:29	
o-Terphenyl	84-15-1	118	%	70-135	03.10.2020 06:29	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: C-15C
Lab Sample Id: 655051-007

Matrix: Soil
Date Collected: 03.09.2020 13:40

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119055

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 06:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	62.7	50.0	mg/kg	03.10.2020 06:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.10.2020 06:50	U	1
Total TPH	PHC635	62.7	50.0	mg/kg	03.10.2020 06:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.10.2020 06:50	
o-Terphenyl	84-15-1	116	%	70-135	03.10.2020 06:50	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-15D**
Lab Sample Id: 655051-008

Matrix: Soil
Date Collected: 03.09.2020 13:41

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 07:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	444	50.0	mg/kg	03.10.2020 07:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	79.3	50.0	mg/kg	03.10.2020 07:10		1
Total TPH	PHC635	523	50.0	mg/kg	03.10.2020 07:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	03.10.2020 07:10	
o-Terphenyl	84-15-1	128	%	70-135	03.10.2020 07:10	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-15E**
Lab Sample Id: 655051-009

Matrix: Soil
Date Collected: 03.09.2020 13:44

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119062

Prep Method: SW8015P

% Moisture:

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 07:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	636	50.0	mg/kg	03.10.2020 07:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	107	50.0	mg/kg	03.10.2020 07:30		1
Total TPH	PHC635	743	50.0	mg/kg	03.10.2020 07:30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.10.2020 07:30	
o-Terphenyl	84-15-1	129	%	70-135	03.10.2020 07:30	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-15 West**

Matrix: Soil

Date Received: 03.09.2020 15:17

Lab Sample Id: 655051-010

Date Collected: 03.09.2020 13:47

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	65.6	50.0	mg/kg	03.10.2020 07:50		1
Diesel Range Organics (DRO)	C10C28DRO	1700	50.0	mg/kg	03.10.2020 07:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	346	50.0	mg/kg	03.10.2020 07:50		1
Total TPH	PHC635	2110	50.0	mg/kg	03.10.2020 07:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.10.2020 07:50	
o-Terphenyl	84-15-1	130	%	70-135	03.10.2020 07:50	



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-16A**
Lab Sample Id: 655051-011

Matrix: Soil
Date Collected: 03.09.2020 13:51

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119062

Prep Method: SW8015P

% Moisture:

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 05:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	102	50.0	mg/kg	03.10.2020 05:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.10.2020 05:09	U	1
Total TPH	PHC635	102	50.0	mg/kg	03.10.2020 05:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	03.10.2020 05:09	
o-Terphenyl	84-15-1	129	%	70-135	03.10.2020 05:09	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-16B**
Lab Sample Id: 655051-012

Matrix: Soil
Date Collected: 03.09.2020 13:52

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 05:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	144	50.0	mg/kg	03.10.2020 05:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.10.2020 05:29	U	1
Total TPH	PHC635	144	50.0	mg/kg	03.10.2020 05:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	03.10.2020 05:29	
o-Terphenyl	84-15-1	128	%	70-135	03.10.2020 05:29	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-16C**
Lab Sample Id: 655051-013

Matrix: Soil
Date Collected: 03.09.2020 13:54

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 05:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.10.2020 05:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.10.2020 05:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.10.2020 05:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.10.2020 05:49	
o-Terphenyl	84-15-1	121	%	70-135	03.10.2020 05:49	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **C-16 East**

Matrix: Soil

Date Received: 03.09.2020 15:17

Lab Sample Id: 655051-014

Date Collected: 03.09.2020 13:56

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 06:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	199	50.0	mg/kg	03.10.2020 06:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	75.3	50.0	mg/kg	03.10.2020 06:09		1
Total TPH	PHC635	274	50.0	mg/kg	03.10.2020 06:09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.10.2020 06:09	
o-Terphenyl	84-15-1	119	%	70-135	03.10.2020 06:09	



Certificate of Analytical Results 655051

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **13- S.E.B**
Lab Sample Id: 655051-015

Matrix: Soil
Date Collected: 03.09.2020 14:16

Date Received: 03.09.2020 15:17

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119062

Prep Method: SW8015P

% Moisture:

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.2020 06:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	365	50.0	mg/kg	03.10.2020 06:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	53.1	50.0	mg/kg	03.10.2020 06:29		1
Total TPH	PHC635	418	50.0	mg/kg	03.10.2020 06:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.10.2020 06:29	
o-Terphenyl	84-15-1	123	%	70-135	03.10.2020 06:29	



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Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: 13- S.W.B

Matrix: Soil

Date Received: 03.09.2020 15:17

Lab Sample Id: 655051-016

Date Collected: 03.09.2020 14:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.09.2020 17:00

Basis: Wet Weight

Seq Number: 3119062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	69.9	50.0	mg/kg	03.10.2020 06:50		1
Diesel Range Organics (DRO)	C10C28DRO	881	50.0	mg/kg	03.10.2020 06:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	112	50.0	mg/kg	03.10.2020 06:50		1
Total TPH	PHC635	1060	50.0	mg/kg	03.10.2020 06:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.10.2020 06:50	
o-Terphenyl	84-15-1	122	%	70-135	03.10.2020 06:50	

Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 655051

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119055

MB Sample Id: 7698462-1-BLK

Matrix: Solid

LCS Sample Id: 7698462-1-BKS

Prep Method: SW8015P

Date Prep: 03.09.2020

LCSD Sample Id: 7698462-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	916	92	927	93	70-135	1	35	mg/kg	03.10.2020 09:41	
Diesel Range Organics (DRO)	<50.0	1000	916	92	914	91	70-135	0	35	mg/kg	03.10.2020 09:41	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	96		107		100		70-135			%	03.10.2020 09:41	
o-Terphenyl	106		111		104		70-135			%	03.10.2020 09:41	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119062

MB Sample Id: 7698464-1-BLK

Matrix: Solid

LCS Sample Id: 7698464-1-BKS

Prep Method: SW8015P

Date Prep: 03.09.2020

LCSD Sample Id: 7698464-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	931	93	924	92	70-135	1	35	mg/kg	03.10.2020 09:41	
Diesel Range Organics (DRO)	<50.0	1000	971	97	944	94	70-135	3	35	mg/kg	03.10.2020 09:41	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	86		108		100		70-135			%	03.10.2020 09:41	
o-Terphenyl	98		115		106		70-135			%	03.10.2020 09:41	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119055

Matrix: Solid
MB Sample Id: 7698462-1-BLK

Prep Method: SW8015P

Date Prep: 03.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.2020 09:21	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119062

Matrix: Solid
MB Sample Id: 7698464-1-BLK

Prep Method: SW8015P

Date Prep: 03.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.2020 03:48	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 655051

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119055

Parent Sample Id: 654990-026

Matrix: Soil

MS Sample Id: 654990-026 S

Prep Method: SW8015P

Date Prep: 03.09.2020

MSD Sample Id: 654990-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	962	96	984	98	70-135	2	35	mg/kg	03.10.2020 04:28	
Diesel Range Organics (DRO)	<49.9	997	939	94	956	96	70-135	2	35	mg/kg	03.10.2020 04:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		119		70-135	%	03.10.2020 04:28
o-Terphenyl	125		125		70-135	%	03.10.2020 04:28

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119062

Parent Sample Id: 654990-027

Matrix: Soil

MS Sample Id: 654990-027 S

Prep Method: SW8015P

Date Prep: 03.09.2020

MSD Sample Id: 654990-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	993	99	1120	112	70-135	12	35	mg/kg	03.10.2020 04:28	
Diesel Range Organics (DRO)	<50.0	1000	1000	100	969	97	70-135	3	35	mg/kg	03.10.2020 04:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		130		70-135	%	03.10.2020 04:28
o-Terphenyl	131		134		70-135	%	03.10.2020 04:28

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

CHAIN-OF-CUSTODY



507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/09/2020 PAGE 1 OF 2
PO#: _____ LAB WORK ORDER#: 655057
PROJECT LOCATION OR NAME: Empire Abo - Durango Midstream
LAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION					ANALYSES															FIELD NOTES								
						HCl	HNO ₃	H ₂ SO ₄ □ NaOH □	ICE	UNPRESERVED	BTEX □ MTBE □	TRPH 418.1 □ TPH 1005 □ TPH 1006 □	GASOLINE MOD 8015 □	DIESEL - MOD 8015 □	OIL - MOD 8015 □	VOC 8260 □	SVOC 8270 □ PAH 8270 □	8081 PESTICIDES □	8082 PCBs □	TBLP - METALS (RCRA) □	TCLP - METALS (RCRA) □	HERB □	8151 HERBICIDES □	HOLDPAH □	TCLP VOC □		Semi-VOC □	OTHER LIST □	TCLP □	D.W. 200.8 □	FLASHPOINT □	% MOISTURE □	HEXAVALENT CHROMIUM □	PECHLORATE □
C-13 West		3/9/20	0907	S	1					X		X	X	X																				
C-14A			0909																															
C-14B			0915																															
C-14C			0919																															
C-15A			1335																															
C-15B			1337																															
C-15C			1340																															
C-15D			1341																															
C-15E			1344																															
C-15 West			1347																															
C-16A			1351																															
C-16B			1352																															
C-16C			1354																															
C-16 East			1356																															
13-S.E.B			1416																															
TOTAL	15																																	

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	TURN AROUND TIME NORMAL ☐ 1 DAY ☒ Rush! 2 DAY ☐ OTHER ☐	LABORATORY USE ONLY: RECEIVING TEMP: <u>13.0</u> THERM#: <u>T-NM007</u> CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED ☐ CARRIER BILL # _____ ☒ HAND DELIVERED
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)		
LABORATORY:				

CHAIN-OF-CUSTODY



507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/9/2020

PAGE 2 OF 2

PO#:

LAB WORK ORDER#: 055051

PROJECT LOCATION OR NAME: Empire Abo - Durango Midstream

LAI PROJECT #: 06-041-11

COLLECTOR: EC

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE:
Time zone/State:

MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESERVED

ANALYSES

BTX ☐ MTBE ☐
TPH 4181 ☐ TPH 1005 ☐ TPH 1008 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TBLP - METALS (RCRA) ☐ TCLP VOC ☐
TCLP - PEST ☐ HERB ☐ Semi-VOC ☐
TOTAL METALS (RCRA) ☐ OTHER LIST ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECTHOLATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

13-S.W. B

3/9/20

1417

S

1

X

X X X

TOTAL 1

RELINQUISHED BY: (Signature)

DATE/TIME

03-09-20/1517

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

NORMAL ☐

1 DAY ☒ Rush!

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 130

THERM#: T-NM-027

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED

☐ CARRIER BILL #

☒ HAND DELIVERED

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.09.2020 03.17.00 PM

Work Order #: 655051

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

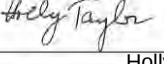
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.09.2020

Checklist reviewed by:


Holly Taylor

Date: 03.10.2020



Certificate of Analysis Summary 655219

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-Durango Midstream

Project Id: 06-0141-11
Contact: Mark Larson
Project Location: Durango Midstream

Date Received in Lab: Tue 03.10.2020 14:56
Report Date: 03.11.2020 14:53
Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655219-001	655219-002				
	Field Id:	13-E.Wall North	13-E.Wall South				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	03.10.2020 14:00	03.10.2020 14:02				
TPH By SW8015 Mod	Extracted:	03.10.2020 17:10	03.10.2020 17:10				
	Analyzed:	03.11.2020 03:12	03.11.2020 03:32				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0				
Diesel Range Organics (DRO)		389 50.2	94.6 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0				
Total TPH		389 50.2	94.6 50.0				

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

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

Holly Taylor
Project Manager



Analytical Report 655219

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo-Durango Midstream

06-0141-11

03.11.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.11.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **655219**

Empire Abo-Durango Midstream

Project Address: Durango Midstream

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655219. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655219 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 655219

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
13-E.Wall North	S	03.10.2020 14:00		655219-001
13-E.Wall South	S	03.10.2020 14:02		655219-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo-Durango Midstream

Project ID: 06-0141-11
Work Order Number(s): 655219

Report Date: 03.11.2020
Date Received: 03.10.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 655219

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **13-E.Wall North**

Matrix: Soil

Date Received: 03.10.2020 14:56

Lab Sample Id: 655219-001

Date Collected: 03.10.2020 14:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.10.2020 17:10

Basis: Wet Weight

Seq Number: 3119195

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.11.2020 03:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	389	50.2	mg/kg	03.11.2020 03:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.11.2020 03:12	U	1
Total TPH	PHC635	389	50.2	mg/kg	03.11.2020 03:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	03.11.2020 03:12	
o-Terphenyl	84-15-1	123	%	70-135	03.11.2020 03:12	



Certificate of Analytical Results 655219

Larson and Associates, Inc., Midland, TX

Empire Abo-Durango Midstream

Sample Id: **13-E.Wall South**

Matrix: Soil

Date Received: 03.10.2020 14:56

Lab Sample Id: 655219-002

Date Collected: 03.10.2020 14:02

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.10.2020 17:10

Basis: Wet Weight

Seq Number: 3119195

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.11.2020 03:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	94.6	50.0	mg/kg	03.11.2020 03:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.11.2020 03:32	U	1
Total TPH	PHC635	94.6	50.0	mg/kg	03.11.2020 03:32		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-135	03.11.2020 03:32		
o-Terphenyl	84-15-1	120	%	70-135	03.11.2020 03:32		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 655219

Larson and Associates, Inc. Empire Abo-Durango Midstream

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119195

MB Sample Id: 7698558-1-BLK

Matrix: Solid

LCS Sample Id: 7698558-1-BKS

Prep Method: SW8015P

Date Prep: 03.10.2020

LCSD Sample Id: 7698558-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	913	91	859	86	70-135	6	35	mg/kg	03.11.2020 01:10	
Diesel Range Organics (DRO)	<50.0	1000	903	90	854	85	70-135	6	35	mg/kg	03.11.2020 01:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		120		95		70-135	%	03.11.2020 01:10
o-Terphenyl	105		113		99		70-135	%	03.11.2020 01:10

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119195

Matrix: Solid

MB Sample Id: 7698558-1-BLK

Prep Method: SW8015P

Date Prep: 03.10.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.11.2020 00:49	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119195

Matrix: Soil

Parent Sample Id: 655230-001

MS Sample Id: 655230-001 S

Prep Method: SW8015P

Date Prep: 03.10.2020

MSD Sample Id: 655230-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1070	107	1040	104	70-135	3	35	mg/kg	03.11.2020 02:11	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	981	98	70-135	6	35	mg/kg	03.11.2020 02:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		121		70-135	%	03.11.2020 02:11
o-Terphenyl	125		119		70-135	%	03.11.2020 02:11

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.10.2020 02:56.00 PM

Work Order #: 655219

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

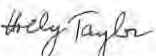
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.10.2020

Checklist reviewed by:


Holly Taylor

Date: 03.11.2020



Certificate of Analysis Summary 655554

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.12.2020 16:16

Report Date: 03.17.2020 17:05

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	655554-001	655554-002	655554-003	655554-004	655554-005	655554-006
	<i>Field Id:</i>	S-4 (2')	S-4 (3')	S-4 (4')	S-5 (2')	S-5 (3')	S-5 (4')
	<i>Depth:</i>	2- ft	3- ft	4- ft	2- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.11.2020 14:36	03.11.2020 14:54	03.11.2020 14:55	03.11.2020 15:14	03.11.2020 15:15	03.11.2020 15:16
TPH By SW8015 Mod	<i>Extracted:</i>	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00
	<i>Analyzed:</i>	03.12.2020 23:51	03.12.2020 23:30	03.13.2020 00:31	03.13.2020 00:11	03.12.2020 22:50	03.12.2020 23:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	1430 251	265 50.2	138 50.3	1210 251	135 49.8
Diesel Range Organics (DRO)		729 49.8	15500 251	2570 50.2	4760 50.3	21700 251	2890 49.8
Motor Oil Range Hydrocarbons (MRO)		125 49.8	1650 251	269 50.2	503 50.3	3380 251	472 49.8
Total TPH		854 49.8	18600 251	3100 50.2	5400 50.3	26300 251	3500 49.8

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Holly Taylor
Project Manager



Certificate of Analysis Summary 655554

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.12.2020 16:16

Report Date: 03.17.2020 17:05

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655554-007	655554-008	655554-009	655554-010	655554-011	655554-012
	Field Id:	07-05 B (8')	07-05 SW N/S (4')	07-05 SW E/W (4')	07-02 SW (2')	07-02 B (4')	05-03B (2.5')
	Depth:	8- ft	4- ft	4- ft	2- ft	4- ft	2.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.12.2020 13:14	03.12.2020 13:15	03.12.2020 13:16	03.12.2020 13:24	03.12.2020 13:23	03.12.2020 14:14
Select Metals by SW-846 6010C SUB: T104704215-19-30	Extracted:	03.16.2020 11:40	03.16.2020 11:40	03.16.2020 11:40			
	Analyzed:	03.17.2020 12:45	03.17.2020 12:49	03.17.2020 12:53			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chromium		17.3 0.847	330 0.847	211 0.943			
Select Metals by SW-846 6010C SUB: T104704215-19-30	Extracted:				03.16.2020 11:40	03.16.2020 11:40	
	Analyzed:				03.17.2020 13:06	03.17.2020 13:10	
	Units/RL:				mg/kg RL	mg/kg RL	
Arsenic					<1.69 1.69	<1.85 1.85	
BTEX by EPA 8021B	Extracted:						03.12.2020 18:00
	Analyzed:						03.13.2020 00:44
	Units/RL:						mg/kg RL
Benzene							0.365 0.0833
Toluene							0.783 0.0833
Ethylbenzene							0.278 0.0833
m,p-Xylenes							0.335 0.167
o-Xylene							0.210 0.0833
Total Xylenes							0.545 0.0833
Total BTEX							1.97 0.0833
Chloride by EPA 300	Extracted:						03.12.2020 17:10
	Analyzed:						03.12.2020 18:03
	Units/RL:						mg/kg RL
Chloride							317 49.9

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Holly Taylor
Project Manager



Certificate of Analysis Summary 655554

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.12.2020 16:16

Report Date: 03.17.2020 17:05

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655554-007	655554-008	655554-009	655554-010	655554-011	655554-012
	Field Id:	07-05 B (8')	07-05 SW N/S (4')	07-05 SW E/W (4')	07-02 SW (2')	07-02 B (4')	05-03B (2.5')
	Depth:	8- ft	4- ft	4- ft	2- ft	4- ft	2.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.12.2020 13:14	03.12.2020 13:15	03.12.2020 13:16	03.12.2020 13:24	03.12.2020 13:23	03.12.2020 14:14
TPH By SW8015 Mod	Extracted:						03.12.2020 18:00
	Analyzed:						03.13.2020 00:31
	Units/RL:						mg/kg RL
	Gasoline Range Hydrocarbons (GRO)						114 50.0
	Diesel Range Organics (DRO)						1200 50.0
	Motor Oil Range Hydrocarbons (MRO)						240 50.0
	Total TPH						1550 50.0

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Holly Taylor
Project Manager



Certificate of Analysis Summary 655554

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.12.2020 16:16

Report Date: 03.17.2020 17:05

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655554-013	655554-014	655554-015	655554-016		
	Field Id:	05-03 SW	S-6 (2')	C-16D Bottom	C-13 W Wall (4')		
	Depth:		2- ft		4- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	03.12.2020 14:15	03.12.2020 14:22	03.12.2020 14:43	03.12.2020 15:22		
BTEX by EPA 8021B	Extracted:	03.12.2020 18:00					
	Analyzed:	03.13.2020 01:04					
	Units/RL:	mg/kg RL					
	Benzene	0.0243 0.0192					
	Toluene	0.594 0.0769					
	Ethylbenzene	3.92 0.0769					
	m,p-Xylenes	0.552 0.154					
	o-Xylene	0.576 0.0769					
	Total Xylenes	1.13 0.0769					
	Total BTEX	5.67 0.0192					
Chloride by EPA 300	Extracted:	03.12.2020 17:10					
	Analyzed:	03.12.2020 18:09					
	Units/RL:	mg/kg RL					
	Chloride	103 49.7					
TPH By SW8015 Mod	Extracted:	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00	03.12.2020 18:00		
	Analyzed:	03.13.2020 01:32	03.13.2020 00:11	03.12.2020 22:29	03.13.2020 01:12		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	431 50.3	<50.1 50.1	<50.3 50.3	<50.3 50.3		
	Diesel Range Organics (DRO)	3100 50.3	875 50.1	<50.3 50.3	3430 50.3		
	Motor Oil Range Hydrocarbons (MRO)	1710 50.3	197 50.1	<50.3 50.3	3530 50.3		
	Total TPH	5240 50.3	1070 50.1	<50.3 50.3	6960 50.3		

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Holly Taylor
Project Manager



Analytical Report 655554

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.17.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.17.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **655554**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655554. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655554 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-4 (2')	S	03.11.2020 14:36	2 ft	655554-001
S-4 (3')	S	03.11.2020 14:54	3 ft	655554-002
S-4 (4')	S	03.11.2020 14:55	4 ft	655554-003
S-5 (2')	S	03.11.2020 15:14	2 ft	655554-004
S-5 (3')	S	03.11.2020 15:15	3 ft	655554-005
S-5 (4')	S	03.11.2020 15:16	4 ft	655554-006
07-05 B (8')	S	03.12.2020 13:14	8 ft	655554-007
07-05 SW N/S (4')	S	03.12.2020 13:15	4 ft	655554-008
07-05 SW E/W (4')	S	03.12.2020 13:16	4 ft	655554-009
07-02 SW (2')	S	03.12.2020 13:24	2 ft	655554-010
07-02 B (4')	S	03.12.2020 13:23	4 ft	655554-011
05-03B (2.5')	S	03.12.2020 14:14	2.5 ft	655554-012
05-03 SW	S	03.12.2020 14:15		655554-013
S-6 (2')	S	03.12.2020 14:22	2 ft	655554-014
C-16D Bottom	S	03.12.2020 14:43		655554-015
C-13 W Wall (4')	S	03.12.2020 15:22	4 ft	655554-016



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 655554

Report Date: 03.17.2020
Date Received: 03.12.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119461 BTEX by EPA 8021B

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



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **S-4 (2')**
Lab Sample Id: 655554-001

Matrix: Soil
Date Collected: 03.11.2020 14:36

Date Received: 03.12.2020 16:16
Sample Depth: 2 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.12.2020 23:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	729	49.8	mg/kg	03.12.2020 23:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	125	49.8	mg/kg	03.12.2020 23:51		1
Total TPH	PHC635	854	49.8	mg/kg	03.12.2020 23:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	03.12.2020 23:51	
o-Terphenyl	84-15-1	113	%	70-135	03.12.2020 23:51	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **S-4 (3')**
Lab Sample Id: 655554-002

Matrix: Soil
Date Collected: 03.11.2020 14:54

Date Received: 03.12.2020 16:16
Sample Depth: 3 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1430	251	mg/kg	03.12.2020 23:30		5
Diesel Range Organics (DRO)	C10C28DRO	15500	251	mg/kg	03.12.2020 23:30		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1650	251	mg/kg	03.12.2020 23:30		5
Total TPH	PHC635	18600	251	mg/kg	03.12.2020 23:30		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.12.2020 23:30	
o-Terphenyl	84-15-1	118	%	70-135	03.12.2020 23:30	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **S-4 (4')**
Lab Sample Id: 655554-003

Matrix: Soil
Date Collected: 03.11.2020 14:55

Date Received: 03.12.2020 16:16
Sample Depth: 4 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	265	50.2	mg/kg	03.13.2020 00:31		1
Diesel Range Organics (DRO)	C10C28DRO	2570	50.2	mg/kg	03.13.2020 00:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	269	50.2	mg/kg	03.13.2020 00:31		1
Total TPH	PHC635	3100	50.2	mg/kg	03.13.2020 00:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.13.2020 00:31	
o-Terphenyl	84-15-1	116	%	70-135	03.13.2020 00:31	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: S-5 (2')
Lab Sample Id: 655554-004

Matrix: Soil
Date Collected: 03.11.2020 15:14

Date Received: 03.12.2020 16:16
Sample Depth: 2 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119530

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	138	50.3	mg/kg	03.13.2020 00:11		1
Diesel Range Organics (DRO)	C10C28DRO	4760	50.3	mg/kg	03.13.2020 00:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	503	50.3	mg/kg	03.13.2020 00:11		1
Total TPH	PHC635	5400	50.3	mg/kg	03.13.2020 00:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	03.13.2020 00:11	
o-Terphenyl	84-15-1	112	%	70-135	03.13.2020 00:11	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: S-5 (3')
Lab Sample Id: 655554-005

Matrix: Soil
Date Collected: 03.11.2020 15:15

Date Received: 03.12.2020 16:16
Sample Depth: 3 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119529

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1210	251	mg/kg	03.12.2020 22:50		5
Diesel Range Organics (DRO)	C10C28DRO	21700	251	mg/kg	03.12.2020 22:50		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	3380	251	mg/kg	03.12.2020 22:50		5
Total TPH	PHC635	26300	251	mg/kg	03.12.2020 22:50		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.12.2020 22:50	
o-Terphenyl	84-15-1	100	%	70-135	03.12.2020 22:50	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: S-5 (4')
Lab Sample Id: 655554-006

Matrix: Soil
Date Collected: 03.11.2020 15:16

Date Received: 03.12.2020 16:16
Sample Depth: 4 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119529

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	135	49.8	mg/kg	03.12.2020 23:51		1
Diesel Range Organics (DRO)	C10C28DRO	2890	49.8	mg/kg	03.12.2020 23:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	472	49.8	mg/kg	03.12.2020 23:51		1
Total TPH	PHC635	3500	49.8	mg/kg	03.12.2020 23:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	03.12.2020 23:51	
o-Terphenyl	84-15-1	125	%	70-135	03.12.2020 23:51	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **07-05 B (8')**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-007

Date Collected: 03.12.2020 13:14

Sample Depth: 8 ft

Analytical Method: Select Metals by SW-846 6010C

Prep Method: SW3051

Tech: PJB

% Moisture:

Analyst: DEP

Date Prep: 03.16.2020 11:40

Basis: Wet Weight

Seq Number: 3119955

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	17.3	0.847	mg/kg	03.17.2020 12:45		1



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 07-05 SW N/S (4')

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-008

Date Collected: 03.12.2020 13:15

Sample Depth: 4 ft

Analytical Method: Select Metals by SW-846 6010C

Prep Method: SW3051

Tech: PJB

% Moisture:

Analyst: DEP

Date Prep: 03.16.2020 11:40

Basis: Wet Weight

Seq Number: 3119955

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	330	0.847	mg/kg	03.17.2020 12:49		1



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 07-05 SW E/W (4')

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-009

Date Collected: 03.12.2020 13:16

Sample Depth: 4 ft

Analytical Method: Select Metals by SW-846 6010C

Prep Method: SW3051

Tech: PJB

% Moisture:

Analyst: DEP

Date Prep: 03.16.2020 11:40

Basis: Wet Weight

Seq Number: 3119955

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	211	0.943	mg/kg	03.17.2020 12:53		1



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 07-02 SW (2')

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-010

Date Collected: 03.12.2020 13:24

Sample Depth: 2 ft

Analytical Method: Select Metals by SW-846 6010C

Prep Method: SW3051

Tech: PJB

% Moisture:

Analyst: DEP

Date Prep: 03.16.2020 11:40

Basis: Wet Weight

Seq Number: 3119955

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<1.69	1.69	mg/kg	03.17.2020 13:06	U	1



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **07-02 B (4')**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-011

Date Collected: 03.12.2020 13:23

Sample Depth: 4 ft

Analytical Method: Select Metals by SW-846 6010C

Prep Method: SW3051

Tech: PJB

% Moisture:

Analyst: DEP

Date Prep: 03.16.2020 11:40

Basis: Wet Weight

Seq Number: 3119955

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<1.85	1.85	mg/kg	03.17.2020 13:10	U	1



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 05-03B (2.5')

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-012

Date Collected: 03.12.2020 14:14

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.2020 17:10

Basis: Wet Weight

Seq Number: 3119469

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	317	49.9	mg/kg	03.12.2020 18:03		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119529

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	114	50.0	mg/kg	03.13.2020 00:31		1
Diesel Range Organics (DRO)	C10C28DRO	1200	50.0	mg/kg	03.13.2020 00:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	240	50.0	mg/kg	03.13.2020 00:31		1
Total TPH	PHC635	1550	50.0	mg/kg	03.13.2020 00:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.13.2020 00:31	
o-Terphenyl	84-15-1	117	%	70-135	03.13.2020 00:31	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 05-03B (2.5')

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-012

Date Collected: 03.12.2020 14:14

Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.365	0.0833	mg/kg	03.13.2020 00:44		1
Toluene	108-88-3	0.783	0.0833	mg/kg	03.13.2020 00:44		1
Ethylbenzene	100-41-4	0.278	0.0833	mg/kg	03.13.2020 00:44		1
m,p-Xylenes	179601-23-1	0.335	0.167	mg/kg	03.13.2020 00:44		1
o-Xylene	95-47-6	0.210	0.0833	mg/kg	03.13.2020 00:44		1
Total Xylenes	1330-20-7	0.545	0.0833	mg/kg	03.13.2020 00:44		1
Total BTEX		1.97	0.0833	mg/kg	03.13.2020 00:44		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.13.2020 00:44		
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.13.2020 00:44		



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 05-03 SW

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-013

Date Collected: 03.12.2020 14:15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.2020 17:10

Basis: Wet Weight

Seq Number: 3119469

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	103	49.7	mg/kg	03.12.2020 18:09		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119529

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	431	50.3	mg/kg	03.13.2020 01:32		1
Diesel Range Organics (DRO)	C10C28DRO	3100	50.3	mg/kg	03.13.2020 01:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1710	50.3	mg/kg	03.13.2020 01:32		1
Total TPH	PHC635	5240	50.3	mg/kg	03.13.2020 01:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	03.13.2020 01:32	
o-Terphenyl	84-15-1	120	%	70-135	03.13.2020 01:32	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **05-03 SW**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-013

Date Collected: 03.12.2020 14:15

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0243	0.0192	mg/kg	03.13.2020 01:04		1
Toluene	108-88-3	0.594	0.0769	mg/kg	03.13.2020 01:04		1
Ethylbenzene	100-41-4	3.92	0.0769	mg/kg	03.13.2020 01:04		1
m,p-Xylenes	179601-23-1	0.552	0.154	mg/kg	03.13.2020 01:04		1
o-Xylene	95-47-6	0.576	0.0769	mg/kg	03.13.2020 01:04		1
Total Xylenes	1330-20-7	1.13	0.0769	mg/kg	03.13.2020 01:04		1
Total BTEX		5.67	0.0192	mg/kg	03.13.2020 01:04		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.13.2020 01:04		
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.13.2020 01:04		



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **S-6 (2')**
Lab Sample Id: 655554-014

Matrix: Soil
Date Collected: 03.12.2020 14:22

Date Received: 03.12.2020 16:16
Sample Depth: 2 ft

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119529

Prep Method: SW8015P

% Moisture:

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.13.2020 00:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	875	50.1	mg/kg	03.13.2020 00:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	197	50.1	mg/kg	03.13.2020 00:11		1
Total TPH	PHC635	1070	50.1	mg/kg	03.13.2020 00:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	03.13.2020 00:11	
o-Terphenyl	84-15-1	131	%	70-135	03.13.2020 00:11	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-16D Bottom**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-015

Date Collected: 03.12.2020 14:43

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119529

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.12.2020 22:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.12.2020 22:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.12.2020 22:29	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.12.2020 22:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	03.12.2020 22:29	
o-Terphenyl	84-15-1	118	%	70-135	03.12.2020 22:29	



Certificate of Analytical Results 655554

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **C-13 W Wall (4')**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655554-016

Date Collected: 03.12.2020 15:22

Sample Depth: 4 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.12.2020 18:00

Basis: Wet Weight

Seq Number: 3119529

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.13.2020 01:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	3430	50.3	mg/kg	03.13.2020 01:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	3530	50.3	mg/kg	03.13.2020 01:12		1
Total TPH	PHC635	6960	50.3	mg/kg	03.13.2020 01:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	03.13.2020 01:12	
o-Terphenyl	84-15-1	117	%	70-135	03.13.2020 01:12	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 655554

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3119469

MB Sample Id: 7698707-1-BLK

Matrix: Solid

LCS Sample Id: 7698707-1-BKS

Prep Method: E300P

Date Prep: 03.12.2020

LCSD Sample Id: 7698707-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	259	104	261	104	90-110	1	20	mg/kg	03.12.2020 13:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3119469

Parent Sample Id: 655422-001

Matrix: Soil

MS Sample Id: 655422-001 S

Prep Method: E300P

Date Prep: 03.12.2020

MSD Sample Id: 655422-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1120	199	1310	95	1340	111	90-110	2	20	mg/kg	03.12.2020 14:16	X

Analytical Method: Chloride by EPA 300

Seq Number: 3119469

Parent Sample Id: 655501-001

Matrix: Soil

MS Sample Id: 655501-001 S

Prep Method: E300P

Date Prep: 03.12.2020

MSD Sample Id: 655501-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	277	199	482	103	481	103	90-110	0	20	mg/kg	03.12.2020 17:12	

Analytical Method: Select Metals by SW-846 6010C

Seq Number: 3119955

MB Sample Id: 7699011-1-BLK

Matrix: Solid

LCS Sample Id: 7699011-1-BKS

Prep Method: SW3051

Date Prep: 03.16.2020

LCSD Sample Id: 7699011-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<2.00	100	90.4	90	91.3	91	75-125	1	20	mg/kg	03.17.2020 11:38	
Chromium	<1.00	100	93.8	94	94.4	94	75-125	1	20	mg/kg	03.17.2020 11:38	

Analytical Method: Select Metals by SW-846 6010C

Seq Number: 3119955

Parent Sample Id: 655650-001

Matrix: Soil

MS Sample Id: 655650-001 S

Prep Method: SW3051

Date Prep: 03.16.2020

MSD Sample Id: 655650-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	9.25	96.2	106	101	108	101	75-125	2	20	mg/kg	03.17.2020 11:50	
Chromium	73.9	96.2	189	120	192	121	75-125	2	20	mg/kg	03.17.2020 11:50	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119529

MB Sample Id: 7698799-1-BLK

Matrix: Solid

LCS Sample Id: 7698799-1-BKS

Prep Method: SW8015P

Date Prep: 03.12.2020

LCSD Sample Id: 7698799-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	937	94	946	95	70-135	1	35	mg/kg	03.12.2020 20:48	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1040	104	70-135	2	35	mg/kg	03.12.2020 20:48	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	87		127		109		70-135			%	03.12.2020 20:48	
o-Terphenyl	92		109		110		70-135			%	03.12.2020 20:48	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119530

MB Sample Id: 7698800-1-BLK

Matrix: Solid

LCS Sample Id: 7698800-1-BKS

Prep Method: SW8015P

Date Prep: 03.12.2020

LCSD Sample Id: 7698800-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	974	97	942	94	70-135	3	35	mg/kg	03.12.2020 20:48	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1040	104	70-135	5	35	mg/kg	03.12.2020 20:48	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane	99		116		112		70-135			%	03.12.2020 20:48	
o-Terphenyl	106		116		108		70-135			%	03.12.2020 20:48	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119529

Matrix: Solid
MB Sample Id: 7698799-1-BLK

Prep Method: SW8015P

Date Prep: 03.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.12.2020 20:27	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119530

Matrix: Solid
MB Sample Id: 7698800-1-BLK

Prep Method: SW8015P

Date Prep: 03.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.12.2020 20:27	

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



QC Summary 655554

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119529

Parent Sample Id: 655540-008

Matrix: Soil

MS Sample Id: 655540-008 S

Prep Method: SW8015P

Date Prep: 03.12.2020

MSD Sample Id: 655540-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	1120	113	965	97	70-135	15	35	mg/kg	03.12.2020 21:49	
Diesel Range Organics (DRO)	<49.8	995	1270	128	1080	108	70-135	16	35	mg/kg	03.12.2020 21:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		114		70-135	%	03.12.2020 21:49
o-Terphenyl	132		116		70-135	%	03.12.2020 21:49

Analytical Method: TPH By SW8015 Mod

Seq Number: 3119530

Parent Sample Id: 655540-004

Matrix: Soil

MS Sample Id: 655540-004 S

Prep Method: SW8015P

Date Prep: 03.12.2020

MSD Sample Id: 655540-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	912	92	981	98	70-135	7	35	mg/kg	03.12.2020 21:49	
Diesel Range Organics (DRO)	<49.8	995	1030	104	1110	111	70-135	7	35	mg/kg	03.12.2020 21:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		120		70-135	%	03.12.2020 21:49
o-Terphenyl	114		121		70-135	%	03.12.2020 21:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119461

MB Sample Id: 7698776-1-BLK

Matrix: Solid

LCS Sample Id: 7698776-1-BKS

Prep Method: SW5030B

Date Prep: 03.12.2020

LCSD Sample Id: 7698776-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.113	113	70-130	5	35	mg/kg	03.12.2020 21:20	
Toluene	<0.00200	0.100	0.103	103	0.109	109	70-130	6	35	mg/kg	03.12.2020 21:20	
Ethylbenzene	<0.00200	0.100	0.0982	98	0.105	105	71-129	7	35	mg/kg	03.12.2020 21:20	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.216	108	70-135	7	35	mg/kg	03.12.2020 21:20	
o-Xylene	<0.00200	0.100	0.102	102	0.109	109	71-133	7	35	mg/kg	03.12.2020 21:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		108		70-130	%	03.12.2020 21:20
4-Bromofluorobenzene	96		94		97		70-130	%	03.12.2020 21:20

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 655554

Larson and Associates, Inc. Empire Abo

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119461

Parent Sample Id: 655540-004

Matrix: Soil

MS Sample Id: 655540-004 S

Prep Method: SW5030B

Date Prep: 03.12.2020

MSD Sample Id: 655540-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.119	119	0.104	104	70-130	13	35	mg/kg	03.12.2020 22:01	
Toluene	<0.00200	0.0998	0.112	112	0.100	100	70-130	11	35	mg/kg	03.12.2020 22:01	
Ethylbenzene	<0.00200	0.0998	0.106	106	0.0951	95	71-129	11	35	mg/kg	03.12.2020 22:01	
m,p-Xylenes	<0.00399	0.200	0.216	108	0.195	98	70-135	10	35	mg/kg	03.12.2020 22:01	
o-Xylene	<0.00200	0.0998	0.110	110	0.0990	99	71-133	11	35	mg/kg	03.12.2020 22:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		107		70-130	%	03.12.2020 22:01
4-Bromofluorobenzene	94		92		70-130	%	03.12.2020 22:01

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/12/2020 PAGE 1 OF 2
PO#: _____ LAB WORK ORDER#: 655554
PROJECT LOCATION OR NAME: Empire A60
LAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

[illegible]

~~RELINQUISHED BY: (Signature)~~

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

NORMAL

1 DAY ☒ Rush:

2 DAY ☐OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 2.0 THERM#: TNM007

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED

CARRIER BILL #

☐ HAND DELIVERED

Final 1.000

Page 32 of 36

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/12/2020 PAGE 2 OF 2

PO#: _____ LAB WORK ORDER#: 655554

PROJECT LOCATION OR NAME: Empire Abo

LAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR
P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE:
Time zone/State:
MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESSED

ANALYSES

BTX ☐ MTBE ☐
TPH 418-1 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☒
DIESEL - MOD 8015 ☒
OIL - MOD 8015 ☒
VOC 8260 ☐
SVOC 8270 ☐
8081 PESTICIDES ☐
8082 PESTICIDES ☐
PAH 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
TBLP - METALS (RCRA) ☐ 8151 HERBICIDES ☐
TCLP - PEST ☐ HERB ☐ TCLP VOC ☐
TOTAL METALS (RCRA) ☐ Semi-VOC ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ OTHER LIST ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECTHLORATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

C-13 W Wall (4)

3/12/20 1522

S

1

X

X X X

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME

03-12-20/1416

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME

NORMAL ☐
1 DAY ☒ Run!
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 2.0 THERM#: TNM007
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Inter-Office Shipment

IOS Number : 60204

Date/Time: 03.13.2020

Created by: Elizabeth McClellan

Please send report to: Holly Taylor

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Houston**

Air Bill No.: 770018993591

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
655554-007	S	07-05 B (8)	03.12.2020 13:14	SW6010C_Select	Select Metals by SW-846 6010C	03.17.2020	09.08.2020	HTA	AS CR	
655554-008	S	07-05 SW N/S (4')	03.12.2020 13:15	SW6010C_Select	Select Metals by SW-846 6010C	03.17.2020	09.08.2020	HTA	AS CR	
655554-009	S	07-05 SW E/W (4')	03.12.2020 13:16	SW6010C_Select	Select Metals by SW-846 6010C	03.17.2020	09.08.2020	HTA	AS CR	
655554-010	S	07-02 SW (2')	03.12.2020 13:24	SW6010C_Select	Select Metals by SW-846 6010C	03.17.2020	09.08.2020	HTA	AS CR	
655554-011	S	07-02 B (4')	03.12.2020 13:23	SW6010C_Select	Select Metals by SW-846 6010C	03.17.2020	09.08.2020	HTA	AS CR	

Inter Office Shipment or Sample Comments:

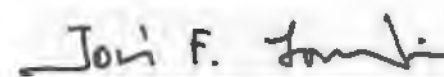
Relinquished By:



Elizabeth McClellan

Date Relinquished: 03.13.2020

Received By:



Jose Londono

Date Received: 03.14.2020

Cooler Temperature: 5.3



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 60204

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Elizabeth McClellan

Date Sent: 03.13.2020 10.14 AM

Received By: Jose Londono

Date Received: 03.14.2020 09.35 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	5.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

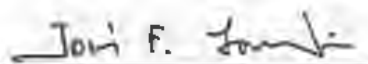
NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:


Jose Londono

Date: 03.14.2020

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.12.2020 04.16.00 PM

Work Order #: 655554

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	SW6010 subbed to Stafford
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.12.2020

Checklist reviewed by:


Holly Taylor

Date: 03.13.2020



Certificate of Analysis Summary 655584

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.12.2020 16:16

Report Date: 03.19.2020 14:20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	655584-001	655584-002				
	Field Id:	07-05 Soil pile	07-02 Soil Pile				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	03.12.2020 13:29	03.12.2020 13:27				
TCLP Metals per ICP by SW846 6010B SUB: T104704215-19-30	Extracted:	03.18.2020 08:35					
	Analyzed:	03.18.2020 16:41					
	Units/RL:	mg/L RL					
Chromium		<0.0500 0.0500					
TCLP Metals per ICP by SW846 6010B SUB: T104704215-19-30	Extracted:		03.18.2020 08:35				
	Analyzed:		03.18.2020 16:45				
	Units/RL:		mg/L RL				
Arsenic			<0.0500 0.0500				

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

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

Holly Taylor
Project Manager



Analytical Report 655584

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.19.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.19.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **655584**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655584. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655584 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 655584

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
07-05 Soil pile	S	03.12.2020 13:29		655584-001
07-02 Soil Pile	S	03.12.2020 13:27		655584-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 655584

Report Date: 03.19.2020
Date Received: 03.12.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 655584

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **07-05 Soil pile**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655584-001

Date Collected: 03.12.2020 13:29

Analytical Method: TCLP Metals per ICP by SW846 6010B

Prep Method: SW3010A

Tech: MLI

% Moisture:

Analyst: DEP

Date Prep: 03.18.2020 08:35

Seq Number: 3120133

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chromium	7440-47-3	<0.0500	0.0500	mg/L	03.18.2020 16:41	U	1



Certificate of Analytical Results 655584

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **07-02 Soil Pile**

Matrix: Soil

Date Received: 03.12.2020 16:16

Lab Sample Id: 655584-002

Date Collected: 03.12.2020 13:27

Analytical Method: TCLP Metals per ICP by SW846 6010B

Prep Method: SW3010A

Tech: MLI

% Moisture:

Analyst: DEP

Date Prep: 03.18.2020 08:35

Seq Number: 3120133

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	<0.0500	0.0500	mg/L	03.18.2020 16:45	U	1

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: TCLP Metals per ICP by SW846 6010B

Seq Number: 3120133

Matrix: Water

Prep Method: SW3010A

MB Sample Id: 7699160-1-BLK

LCS Sample Id: 7699160-1-BKS

Date Prep: 03.18.2020

LCSD Sample Id: 7699160-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<0.0100	1.00	0.962	96	0.972	97	75-125	1	20	mg/L	03.18.2020 15:05	
Chromium	<0.0100	1.00	1.02	102	1.01	101	75-125	1	20	mg/L	03.18.2020 15:05	

Analytical Method: TCLP Metals per ICP by SW846 6010B

Seq Number: 3120133

Matrix: Water

Prep Method: SW3010A

Parent Sample Id: 655689-001

MS Sample Id: 655689-001 S

Date Prep: 03.18.2020

MSD Sample Id: 655689-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	<0.0100	1.00	0.916	92	0.894	89	75-125	2	20	mg/L	03.18.2020 15:17	
Chromium	<0.0100	1.00	0.944	94	0.937	94	75-125	1	20	mg/L	03.18.2020 15:17	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/12/2020 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: 055584
PROJECT LOCATION OR NAME: Empire A60
LAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

[illegible]

Inter-Office Shipment

IOS Number : **60211**

Date/Time: 03.13.2020

Created by: Elizabeth McClellan

Please send report to: Holly Taylor

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Houston**

Air Bill No.:

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
655584-001	S	07-05 Soil pile	03.12.2020 13:29	SW6010C_Select	Select Metals by SW-846 6010C	03.18.2020	09.08.2020	HTA	AS CR	
655584-002	S	07-02 Soil Pile	03.12.2020 13:27	SW6010C_Select	Select Metals by SW-846 6010C	03.18.2020	09.08.2020	HTA	AS CR	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 03.13.2020

Received By: _____

Date Received: _____

Cooler Temperature: _____

Inter-Office Shipment

IOS Number : **60239**

Date/Time: 03.13.2020

Created by: Elizabeth McClellan

Please send report to: Holly Taylor

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Houston**

Air Bill No.: 770018993591

E-Mail: holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
655584-001	W	07-05 Soil pile	03.12.2020 13:29	SW6010BTCLP	TCLP Metals per ICP by SW846 6010B	03.18.2020	09.08.2020	HTA	AS CR	
655584-002	W	07-02 Soil Pile	03.12.2020 13:27	SW6010BTCLP	TCLP Metals per ICP by SW846 6010B	03.18.2020	09.08.2020	HTA	AS CR	

Inter Office Shipment or Sample Comments:

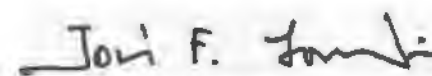
Relinquished By:



Elizabeth McClellan

Date Relinquished: 03.13.2020

Received By:



Jose Londono

Date Received: 03.14.2020

Cooler Temperature: 5.3



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 60239

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Elizabeth McClellan

Date Sent: 03.13.2020 03.27 PM

Received By: Jose Londono

Date Received: 03.14.2020 09.35 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	5.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

José F. Londono
Jose Londono

Date: 03.14.2020

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.12.2020 04.16.00 PM

Work Order #: 655584

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

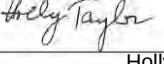
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.13.2020

Checklist reviewed by:


Holly Taylor

Date: 03.19.2020



Certificate of Analysis Summary 656141

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Wed 03.18.2020 15:30

Report Date: 03.19.2020 13:20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656141-001	656141-002	656141-003	656141-004	656141-005	656141-006
	Field Id:	C-13 West Wall, 4'	03-02 Bottom, 2.5'	03-02 Sidewall, 0-2.5'	03-East Sidewall, 0-8'	03-South Sidewall, 0-8'	03-West Sidewall, 0-8'
	Depth:	4- ft	2.5- ft	0-2.5 ft	0-8 ft	0-8 ft	0-8 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.18.2020 07:50	03.18.2020 08:22	03.18.2020 08:22	03.18.2020 13:55	03.18.2020 13:54	03.18.2020 13:56
BTEX by EPA 8021B	Extracted:		03.18.2020 17:24	03.18.2020 17:24	03.18.2020 17:24	03.18.2020 17:24	03.18.2020 17:24
	Analyzed:		03.19.2020 02:40	03.19.2020 03:01	03.19.2020 09:08	03.19.2020 04:43	03.19.2020 05:03
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene			<0.00200 0.00200	<0.00200 0.00200	<0.0556 0.0556	<0.101 0.101	1.22 0.397
Toluene			<0.00200 0.00200	<0.00200 0.00200	<0.0556 0.0556	0.541 0.404	5.36 0.397
Ethylbenzene			0.00486 0.00200	<0.00200 0.00200	0.0778 0.0556	2.30 0.404	13.0 0.397
m,p-Xylenes			0.00611 0.00400	<0.00401 0.00401	0.176 0.111	2.70 0.808	17.5 0.794
o-Xylene			0.00478 0.00200	<0.00200 0.00200	0.0739 0.0556	1.28 0.404	8.71 0.397
Total Xylenes			0.0109 0.00200	<0.00200 0.00200	0.250 0.0556	3.98 0.404	26.2 0.397
Total BTEX			0.0158 0.00200	<0.00200 0.00200	0.328 0.0556	6.82 0.101	45.8 0.397
Chloride by EPA 300	Extracted:		03.18.2020 16:00	03.18.2020 16:00	03.18.2020 16:00	03.18.2020 16:00	03.18.2020 18:11
	Analyzed:		03.18.2020 18:41	03.18.2020 18:46	03.18.2020 18:52	03.18.2020 18:58	03.18.2020 19:32
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride			86.2 50.1	459 50.0	223 49.9	341 49.6	377 X 50.0
TPH By SW8015 Mod	Extracted:	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30
	Analyzed:	03.18.2020 21:11	03.18.2020 21:32	03.19.2020 10:21	03.18.2020 22:12	03.19.2020 10:41	03.18.2020 21:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1	<49.9 49.9	<50.1 50.1	169 50.1	3370 249
Diesel Range Organics (DRO)		590 50.1	89.5 50.1	150 49.9	109 50.1	1230 50.1	3540 249
Motor Oil Range Hydrocarbons (MRO)		148 50.1	<50.1 50.1	<49.9 49.9	<50.1 50.1	453 50.1	902 249
Total TPH		738 50.1	89.5 50.1	150 49.9	109 50.1	1850 50.1	7810 249

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

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 656141

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Wed 03.18.2020 15:30

Report Date: 03.19.2020 13:20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656141-007	656141-008	656141-009	656141-010		
	Field Id:	03-Bottom NE, 8'	03-Bottom NW, 8'	03-Bottom SE, 8'	03-Bottom SW, 8'		
	Depth:	8- ft	8- ft	8- ft	8- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	03.18.2020 13:57	03.18.2020 13:58	03.18.2020 13:59	03.18.2020 14:00		
BTEX by EPA 8021B	Extracted:	03.18.2020 17:24	03.18.2020 17:24	03.18.2020 17:24	03.18.2020 17:24		
	Analyzed:	03.19.2020 05:24	03.19.2020 09:28	03.19.2020 06:04	03.19.2020 09:49		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.101 0.101	<0.0833 0.0833	<0.100 0.100	<0.0556 0.0556		
Toluene		0.295 0.101	<0.0833 0.0833	0.184 0.100	0.0636 0.0556		
Ethylbenzene		2.53 0.404	0.437 0.0833	1.31 0.401	1.23 0.0556		
m,p-Xylenes		3.88 0.808	0.493 0.167	1.24 0.802	1.50 0.111		
o-Xylene		1.61 0.404	0.249 0.0833	0.784 0.401	1.18 0.0556		
Total Xylenes		5.49 0.404	0.742 0.0833	2.02 0.401	2.68 0.0556		
Total BTEX		8.32 0.101	1.18 0.0833	3.52 0.100	3.97 0.0556		
Chloride by EPA 300	Extracted:	03.18.2020 18:11	03.18.2020 18:11	03.18.2020 18:11	03.18.2020 18:11		
	Analyzed:	03.18.2020 19:51	03.18.2020 19:57	03.18.2020 20:03	03.18.2020 20:09		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		109 50.3	251 50.0	114 49.7	73.6 49.9		
TPH By SW8015 Mod	Extracted:	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30	03.18.2020 17:30		
	Analyzed:	03.18.2020 21:32	03.19.2020 10:21	03.19.2020 10:41	03.19.2020 11:01		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		320 249	63.4 50.1	332 50.2	78.2 50.0		
Diesel Range Organics (DRO)		1670 249	324 50.1	1360 50.2	513 50.0		
Motor Oil Range Hydrocarbons (MRO)		567 249	93.4 50.1	279 50.2	162 50.0		
Total TPH		2560 249	481 50.1	1970 50.2	753 50.0		

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

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

Holly Taylor
Project Manager



Analytical Report 656141

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.19.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.19.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656141**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656141. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656141 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
C-13 West Wall, 4'	S	03.18.2020 07:50	4 ft	656141-001
03-02 Bottom, 2.5'	S	03.18.2020 08:22	2.5 ft	656141-002
03-02 Sidewall, 0-2.5'	S	03.18.2020 08:22	0 - 2.5 ft	656141-003
03-East Sidewall, 0-8'	S	03.18.2020 13:55	0 - 8 ft	656141-004
03-South Sidewall, 0-8'	S	03.18.2020 13:54	0 - 8 ft	656141-005
03-West Sidewall, 0-8'	S	03.18.2020 13:56	0 - 8 ft	656141-006
03-Bottom NE, 8'	S	03.18.2020 13:57	8 ft	656141-007
03-Bottom NW, 8'	S	03.18.2020 13:58	8 ft	656141-008
03-Bottom SE, 8'	S	03.18.2020 13:59	8 ft	656141-009
03-Bottom SW, 8'	S	03.18.2020 14:00	8 ft	656141-010



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 656141

Report Date: 03.19.2020
Date Received: 03.18.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120173 BTEX by EPA 8021B

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

Batch: LBA-3120188 Chloride by EPA 300

MS/MSD fell below the method acceptance limit probably due to matrix interference in the sample.

LCS/LCSD met acceptance criteria, therefore data was accepted..



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: C-13 West Wall, 4'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-001

Date Collected: 03.18.2020 07:50

Sample Depth: 4 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.18.2020 21:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	590	50.1	mg/kg	03.18.2020 21:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	148	50.1	mg/kg	03.18.2020 21:11		1
Total TPH	PHC635	738	50.1	mg/kg	03.18.2020 21:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.18.2020 21:11	
o-Terphenyl	84-15-1	112	%	70-135	03.18.2020 21:11	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-02 Bottom, 2.5'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-002

Date Collected: 03.18.2020 08:22

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 16:00

Basis: Wet Weight

Seq Number: 3120183

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.2	50.1	mg/kg	03.18.2020 18:41		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.18.2020 21:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	89.5	50.1	mg/kg	03.18.2020 21:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.18.2020 21:32	U	1
Total TPH	PHC635	89.5	50.1	mg/kg	03.18.2020 21:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.18.2020 21:32	
o-Terphenyl	84-15-1	112	%	70-135	03.18.2020 21:32	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-02 Bottom, 2.5'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-002

Date Collected: 03.18.2020 08:22

Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.2020 02:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.2020 02:40	U	1
Ethylbenzene	100-41-4	0.00486	0.00200	mg/kg	03.19.2020 02:40		1
m,p-Xylenes	179601-23-1	0.00611	0.00400	mg/kg	03.19.2020 02:40		1
o-Xylene	95-47-6	0.00478	0.00200	mg/kg	03.19.2020 02:40		1
Total Xylenes	1330-20-7	0.0109	0.00200	mg/kg	03.19.2020 02:40		1
Total BTEX		0.0158	0.00200	mg/kg	03.19.2020 02:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.19.2020 02:40	
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.19.2020 02:40	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-02 Sidewall, 0-2.5'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-003

Date Collected: 03.18.2020 08:22

Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 16:00

Basis: Wet Weight

Seq Number: 3120183

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	459	50.0	mg/kg	03.18.2020 18:46		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.19.2020 10:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	150	49.9	mg/kg	03.19.2020 10:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.19.2020 10:21	U	1
Total TPH	PHC635	150	49.9	mg/kg	03.19.2020 10:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.19.2020 10:21	
o-Terphenyl	84-15-1	117	%	70-135	03.19.2020 10:21	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-02 Sidewall, 0-2.5'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-003

Date Collected: 03.18.2020 08:22

Sample Depth: 0 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.19.2020 03:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.2020 03:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.19.2020 03:01		
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.19.2020 03:01		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-East Sidewall, 0-8'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-004

Date Collected: 03.18.2020 13:55

Sample Depth: 0 - 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 16:00

Basis: Wet Weight

Seq Number: 3120183

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	49.9	mg/kg	03.18.2020 18:52		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.18.2020 22:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	109	50.1	mg/kg	03.18.2020 22:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.18.2020 22:12	U	1
Total TPH	PHC635	109	50.1	mg/kg	03.18.2020 22:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	03.18.2020 22:12	
o-Terphenyl	84-15-1	126	%	70-135	03.18.2020 22:12	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-East Sidewall, 0-8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-004

Date Collected: 03.18.2020 13:55

Sample Depth: 0 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0556	0.0556	mg/kg	03.19.2020 09:08	U	1
Toluene	108-88-3	<0.0556	0.0556	mg/kg	03.19.2020 09:08	U	1
Ethylbenzene	100-41-4	0.0778	0.0556	mg/kg	03.19.2020 09:08		1
m,p-Xylenes	179601-23-1	0.176	0.111	mg/kg	03.19.2020 09:08		1
o-Xylene	95-47-6	0.0739	0.0556	mg/kg	03.19.2020 09:08		1
Total Xylenes	1330-20-7	0.250	0.0556	mg/kg	03.19.2020 09:08		1
Total BTEX		0.328	0.0556	mg/kg	03.19.2020 09:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	03.19.2020 09:08	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.19.2020 09:08	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-South Sidewall, 0-8'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-005

Date Collected: 03.18.2020 13:54

Sample Depth: 0 - 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 16:00

Basis: Wet Weight

Seq Number: 3120183

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	341	49.6	mg/kg	03.18.2020 18:58		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120217

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	169	50.1	mg/kg	03.19.2020 10:41		1
Diesel Range Organics (DRO)	C10C28DRO	1230	50.1	mg/kg	03.19.2020 10:41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	453	50.1	mg/kg	03.19.2020 10:41		1
Total TPH	PHC635	1850	50.1	mg/kg	03.19.2020 10:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.19.2020 10:41	
o-Terphenyl	84-15-1	116	%	70-135	03.19.2020 10:41	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-South Sidewall, 0-8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-005

Date Collected: 03.18.2020 13:54

Sample Depth: 0 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.101	0.101	mg/kg	03.19.2020 04:43	U	200
Toluene	108-88-3	0.541	0.404	mg/kg	03.19.2020 04:43		200
Ethylbenzene	100-41-4	2.30	0.404	mg/kg	03.19.2020 04:43		200
m,p-Xylenes	179601-23-1	2.70	0.808	mg/kg	03.19.2020 04:43		200
o-Xylene	95-47-6	1.28	0.404	mg/kg	03.19.2020 04:43		200
Total Xylenes	1330-20-7	3.98	0.404	mg/kg	03.19.2020 04:43		200
Total BTEX		6.82	0.101	mg/kg	03.19.2020 04:43		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.19.2020 04:43		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.2020 04:43		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-West Sidewall, 0-8'

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-006

Date Collected: 03.18.2020 13:56

Sample Depth: 0 - 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 18:11

Basis: Wet Weight

Seq Number: 3120188

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	377	50.0	mg/kg	03.18.2020 19:32	X	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3370	249	mg/kg	03.18.2020 21:11		5
Diesel Range Organics (DRO)	C10C28DRO	3540	249	mg/kg	03.18.2020 21:11		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	902	249	mg/kg	03.18.2020 21:11		5
Total TPH	PHC635	7810	249	mg/kg	03.18.2020 21:11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	03.18.2020 21:11	
o-Terphenyl	84-15-1	110	%	70-135	03.18.2020 21:11	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-West Sidewall, 0-8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-006

Date Collected: 03.18.2020 13:56

Sample Depth: 0 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	1.22	0.397	mg/kg	03.19.2020 05:03		200
Toluene	108-88-3	5.36	0.397	mg/kg	03.19.2020 05:03		200
Ethylbenzene	100-41-4	13.0	0.397	mg/kg	03.19.2020 05:03		200
m,p-Xylenes	179601-23-1	17.5	0.794	mg/kg	03.19.2020 05:03		200
o-Xylene	95-47-6	8.71	0.397	mg/kg	03.19.2020 05:03		200
Total Xylenes	1330-20-7	26.2	0.397	mg/kg	03.19.2020 05:03		200
Total BTEX		45.8	0.397	mg/kg	03.19.2020 05:03		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	82	%	70-130	03.19.2020 05:03		
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.19.2020 05:03		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom NE, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-007

Date Collected: 03.18.2020 13:57

Sample Depth: 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 18:11

Basis: Wet Weight

Seq Number: 3120188

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	50.3	mg/kg	03.18.2020 19:51		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	320	249	mg/kg	03.18.2020 21:32		5
Diesel Range Organics (DRO)	C10C28DRO	1670	249	mg/kg	03.18.2020 21:32		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	567	249	mg/kg	03.18.2020 21:32		5
Total TPH	PHC635	2560	249	mg/kg	03.18.2020 21:32		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.18.2020 21:32	
o-Terphenyl	84-15-1	108	%	70-135	03.18.2020 21:32	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom NE, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-007

Date Collected: 03.18.2020 13:57

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.101	0.101	mg/kg	03.19.2020 05:24	U	200
Toluene	108-88-3	0.295	0.101	mg/kg	03.19.2020 05:24		200
Ethylbenzene	100-41-4	2.53	0.404	mg/kg	03.19.2020 05:24		200
m,p-Xylenes	179601-23-1	3.88	0.808	mg/kg	03.19.2020 05:24		200
o-Xylene	95-47-6	1.61	0.404	mg/kg	03.19.2020 05:24		200
Total Xylenes	1330-20-7	5.49	0.404	mg/kg	03.19.2020 05:24		200
Total BTEX		8.32	0.101	mg/kg	03.19.2020 05:24		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	03.19.2020 05:24		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.2020 05:24		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom NW, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-008

Date Collected: 03.18.2020 13:58

Sample Depth: 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 18:11

Basis: Wet Weight

Seq Number: 3120188

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	251	50.0	mg/kg	03.18.2020 19:57		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	63.4	50.1	mg/kg	03.19.2020 10:21		1
Diesel Range Organics (DRO)	C10C28DRO	324	50.1	mg/kg	03.19.2020 10:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	93.4	50.1	mg/kg	03.19.2020 10:21		1
Total TPH	PHC635	481	50.1	mg/kg	03.19.2020 10:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.19.2020 10:21	
o-Terphenyl	84-15-1	119	%	70-135	03.19.2020 10:21	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom NW, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-008

Date Collected: 03.18.2020 13:58

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0833	0.0833	mg/kg	03.19.2020 09:28	U	1
Toluene	108-88-3	<0.0833	0.0833	mg/kg	03.19.2020 09:28	U	1
Ethylbenzene	100-41-4	0.437	0.0833	mg/kg	03.19.2020 09:28		1
m,p-Xylenes	179601-23-1	0.493	0.167	mg/kg	03.19.2020 09:28		1
o-Xylene	95-47-6	0.249	0.0833	mg/kg	03.19.2020 09:28		1
Total Xylenes	1330-20-7	0.742	0.0833	mg/kg	03.19.2020 09:28		1
Total BTEX		1.18	0.0833	mg/kg	03.19.2020 09:28		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.19.2020 09:28		
4-Bromofluorobenzene	460-00-4	87	%	70-130	03.19.2020 09:28		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom SE, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-009

Date Collected: 03.18.2020 13:59

Sample Depth: 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 18:11

Basis: Wet Weight

Seq Number: 3120188

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	49.7	mg/kg	03.18.2020 20:03		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	332	50.2	mg/kg	03.19.2020 10:41		1
Diesel Range Organics (DRO)	C10C28DRO	1360	50.2	mg/kg	03.19.2020 10:41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	279	50.2	mg/kg	03.19.2020 10:41		1
Total TPH	PHC635	1970	50.2	mg/kg	03.19.2020 10:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.19.2020 10:41	
o-Terphenyl	84-15-1	116	%	70-135	03.19.2020 10:41	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom SE, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-009

Date Collected: 03.18.2020 13:59

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.100	0.100	mg/kg	03.19.2020 06:04	U	200
Toluene	108-88-3	0.184	0.100	mg/kg	03.19.2020 06:04		200
Ethylbenzene	100-41-4	1.31	0.401	mg/kg	03.19.2020 06:04		200
m,p-Xylenes	179601-23-1	1.24	0.802	mg/kg	03.19.2020 06:04		200
o-Xylene	95-47-6	0.784	0.401	mg/kg	03.19.2020 06:04		200
Total Xylenes	1330-20-7	2.02	0.401	mg/kg	03.19.2020 06:04		200
Total BTEX		3.52	0.100	mg/kg	03.19.2020 06:04		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.19.2020 06:04		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.2020 06:04		



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom SW, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-010

Date Collected: 03.18.2020 14:00

Sample Depth: 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 18:11

Basis: Wet Weight

Seq Number: 3120188

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.6	49.9	mg/kg	03.18.2020 20:09		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.18.2020 17:30

Basis: Wet Weight

Seq Number: 3120220

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	78.2	50.0	mg/kg	03.19.2020 11:01		1
Diesel Range Organics (DRO)	C10C28DRO	513	50.0	mg/kg	03.19.2020 11:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	162	50.0	mg/kg	03.19.2020 11:01		1
Total TPH	PHC635	753	50.0	mg/kg	03.19.2020 11:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.19.2020 11:01	
o-Terphenyl	84-15-1	111	%	70-135	03.19.2020 11:01	



Certificate of Analytical Results 656141

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-Bottom SW, 8'**

Matrix: Soil

Date Received: 03.18.2020 15:30

Lab Sample Id: 656141-010

Date Collected: 03.18.2020 14:00

Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.18.2020 17:24

Basis: Wet Weight

Seq Number: 3120173

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0556	0.0556	mg/kg	03.19.2020 09:49	U	1
Toluene	108-88-3	0.0636	0.0556	mg/kg	03.19.2020 09:49		1
Ethylbenzene	100-41-4	1.23	0.0556	mg/kg	03.19.2020 09:49		1
m,p-Xylenes	179601-23-1	1.50	0.111	mg/kg	03.19.2020 09:49		1
o-Xylene	95-47-6	1.18	0.0556	mg/kg	03.19.2020 09:49		1
Total Xylenes	1330-20-7	2.68	0.0556	mg/kg	03.19.2020 09:49		1
Total BTEX		3.97	0.0556	mg/kg	03.19.2020 09:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.19.2020 09:49	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.2020 09:49	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 656141

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3120183

MB Sample Id: 7699236-1-BLK

Matrix: Solid

LCS Sample Id: 7699236-1-BKS

Prep Method: E300P

Date Prep: 03.18.2020

LCSD Sample Id: 7699236-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	260	104	90-110	0	20	mg/kg	03.18.2020 16:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3120188

MB Sample Id: 7699237-1-BLK

Matrix: Solid

LCS Sample Id: 7699237-1-BKS

Prep Method: E300P

Date Prep: 03.18.2020

LCSD Sample Id: 7699237-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	259	104	260	104	90-110	0	20	mg/kg	03.18.2020 19:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3120183

Parent Sample Id: 656115-001

Matrix: Soil

MS Sample Id: 656115-001 S

Prep Method: E300P

Date Prep: 03.18.2020

MSD Sample Id: 656115-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	224	200	432	104	434	106	90-110	0	20	mg/kg	03.18.2020 16:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3120183

Parent Sample Id: 656115-011

Matrix: Soil

MS Sample Id: 656115-011 S

Prep Method: E300P

Date Prep: 03.18.2020

MSD Sample Id: 656115-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.1	199	244	105	245	105	90-110	0	20	mg/kg	03.18.2020 17:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3120188

Parent Sample Id: 656141-006

Matrix: Soil

MS Sample Id: 656141-006 S

Prep Method: E300P

Date Prep: 03.18.2020

MSD Sample Id: 656141-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	377	251	595	87	589	84	90-110	1	20	mg/kg	03.19.2020 10:50	X

Analytical Method: Chloride by EPA 300

Seq Number: 3120188

Parent Sample Id: 656161-005

Matrix: Soil

MS Sample Id: 656161-005 S

Prep Method: E300P

Date Prep: 03.18.2020

MSD Sample Id: 656161-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.07	200	212	101	215	103	90-110	1	20	mg/kg	03.18.2020 20:59	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656141

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120217

MB Sample Id: 7699257-1-BLK

Matrix: Solid

LCS Sample Id: 7699257-1-BKS

Prep Method: SW8015P

Date Prep: 03.18.2020

LCSD Sample Id: 7699257-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	829	83	761	76	70-135	9	35	mg/kg	03.18.2020 14:23	
Diesel Range Organics (DRO)	<50.0	1000	905	91	835	84	70-135	8	35	mg/kg	03.18.2020 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		111		102		70-135	%	03.18.2020 14:23
o-Terphenyl	98		98		92		70-135	%	03.18.2020 14:23

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120220

MB Sample Id: 7699259-1-BLK

Matrix: Solid

LCS Sample Id: 7699259-1-BKS

Prep Method: SW8015P

Date Prep: 03.18.2020

LCSD Sample Id: 7699259-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1010	101	961	96	70-135	5	35	mg/kg	03.18.2020 14:23	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1030	103	70-135	5	35	mg/kg	03.18.2020 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		120		116		70-135	%	03.18.2020 14:23
o-Terphenyl	107		112		107		70-135	%	03.18.2020 14:23

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120217

Matrix: Solid

MB Sample Id: 7699257-1-BLK

Prep Method: SW8015P

Date Prep: 03.18.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.18.2020 14:02	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120220

Matrix: Solid

MB Sample Id: 7699259-1-BLK

Prep Method: SW8015P

Date Prep: 03.18.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.18.2020 14:02	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656141

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120217

Parent Sample Id: 656032-001

Matrix: Soil

MS Sample Id: 656032-001 S

Prep Method: SW8015P

Date Prep: 03.18.2020

MSD Sample Id: 656032-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	850	85	966	97	70-135	13	35	mg/kg	03.18.2020 15:24	
Diesel Range Organics (DRO)	<49.8	995	928	93	1070	107	70-135	14	35	mg/kg	03.18.2020 15:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		115		70-135	%	03.18.2020 15:24
o-Terphenyl	108		123		70-135	%	03.18.2020 15:24

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120220

Parent Sample Id: 656034-001

Matrix: Soil

MS Sample Id: 656034-001 S

Prep Method: SW8015P

Date Prep: 03.18.2020

MSD Sample Id: 656034-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	922	92	950	95	70-135	3	35	mg/kg	03.18.2020 15:24	
Diesel Range Organics (DRO)	<50.2	1000	1020	102	1040	104	70-135	2	35	mg/kg	03.18.2020 15:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		120		70-135	%	03.18.2020 15:24
o-Terphenyl	115		115		70-135	%	03.18.2020 15:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120173

MB Sample Id: 7699214-1-BLK

Matrix: Solid

LCS Sample Id: 7699214-1-BKS

Prep Method: SW5030B

Date Prep: 03.18.2020

LCSD Sample Id: 7699214-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.110	110	70-130	0	35	mg/kg	03.18.2020 22:36	
Toluene	<0.00200	0.100	0.0996	100	0.0995	100	70-130	0	35	mg/kg	03.18.2020 22:36	
Ethylbenzene	<0.00200	0.100	0.0923	92	0.0919	92	71-129	0	35	mg/kg	03.18.2020 22:36	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.179	90	70-135	1	35	mg/kg	03.18.2020 22:36	
o-Xylene	<0.00200	0.100	0.0922	92	0.0916	92	71-133	1	35	mg/kg	03.18.2020 22:36	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	118		112		111		70-130	%	03.18.2020 22:36
4-Bromofluorobenzene	92		91		86		70-130	%	03.18.2020 22:36

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656141

Larson and Associates, Inc. Empire Abo

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120173

Parent Sample Id: 656115-011

Matrix: Soil

MS Sample Id: 656115-011 S

Prep Method: SW5030B

Date Prep: 03.18.2020

MSD Sample Id: 656115-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.120	121	0.103	102	70-130	15	35	mg/kg	03.18.2020 23:16	
Toluene	<0.00198	0.0990	0.122	123	0.0974	96	70-130	22	35	mg/kg	03.18.2020 23:16	
Ethylbenzene	<0.00198	0.0990	0.102	103	0.0874	87	71-129	15	35	mg/kg	03.18.2020 23:16	
m,p-Xylenes	<0.00396	0.198	0.217	110	0.177	88	70-135	20	35	mg/kg	03.18.2020 23:16	
o-Xylene	<0.00198	0.0990	0.104	105	0.0877	87	71-133	17	35	mg/kg	03.18.2020 23:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		112		70-130	%	03.18.2020 23:16
4-Bromofluorobenzene	89		92		70-130	%	03.18.2020 23:16

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3.18.2020 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: 656041
PROJECT LOCATION OR NAME: Empire ABO
LAI PROJECT #: 06-0141-11 COLLECTOR: RN

Data Reported to:

TRRP report? ☐ Yes ☒ No		S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER	PRESERVATION						ANALYSES																		FIELD NOTES							
TIME ZONE: Time zone/State: MST				# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESSED	BTEX-4 MTBE ☐	TPH 418-1 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐	TCLP - METALS (RCRA) ☐	TCLP - HERB ☐	LEAD - TOTAL ☐	R/C ☐	TDS ☐	pH ☐	% MOISTURE ☐	FLASHPOINT ☐		OTHER LIST ☐	EXPLOSIVES ☐	HEXAVALENT CHROMIUM ☐	PECHLORATE ☐	CYANIDE ☐	ANIONS ☐	ALKALINITY ☐
Field Sample I.D.	Lab #	Date	Time	Matrix																															
C-13 West Wall, 4'		3.18.20	7:50	S	1			X			X	X	X																						
03-02 Bottom, 1.5'			8:22	I						X	X	X	X																						
03-02 Sidewalk, 0-2.5'			8:25	I																															
03- Sidewalk East, 0-8'			13:55	I																															
03- Sidewalk South, 0-8'			13:54	I																															
03- Sidewalk West, 0-8'			13:56	I																															
03- Bottom NE, 8'			13:57	I																															
03- Bottom NW, 8'			13:58	I																															
03- Bottom SE, 8'			13:59	I																															
03- Bottom SW, 8'			14:00	I																															
TOTAL																																			
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)						TURN AROUND TIME		LABORATORY USE ONLY:																							
		3.18.20 15:30								NORMAL ☐ 1 DAY ☒ Rush! 2 DAY ☐ OTHER ☐		RECEIVING TEMP: 3.9 THERM#: TNM007																							
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)								CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED																							
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)								☐ CARRIER BILL #																							
LABORATORY: Xenco												☒ HAND DELIVERED																							

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.18.2020 03.30.00 PM

Work Order #: 656141

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.18.2020

Checklist reviewed by:


Holly Taylor

Date: 03.19.2020



Certificate of Analysis Summary 656301

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.19.2020 15:05

Report Date: 03.20.2020 16:41

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656301-001	656301-002	656301-003	656301-004	656301-005	656301-006
	Field Id:	02-03 Bottom,2'	02-03 Sidewall,0-2'	EA-13 Sidewall,East/Nort	EA-13 Sidewall,East/Sout	EA-13 Sidewall,West/Nor	EA-13 Sidewall,West/Sou
	Depth:	2- ft	0-2 ft	0-7 ft	0-7 ft	0-7 ft	0-7 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.19.2020 07:42	03.19.2020 07:45	03.19.2020 11:15	03.19.2020 11:16	03.19.2020 11:17	03.19.2020 11:18
BTEX by EPA 8021B	Extracted:	03.19.2020 18:00	03.19.2020 18:00				
	Analyzed:	03.20.2020 00:43	03.20.2020 01:04				
Units/RL:		mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00202 0.00202				
Toluene		<0.00199 0.00199	<0.00202 0.00202				
Ethylbenzene		<0.00199 0.00199	<0.00202 0.00202				
m,p-Xylenes		<0.00398 0.00398	<0.00403 0.00403				
o-Xylene		<0.00199 0.00199	<0.00202 0.00202				
Total Xylenes		<0.00199 0.00199	<0.00202 0.00202				
Total BTEX		<0.00199 0.00199	<0.00202 0.00202				
Chloride by EPA 300	Extracted:	03.19.2020 17:09	03.19.2020 17:09				
	Analyzed:	03.19.2020 19:14	03.19.2020 19:20				
Units/RL:		mg/kg RL	mg/kg RL				
Chloride		390 50.1	295 50.1				
TPH By SW8015 Mod	Extracted:	03.19.2020 17:20	03.19.2020 17:20	03.19.2020 17:20	03.19.2020 17:20	03.19.2020 17:20	03.19.2020 17:20
	Analyzed:	03.19.2020 19:15	03.19.2020 19:55	03.19.2020 20:16	03.19.2020 20:36	03.19.2020 20:56	03.19.2020 21:16
Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.0 50.0	<50.2 50.2	55.3 50.0	<251 251	96.4 49.8
Diesel Range Organics (DRO)		<50.3 50.3	<50.0 50.0	245 50.2	3470 50.0	4170 251	3200 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.0 50.0	<50.2 50.2	681 50.0	1700 251	426 49.8
Total TPH		<50.3 50.3	<50.0 50.0	245 50.2	4210 50.0	5870 251	3720 49.8

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

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

Holly Taylor
Project Manager



Certificate of Analysis Summary 656301

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.19.2020 15:05

Report Date: 03.20.2020 16:41

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656301-007	656301-008	656301-009			
	Field Id:	EA-13 Sidewall, South/Eas	EA-13 Sidewall, South/We	EA-13 S-7(SW), 5'			
	Depth:	0-7 ft	0-7 ft	5- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	03.19.2020 11:19	03.19.2020 11:20	03.19.2020 11:21			
TPH By SW8015 Mod	Extracted:	03.19.2020 17:20	03.19.2020 17:20	03.19.2020 17:20			
	Analyzed:	03.19.2020 21:36	03.19.2020 21:57	03.19.2020 22:17			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<251 251	<249 249			
Diesel Range Organics (DRO)		1850 50.1	12900 251	7310 249			
Motor Oil Range Hydrocarbons (MRO)		261 50.1	1500 251	662 249			
Total TPH		2110 50.1	14400 251	7970 249			

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

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

Holly Taylor
Project Manager



Analytical Report 656301

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.20.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.20.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656301**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656301. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656301 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
02-03 Bottom,2'	S	03.19.2020 07:42	2 ft	656301-001
02-03 Sidewall,0-2'	S	03.19.2020 07:45	0 - 2 ft	656301-002
EA-13 Sidewall,East/North,0-7'	S	03.19.2020 11:15	0 - 7 ft	656301-003
EA-13 Sidewall,East/South,0-7'	S	03.19.2020 11:16	0 - 7 ft	656301-004
EA-13 Sidewall,West/North,0-7'	S	03.19.2020 11:17	0 - 7 ft	656301-005
EA-13 Sidewall,West/South,0-7'	S	03.19.2020 11:18	0 - 7 ft	656301-006
EA-13 Sidewall,South/East,0-7'	S	03.19.2020 11:19	0 - 7 ft	656301-007
EA-13 Sidewall,South/West,0-7'	S	03.19.2020 11:20	0 - 7 ft	656301-008
EA-13 S-7(SW),5'	S	03.19.2020 11:21	5 ft	656301-009



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 656301

Report Date: 03.20.2020
Date Received: 03.19.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120334 BTEX by EPA 8021B

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



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 02-03 Bottom,2'

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-001

Date Collected: 03.19.2020 07:42

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.19.2020 17:09

Basis: Wet Weight

Seq Number: 3120337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	390	50.1	mg/kg	03.19.2020 19:14		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.19.2020 19:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.19.2020 19:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.19.2020 19:15	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.19.2020 19:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.19.2020 19:15	
o-Terphenyl	84-15-1	106	%	70-135	03.19.2020 19:15	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 02-03 Bottom,2'

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-001

Date Collected: 03.19.2020 07:42

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.19.2020 18:00

Basis: Wet Weight

Seq Number: 3120334

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.20.2020 00:43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.20.2020 00:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.20.2020 00:43		
1,4-Difluorobenzene	540-36-3	116	%	70-130	03.20.2020 00:43		



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 02-03 Sidewall,0-2'

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-002

Date Collected: 03.19.2020 07:45

Sample Depth: 0 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.19.2020 17:09

Basis: Wet Weight

Seq Number: 3120337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	295	50.1	mg/kg	03.19.2020 19:20		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.19.2020 19:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.19.2020 19:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.19.2020 19:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.19.2020 19:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.19.2020 19:55	
o-Terphenyl	84-15-1	110	%	70-135	03.19.2020 19:55	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 02-03 Sidewall,0-2'

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-002

Date Collected: 03.19.2020 07:45

Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.19.2020 18:00

Basis: Wet Weight

Seq Number: 3120334

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.20.2020 01:04	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.20.2020 01:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.20.2020 01:04		
1,4-Difluorobenzene	540-36-3	117	%	70-130	03.20.2020 01:04		



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall,East/North,0-7'**

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-003

Date Collected: 03.19.2020 11:15

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.19.2020 20:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	245	50.2	mg/kg	03.19.2020 20:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.19.2020 20:16	U	1
Total TPH	PHC635	245	50.2	mg/kg	03.19.2020 20:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.19.2020 20:16	
o-Terphenyl	84-15-1	115	%	70-135	03.19.2020 20:16	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall,East/South,0-7'**

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-004

Date Collected: 03.19.2020 11:16

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	55.3	50.0	mg/kg	03.19.2020 20:36		1
Diesel Range Organics (DRO)	C10C28DRO	3470	50.0	mg/kg	03.19.2020 20:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	681	50.0	mg/kg	03.19.2020 20:36		1
Total TPH	PHC635	4210	50.0	mg/kg	03.19.2020 20:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	03.19.2020 20:36	
o-Terphenyl	84-15-1	130	%	70-135	03.19.2020 20:36	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall, West/North, 0-7'**

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-005

Date Collected: 03.19.2020 11:17

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<251	251	mg/kg	03.19.2020 20:56	U	5
Diesel Range Organics (DRO)	C10C28DRO	4170	251	mg/kg	03.19.2020 20:56		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1700	251	mg/kg	03.19.2020 20:56		5
Total TPH	PHC635	5870	251	mg/kg	03.19.2020 20:56		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	03.19.2020 20:56	
o-Terphenyl	84-15-1	120	%	70-135	03.19.2020 20:56	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall, West/South, 0-7'**

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-006

Date Collected: 03.19.2020 11:18

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	96.4	49.8	mg/kg	03.19.2020 21:16		1
Diesel Range Organics (DRO)	C10C28DRO	3200	49.8	mg/kg	03.19.2020 21:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	426	49.8	mg/kg	03.19.2020 21:16		1
Total TPH	PHC635	3720	49.8	mg/kg	03.19.2020 21:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.19.2020 21:16	
o-Terphenyl	84-15-1	111	%	70-135	03.19.2020 21:16	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall,South/East,0-7'**

Matrix: Soil

Date Received:03.19.2020 15:05

Lab Sample Id: 656301-007

Date Collected: 03.19.2020 11:19

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.19.2020 21:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	1850	50.1	mg/kg	03.19.2020 21:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	261	50.1	mg/kg	03.19.2020 21:36		1
Total TPH	PHC635	2110	50.1	mg/kg	03.19.2020 21:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.19.2020 21:36	
o-Terphenyl	84-15-1	113	%	70-135	03.19.2020 21:36	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 Sidewall,South/West,0-7'**

Matrix: Soil

Date Received:03.19.2020 15:05

Lab Sample Id: 656301-008

Date Collected: 03.19.2020 11:20

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<251	251	mg/kg	03.19.2020 21:57	U	5
Diesel Range Organics (DRO)	C10C28DRO	12900	251	mg/kg	03.19.2020 21:57		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1500	251	mg/kg	03.19.2020 21:57		5
Total TPH	PHC635	14400	251	mg/kg	03.19.2020 21:57		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.19.2020 21:57	
o-Terphenyl	84-15-1	119	%	70-135	03.19.2020 21:57	



Certificate of Analytical Results 656301

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: EA-13 S-7(SW),5'

Matrix: Soil

Date Received: 03.19.2020 15:05

Lab Sample Id: 656301-009

Date Collected: 03.19.2020 11:21

Sample Depth: 5 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.19.2020 17:20

Basis: Wet Weight

Seq Number: 3120382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<249	249	mg/kg	03.19.2020 22:17	U	5
Diesel Range Organics (DRO)	C10C28DRO	7310	249	mg/kg	03.19.2020 22:17		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	662	249	mg/kg	03.19.2020 22:17		5
Total TPH	PHC635	7970	249	mg/kg	03.19.2020 22:17		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	03.19.2020 22:17	
o-Terphenyl	84-15-1	125	%	70-135	03.19.2020 22:17	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 656301

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3120337

MB Sample Id: 7699316-1-BLK

Matrix: Solid

LCS Sample Id: 7699316-1-BKS

Prep Method: E300P

Date Prep: 03.19.2020

LCSD Sample Id: 7699316-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	261	104	90-110	0	20	mg/kg	03.19.2020 17:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3120337

Parent Sample Id: 656277-013

Matrix: Soil

MS Sample Id: 656277-013 S

Prep Method: E300P

Date Prep: 03.19.2020

MSD Sample Id: 656277-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	200	354	107	352	106	90-110	1	20	mg/kg	03.19.2020 18:00	

Analytical Method: Chloride by EPA 300

Seq Number: 3120337

Parent Sample Id: 656301-002

Matrix: Soil

MS Sample Id: 656301-002 S

Prep Method: E300P

Date Prep: 03.19.2020

MSD Sample Id: 656301-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	295	200	508	107	507	106	90-110	0	20	mg/kg	03.19.2020 19:26	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120382

MB Sample Id: 7699380-1-BLK

Matrix: Solid

LCS Sample Id: 7699380-1-BKS

Prep Method: SW8015P

Date Prep: 03.19.2020

LCSD Sample Id: 7699380-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	938	94	1050	105	70-135	11	35	mg/kg	03.19.2020 14:52	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1160	116	70-135	10	35	mg/kg	03.19.2020 14:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		111		126		70-135	%	03.19.2020 14:52
o-Terphenyl	98		119		134		70-135	%	03.19.2020 14:52

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120382

Matrix: Solid

MB Sample Id: 7699380-1-BLK

Prep Method: SW8015P

Date Prep: 03.19.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.19.2020 14:32	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656301

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120382

Parent Sample Id: 656196-001

Matrix: Soil

MS Sample Id: 656196-001 S

Prep Method: SW8015P

Date Prep: 03.19.2020

MSD Sample Id: 656196-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	903	90	924	92	70-135	2	35	mg/kg	03.19.2020 15:53	
Diesel Range Organics (DRO)	<50.1	1000	983	98	1020	102	70-135	4	35	mg/kg	03.19.2020 15:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		111		70-135	%	03.19.2020 15:53
o-Terphenyl	111		117		70-135	%	03.19.2020 15:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120334

MB Sample Id: 7699317-1-BLK

Matrix: Solid

LCS Sample Id: 7699317-1-BKS

Prep Method: SW5030B

Date Prep: 03.19.2020

LCSD Sample Id: 7699317-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.122	122	0.124	124	70-130	2	35	mg/kg	03.19.2020 16:34	
Toluene	<0.00200	0.100	0.111	111	0.113	113	70-130	2	35	mg/kg	03.19.2020 16:34	
Ethylbenzene	<0.00200	0.100	0.103	103	0.105	105	71-129	2	35	mg/kg	03.19.2020 16:34	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.204	102	70-135	2	35	mg/kg	03.19.2020 16:34	
o-Xylene	<0.00200	0.100	0.102	102	0.104	104	71-133	2	35	mg/kg	03.19.2020 16:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		112		110		70-130	%	03.19.2020 16:34
4-Bromofluorobenzene	92		87		88		70-130	%	03.19.2020 16:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120334

Parent Sample Id: 656277-007

Matrix: Soil

MS Sample Id: 656277-007 S

Prep Method: SW5030B

Date Prep: 03.19.2020

MSD Sample Id: 656277-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.121	121	0.124	124	70-130	2	35	mg/kg	03.19.2020 17:15	
Toluene	<0.00200	0.100	0.110	110	0.113	113	70-130	3	35	mg/kg	03.19.2020 17:15	
Ethylbenzene	<0.00200	0.100	0.102	102	0.106	106	71-129	4	35	mg/kg	03.19.2020 17:15	
m,p-Xylenes	<0.00401	0.200	0.201	101	0.206	102	70-135	2	35	mg/kg	03.19.2020 17:15	
o-Xylene	<0.00200	0.100	0.101	101	0.103	103	71-133	2	35	mg/kg	03.19.2020 17:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		111		70-130	%	03.19.2020 17:15
4-Bromofluorobenzene	88		86		70-130	%	03.19.2020 17:15

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.19.2020 03.05.00 PM

Work Order #: 656301

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

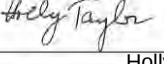
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.19.2020

Checklist reviewed by:


Holly Taylor

Date: 03.20.2020



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656471-001	656471-002	656471-003	656471-004	656471-005	656471-006
	<i>Field Id:</i>	S-8 2'	S-8 3'	S-8 4'	S-8 5'	S-8 6'	S-8 7'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.20.2020 09:00	03.20.2020 09:01	03.20.2020 09:02	03.20.2020 09:03	03.20.2020 09:04	03.20.2020 09:05
TPH by SW8015 Mod	<i>Extracted:</i>	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	<i>Analyzed:</i>	03.23.2020 12:33	03.23.2020 13:36	03.23.2020 13:57	03.23.2020 14:18	03.23.2020 14:39	03.23.2020 15:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	64.5 50.0	<50.0 50.0	259 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	2340 50.0	536 50.0	677 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	965 50.0	209 50.0	220 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.8 49.8	3370 50.0	745 50.0	1160 50.0	<49.9 49.9

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656471-007	656471-008	656471-009	656471-010	656471-011	656471-012
	Field Id:	S-8 8'	S-4B 2'	S-4B 3'	S-4B 4'	S-4B 5'	S-4B 6'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.20.2020 09:06	03.20.2020 09:30	03.20.2020 09:31	03.20.2020 09:32	03.20.2020 09:33	03.20.2020 09:34
TPH by SW8015 Mod	Extracted:	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	Analyzed:	03.23.2020 15:21	03.23.2020 15:42	03.23.2020 16:03	03.23.2020 16:25	03.23.2020 17:07	03.23.2020 17:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.8 49.8	<50.0 50.0	188 50.0	840 49.9	2110 249
Diesel Range Organics (DRO)		290 49.8	<49.8 49.8	<50.0 50.0	536 50.0	1570 49.9	4610 249
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8	<50.0 50.0	105 50.0	307 49.9	544 249
Total TPH		290 49.8	<49.8 49.8	<50.0 50.0	829 50.0	2720 49.9	7260 249

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656471-013	656471-014	656471-015	656471-016	656471-017	656471-018
	<i>Field Id:</i>	S-4B 7'	S-4B 8'	S-5B 2'	S-5B 3'	S-5B 4'	S-5B 5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.20.2020 09:35	03.20.2020 09:36	03.20.2020 10:01	03.20.2020 10:02	03.20.2020 10:03	03.20.2020 10:04
TPH by SW8015 Mod	<i>Extracted:</i>	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	<i>Analyzed:</i>	03.23.2020 17:49	03.23.2020 18:10	03.23.2020 18:31	03.23.2020 18:52	03.23.2020 19:14	03.23.2020 19:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		123 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<249 249	1120 249
Diesel Range Organics (DRO)		1600 50.0	624 49.9	514 50.0	2550 50.0	4240 249	8300 249
Motor Oil Range Hydrocarbons (MRO)		226 50.0	79.9 49.9	106 50.0	288 50.0	575 249	854 249
Total TPH		1950 50.0	704 49.9	620 50.0	2840 50.0	4820 249	10300 249

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656471-019	656471-020	656471-021	656471-022	656471-023	656471-024
	<i>Field Id:</i>	S-5B 6'	S-5B 7'	S-5B 8'	S-9 2'	S-9 3'	S-9 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.20.2020 10:05	03.20.2020 10:06	03.20.2020 10:07	03.20.2020 10:30	03.20.2020 10:31	03.20.2020 10:32
TPH by SW8015 Mod	<i>Extracted:</i>	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	<i>Analyzed:</i>	03.23.2020 19:56	03.23.2020 20:16	03.23.2020 12:33	03.23.2020 13:36	03.23.2020 13:57	03.23.2020 14:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		239 50.0	64.7 50.0	<50.0 50.0	84.8 50.0	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		2820 50.0	1780 50.0	<50.0 50.0	889 50.0	<50.0 50.0	93.1 49.9
Motor Oil Range Hydrocarbons (MRO)		328 50.0	211 50.0	<50.0 50.0	125 50.0	<50.0 50.0	<49.9 49.9
Total TPH		3390 50.0	2060 50.0	<50.0 50.0	1100 50.0	<50.0 50.0	93.1 49.9

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656471-025	656471-026	656471-027	656471-028	656471-029	656471-030
	Field Id:	S-9 5'	S-9 6'	S-9 7'	S-9 8'	S-5A 5'	S-5A 6'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.20.2020 10:33	03.20.2020 10:34	03.20.2020 10:35	03.20.2020 10:36	03.20.2020 11:01	03.20.2020 11:02
TPH by SW8015 Mod	Extracted:	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	Analyzed:	03.23.2020 14:39	03.23.2020 15:00	03.23.2020 15:21	03.23.2020 15:42	03.23.2020 16:03	03.23.2020 16:25
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	1800 249	1520 250
Diesel Range Organics (DRO)		60.7 49.8	71.8 50.0	85.8 49.9	139 50.0	17500 249	10300 250
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	55.0 50.0	2280 249	2470 250
Total TPH		60.7 49.8	71.8 50.0	85.8 49.9	194 50.0	21600 249	14300 250

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656471-031	656471-032	656471-033	656471-034	656471-035	656471-036
	Field Id:	S-5A 7'	S-5A 8'	S-5A 9'	S-5A 10'	S-4A 5'	S-4A 6'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.20.2020 11:03	03.20.2020 11:04	03.20.2020 11:05	03.20.2020 11:06	03.20.2020 11:31	03.20.2020 11:32
TPH by SW8015 Mod	Extracted:	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00
	Analyzed:	03.23.2020 17:07	03.23.2020 17:28	03.23.2020 17:49	03.23.2020 18:10	03.23.2020 18:31	03.23.2020 18:52
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		1460 250	1320 250	261 50.0	208 50.0	154 50.0	127 49.8
Diesel Range Organics (DRO)		11400 250	11300 250	3080 50.0	2430 50.0	1210 50.0	1060 49.8
Motor Oil Range Hydrocarbons (MRO)		1970 250	1980 250	465 50.0	347 50.0	176 50.0	144 49.8
Total TPH		14800 250	14600 250	3810 50.0	2990 50.0	1540 50.0	1330 49.8

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656471-037	656471-038	656471-039	656471-040	656471-041	656471-042
	<i>Field Id:</i>	S-10 2'	S-10 3'	S-10 4'	S-10 5'	S-10 6'	S-10 7'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.20.2020 12:01	03.20.2020 12:02	03.20.2020 12:03	03.20.2020 12:04	03.20.2020 12:05	03.20.2020 12:06
TPH by SW8015 Mod	<i>Extracted:</i>	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 11:00	03.23.2020 15:00	03.23.2020 15:00
	<i>Analyzed:</i>	03.23.2020 19:14	03.23.2020 19:35	03.23.2020 19:56	03.23.2020 20:16	03.24.2020 01:58	03.24.2020 02:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	132 49.9	2370 250	2200 250
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	96.9 50.0	756 49.9	8480 250	5420 250
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	122 49.9	1240 250	830 250
Total TPH		<49.9 49.9	<50.0 50.0	96.9 50.0	1010 49.9	12100 250	8450 250

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Holly Taylor
Project Manager



Certificate of Analysis Summary 656471

Larson and Associates, Inc., Midland, TX

Project Name: Empire ABO

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 09:42

Report Date: 03.27.2020 12:07

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	656471-043	656471-044	656471-045	656471-046	656471-047	656471-048
	<i>Field Id:</i>	S-10 8'	S-10 9'	S-11 2'	S-11 3'	S-11 4'	S-11 5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.20.2020 12:07	03.20.2020 12:08	03.20.2020 12:30	03.20.2020 12:31	03.20.2020 12:32	03.20.2020 12:33
TPH by SW8015 Mod	<i>Extracted:</i>	03.23.2020 15:00	03.23.2020 15:00	03.23.2020 15:00	03.23.2020 15:00	03.23.2020 15:00	03.23.2020 15:00
	<i>Analyzed:</i>	03.24.2020 02:36	03.24.2020 01:02	03.24.2020 06:52	03.24.2020 07:11	03.24.2020 03:32	03.24.2020 03:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		692 49.9	84.0 50.0	<49.8 49.8	<50.0 50.0	1470 250	322 249
Diesel Range Organics (DRO)		2520 49.9	787 50.0	1000 49.8	1880 50.0	14100 250	3660 249
Motor Oil Range Hydrocarbons (MRO)		396 49.9	139 50.0	283 49.8	441 50.0	2350 250	708 249
Total TPH		3610 49.9	1010 50.0	1280 49.8	2320 50.0	17900 250	4690 249

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Holly Taylor
Project Manager



Analytical Report 656471

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire ABO

06-0141-11

03.27.2020

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



03.27.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656471**

Empire ABO

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656471. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656471 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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Sample Cross Reference 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-8 2'	S	03.20.2020 09:00		656471-001
S-8 3'	S	03.20.2020 09:01		656471-002
S-8 4'	S	03.20.2020 09:02		656471-003
S-8 5'	S	03.20.2020 09:03		656471-004
S-8 6'	S	03.20.2020 09:04		656471-005
S-8 7'	S	03.20.2020 09:05		656471-006
S-8 8'	S	03.20.2020 09:06		656471-007
S-4B 2'	S	03.20.2020 09:30		656471-008
S-4B 3'	S	03.20.2020 09:31		656471-009
S-4B 4'	S	03.20.2020 09:32		656471-010
S-4B 5'	S	03.20.2020 09:33		656471-011
S-4B 6'	S	03.20.2020 09:34		656471-012
S-4B 7'	S	03.20.2020 09:35		656471-013
S-4B 8'	S	03.20.2020 09:36		656471-014
S-5B 2'	S	03.20.2020 10:01		656471-015
S-5B 3'	S	03.20.2020 10:02		656471-016
S-5B 4'	S	03.20.2020 10:03		656471-017
S-5B 5'	S	03.20.2020 10:04		656471-018
S-5B 6'	S	03.20.2020 10:05		656471-019
S-5B 7'	S	03.20.2020 10:06		656471-020
S-5B 8'	S	03.20.2020 10:07		656471-021
S-9 2'	S	03.20.2020 10:30		656471-022
S-9 3'	S	03.20.2020 10:31		656471-023
S-9 4'	S	03.20.2020 10:32		656471-024
S-9 5'	S	03.20.2020 10:33		656471-025
S-9 6'	S	03.20.2020 10:34		656471-026
S-9 7'	S	03.20.2020 10:35		656471-027
S-9 8'	S	03.20.2020 10:36		656471-028
S-5A 5'	S	03.20.2020 11:01		656471-029
S-5A 6'	S	03.20.2020 11:02		656471-030
S-5A 7'	S	03.20.2020 11:03		656471-031
S-5A 8'	S	03.20.2020 11:04		656471-032
S-5A 9'	S	03.20.2020 11:05		656471-033
S-5A 10'	S	03.20.2020 11:06		656471-034
S-4A 5'	S	03.20.2020 11:31		656471-035
S-4A 6'	S	03.20.2020 11:32		656471-036
S-10 2'	S	03.20.2020 12:01		656471-037
S-10 3'	S	03.20.2020 12:02		656471-038
S-10 4'	S	03.20.2020 12:03		656471-039
S-10 5'	S	03.20.2020 12:04		656471-040
S-10 6'	S	03.20.2020 12:05		656471-041
S-10 7'	S	03.20.2020 12:06		656471-042
S-10 8'	S	03.20.2020 12:07		656471-043



Sample Cross Reference 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

S-10 9'	S	03.20.2020 12:08	656471-044
S-11 2'	S	03.20.2020 12:30	656471-045
S-11 3'	S	03.20.2020 12:31	656471-046
S-11 4'	S	03.20.2020 12:32	656471-047
S-11 5'	S	03.20.2020 12:33	656471-048



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire ABO

Project ID: 06-0141-11
Work Order Number(s): 656471

Report Date: 03.27.2020
Date Received: 03.23.2020

Sample receipt non conformances and comments:

3/27/2020 1.001 Revised to correct sample ID on 044 per Mark Larson (email). HT

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-8 2'
Lab Sample Id: 656471-001

Matrix: Soil
Date Collected: 03.20.2020 09:00

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.23.2020 12:33	
o-Terphenyl	84-15-1	104	%	70-135	03.23.2020 12:33	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 3'**
Lab Sample Id: 656471-002

Matrix: Soil
Date Collected: 03.20.2020 09:01

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.23.2020 13:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.23.2020 13:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.23.2020 13:36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.23.2020 13:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.23.2020 13:36	
o-Terphenyl	84-15-1	105	%	70-135	03.23.2020 13:36	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 4'**
Lab Sample Id: 656471-003

Matrix: Soil
Date Collected: 03.20.2020 09:02

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	64.5	50.0	mg/kg	03.23.2020 13:57		1
Diesel Range Organics (DRO)	C10C28DRO	2340	50.0	mg/kg	03.23.2020 13:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	965	50.0	mg/kg	03.23.2020 13:57		1
Total TPH	PHC635	3370	50.0	mg/kg	03.23.2020 13:57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.23.2020 13:57	
o-Terphenyl	84-15-1	103	%	70-135	03.23.2020 13:57	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 5'**
Lab Sample Id: 656471-004

Matrix: Soil
Date Collected: 03.20.2020 09:03

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 14:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	536	50.0	mg/kg	03.23.2020 14:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	209	50.0	mg/kg	03.23.2020 14:18		1
Total TPH	PHC635	745	50.0	mg/kg	03.23.2020 14:18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.23.2020 14:18	
o-Terphenyl	84-15-1	105	%	70-135	03.23.2020 14:18	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 6'**
Lab Sample Id: 656471-005

Matrix: Soil
Date Collected: 03.20.2020 09:04

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	259	50.0	mg/kg	03.23.2020 14:39		1
Diesel Range Organics (DRO)	C10C28DRO	677	50.0	mg/kg	03.23.2020 14:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	220	50.0	mg/kg	03.23.2020 14:39		1
Total TPH	PHC635	1160	50.0	mg/kg	03.23.2020 14:39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.23.2020 14:39	
o-Terphenyl	84-15-1	109	%	70-135	03.23.2020 14:39	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 7'**
Lab Sample Id: 656471-006

Matrix: Soil
Date Collected: 03.20.2020 09:05

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.23.2020 15:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.23.2020 15:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.23.2020 15:00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.23.2020 15:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.23.2020 15:00	
o-Terphenyl	84-15-1	105	%	70-135	03.23.2020 15:00	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-8 8'**
Lab Sample Id: 656471-007

Matrix: Soil
Date Collected: 03.20.2020 09:06

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120736

Prep Method: SW8015P

% Moisture:

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.23.2020 15:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	290	49.8	mg/kg	03.23.2020 15:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.23.2020 15:21	U	1
Total TPH	PHC635	290	49.8	mg/kg	03.23.2020 15:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.23.2020 15:21	
o-Terphenyl	84-15-1	106	%	70-135	03.23.2020 15:21	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 2'**
Lab Sample Id: 656471-008

Matrix: Soil
Date Collected: 03.20.2020 09:30

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.23.2020 15:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.23.2020 15:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.23.2020 15:42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.23.2020 15:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.23.2020 15:42	
o-Terphenyl	84-15-1	109	%	70-135	03.23.2020 15:42	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 3'**
Lab Sample Id: 656471-009

Matrix: Soil
Date Collected: 03.20.2020 09:31

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 16:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.23.2020 16:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 16:03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.23.2020 16:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.23.2020 16:03	
o-Terphenyl	84-15-1	106	%	70-135	03.23.2020 16:03	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 4'**
Lab Sample Id: 656471-010

Matrix: Soil
Date Collected: 03.20.2020 09:32

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	188	50.0	mg/kg	03.23.2020 16:25		1
Diesel Range Organics (DRO)	C10C28DRO	536	50.0	mg/kg	03.23.2020 16:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	105	50.0	mg/kg	03.23.2020 16:25		1
Total TPH	PHC635	829	50.0	mg/kg	03.23.2020 16:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.23.2020 16:25	
o-Terphenyl	84-15-1	108	%	70-135	03.23.2020 16:25	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 5'**
Lab Sample Id: 656471-011

Matrix: Soil
Date Collected: 03.20.2020 09:33

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	840	49.9	mg/kg	03.23.2020 17:07		1
Diesel Range Organics (DRO)	C10C28DRO	1570	49.9	mg/kg	03.23.2020 17:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	307	49.9	mg/kg	03.23.2020 17:07		1
Total TPH	PHC635	2720	49.9	mg/kg	03.23.2020 17:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.23.2020 17:07	
o-Terphenyl	84-15-1	105	%	70-135	03.23.2020 17:07	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 6'**
Lab Sample Id: 656471-012

Matrix: Soil
Date Collected: 03.20.2020 09:34

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2110	249	mg/kg	03.23.2020 17:28		5
Diesel Range Organics (DRO)	C10C28DRO	4610	249	mg/kg	03.23.2020 17:28		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	544	249	mg/kg	03.23.2020 17:28		5
Total TPH	PHC635	7260	249	mg/kg	03.23.2020 17:28		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.23.2020 17:28	
o-Terphenyl	84-15-1	116	%	70-135	03.23.2020 17:28	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 7'**
Lab Sample Id: 656471-013

Matrix: Soil
Date Collected: 03.20.2020 09:35

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	123	50.0	mg/kg	03.23.2020 17:49		1
Diesel Range Organics (DRO)	C10C28DRO	1600	50.0	mg/kg	03.23.2020 17:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	226	50.0	mg/kg	03.23.2020 17:49		1
Total TPH	PHC635	1950	50.0	mg/kg	03.23.2020 17:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.23.2020 17:49	
o-Terphenyl	84-15-1	107	%	70-135	03.23.2020 17:49	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4B 8'**
Lab Sample Id: 656471-014

Matrix: Soil
Date Collected: 03.20.2020 09:36

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.23.2020 18:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	624	49.9	mg/kg	03.23.2020 18:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	79.9	49.9	mg/kg	03.23.2020 18:10		1
Total TPH	PHC635	704	49.9	mg/kg	03.23.2020 18:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.23.2020 18:10	
o-Terphenyl	84-15-1	109	%	70-135	03.23.2020 18:10	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 2'**
Lab Sample Id: 656471-015

Matrix: Soil
Date Collected: 03.20.2020 10:01

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 18:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	514	50.0	mg/kg	03.23.2020 18:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	106	50.0	mg/kg	03.23.2020 18:31		1
Total TPH	PHC635	620	50.0	mg/kg	03.23.2020 18:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.23.2020 18:31	
o-Terphenyl	84-15-1	108	%	70-135	03.23.2020 18:31	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 3'**
Lab Sample Id: 656471-016

Matrix: Soil
Date Collected: 03.20.2020 10:02

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 18:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	2550	50.0	mg/kg	03.23.2020 18:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	288	50.0	mg/kg	03.23.2020 18:52		1
Total TPH	PHC635	2840	50.0	mg/kg	03.23.2020 18:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.23.2020 18:52	
o-Terphenyl	84-15-1	108	%	70-135	03.23.2020 18:52	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 4'**
Lab Sample Id: 656471-017

Matrix: Soil
Date Collected: 03.20.2020 10:03

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<249	249	mg/kg	03.23.2020 19:14	U	5
Diesel Range Organics (DRO)	C10C28DRO	4240	249	mg/kg	03.23.2020 19:14		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	575	249	mg/kg	03.23.2020 19:14		5
Total TPH	PHC635	4820	249	mg/kg	03.23.2020 19:14		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.23.2020 19:14	
o-Terphenyl	84-15-1	107	%	70-135	03.23.2020 19:14	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 5'**
Lab Sample Id: 656471-018

Matrix: Soil
Date Collected: 03.20.2020 10:04

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1120	249	mg/kg	03.23.2020 19:35		5
Diesel Range Organics (DRO)	C10C28DRO	8300	249	mg/kg	03.23.2020 19:35		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	854	249	mg/kg	03.23.2020 19:35		5
Total TPH	PHC635	10300	249	mg/kg	03.23.2020 19:35		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 19:35	
o-Terphenyl	84-15-1	117	%	70-135	03.23.2020 19:35	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 6'**
Lab Sample Id: 656471-019

Matrix: Soil
Date Collected: 03.20.2020 10:05

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	239	50.0	mg/kg	03.23.2020 19:56		1
Diesel Range Organics (DRO)	C10C28DRO	2820	50.0	mg/kg	03.23.2020 19:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	328	50.0	mg/kg	03.23.2020 19:56		1
Total TPH	PHC635	3390	50.0	mg/kg	03.23.2020 19:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.23.2020 19:56	
o-Terphenyl	84-15-1	112	%	70-135	03.23.2020 19:56	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 7'**
Lab Sample Id: 656471-020

Matrix: Soil
Date Collected: 03.20.2020 10:06

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120736

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	64.7	50.0	mg/kg	03.23.2020 20:16		1
Diesel Range Organics (DRO)	C10C28DRO	1780	50.0	mg/kg	03.23.2020 20:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	211	50.0	mg/kg	03.23.2020 20:16		1
Total TPH	PHC635	2060	50.0	mg/kg	03.23.2020 20:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.23.2020 20:16	
o-Terphenyl	84-15-1	102	%	70-135	03.23.2020 20:16	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5B 8'**
Lab Sample Id: 656471-021

Matrix: Soil
Date Collected: 03.20.2020 10:07

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.23.2020 12:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.23.2020 12:33	
o-Terphenyl	84-15-1	118	%	70-135	03.23.2020 12:33	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 2'**
Lab Sample Id: 656471-022

Matrix: Soil
Date Collected: 03.20.2020 10:30

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	84.8	50.0	mg/kg	03.23.2020 13:36		1
Diesel Range Organics (DRO)	C10C28DRO	889	50.0	mg/kg	03.23.2020 13:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	125	50.0	mg/kg	03.23.2020 13:36		1
Total TPH	PHC635	1100	50.0	mg/kg	03.23.2020 13:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 13:36	
o-Terphenyl	84-15-1	122	%	70-135	03.23.2020 13:36	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 3'**
Lab Sample Id: 656471-023

Matrix: Soil
Date Collected: 03.20.2020 10:31

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 13:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.23.2020 13:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 13:57	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.23.2020 13:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.23.2020 13:57	
o-Terphenyl	84-15-1	114	%	70-135	03.23.2020 13:57	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 4'**
Lab Sample Id: 656471-024

Matrix: Soil
Date Collected: 03.20.2020 10:32

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.23.2020 14:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	93.1	49.9	mg/kg	03.23.2020 14:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.23.2020 14:18	U	1
Total TPH	PHC635	93.1	49.9	mg/kg	03.23.2020 14:18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.23.2020 14:18	
o-Terphenyl	84-15-1	116	%	70-135	03.23.2020 14:18	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-9 5'
Lab Sample Id: 656471-025

Matrix: Soil
Date Collected: 03.20.2020 10:33

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.23.2020 14:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	60.7	49.8	mg/kg	03.23.2020 14:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.23.2020 14:39	U	1
Total TPH	PHC635	60.7	49.8	mg/kg	03.23.2020 14:39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.23.2020 14:39	
o-Terphenyl	84-15-1	113	%	70-135	03.23.2020 14:39	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 6'**
Lab Sample Id: 656471-026

Matrix: Soil
Date Collected: 03.20.2020 10:34

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 15:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	71.8	50.0	mg/kg	03.23.2020 15:00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 15:00	U	1
Total TPH	PHC635	71.8	50.0	mg/kg	03.23.2020 15:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.23.2020 15:00	
o-Terphenyl	84-15-1	112	%	70-135	03.23.2020 15:00	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 7'**
Lab Sample Id: 656471-027

Matrix: Soil
Date Collected: 03.20.2020 10:35

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.23.2020 15:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	85.8	49.9	mg/kg	03.23.2020 15:21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.23.2020 15:21	U	1
Total TPH	PHC635	85.8	49.9	mg/kg	03.23.2020 15:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.23.2020 15:21	
o-Terphenyl	84-15-1	112	%	70-135	03.23.2020 15:21	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-9 8'**
Lab Sample Id: 656471-028

Matrix: Soil
Date Collected: 03.20.2020 10:36

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 15:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	139	50.0	mg/kg	03.23.2020 15:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	55.0	50.0	mg/kg	03.23.2020 15:42		1
Total TPH	PHC635	194	50.0	mg/kg	03.23.2020 15:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	03.23.2020 15:42	
o-Terphenyl	84-15-1	115	%	70-135	03.23.2020 15:42	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-5A 5'
Lab Sample Id: 656471-029

Matrix: Soil
Date Collected: 03.20.2020 11:01

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1800	249	mg/kg	03.23.2020 16:03		5
Diesel Range Organics (DRO)	C10C28DRO	17500	249	mg/kg	03.23.2020 16:03		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2280	249	mg/kg	03.23.2020 16:03		5
Total TPH	PHC635	21600	249	mg/kg	03.23.2020 16:03		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.23.2020 16:03	
o-Terphenyl	84-15-1	100	%	70-135	03.23.2020 16:03	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5A 6'**
Lab Sample Id: 656471-030

Matrix: Soil
Date Collected: 03.20.2020 11:02

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1520	250	mg/kg	03.23.2020 16:25		5
Diesel Range Organics (DRO)	C10C28DRO	10300	250	mg/kg	03.23.2020 16:25		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2470	250	mg/kg	03.23.2020 16:25		5
Total TPH	PHC635	14300	250	mg/kg	03.23.2020 16:25		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	03.23.2020 16:25	
o-Terphenyl	84-15-1	111	%	70-135	03.23.2020 16:25	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-5A 7'
Lab Sample Id: 656471-031

Matrix: Soil
Date Collected: 03.20.2020 11:03

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1460	250	mg/kg	03.23.2020 17:07		5
Diesel Range Organics (DRO)	C10C28DRO	11400	250	mg/kg	03.23.2020 17:07		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1970	250	mg/kg	03.23.2020 17:07		5
Total TPH	PHC635	14800	250	mg/kg	03.23.2020 17:07		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	03.23.2020 17:07	
o-Terphenyl	84-15-1	108	%	70-135	03.23.2020 17:07	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5A 8'**
Lab Sample Id: 656471-032

Matrix: Soil
Date Collected: 03.20.2020 11:04

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1320	250	mg/kg	03.23.2020 17:28		5
Diesel Range Organics (DRO)	C10C28DRO	11300	250	mg/kg	03.23.2020 17:28		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1980	250	mg/kg	03.23.2020 17:28		5
Total TPH	PHC635	14600	250	mg/kg	03.23.2020 17:28		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.23.2020 17:28	
o-Terphenyl	84-15-1	115	%	70-135	03.23.2020 17:28	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5A 9'**
Lab Sample Id: 656471-033

Matrix: Soil
Date Collected: 03.20.2020 11:05

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	261	50.0	mg/kg	03.23.2020 17:49		1
Diesel Range Organics (DRO)	C10C28DRO	3080	50.0	mg/kg	03.23.2020 17:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	465	50.0	mg/kg	03.23.2020 17:49		1
Total TPH	PHC635	3810	50.0	mg/kg	03.23.2020 17:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 17:49	
o-Terphenyl	84-15-1	113	%	70-135	03.23.2020 17:49	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-5A 10'**
Lab Sample Id: 656471-034

Matrix: Soil
Date Collected: 03.20.2020 11:06

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	208	50.0	mg/kg	03.23.2020 18:10		1
Diesel Range Organics (DRO)	C10C28DRO	2430	50.0	mg/kg	03.23.2020 18:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	347	50.0	mg/kg	03.23.2020 18:10		1
Total TPH	PHC635	2990	50.0	mg/kg	03.23.2020 18:10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 18:10	
o-Terphenyl	84-15-1	114	%	70-135	03.23.2020 18:10	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4A 5'**
Lab Sample Id: 656471-035

Matrix: Soil
Date Collected: 03.20.2020 11:31

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	154	50.0	mg/kg	03.23.2020 18:31		1
Diesel Range Organics (DRO)	C10C28DRO	1210	50.0	mg/kg	03.23.2020 18:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	176	50.0	mg/kg	03.23.2020 18:31		1
Total TPH	PHC635	1540	50.0	mg/kg	03.23.2020 18:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 18:31	
o-Terphenyl	84-15-1	114	%	70-135	03.23.2020 18:31	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-4A 6'**
Lab Sample Id: 656471-036

Matrix: Soil
Date Collected: 03.20.2020 11:32

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	127	49.8	mg/kg	03.23.2020 18:52		1
Diesel Range Organics (DRO)	C10C28DRO	1060	49.8	mg/kg	03.23.2020 18:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	144	49.8	mg/kg	03.23.2020 18:52		1
Total TPH	PHC635	1330	49.8	mg/kg	03.23.2020 18:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	03.23.2020 18:52	
o-Terphenyl	84-15-1	116	%	70-135	03.23.2020 18:52	



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Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-10 2'
Lab Sample Id: 656471-037

Matrix: Soil
Date Collected: 03.20.2020 12:01

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.23.2020 19:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.23.2020 19:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.23.2020 19:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.23.2020 19:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	03.23.2020 19:14	
o-Terphenyl	84-15-1	118	%	70-135	03.23.2020 19:14	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-10 3'
Lab Sample Id: 656471-038

Matrix: Soil
Date Collected: 03.20.2020 12:02

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 19:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.23.2020 19:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 19:35	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.23.2020 19:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	03.23.2020 19:35	
o-Terphenyl	84-15-1	119	%	70-135	03.23.2020 19:35	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: S-10 4'
Lab Sample Id: 656471-039

Matrix: Soil
Date Collected: 03.20.2020 12:03

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.23.2020 19:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	96.9	50.0	mg/kg	03.23.2020 19:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.23.2020 19:56	U	1
Total TPH	PHC635	96.9	50.0	mg/kg	03.23.2020 19:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	03.23.2020 19:56	
o-Terphenyl	84-15-1	116	%	70-135	03.23.2020 19:56	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-10 5'**
Lab Sample Id: 656471-040

Matrix: Soil
Date Collected: 03.20.2020 12:04

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 11:00

Basis: Wet Weight

Seq Number: 3120741

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	132	49.9	mg/kg	03.23.2020 20:16		1
Diesel Range Organics (DRO)	C10C28DRO	756	49.9	mg/kg	03.23.2020 20:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	122	49.9	mg/kg	03.23.2020 20:16		1
Total TPH	PHC635	1010	49.9	mg/kg	03.23.2020 20:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	03.23.2020 20:16	
o-Terphenyl	84-15-1	117	%	70-135	03.23.2020 20:16	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-10 6'**
Lab Sample Id: 656471-041

Matrix: Soil
Date Collected: 03.20.2020 12:05

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2370	250	mg/kg	03.24.2020 01:58		5
Diesel Range Organics (DRO)	C10C28DRO	8480	250	mg/kg	03.24.2020 01:58		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1240	250	mg/kg	03.24.2020 01:58		5
Total TPH	PHC635	12100	250	mg/kg	03.24.2020 01:58		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	03.24.2020 01:58	
o-Terphenyl	84-15-1	123	%	70-135	03.24.2020 01:58	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-10 7'**
Lab Sample Id: 656471-042

Matrix: Soil
Date Collected: 03.20.2020 12:06

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2200	250	mg/kg	03.24.2020 02:17		5
Diesel Range Organics (DRO)	C10C28DRO	5420	250	mg/kg	03.24.2020 02:17		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	830	250	mg/kg	03.24.2020 02:17		5
Total TPH	PHC635	8450	250	mg/kg	03.24.2020 02:17		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	03.24.2020 02:17	
o-Terphenyl	84-15-1	91	%	70-135	03.24.2020 02:17	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-10 8'**
Lab Sample Id: 656471-043

Matrix: Soil
Date Collected: 03.20.2020 12:07

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	692	49.9	mg/kg	03.24.2020 02:36		1
Diesel Range Organics (DRO)	C10C28DRO	2520	49.9	mg/kg	03.24.2020 02:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	396	49.9	mg/kg	03.24.2020 02:36		1
Total TPH	PHC635	3610	49.9	mg/kg	03.24.2020 02:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.24.2020 02:36	
o-Terphenyl	84-15-1	104	%	70-135	03.24.2020 02:36	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-10 9'**
Lab Sample Id: 656471-044

Matrix: Soil
Date Collected: 03.20.2020 12:08

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	84.0	50.0	mg/kg	03.24.2020 01:02		1
Diesel Range Organics (DRO)	C10C28DRO	787	50.0	mg/kg	03.24.2020 01:02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	139	50.0	mg/kg	03.24.2020 01:02		1
Total TPH	PHC635	1010	50.0	mg/kg	03.24.2020 01:02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	03.24.2020 01:02	
o-Terphenyl	84-15-1	92	%	70-135	03.24.2020 01:02	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-11 2'**
Lab Sample Id: 656471-045

Matrix: Soil
Date Collected: 03.20.2020 12:30

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.24.2020 06:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	1000	49.8	mg/kg	03.24.2020 06:52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	283	49.8	mg/kg	03.24.2020 06:52		1
Total TPH	PHC635	1280	49.8	mg/kg	03.24.2020 06:52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	03.24.2020 06:52	
o-Terphenyl	84-15-1	85	%	70-135	03.24.2020 06:52	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-11 3'**
Lab Sample Id: 656471-046

Matrix: Soil
Date Collected: 03.20.2020 12:31

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.24.2020 07:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	1880	50.0	mg/kg	03.24.2020 07:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	441	50.0	mg/kg	03.24.2020 07:11		1
Total TPH	PHC635	2320	50.0	mg/kg	03.24.2020 07:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	03.24.2020 07:11	
o-Terphenyl	84-15-1	92	%	70-135	03.24.2020 07:11	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-11 4'**
Lab Sample Id: 656471-047

Matrix: Soil
Date Collected: 03.20.2020 12:32

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1470	250	mg/kg	03.24.2020 03:32		5
Diesel Range Organics (DRO)	C10C28DRO	14100	250	mg/kg	03.24.2020 03:32		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2350	250	mg/kg	03.24.2020 03:32		5
Total TPH	PHC635	17900	250	mg/kg	03.24.2020 03:32		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.24.2020 03:32	
o-Terphenyl	84-15-1	121	%	70-135	03.24.2020 03:32	



Certificate of Analytical Results 656471

Larson and Associates, Inc., Midland, TX

Empire ABO

Sample Id: **S-11 5'**
Lab Sample Id: 656471-048

Matrix: Soil
Date Collected: 03.20.2020 12:33

Date Received: 03.23.2020 09:42

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.23.2020 15:00

Basis: Wet Weight

Seq Number: 3120735

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	322	249	mg/kg	03.24.2020 03:51		5
Diesel Range Organics (DRO)	C10C28DRO	3660	249	mg/kg	03.24.2020 03:51		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	708	249	mg/kg	03.24.2020 03:51		5
Total TPH	PHC635	4690	249	mg/kg	03.24.2020 03:51		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.24.2020 03:51	
o-Terphenyl	84-15-1	99	%	70-135	03.24.2020 03:51	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 656471

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120736

MB Sample Id: 7699527-1-BLK

Matrix: Solid

LCS Sample Id: 7699527-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.2020

LCSD Sample Id: 7699527-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	998	100	1010	101	70-135	1	20	mg/kg	03.23.2020 11:51	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1060	106	70-135	2	20	mg/kg	03.23.2020 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		93		95		70-135	%	03.23.2020 11:51
o-Terphenyl	99		96		96		70-135	%	03.23.2020 11:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120741

MB Sample Id: 7699528-1-BLK

Matrix: Solid

LCS Sample Id: 7699528-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.2020

LCSD Sample Id: 7699528-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1120	112	70-135	8	20	mg/kg	03.23.2020 11:51	
Diesel Range Organics (DRO)	<50.0	1000	1030	103	1110	111	70-135	7	20	mg/kg	03.23.2020 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		104		111		70-135	%	03.23.2020 11:51
o-Terphenyl	109		105		112		70-135	%	03.23.2020 11:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120735

MB Sample Id: 7699549-1-BLK

Matrix: Solid

LCS Sample Id: 7699549-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.2020

LCSD Sample Id: 7699549-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1010	101	978	98	70-135	3	20	mg/kg	03.24.2020 00:24	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1080	108	70-135	2	20	mg/kg	03.24.2020 00:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	81		115		104		70-135	%	03.24.2020 00:24
o-Terphenyl	86		105		101		70-135	%	03.24.2020 00:24

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120736

Matrix: Solid
MB Sample Id: 7699527-1-BLK

Prep Method: SW8015P

Date Prep: 03.23.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.23.2020 11:30	

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656471

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120741

Matrix: Solid

MB Sample Id: 7699528-1-BLK

Prep Method: SW8015P

Date Prep: 03.23.2020

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.23.2020 11:30	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120735

Matrix: Solid

MB Sample Id: 7699549-1-BLK

Prep Method: SW8015P

Date Prep: 03.23.2020

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.24.2020 00:06	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120736

Matrix: Soil

Parent Sample Id: 656471-001

MS Sample Id: 656471-001 S

Prep Method: SW8015P

Date Prep: 03.23.2020

MSD Sample Id: 656471-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1120	112	1120	112	70-135	0	20	mg/kg	03.23.2020 12:54	
Diesel Range Organics (DRO)	<49.9	997	1140	114	1190	119	70-135	4	20	mg/kg	03.23.2020 12:54	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		107		70-135	%	03.23.2020 12:54
o-Terphenyl	109		110		70-135	%	03.23.2020 12:54

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120741

Matrix: Soil

Parent Sample Id: 656471-021

MS Sample Id: 656471-021 S

Prep Method: SW8015P

Date Prep: 03.23.2020

MSD Sample Id: 656471-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1090	109	1110	111	70-135	2	20	mg/kg	03.23.2020 12:54	
Diesel Range Organics (DRO)	<49.9	998	1070	107	1070	107	70-135	0	20	mg/kg	03.23.2020 12:54	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		113		70-135	%	03.23.2020 12:54
o-Terphenyl	117		116		70-135	%	03.23.2020 12:54

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656471

Larson and Associates, Inc. Empire ABO

Analytical Method: TPH by SW8015 Mod

Seq Number: 3120735

Parent Sample Id: 656471-044

Matrix: Soil

MS Sample Id: 656471-044 S

Prep Method: SW8015P

Date Prep: 03.23.2020

MSD Sample Id: 656471-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	84.0	997	920	84	913	83	70-135	1	20	mg/kg	03.24.2020 01:21	
Diesel Range Organics (DRO)	787	997	1770	99	1740	96	70-135	2	20	mg/kg	03.24.2020 01:21	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane			97			97		70-135		%	03.24.2020 01:21	
o-Terphenyl			98			98		70-135		%	03.24.2020 01:21	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3-23-20 PAGE 1 OF 4

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Emme Abo

LAI PROJECT #: 06-0141-11 COLLECTOR: rw

Data Reported to:

TRRP report? ☐ Yes ☒ No		S=SOIL W=WATER A=AIR	P=PAINT SL=SLUDGE OT=OTHER	PRESERVATION						ANALYSES																		FIELD NOTES	
TIME ZONE: Time zone/State: <u>MST</u>	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESSED	BTEX ☐ MTBE ☐	TPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8280 ☐	SVOC 8270 ☐ PAH 8270 ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	TBLP - PCBs ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ OTHER LIST ☐	RCL ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐			
S-8, 2'		3-20-20	9:00	S	1				X			X	X	X															
S-8, 3'			9:01																										
S-8, 4'			9:02																										
S-8, 5'			9:03																										
S-8, 6'			9:04																										
S-8, 7'			9:05																										
S-8, 8'			9:06																										
S-4B, 2'			9:30																										
S-4B, 3'			9:31																										
S-4B, 4'			9:32																										
S-4B, 5'			9:33																										
S-4B, 6'			9:34																										
S-4B, 7'			9:35																										
S-4B, 8'			9:36																										
S-5B, 2'			10:01																										
TOTAL																													
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)																											
	3-22-20 9:42																												
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)																											
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)																											
LABORATORY: Xenco				TURN AROUND TIME NORMAL ☐ 1 DAY ☒ Rush! 2 DAY ☐ OTHER ☐																									
				LABORATORY USE ONLY: RECEIVING TEMP: 16.1-3 THERM#: D9 CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED ☐ CARRIER BILL # _____ ☐ HAND DELIVERED																									

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: EmAir Abo

LAI PROJECT #: 06-0141-11 COLLECTOR: RW

Data Reported to:

TRRP report? ☐ Yes ☒ No		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		PRESERVATION					ANALYSES															FIELD NOTES					
TIME ZONE: Time zone/State: <u>MST</u>		Lab #	Date	Time	Matrix	# of Containers	HCl	HNO ₃	H ₂ SO ₄ ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1008 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8280 ☐	SVOC 8270 ☐ PAH 8270 ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	TBLP - METALS (RCRA) ☐ HOLDPAH ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	PH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐			
S-SB, 3'								3-25-20	10:02	S	1				X		X	X	X												
S-SB, 4'				10:03																											
S-SB, 5'				10:04																											
S-SB, 6'				10:05																											
S-SB, 7'				10:06																											
S-SB, 8'				10:07																											
S-9, 2'				10:30																											
S-9, 3'				10:31																											
S-9, 4'				10:32																											
S-9, 5'				10:33																											
S-9, 6'				10:34																											
S-9, 7'				10:35																											
S-9, 8'				10:36																											
S-5A, 5'				11:01																											
S-5AC, 1'				11:02																											
TOTAL																															
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		TURN AROUND TIME		LABORATORY USE ONLY:																							
		3-23-20 9:42				NORMAL ☐ 1 DAY ☒ Rush! 2 DAY ☐ OTHER ☐		RECEIVING TEMP: 14.13 THERM 29																							
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)				CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED																							
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)				☐ CARRIER BILL #																							
LABORATORY: XERO								☐ HAND DELIVERED																							

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3-23-20 PAGE 3 OF 4
PO#: _____ LAB WORK ORDER#: _____
PROJECT LOCATION OR NAME: Empire ARBO
LAI PROJECT #: 06-0141-11 COLLECTOR: RN

[illegible]

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3-23-2020 PAGE 4 OF 4
PO#: _____ LAB WORK ORDER#: _____
PROJECT LOCATION OR NAME: Empire A60
LAI PROJECT #: 06-0141-11 COLLECTOR: RW

Data Reported to:

[illegible]

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.23.2020 09.42.00 AM

Work Order #: 656471

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

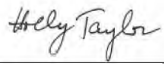
Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:	 Brianna Teel	Date: 03.23.2020
Checklist reviewed by:	 Holly Taylor	Date: 03.24.2020



Certificate of Analysis Summary 656545

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-01

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.23.2020 15:07

Report Date: 03.24.2020 16:34

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656545-001	656545-002	656545-003	656545-004	656545-005	656545-006
	Field Id:	05-01 SW	05-03 SW	03-N.Sidewall East (0-8')	03-N.Sidewall East (0-8')	03-W.Sidewall East (0-8')	03-W.Sidewall East (0-8')
	Depth:			0-8 ft	0-8 ft	0-8 ft	0-8 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	03.23.2020 11:17	03.23.2020 11:25	03.23.2020 11:50	03.23.2020 11:54	03.23.2020 14:06	03.23.2020 14:13
BTEX by EPA 8021B	Extracted:			03.23.2020 18:00	03.23.2020 18:00		
	Analyzed:			03.23.2020 22:40	03.24.2020 10:24		
		Units/RL:		mg/kg RL		mg/kg RL	
Benzene				<0.00201 0.00201		<0.00952 0.00952	
Toluene				<0.00201 0.00201		<0.00952 0.00952	
Ethylbenzene				<0.00201 0.00201		<0.00952 0.00952	
m,p-Xylenes				<0.00402 0.00402		<0.0190 0.0190	
o-Xylene				<0.00201 0.00201		<0.00952 0.00952	
Total Xylenes				<0.00201 0.00201		<0.00952 0.00952	
Total BTEX				<0.00201 0.00201		<0.00952 0.00952	
Chloride by EPA 300	Extracted:			03.23.2020 17:02	03.23.2020 17:02		
	Analyzed:			03.23.2020 19:17	03.23.2020 19:34		
		Units/RL:		mg/kg RL		mg/kg RL	
Chloride				306 9.96		259 49.6	
TPH By SW8015 Mod	Extracted:	03.23.2020 17:30	03.23.2020 17:30	03.23.2020 17:30	03.23.2020 17:30	03.23.2020 17:30	03.23.2020 17:30
	Analyzed:	03.24.2020 08:05	03.24.2020 08:25	03.24.2020 04:02	03.24.2020 04:23	03.24.2020 07:24	03.24.2020 07:44
		Units/RL:		mg/kg RL		mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		67.7 50.1	<50.1 50.1	<50.2 50.2	<50.2 50.2	<50.3 50.3	<50.0 50.0
Diesel Range Organics (DRO)		1940 50.1	1520 50.1	<50.2 50.2	103 50.2	130 50.3	174 50.0
Motor Oil Range Hydrocarbons (MRO)		318 50.1	374 50.1	<50.2 50.2	<50.2 50.2	<50.3 50.3	59.9 50.0
Total TPH		2330 50.1	1890 50.1	<50.2 50.2	103 50.2	130 50.3	234 50.0

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

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

Holly Taylor
Project Manager



Analytical Report 656545

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-01

03.24.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.24.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656545**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656545. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656545 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
05-01 SW	S	03.23.2020 11:17		656545-001
05-03 SW	S	03.23.2020 11:25		656545-002
03-N.Sidewall East (0-8')	S	03.23.2020 11:50	0 - 8 ft	656545-003
03-N.Sidewall East (0-8')	S	03.23.2020 11:54	0 - 8 ft	656545-004
03-W.Sidewall East (0-8')	S	03.23.2020 14:06	0 - 8 ft	656545-005
03-W.Sidewall East (0-8')	S	03.23.2020 14:13	0 - 8 ft	656545-006



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-01
Work Order Number(s): 656545

Report Date: 03.24.2020
Date Received: 03.23.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120699 BTEX by EPA 8021B

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



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **05-01 SW**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-001

Date Collected: 03.23.2020 11:17

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	67.7	50.1	mg/kg	03.24.2020 08:05		1
Diesel Range Organics (DRO)	C10C28DRO	1940	50.1	mg/kg	03.24.2020 08:05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	318	50.1	mg/kg	03.24.2020 08:05		1
Total TPH	PHC635	2330	50.1	mg/kg	03.24.2020 08:05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.24.2020 08:05	
o-Terphenyl	84-15-1	109	%	70-135	03.24.2020 08:05	



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **05-03 SW**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-002

Date Collected: 03.23.2020 11:25

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.24.2020 08:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	1520	50.1	mg/kg	03.24.2020 08:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	374	50.1	mg/kg	03.24.2020 08:25		1
Total TPH	PHC635	1890	50.1	mg/kg	03.24.2020 08:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	03.24.2020 08:25	
o-Terphenyl	84-15-1	118	%	70-135	03.24.2020 08:25	



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 03-N.Sidewall East (0-8')

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-003

Date Collected: 03.23.2020 11:50

Sample Depth: 0 - 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.23.2020 17:02

Basis: Wet Weight

Seq Number: 3120705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	306	9.96	mg/kg	03.23.2020 19:17		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.24.2020 04:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.24.2020 04:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.24.2020 04:02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.24.2020 04:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.24.2020 04:02	
o-Terphenyl	84-15-1	107	%	70-135	03.24.2020 04:02	



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-N.Sidewall East (0-8')**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-003

Date Collected: 03.23.2020 11:50

Sample Depth: 0 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.23.2020 18:00

Basis: Wet Weight

Seq Number: 3120699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.23.2020 22:40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.23.2020 22:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.23.2020 22:40		
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.23.2020 22:40		



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-N.Sidewall East (0-8')**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-004

Date Collected: 03.23.2020 11:54

Sample Depth: 0 - 8 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.23.2020 17:02

Basis: Wet Weight

Seq Number: 3120705

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	259	49.6	mg/kg	03.23.2020 19:34		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.24.2020 04:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	103	50.2	mg/kg	03.24.2020 04:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.24.2020 04:23	U	1
Total TPH	PHC635	103	50.2	mg/kg	03.24.2020 04:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	03.24.2020 04:23	
o-Terphenyl	84-15-1	110	%	70-135	03.24.2020 04:23	



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-N.Sidewall East (0-8')**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-004

Date Collected: 03.23.2020 11:54

Sample Depth: 0 - 8 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.23.2020 18:00

Basis: Wet Weight

Seq Number: 3120699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
Toluene	108-88-3	<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
Ethylbenzene	100-41-4	<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
m,p-Xylenes	179601-23-1	<0.0190	0.0190	mg/kg	03.24.2020 10:24	U	1
o-Xylene	95-47-6	<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
Total Xylenes	1330-20-7	<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
Total BTEX		<0.00952	0.00952	mg/kg	03.24.2020 10:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.24.2020 10:24		
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.24.2020 10:24		



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-W.Sidewall East (0-8')**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-005

Date Collected: 03.23.2020 14:06

Sample Depth: 0 - 8 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.24.2020 07:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	130	50.3	mg/kg	03.24.2020 07:24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.24.2020 07:24	U	1
Total TPH	PHC635	130	50.3	mg/kg	03.24.2020 07:24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.24.2020 07:24	
o-Terphenyl	84-15-1	110	%	70-135	03.24.2020 07:24	



Certificate of Analytical Results 656545

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-W.Sidewall East (0-8')**

Matrix: Soil

Date Received: 03.23.2020 15:07

Lab Sample Id: 656545-006

Date Collected: 03.23.2020 14:13

Sample Depth: 0 - 8 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.23.2020 17:30

Basis: Wet Weight

Seq Number: 3120748

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.24.2020 07:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	174	50.0	mg/kg	03.24.2020 07:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	59.9	50.0	mg/kg	03.24.2020 07:44		1
Total TPH	PHC635	234	50.0	mg/kg	03.24.2020 07:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.24.2020 07:44	
o-Terphenyl	84-15-1	104	%	70-135	03.24.2020 07:44	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 656545

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3120705

MB Sample Id: 7699593-1-BLK

Matrix: Solid

LCS Sample Id: 7699593-1-BKS

Prep Method: E300P

Date Prep: 03.23.2020

LCSD Sample Id: 7699593-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	260	104	90-110	0	20	mg/kg	03.23.2020 19:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3120705

Parent Sample Id: 656545-003

Matrix: Soil

MS Sample Id: 656545-003 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656545-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	306	200	511	103	517	106	90-110	1	20	mg/kg	03.23.2020 19:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3120705

Parent Sample Id: 656560-009

Matrix: Soil

MS Sample Id: 656560-009 S

Prep Method: E300P

Date Prep: 03.23.2020

MSD Sample Id: 656560-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	107	199	319	107	320	107	90-110	0	20	mg/kg	03.23.2020 20:42	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120748

MB Sample Id: 7699618-1-BLK

Matrix: Solid

LCS Sample Id: 7699618-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.2020

LCSD Sample Id: 7699618-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	859	86	834	83	70-135	3	35	mg/kg	03.24.2020 00:20	
Diesel Range Organics (DRO)	<50.0	1000	855	86	828	83	70-135	3	35	mg/kg	03.24.2020 00:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	131		128		125		70-135	%	03.24.2020 00:20
o-Terphenyl	121		109		105		70-135	%	03.24.2020 00:20

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120748

Matrix: Solid

MB Sample Id: 7699618-1-BLK

Prep Method: SW8015P

Date Prep: 03.23.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.24.2020 00:00	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 656545

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3120748

Parent Sample Id: 656472-002

Matrix: Soil

MS Sample Id: 656472-002 S

Prep Method: SW8015P

Date Prep: 03.23.2020

MSD Sample Id: 656472-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	996	100	1090	109	70-135	9	35	mg/kg	03.24.2020 01:21	
Diesel Range Organics (DRO)	<50.0	999	1040	104	1150	115	70-135	10	35	mg/kg	03.24.2020 01:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		126		70-135	%	03.24.2020 01:21
o-Terphenyl	113		122		70-135	%	03.24.2020 01:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120699

MB Sample Id: 7699587-1-BLK

Matrix: Solid

LCS Sample Id: 7699587-1-BKS

Prep Method: SW5030B

Date Prep: 03.23.2020

LCSD Sample Id: 7699587-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	03.23.2020 20:58	
Toluene	<0.00200	0.100	0.102	102	0.100	100	70-130	2	35	mg/kg	03.23.2020 20:58	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.0952	95	71-129	3	35	mg/kg	03.23.2020 20:58	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.196	98	70-135	3	35	mg/kg	03.23.2020 20:58	
o-Xylene	<0.00200	0.100	0.102	102	0.0988	99	71-133	3	35	mg/kg	03.23.2020 20:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		108		70-130	%	03.23.2020 20:58
4-Bromofluorobenzene	95		94		92		70-130	%	03.23.2020 20:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3120699

Parent Sample Id: 656545-003

Matrix: Soil

MS Sample Id: 656545-003 S

Prep Method: SW5030B

Date Prep: 03.23.2020

MSD Sample Id: 656545-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0874	87	0.109	109	70-130	22	35	mg/kg	03.23.2020 21:39	
Toluene	<0.00200	0.100	0.0839	84	0.102	102	70-130	19	35	mg/kg	03.23.2020 21:39	
Ethylbenzene	<0.00200	0.100	0.0795	80	0.0950	95	71-129	18	35	mg/kg	03.23.2020 21:39	
m,p-Xylenes	<0.00401	0.200	0.163	82	0.194	97	70-135	17	35	mg/kg	03.23.2020 21:39	
o-Xylene	<0.00200	0.100	0.0815	82	0.0986	99	71-133	19	35	mg/kg	03.23.2020 21:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	03.23.2020 21:39
4-Bromofluorobenzene	97		90		70-130	%	03.23.2020 21:39

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.23.2020 03.07.00 PM

Work Order #: 656545

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

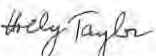
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.23.2020

Checklist reviewed by:


Holly Taylor

Date: 03.24.2020



Certificate of Analysis Summary 656919

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Wed 03.25.2020 16:05

Report Date: 03.26.2020 14:46

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	656919-001	656919-002				
	Field Id:	13- W.Sidewall North (0-	13- W.Sidewall South (0-				
	Depth:	0-7 ft	0-7 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	03.25.2020 15:05	03.25.2020 15:06				
TPH By SW8015 Mod	Extracted:	03.25.2020 17:30	03.25.2020 17:30				
	Analyzed:	03.26.2020 12:13	03.26.2020 12:33				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		220 50.3	415 49.8				
Diesel Range Organics (DRO)		1750 50.3	2700 49.8				
Motor Oil Range Hydrocarbons (MRO)		217 50.3	469 49.8				
Total TPH		2190 50.3	3580 49.8				

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

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

Holly Taylor
Project Manager



Analytical Report 656919

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

03.26.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.26.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **656919**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656919. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656919 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 656919

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
13- W.Sidewall North (0-7')	S	03.25.2020 15:05	0 - 7 ft	656919-001
13- W.Sidewall South (0-7')	S	03.25.2020 15:06	0 - 7 ft	656919-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 656919

Report Date: 03.26.2020
Date Received: 03.25.2020

Sample receipt non conformances and comments:

3/25/20, client (Ed Chavez) called for the project ID to be changed to 06-0141-11

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 656919

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 13- W.Sidewall North (0-7')

Matrix: Soil

Date Received: 03.25.2020 16:05

Lab Sample Id: 656919-001

Date Collected: 03.25.2020 15:05

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.25.2020 17:30

Basis: Wet Weight

Seq Number: 3121009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	220	50.3	mg/kg	03.26.2020 12:13		1
Diesel Range Organics (DRO)	C10C28DRO	1750	50.3	mg/kg	03.26.2020 12:13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	217	50.3	mg/kg	03.26.2020 12:13		1
Total TPH	PHC635	2190	50.3	mg/kg	03.26.2020 12:13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	03.26.2020 12:13	
o-Terphenyl	84-15-1	71	%	70-135	03.26.2020 12:13	



Certificate of Analytical Results 656919

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: 13- W.Sidewall South (0-7')

Matrix: Soil

Date Received: 03.25.2020 16:05

Lab Sample Id: 656919-002

Date Collected: 03.25.2020 15:06

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.25.2020 17:30

Basis: Wet Weight

Seq Number: 3121009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	415	49.8	mg/kg	03.26.2020 12:33		1
Diesel Range Organics (DRO)	C10C28DRO	2700	49.8	mg/kg	03.26.2020 12:33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	469	49.8	mg/kg	03.26.2020 12:33		1
Total TPH	PHC635	3580	49.8	mg/kg	03.26.2020 12:33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.26.2020 12:33	
o-Terphenyl	84-15-1	95	%	70-135	03.26.2020 12:33	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 656919

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121009

MB Sample Id: 7699786-1-BLK

Matrix: Solid

LCS Sample Id: 7699786-1-BKS

Prep Method: SW8015P

Date Prep: 03.25.2020

LCSD Sample Id: 7699786-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	982	98	933	93	70-135	5	35	mg/kg	03.26.2020 04:52	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1070	107	70-135	5	35	mg/kg	03.26.2020 04:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		121		115		70-135	%	03.26.2020 04:52
o-Terphenyl	103		124		118		70-135	%	03.26.2020 04:52

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121009

Matrix: Solid

MB Sample Id: 7699786-1-BLK

Prep Method: SW8015P

Date Prep: 03.25.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.26.2020 04:32	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121009

Matrix: Soil

Parent Sample Id: 656917-001

MS Sample Id: 656917-001 S

Prep Method: SW8015P

Date Prep: 03.25.2020

MSD Sample Id: 656917-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	970	97	1060	105	70-135	9	35	mg/kg	03.26.2020 05:53	
Diesel Range Organics (DRO)	<50.2	1000	1100	110	1210	120	70-135	10	35	mg/kg	03.26.2020 05:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		131		70-135	%	03.26.2020 05:53
o-Terphenyl	120		135		70-135	%	03.26.2020 05:53

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.25.2020 04.05.00 PM

Work Order #: 656919

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

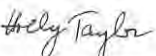
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.25.2020

Checklist reviewed by:


Holly Taylor

Date: 03.26.2020



Certificate of Analysis Summary 657042

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo-AKA Energy

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Thu 03.26.2020 15:56

Report Date: 03.27.2020 15:02

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	657042-001	657042-002				
	Field Id:	13-E. Sidewall North (0-7	13-E. Sidewall South (0-7				
	Depth:	0-7 ft	0-7 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	03.26.2020 09:38	03.26.2020 09:40				
TPH By SW8015 Mod	Extracted:	03.26.2020 16:00	03.26.2020 16:00				
	Analyzed:	03.27.2020 05:56	03.27.2020 06:16				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9				
Diesel Range Organics (DRO)		70.7 50.0	101 49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9				
Total TPH		70.7 50.0	101 49.9				

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

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

Holly Taylor
Project Manager



Analytical Report 657042

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo-AKA Energy

06-0141-11

03.27.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03.27.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **657042**

Empire Abo-AKA Energy

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657042. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657042 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 657042

Larson and Associates, Inc., Midland, TX

Empire Abo-AKA Energy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
13-E. Sidewall North (0-7')	S	03.26.2020 09:38	0 - 7 ft	657042-001
13-E. Sidewall South (0-7')	S	03.26.2020 09:40	0 - 7 ft	657042-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo-AKA Energy

Project ID: 06-0141-11
Work Order Number(s): 657042

Report Date: 03.27.2020
Date Received: 03.26.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 657042

Larson and Associates, Inc., Midland, TX

Empire Abo-AKA Energy

Sample Id: **13-E. Sidewall North (0-7')**

Matrix: Soil

Date Received: 03.26.2020 15:56

Lab Sample Id: 657042-001

Date Collected: 03.26.2020 09:38

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.26.2020 16:00

Basis: Wet Weight

Seq Number: 3121138

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.27.2020 05:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	70.7	50.0	mg/kg	03.27.2020 05:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.27.2020 05:56	U	1
Total TPH	PHC635	70.7	50.0	mg/kg	03.27.2020 05:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	03.27.2020 05:56	
o-Terphenyl	84-15-1	123	%	70-135	03.27.2020 05:56	



Certificate of Analytical Results 657042

Larson and Associates, Inc., Midland, TX

Empire Abo-AKA Energy

Sample Id: **13-E. Sidewall South (0-7')**

Matrix: Soil

Date Received: 03.26.2020 15:56

Lab Sample Id: 657042-002

Date Collected: 03.26.2020 09:40

Sample Depth: 0 - 7 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.26.2020 16:00

Basis: Wet Weight

Seq Number: 3121138

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.27.2020 06:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	101	49.9	mg/kg	03.27.2020 06:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.27.2020 06:16	U	1
Total TPH	PHC635	101	49.9	mg/kg	03.27.2020 06:16		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-135	03.27.2020 06:16		
o-Terphenyl	84-15-1	123	%	70-135	03.27.2020 06:16		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 657042

Larson and Associates, Inc. Empire Abo-AKA Energy

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121138

MB Sample Id: 7699848-1-BLK

Matrix: Solid

LCS Sample Id: 7699848-1-BKS

Prep Method: SW8015P

Date Prep: 03.26.2020

LCSD Sample Id: 7699848-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	956	96	951	95	70-135	1	35	mg/kg	03.27.2020 00:51	
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1110	111	70-135	2	35	mg/kg	03.27.2020 00:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		121		124		70-135	%	03.27.2020 00:51
o-Terphenyl	118		129		127		70-135	%	03.27.2020 00:51

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121138

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.26.2020

MB Sample Id: 7699848-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.27.2020 00:31	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121138

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.26.2020

Parent Sample Id: 656942-014

MS Sample Id: 656942-014 S

MSD Sample Id: 656942-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	998	100	984	98	70-135	1	35	mg/kg	03.27.2020 01:52	
Diesel Range Organics (DRO)	<49.9	998	1170	117	1150	115	70-135	2	35	mg/kg	03.27.2020 01:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		129		70-135	%	03.27.2020 01:52
o-Terphenyl	132		131		70-135	%	03.27.2020 01:52

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 03/26/2020 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: U57 042
PROJECT LOCATION OR NAME: Empire Abn - Aka Energy
LAI PROJECT #: 06-0141-11 COLLECTOR: EC

Data Reported to:

[illegible]

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.26.2020 03.56.00 PM

Work Order #: 657042

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.26.2020

Checklist reviewed by:


Holly Taylor

Date: 03.27.2020



Certificate of Analysis Summary 657235

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.30.2020 10:03

Report Date: 04.02.2020 17:11

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	657235-001	657235-002	657235-003			
	Field Id:	Containment N.	Containment W.	Hydrovac Containment			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	03.27.2020 13:01	03.27.2020 13:04	03.27.2020 13:09			
BTEX by EPA 8021B	Extracted:	04.01.2020 16:00	04.01.2020 16:00	04.01.2020 16:00			
	Analyzed:	04.02.2020 07:05	04.02.2020 07:26	04.02.2020 07:46			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201			
Toluene		0.0129 0.00200	<0.00201 0.00201	<0.00201 0.00201			
Ethylbenzene		0.00672 0.00200	<0.00201 0.00201	<0.00201 0.00201			
m,p-Xylenes		0.0403 0.00400	<0.00402 0.00402	<0.00402 0.00402			
o-Xylene		0.0246 0.00200	<0.00201 0.00201	<0.00201 0.00201			
Total Xylenes		0.0649 0.00200	<0.00201 0.00201	<0.00201 0.00201			
Total BTEX		0.0845 0.00200	<0.00201 0.00201	<0.00201 0.00201			
Chloride by EPA 300	Extracted:	04.01.2020 13:50	04.01.2020 13:50	04.01.2020 13:50			
	Analyzed:	04.01.2020 17:44	04.01.2020 18:28	04.01.2020 17:55			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		234 49.5	427 5.04	102 49.9			
TPH by SW8015 Mod	Extracted:	03.30.2020 15:00	03.30.2020 15:00	03.30.2020 15:00			
	Analyzed:	03.31.2020 05:51	03.31.2020 06:29	03.31.2020 07:06			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<250 250	<49.9 49.9			
Diesel Range Organics (DRO)		62.4 50.0	426 250	75.8 49.9			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	2450 250	113 49.9			
Total TPH		62.4 50.0	2880 250	189 49.9			

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

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

Holly Taylor
Project Manager



Analytical Report 657235

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

04.02.2020

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



04.02.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **657235**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657235. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657235 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Containment N.	S	03.27.2020 13:01		657235-001
Containment W.	S	03.27.2020 13:04		657235-002
Hydrovac Containment	S	03.27.2020 13:09		657235-003



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 657235

Report Date: 04.02.2020
Date Received: 03.30.2020

Sample receipt non conformances and comments:

4/01/2020 1.001 Revised to report BTEX and Cl per Mark Larson (email). HT

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121690 BTEX by EPA 8021B

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



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment N.**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-001

Date Collected: 03.27.2020 13:01

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: CHE

Date Prep: 04.01.2020 13:50

Basis: Wet Weight

Seq Number: 3121668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	234	49.5	mg/kg	04.01.2020 17:44		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.30.2020 15:00

Basis: Wet Weight

Seq Number: 3121479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.31.2020 05:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	62.4	50.0	mg/kg	03.31.2020 05:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.31.2020 05:51	U	1
Total TPH	PHC635	62.4	50.0	mg/kg	03.31.2020 05:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-130	03.31.2020 05:51	
o-Terphenyl	84-15-1	81	%	70-130	03.31.2020 05:51	



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment N.**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-001

Date Collected: 03.27.2020 13:01

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 04.01.2020 16:00

Basis: Wet Weight

Seq Number: 3121690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.02.2020 07:05	U	1
Toluene	108-88-3	0.0129	0.00200	mg/kg	04.02.2020 07:05		1
Ethylbenzene	100-41-4	0.00672	0.00200	mg/kg	04.02.2020 07:05		1
m,p-Xylenes	179601-23-1	0.0403	0.00400	mg/kg	04.02.2020 07:05		1
o-Xylene	95-47-6	0.0246	0.00200	mg/kg	04.02.2020 07:05		1
Total Xylenes	1330-20-7	0.0649	0.00200	mg/kg	04.02.2020 07:05		1
Total BTEX		0.0845	0.00200	mg/kg	04.02.2020 07:05		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.02.2020 07:05		
1,4-Difluorobenzene	540-36-3	110	%	70-130	04.02.2020 07:05		



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment W.**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-002

Date Collected: 03.27.2020 13:04

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: CHE

Date Prep: 04.01.2020 13:50

Basis: Wet Weight

Seq Number: 3121668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	427	5.04	mg/kg	04.01.2020 18:28		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.30.2020 15:00

Basis: Wet Weight

Seq Number: 3121479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<250	250	mg/kg	03.31.2020 06:29	U	5
Diesel Range Organics (DRO)	C10C28DRO	426	250	mg/kg	03.31.2020 06:29		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2450	250	mg/kg	03.31.2020 06:29		5
Total TPH	PHC635	2880	250	mg/kg	03.31.2020 06:29		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-130	03.31.2020 06:29	
o-Terphenyl	84-15-1	84	%	70-130	03.31.2020 06:29	



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment W.**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-002

Date Collected: 03.27.2020 13:04

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 04.01.2020 16:00

Basis: Wet Weight

Seq Number: 3121690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.02.2020 07:26	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.02.2020 07:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.02.2020 07:26		
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.02.2020 07:26		



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Hydrovac Containment**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-003

Date Collected: 03.27.2020 13:09

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: CHE

Date Prep: 04.01.2020 13:50

Basis: Wet Weight

Seq Number: 3121668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	49.9	mg/kg	04.01.2020 17:55		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 03.30.2020 15:00

Basis: Wet Weight

Seq Number: 3121479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.31.2020 07:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	75.8	49.9	mg/kg	03.31.2020 07:06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	113	49.9	mg/kg	03.31.2020 07:06		1
Total TPH	PHC635	189	49.9	mg/kg	03.31.2020 07:06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	03.31.2020 07:06	
o-Terphenyl	84-15-1	81	%	70-130	03.31.2020 07:06	



Certificate of Analytical Results 657235

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Hydrovac Containment**

Matrix: Soil

Date Received: 03.30.2020 10:03

Lab Sample Id: 657235-003

Date Collected: 03.27.2020 13:09

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 04.01.2020 16:00

Basis: Wet Weight

Seq Number: 3121690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.02.2020 07:46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.02.2020 07:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.02.2020 07:46		
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.02.2020 07:46		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3121668

MB Sample Id: 7700277-1-BLK

Matrix: Solid

LCS Sample Id: 7700277-1-BKS

Prep Method: E300P

Date Prep: 04.01.2020

LCSD Sample Id: 7700277-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	240	96	243	97	90-110	1	20	mg/kg	04.01.2020 17:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3121668

Parent Sample Id: 657413-008

Matrix: Soil

MS Sample Id: 657413-008 S

Prep Method: E300P

Date Prep: 04.01.2020

MSD Sample Id: 657413-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.2	250	314	98	312	97	90-110	1	20	mg/kg	04.01.2020 17:32	

Analytical Method: Chloride by EPA 300

Seq Number: 3121668

Parent Sample Id: 657557-001

Matrix: Soil

MS Sample Id: 657557-001 S

Prep Method: E300P

Date Prep: 04.01.2020

MSD Sample Id: 657557-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.92	250	251	99	253	100	90-110	1	20	mg/kg	04.01.2020 19:28	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121479

MB Sample Id: 7700076-1-BLK

Matrix: Solid

LCS Sample Id: 7700076-1-BKS

Prep Method: SW8015P

Date Prep: 03.30.2020

LCSD Sample Id: 7700076-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	861	86	835	84	70-130	3	20	mg/kg	03.31.2020 03:03	
Diesel Range Organics (DRO)	<50.0	1000	922	92	890	89	70-130	4	20	mg/kg	03.31.2020 03:03	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	79		99			100			70-130	%	03.31.2020 03:03	
o-Terphenyl	83		95			88			70-130	%	03.31.2020 03:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121479

Matrix: Solid

MB Sample Id: 7700076-1-BLK

Prep Method: SW8015P

Date Prep: 03.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.31.2020 02:45	

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



QC Summary 657235

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH by SW8015 Mod

Seq Number: 3121479

Parent Sample Id: 657218-002

Matrix: Soil

MS Sample Id: 657218-002 S

Prep Method: SW8015P

Date Prep: 03.30.2020

MSD Sample Id: 657218-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	893	90	872	87	70-130	2	20	mg/kg	03.31.2020 03:59	
Diesel Range Organics (DRO)	<49.8	996	963	97	943	94	70-130	2	20	mg/kg	03.31.2020 03:59	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		96		70-130	%	03.31.2020 03:59
o-Terphenyl	92		94		70-130	%	03.31.2020 03:59

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121690

MB Sample Id: 7700315-1-BLK

Matrix: Solid

LCS Sample Id: 7700315-1-BKS

Prep Method: SW5030B

Date Prep: 04.01.2020

LCSD Sample Id: 7700315-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0861	86	0.0835	84	70-130	3	35	mg/kg	04.02.2020 02:58	
Toluene	<0.00200	0.100	0.0904	90	0.0865	87	70-130	4	35	mg/kg	04.02.2020 02:58	
Ethylbenzene	<0.00200	0.100	0.0927	93	0.0870	87	70-130	6	35	mg/kg	04.02.2020 02:58	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.174	87	70-130	6	35	mg/kg	04.02.2020 02:58	
o-Xylene	<0.00200	0.100	0.0934	93	0.0895	90	70-130	4	35	mg/kg	04.02.2020 02:58	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		107		70-130	%	04.02.2020 02:58
4-Bromofluorobenzene	101		97		99		70-130	%	04.02.2020 02:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121690

Parent Sample Id: 657072-001

Matrix: Soil

MS Sample Id: 657072-001 S

Prep Method: SW5030B

Date Prep: 04.01.2020

MSD Sample Id: 657072-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0758	76	0.0841	84	70-130	10	35	mg/kg	04.02.2020 03:39	
Toluene	<0.00199	0.0994	0.0794	80	0.0854	86	70-130	7	35	mg/kg	04.02.2020 03:39	
Ethylbenzene	<0.00199	0.0994	0.0795	80	0.0846	85	70-130	6	35	mg/kg	04.02.2020 03:39	
m,p-Xylenes	<0.00398	0.199	0.160	80	0.169	85	70-130	5	35	mg/kg	04.02.2020 03:39	
o-Xylene	<0.00199	0.0994	0.0825	83	0.0869	87	70-130	5	35	mg/kg	04.02.2020 03:39	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		109		70-130	%	04.02.2020 03:39
4-Bromofluorobenzene	103		107		70-130	%	04.02.2020 03:39

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.30.2020 10.03.00 AM

Work Order #: 657235

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

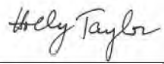
Temperature Measuring device used : R9

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:	 Brianna Teel	Date: 03.30.2020
Checklist reviewed by:	 Holly Taylor	Date: 03.31.2020

Certificate of Analysis Summary 657321

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Mon 03.30.2020 14:51

Report Date: 11.13.2020 09:09

Project Manager: Holly Taylor

<i>Analysis Requested</i>	<i>Lab Id:</i>	657321-001	657321-002	657321-003	657321-004		
	<i>Field Id:</i>	03- Bottom NE, 9'	EA-13 SW Bottom, 12'	EA-13 NW Bottom, 12'	EA-13 South West Sidewa		
	<i>Depth:</i>	9- ft	12- ft	12- ft	0-12 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	03.30.2020 09:39	03.30.2020 11:20	03.30.2020 11:21	03.30.2020 11:22		
TPH By SW8015 Mod	<i>Extracted:</i>	03.30.2020 15:00	03.30.2020 15:00	03.30.2020 15:00	03.30.2020 15:00		
	<i>Analyzed:</i>	03.30.2020 20:15	03.30.2020 20:35	03.30.2020 20:55	03.30.2020 21:16		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.2 50.2	<50.0 50.0		
Diesel Range Organics (DRO)		<50.2 50.2	712 50.0	1370 50.2	2650 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	68.8 50.0	144 50.2	280 50.0		
Total TPH		<50.2 50.2	781 50.0	1510 50.2	2930 50.0		

BRL - Below Reporting Limit

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

Holly Taylor

Analytical Report 657321

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

11.13.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

11.13.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **657321**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 657321. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657321 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Holly Taylor

Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 657321

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
03- Bottom NE, 9'	S	03.30.2020 09:39	9 ft	657321-001
EA-13 SW Bottom, 12'	S	03.30.2020 11:20	12 ft	657321-002
EA-13 NW Bottom, 12'	S	03.30.2020 11:21	12 ft	657321-003
EA-13 South West Sidewall,0-12'	S	03.30.2020 11:22	0 - 12 ft	657321-004

CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 657321

Report Date: 11.13.2020
Date Received: 03.30.2020

Sample receipt non conformances and comments:

11/13/2020 1.001 Revised to change sample IDs per Mark Larson (email). HT

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 657321

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03- Bottom NE, 9'** Matrix: Soil Date Received: 03.30.2020 14:51
 Lab Sample Id: 657321-001 Date Collected: 03.30.2020 09:39 Sample Depth: 9 ft
 Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DTH
 Analyst: DTH Date Prep: 03.30.2020 15:00 % Moisture:
 Seq Number: 3121443 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.30.2020 20:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.30.2020 20:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.30.2020 20:15	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.30.2020 20:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	03.30.2020 20:15		
o-Terphenyl	84-15-1	102	%	70-135	03.30.2020 20:15		

Certificate of Analytical Results 657321

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 SW Bottom, 12'**

Matrix: Soil

Date Received: 03.30.2020 14:51

Lab Sample Id: 657321-002

Date Collected: 03.30.2020 11:20

Sample Depth: 12 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

Analyst: DTH

Date Prep: 03.30.2020 15:00

% Moisture:

Seq Number: 3121443

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.30.2020 20:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	712	50.0	mg/kg	03.30.2020 20:35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	68.8	50.0	mg/kg	03.30.2020 20:35		1
Total TPH	PHC635	781	50.0	mg/kg	03.30.2020 20:35		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	03.30.2020 20:35		
o-Terphenyl	84-15-1	111	%	70-135	03.30.2020 20:35		

Certificate of Analytical Results 657321

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13 NW Bottom, 12'**

Matrix: Soil

Date Received: 03.30.2020 14:51

Lab Sample Id: 657321-003

Date Collected: 03.30.2020 11:21

Sample Depth: 12 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

Analyst: DTH

Date Prep: 03.30.2020 15:00

% Moisture:

Seq Number: 3121443

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.30.2020 20:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	1370	50.2	mg/kg	03.30.2020 20:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	144	50.2	mg/kg	03.30.2020 20:55		1
Total TPH	PHC635	1510	50.2	mg/kg	03.30.2020 20:55		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	03.30.2020 20:55		
o-Terphenyl	84-15-1	115	%	70-135	03.30.2020 20:55		

Certificate of Analytical Results 657321

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: EA-13 South West Sidewall,0-12'	Matrix: Soil	Date Received:03.30.2020 14:51
Lab Sample Id: 657321-004	Date Collected: 03.30.2020 11:22	Sample Depth: 0 - 12 ft
Analytical Method: TPH By SW8015 Mod		Prep Method: SW8015P
Tech: DTH		
Analyst: DTH	Date Prep: 03.30.2020 15:00	% Moisture:
Seq Number: 3121443		Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.30.2020 21:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	2650	50.0	mg/kg	03.30.2020 21:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	280	50.0	mg/kg	03.30.2020 21:16		1
Total TPH	PHC635	2930	50.0	mg/kg	03.30.2020 21:16		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	03.30.2020 21:16		
o-Terphenyl	84-15-1	110	%	70-135	03.30.2020 21:16		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121443

MB Sample Id: 7700134-1-BLK

Matrix: Solid

LCS Sample Id: 7700134-1-BKS

Prep Method: SW8015P

Date Prep: 03.30.2020

LCSD Sample Id: 7700134-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	982	98	1050	105	70-135	7	35	mg/kg	03.30.2020 16:50	
Diesel Range Organics (DRO)	<50.0	1000	920	92	993	99	70-135	8	35	mg/kg	03.30.2020 16:50	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	112		112		121		70-135	%	03.30.2020 16:50			
o-Terphenyl	121		112		122		70-135	%	03.30.2020 16:50			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121443

Matrix: Solid

MB Sample Id: 7700134-1-BLK

Prep Method: SW8015P

Date Prep: 03.30.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.30.2020 16:29	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121443

Matrix: Soil

Parent Sample Id: 657294-001

MS Sample Id: 657294-001 S

Prep Method: SW8015P

Date Prep: 03.30.2020

MSD Sample Id: 657294-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	937	93	901	90	70-135	4	35	mg/kg	03.30.2020 17:51	
Diesel Range Organics (DRO)	<50.3	1010	1080	107	1020	102	70-135	6	35	mg/kg	03.30.2020 17:51	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits		Units	Analysis Date	
1-Chlorooctane			102			100		70-135		%	03.30.2020 17:51	
o-Terphenyl			98			95		70-135		%	03.30.2020 17:51	

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3/30/2020 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: 107321

PROJECT LOCATION OR NAME: Empire A60

LAI PROJECT #: 06-0191-11 COLLECTOR: RN

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL
W=WATER
A=AIR

P=PAINT
SL=SLUDGE
OT=OTHER

TIME ZONE:
Time zone/State:

MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESERVED

ANALYSES

BTX ☐ MTBE ☐
TRPH 418 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TCLP - METALS (RCRA) ☐ TCLP VOC ☐
TOTAL METALS (RCRA) ☐ Herb ☐ Semi-VOC ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ OTHER LIST ☐
RCI ☐ TOX ☐ FLASHPOINT ☐ TCLP ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PECTHLORATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

03-Bottom NE 9'

3/20/20

9:39

S

1

X

XXX

EA-13 SW Bottom 12'

11:20

1

1

1

111

EA-13 NW Bottom 12'

11:21

1

1

1

111

EA-13 SW Bottom 12'

11:22

1

1

1

111

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY: Xenco

TURN AROUND TIME

NORMAL ☐

1 DAY ☒ Rush!

2 DAY ☐

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 2.6 THERM#: INM007

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED

☐ CARRIER BILL # _____

☒ HAND DELIVERED

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.30.2020 02.51.00 PM

Work Order #: 657321

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.30.2020

Checklist reviewed by:


Holly Taylor

Date: 03.31.2020

Certificate of Analysis Summary 657356

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11
Contact: Mark Larson
Project Location:

Date Received in Lab: Tue 03.31.2020 08:45
Report Date: 11.13.2020 09:11
Project Manager: Holly Taylor

Analysis Requested	Lab Id: 657356-001 Field Id: EA- 13 East Bottom, 10' Depth: 10- ft Matrix: SOIL Sampled: 03.31.2020 08:04					
BTEX by EPA 8021B SUB: T104704400-20-21	Extracted: 04.01.2020 17:00 Analyzed: 04.01.2020 22:20 Units/RL: mg/kg RL					
Benzene	<0.00202 0.00202					
Toluene	<0.00202 0.00202					
Ethylbenzene	<0.00202 0.00202					
m,p-Xylenes	<0.00403 0.00403					
o-Xylene	<0.00202 0.00202					
Total Xylenes	<0.00202 0.00202					
Total BTEX	<0.00202 0.00202					
Chloride by EPA 300 SUB: T104704400-20-21	Extracted: 04.01.2020 18:27 Analyzed: 04.01.2020 19:30 Units/RL: mg/kg RL					
Chloride	<10.0 10.0					
TPH By SW8015 Mod	Extracted: 03.31.2020 13:40 Analyzed: 03.31.2020 16:37 Units/RL: mg/kg RL					
Gasoline Range Hydrocarbons (GRO)	<49.9 49.9					
Diesel Range Organics (DRO)	177 49.9					
Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9					
Total TPH	177 49.9					

BRL - Below Reporting Limit

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

Holly Taylor

Analytical Report 657356

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

11.13.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

11.13.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **657356**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 657356. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

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

Respectfully,



Holly Taylor

Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 657356

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
EA- 13 East Bottom, 10'	S	03.31.2020 08:04	10 ft	657356-001

CASE NARRATIVE

Client Name: *Larson and Associates, Inc.*

Project Name: *Empire Abo*

Project ID: 06-0141-11
Work Order Number(s): 657356

Report Date: 11.13.2020
Date Received: 03.31.2020

Sample receipt non conformances and comments:

4/01/2020 1.001 Revised to report BTEX and Cl per Mark Larson (email). HT
11/13/2020 1.002 Revised to change sample ID per Mark Larson (email). HT

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121693 BTEX by EPA 8021B

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

Certificate of Analytical Results 657356

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA- 13 East Bottom, 10'**

Lab Sample Id: 657356-001

Matrix: Soil

Date Collected: 03.31.2020 08:04

Date Received: 03.31.2020 08:45

Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3121702

Date Prep: 04.01.2020 18:27

Prep Method: E300P

% Moisture: 0
Basis: Dry Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	04.01.2020 19:30	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3121587

Date Prep: 03.31.2020 13:40

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.31.2020 16:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	177	49.9	mg/kg	03.31.2020 16:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.31.2020 16:37	U	1
Total TPH	PHC635	177	49.9	mg/kg	03.31.2020 16:37		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	03.31.2020 16:37		
o-Terphenyl	84-15-1	109	%	70-135	03.31.2020 16:37		

Certificate of Analytical Results 657356

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA- 13 East Bottom, 10'**

Matrix: Soil

Date Received: 03.31.2020 08:45

Lab Sample Id: 657356-001

Date Collected: 03.31.2020 08:04

Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

Analyst: MAB

Date Prep: 04.01.2020 17:00

% Moisture: 0

Basis: Dry Weight

Seq Number: 3121693

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.01.2020 22:20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.01.2020 22:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	04.01.2020 22:20	
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.01.2020 22:20	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3121702

MB Sample Id: 7700327-1-BLK

Matrix: Solid

LCS Sample Id: 7700327-1-BKS

Prep Method: E300P

Date Prep: 04.01.2020

LCSD Sample Id: 7700327-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	267	107	268	107	90-110	0	20	mg/kg	04.01.2020 18:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3121702

Parent Sample Id: 657619-001

Matrix: Soil

MS Sample Id: 657619-001 S

Prep Method: E300P

Date Prep: 04.01.2020

MSD Sample Id: 657619-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	200	217	109	218	109	90-110	0	20	mg/kg	04.01.2020 19:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3121702

Parent Sample Id: 657636-007

Matrix: Soil

MS Sample Id: 657636-007 S

Prep Method: E300P

Date Prep: 04.01.2020

MSD Sample Id: 657636-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	371	199	580	105	592	112	90-110	2	20	mg/kg	04.01.2020 20:25	X

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121587

MB Sample Id: 7700182-1-BLK

Matrix: Solid

LCS Sample Id: 7700182-1-BKS

Prep Method: SW8015P

Date Prep: 03.31.2020

LCSD Sample Id: 7700182-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	954	95	935	94	70-135	2	35	mg/kg	03.31.2020 14:13	
Diesel Range Organics (DRO)	<50.0	1000	918	92	893	89	70-135	3	35	mg/kg	03.31.2020 14:13	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	91		89		86		70-135	%	03.31.2020 14:13			
o-Terphenyl	97		86		83		70-135	%	03.31.2020 14:13			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121587

Matrix: Solid

MB Sample Id: 7700182-1-BLK

Prep Method: SW8015P

Date Prep: 03.31.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.31.2020 13:53	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121587

Parent Sample Id: 657367-006

Matrix: Soil

MS Sample Id: 657367-006 S

Prep Method: SW8015P

Date Prep: 03.31.2020

MSD Sample Id: 657367-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	959	96	1010	101	70-135	5	35	mg/kg	03.31.2020 15:15	
Diesel Range Organics (DRO)	<50.1	1000	922	92	969	97	70-135	5	35	mg/kg	03.31.2020 15:15	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		94		70-135	%	03.31.2020 15:15
o-Terphenyl	86		90		70-135	%	03.31.2020 15:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121693

MB Sample Id: 7700314-1-BLK

Matrix: Solid

LCS Sample Id: 7700314-1-BKS

Prep Method: SW5030B

Date Prep: 04.01.2020

LCSD Sample Id: 7700314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.122	122	70-130	7	35	mg/kg	04.01.2020 19:16	
Toluene	<0.00200	0.100	0.107	107	0.110	110	70-130	3	35	mg/kg	04.01.2020 19:16	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.100	100	71-129	2	35	mg/kg	04.01.2020 19:16	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.194	97	70-135	2	35	mg/kg	04.01.2020 19:16	
o-Xylene	<0.00200	0.100	0.0988	99	0.101	101	71-133	2	35	mg/kg	04.01.2020 19:16	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		106		108		70-130	%	04.01.2020 19:16
4-Bromofluorobenzene	88		89		86		70-130	%	04.01.2020 19:16

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121693

Parent Sample Id: 657619-001

Matrix: Soil

MS Sample Id: 657619-001 S

Prep Method: SW5030B

Date Prep: 04.01.2020

MSD Sample Id: 657619-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.129	129	0.124	124	70-130	4	35	mg/kg	04.01.2020 19:57	
Toluene	<0.00200	0.0998	0.119	119	0.124	124	70-130	4	35	mg/kg	04.01.2020 19:57	
Ethylbenzene	<0.00200	0.0998	0.111	111	0.117	117	71-129	5	35	mg/kg	04.01.2020 19:57	
m,p-Xylenes	<0.00399	0.200	0.215	108	0.227	114	70-135	5	35	mg/kg	04.01.2020 19:57	
o-Xylene	<0.00200	0.0998	0.109	109	0.114	114	71-133	4	35	mg/kg	04.01.2020 19:57	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	04.01.2020 19:57
4-Bromofluorobenzene	85		86		70-130	%	04.01.2020 19:57

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

CHAIN-OF-CUSTODY

Arson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3/31/2020 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: 1057356
PROJECT LOCATION OR NAME: Empire ABO
LAI PROJECT #: 06-0141-11 COLLECTOR: RN

Data Reported to:

TRRP report?
☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE:
Time zone/State:

MST

Field
Sample I.D.

Lab #

Date

Time

Matrix

of Containers

PRESERVATION

HCl
HNO₃
H₂SO₄ ☐ NaOH ☐
ICE
UNPRESSED

ANALYSES

BTEX ☐ MTBE ☐
TPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐
GASOLINE MOD 8015 ☐
DIESEL - MOD 8015 ☐
OIL - MOD 8015 ☐
VOC 8260 ☐
SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐
8081 PESTICIDES ☐ 8151 HERBICIDES ☐
TCLP - METALS (RCRA) ☐ TCLP VOC ☐
TOTAL METALS (RCRA) ☐ HERB ☐ Semi-VOC ☐
LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐
RCI ☐ TOX ☐ FLASHPOINT ☐
TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐
PH ☐ HEXAVALENT CHROMIUM ☐
EXPLOSIVES ☐ PETCHLORATE ☐
CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐

FIELD NOTES

EA-13, East Bottom 10'

3/31/20 8:04

S

1

X

X X X

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME

3/31/20 8:45

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY: Xenco

TURN AROUND TIME

NORMAL ☐
1 DAY ☒ Rush!
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 1.2 THERM#: TN14007
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.31.2020 08.45.00 AM

Work Order #: 657356

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

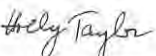
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.31.2020

Checklist reviewed by:


Holly Taylor

Date: 04.01.2020



Certificate of Analysis Summary 657456

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Tue 03.31.2020 15:59

Report Date: 04.02.2020 12:33

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	657456-001	657456-002				
	Field Id:	EA-13, SW Bot, 12'	EA-13, West SW South, 0				
	Depth:	12- ft	0-12 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	03.31.2020 14:57	03.31.2020 14:59				
TPH By SW8015 Mod	Extracted:	03.31.2020 17:50	03.31.2020 17:50				
	Analyzed:	04.01.2020 20:34	04.01.2020 20:55				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0				
Diesel Range Organics (DRO)		245 49.8	142 50.0				
Motor Oil Range Hydrocarbons (MRO)		172 49.8	80.3 50.0				
Total TPH		417 49.8	222 50.0				

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

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

Holly Taylor
Project Manager



Analytical Report 657456

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

04.02.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



04.02.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **657456**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657456. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657456 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 657456

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
EA-13, SW Bot, 12'	S	03.31.2020 14:57	12 ft	657456-001
EA-13, West SW South, 0-12'	S	03.31.2020 14:59	0 - 12 ft	657456-002



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 657456

Report Date: 04.02.2020
Date Received: 03.31.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 657456

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13, SW Bot, 12'**

Matrix: Soil

Date Received: 03.31.2020 15:59

Lab Sample Id: 657456-001

Date Collected: 03.31.2020 14:57

Sample Depth: 12 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.31.2020 17:50

Basis: Wet Weight

Seq Number: 3121659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.01.2020 20:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	245	49.8	mg/kg	04.01.2020 20:34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	172	49.8	mg/kg	04.01.2020 20:34		1
Total TPH	PHC635	417	49.8	mg/kg	04.01.2020 20:34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.01.2020 20:34	
o-Terphenyl	84-15-1	93	%	70-135	04.01.2020 20:34	



Certificate of Analytical Results 657456

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **EA-13, West SW South, 0-12'**

Matrix: Soil

Date Received: 03.31.2020 15:59

Lab Sample Id: 657456-002

Date Collected: 03.31.2020 14:59

Sample Depth: 0 - 12 ft

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.31.2020 17:50

Basis: Wet Weight

Seq Number: 3121659

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.01.2020 20:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	142	50.0	mg/kg	04.01.2020 20:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	80.3	50.0	mg/kg	04.01.2020 20:55		1
Total TPH	PHC635	222	50.0	mg/kg	04.01.2020 20:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.01.2020 20:55	
o-Terphenyl	84-15-1	99	%	70-135	04.01.2020 20:55	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Larson and Associates, Inc.
Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121659

MB Sample Id: 7700187-1-BLK

Matrix: Solid

LCS Sample Id: 7700187-1-BKS

Prep Method: SW8015P

Date Prep: 03.31.2020

LCSD Sample Id: 7700187-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	934	93	70-135	10	35	mg/kg	04.01.2020 12:41	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	999	100	70-135	11	35	mg/kg	04.01.2020 12:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		113		100		70-135	%	04.01.2020 12:41
o-Terphenyl	89		103		92		70-135	%	04.01.2020 12:41

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121659

Matrix: Solid

MB Sample Id: 7700187-1-BLK

Prep Method: SW8015P

Date Prep: 03.31.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.01.2020 12:20	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121659

Matrix: Soil

Parent Sample Id: 657447-001

MS Sample Id: 657447-001 S

Prep Method: SW8015P

Date Prep: 03.31.2020

MSD Sample Id: 657447-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	931	93	944	94	70-135	1	35	mg/kg	04.01.2020 13:42	
Diesel Range Organics (DRO)	<50.0	1000	967	97	989	99	70-135	2	35	mg/kg	04.01.2020 13:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		117		70-135	%	04.01.2020 13:42
o-Terphenyl	104		106		70-135	%	04.01.2020 13:42

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Larson & 
ssociates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 3/31/20 PAGE 1 OF 1
PO#: _____ LAB WORK ORDER#: 657456
PROJECT LOCATION OR NAME: Empire A60
LAI PROJECT #: 06-0141-11 COLLECTOR: RW

Data Reported to:

[illegible]

TOTAL

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

LABORATORY: *Xenon*

TURN AROUND TIME

NORMAL ☐

1 DAY ~~1~~ Reshe

2 DAY ☐OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 2.2 THERM#: +114.07

CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED

☐ CARRIER BILL # _____☒ HAND DELIVERED

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.31.2020 03.59.00 PM

Work Order #: 657456

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

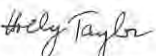
PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.31.2020

Checklist reviewed by:


Holly Taylor

Date: 04.01.2020



Certificate of Analysis Summary 657885

Larson and Associates, Inc., Midland, TX

Project Name: Empire Abo

Project Id: 06-0141-11

Contact: Mark Larson

Project Location:

Date Received in Lab: Fri 04.03.2020 13:10

Report Date: 04.06.2020 14:20

Project Manager: Holly Taylor

Analysis Requested	Lab Id:	657885-001	657885-002	657885-003	657885-004		
	Field Id:	Containment West, Bottom	Containment West, Sidewalk	03-BLM Backfill North	03-BLM Backfill South		
	Depth:	0.5- ft	0-0.5 ft				
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	04.03.2020 09:10	04.03.2020 09:11	04.03.2020 10:46	04.03.2020 10:45		
BTEX by EPA 8021B	Extracted:	04.03.2020 15:32	04.03.2020 15:32	04.03.2020 15:32	04.03.2020 15:32		
	Analyzed:	04.04.2020 07:38	04.04.2020 07:59	04.04.2020 08:19	04.04.2020 08:40		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
Toluene		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
Ethylbenzene		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
m,p-Xylenes		<0.00404 0.00404	<0.0400 0.0400	<0.00404 0.00404	<0.00399 0.00399		
o-Xylene		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
Total Xylenes		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
Total BTEX		<0.00202 0.00202	<0.0200 0.0200	<0.00202 0.00202	<0.00200 0.00200		
Chloride by EPA 300	Extracted:	04.05.2020 08:57	04.05.2020 08:57	04.05.2020 08:57	04.05.2020 08:57		
	Analyzed:	04.05.2020 13:18	04.05.2020 13:35	04.05.2020 13:41	04.05.2020 13:46		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		36.3 9.94	29.9 9.92	140 10.0	96.3 10.0		
TPH By SW8015 Mod	Extracted:	04.03.2020 18:00	04.03.2020 18:00	04.03.2020 18:00	04.03.2020 18:00		
	Analyzed:	04.03.2020 18:07	04.03.2020 18:27	04.03.2020 18:48	04.03.2020 19:08		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<50.3 50.3	<49.8 49.8	<50.2 50.2		
Diesel Range Organics (DRO)		73.9 50.3	1400 50.3	<49.8 49.8	<50.2 50.2		
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<50.3 50.3	<49.8 49.8	<50.2 50.2		
Total TPH		73.9 50.3	1400 50.3	<49.8 49.8	<50.2 50.2		

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

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

Holly Taylor
Project Manager



Analytical Report 657885

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Empire Abo

06-0141-11

04.06.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



04.06.2020

Project Manager: **Mark Larson**

Larson and Associates, Inc.

P. O. Box 50685

Midland, TX 79710

Reference: XENCO Report No(s): **657885**

Empire Abo

Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657885. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657885 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'. The signature is written in a cursive, flowing style.

Holly Taylor

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Containment West, Bottom 0.5'	S	04.03.2020 09:10	0.5 ft	657885-001
Containment West, Sidewall,0- 0.5'	S	04.03.2020 09:11	0 - 0.5 ft	657885-002
03-BLM Backfill North	S	04.03.2020 10:46	ft	657885-003
03-BLM Backfill South	S	04.03.2020 10:45	ft	657885-004



CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Empire Abo

Project ID: 06-0141-11
Work Order Number(s): 657885

Report Date: 04.06.2020
Date Received: 04.03.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121958 BTEX by EPA 8021B

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



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment West, Bottom 0.5'**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-001

Date Collected: 04.03.2020 09:10

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.05.2020 08:57

Basis: Wet Weight

Seq Number: 3121977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.3	9.94	mg/kg	04.05.2020 13:18		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 04.03.2020 18:00

Basis: Wet Weight

Seq Number: 3121935

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.03.2020 18:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	73.9	50.3	mg/kg	04.03.2020 18:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.03.2020 18:07	U	1
Total TPH	PHC635	73.9	50.3	mg/kg	04.03.2020 18:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	04.03.2020 18:07	
o-Terphenyl	84-15-1	111	%	70-135	04.03.2020 18:07	



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment West, Bottom 0.5'**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-001

Date Collected: 04.03.2020 09:10

Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.03.2020 15:32

Basis: Wet Weight

Seq Number: 3121958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.04.2020 07:38	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.04.2020 07:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.04.2020 07:38		
4-Bromofluorobenzene	460-00-4	93	%	70-130	04.04.2020 07:38		



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment West, Sidewall,0- 0.5'**

Matrix: Soil

Date Received:04.03.2020 13:10

Lab Sample Id: 657885-002

Date Collected: 04.03.2020 09:11

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.05.2020 08:57

Basis: Wet Weight

Seq Number: 3121977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.9	9.92	mg/kg	04.05.2020 13:35		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 04.03.2020 18:00

Basis: Wet Weight

Seq Number: 3121935

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.03.2020 18:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	1400	50.3	mg/kg	04.03.2020 18:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.03.2020 18:27	U	1
Total TPH	PHC635	1400	50.3	mg/kg	04.03.2020 18:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.03.2020 18:27	
o-Terphenyl	84-15-1	108	%	70-135	04.03.2020 18:27	



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **Containment West, Sidewall,0- 0.5'**

Matrix: Soil

Date Received:04.03.2020 13:10

Lab Sample Id: 657885-002

Date Collected: 04.03.2020 09:11

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.03.2020 15:32

Basis: Wet Weight

Seq Number: 3121958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
m,p-Xylenes	179601-23-1	<0.0400	0.0400	mg/kg	04.04.2020 07:59	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
Total BTEX		<0.0200	0.0200	mg/kg	04.04.2020 07:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.04.2020 07:59		
4-Bromofluorobenzene	460-00-4	89	%	70-130	04.04.2020 07:59		



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-BLM Backfill North**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-003

Date Collected: 04.03.2020 10:46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.05.2020 08:57

Basis: Wet Weight

Seq Number: 3121977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	10.0	mg/kg	04.05.2020 13:41		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 04.03.2020 18:00

Basis: Wet Weight

Seq Number: 3121935

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.03.2020 18:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.03.2020 18:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.03.2020 18:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.03.2020 18:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.03.2020 18:48	
o-Terphenyl	84-15-1	108	%	70-135	04.03.2020 18:48	



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-BLM Backfill North**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-003

Date Collected: 04.03.2020 10:46

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.03.2020 15:32

Basis: Wet Weight

Seq Number: 3121958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.04.2020 08:19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.04.2020 08:19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.04.2020 08:19		
1,4-Difluorobenzene	540-36-3	108	%	70-130	04.04.2020 08:19		



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-BLM Backfill South**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-004

Date Collected: 04.03.2020 10:45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.05.2020 08:57

Basis: Wet Weight

Seq Number: 3121977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	96.3	10.0	mg/kg	04.05.2020 13:46		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 04.03.2020 18:00

Basis: Wet Weight

Seq Number: 3121935

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.03.2020 19:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.03.2020 19:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.03.2020 19:08	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.03.2020 19:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	04.03.2020 19:08	
o-Terphenyl	84-15-1	113	%	70-135	04.03.2020 19:08	



Certificate of Analytical Results 657885

Larson and Associates, Inc., Midland, TX

Empire Abo

Sample Id: **03-BLM Backfill South**

Matrix: Soil

Date Received: 04.03.2020 13:10

Lab Sample Id: 657885-004

Date Collected: 04.03.2020 10:45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.03.2020 15:32

Basis: Wet Weight

Seq Number: 3121958

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.04.2020 08:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.04.2020 08:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.04.2020 08:40		
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.04.2020 08:40		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 657885

Larson and Associates, Inc. Empire Abo

Analytical Method: Chloride by EPA 300

Seq Number: 3121977

MB Sample Id: 7700526-1-BLK

Matrix: Solid

LCS Sample Id: 7700526-1-BKS

Prep Method: E300P

Date Prep: 04.05.2020

LCSD Sample Id: 7700526-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	247	99	90-110	4	20	mg/kg	04.05.2020 13:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3121977

Parent Sample Id: 657628-031

Matrix: Soil

MS Sample Id: 657628-031 S

Prep Method: E300P

Date Prep: 04.05.2020

MSD Sample Id: 657628-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.7	200	229	104	230	105	90-110	0	20	mg/kg	04.05.2020 14:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3121977

Parent Sample Id: 657885-001

Matrix: Soil

MS Sample Id: 657885-001 S

Prep Method: E300P

Date Prep: 04.05.2020

MSD Sample Id: 657885-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.3	200	249	106	248	106	90-110	0	20	mg/kg	04.05.2020 13:23	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121935

MB Sample Id: 7700519-1-BLK

Matrix: Solid

LCS Sample Id: 7700519-1-BKS

Prep Method: SW8015P

Date Prep: 04.03.2020

LCSD Sample Id: 7700519-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	908	91	939	94	70-135	3	35	mg/kg	04.03.2020 16:24	
Diesel Range Organics (DRO)	<50.0	1000	988	99	1030	103	70-135	4	35	mg/kg	04.03.2020 16:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		123		127		70-135	%	04.03.2020 16:24
o-Terphenyl	100		104		108		70-135	%	04.03.2020 16:24

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121935

Matrix: Solid

MB Sample Id: 7700519-1-BLK

Prep Method: SW8015P

Date Prep: 04.03.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.03.2020 16:04	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



QC Summary 657885

Larson and Associates, Inc. Empire Abo

Analytical Method: TPH By SW8015 Mod

Seq Number: 3121935

Parent Sample Id: 657763-009

Matrix: Soil

MS Sample Id: 657763-009 S

Prep Method: SW8015P

Date Prep: 04.03.2020

MSD Sample Id: 657763-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1010	100	1010	101	70-135	0	35	mg/kg	04.03.2020 17:25	
Diesel Range Organics (DRO)	<50.3	1010	1060	105	1080	108	70-135	2	35	mg/kg	04.03.2020 17:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		111		70-135	%	04.03.2020 17:25
o-Terphenyl	110		110		70-135	%	04.03.2020 17:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121958

MB Sample Id: 7700536-1-BLK

Matrix: Solid

LCS Sample Id: 7700536-1-BKS

Prep Method: SW5030B

Date Prep: 04.03.2020

LCSD Sample Id: 7700536-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	04.04.2020 05:56	
Toluene	<0.00200	0.100	0.0958	96	0.100	100	70-130	4	35	mg/kg	04.04.2020 05:56	
Ethylbenzene	<0.00200	0.100	0.0896	90	0.0947	95	71-129	6	35	mg/kg	04.04.2020 05:56	
m,p-Xylenes	<0.00400	0.200	0.183	92	0.194	97	70-135	6	35	mg/kg	04.04.2020 05:56	
o-Xylene	<0.00200	0.100	0.0942	94	0.0995	100	71-133	5	35	mg/kg	04.04.2020 05:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		104		104		70-130	%	04.04.2020 05:56
4-Bromofluorobenzene	94		90		90		70-130	%	04.04.2020 05:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3121958

Parent Sample Id: 657885-001

Matrix: Soil

MS Sample Id: 657885-001 S

Prep Method: SW5030B

Date Prep: 04.03.2020

MSD Sample Id: 657885-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0966	97	0.103	104	70-130	6	35	mg/kg	04.04.2020 06:37	
Toluene	<0.00200	0.100	0.0923	92	0.0969	98	70-130	5	35	mg/kg	04.04.2020 06:37	
Ethylbenzene	<0.00200	0.100	0.0865	87	0.0905	91	71-129	5	35	mg/kg	04.04.2020 06:37	
m,p-Xylenes	<0.00400	0.200	0.178	89	0.185	93	70-135	4	35	mg/kg	04.04.2020 06:37	
o-Xylene	<0.00200	0.100	0.0908	91	0.0945	95	71-133	4	35	mg/kg	04.04.2020 06:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	04.04.2020 06:37
4-Bromofluorobenzene	89		91		70-130	%	04.04.2020 06:37

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



DATE: 4/3/2020 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 657885

PROJECT LOCATION OR NAME: Emmaire ABo

LAI PROJECT #: 06-0141-11 COLLECTOR: RN

Data Reported to:

[illegible]

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 04.03.2020 01.10.00 PM

Work Order #: 657885

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

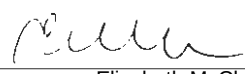
Temperature Measuring device used : T-NM-007

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

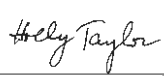
*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: 
Elizabeth McClellan

Date: 04.03.2020

Checklist reviewed by: 
Holly Taylor

Date: 04.06.2020

Appendix D

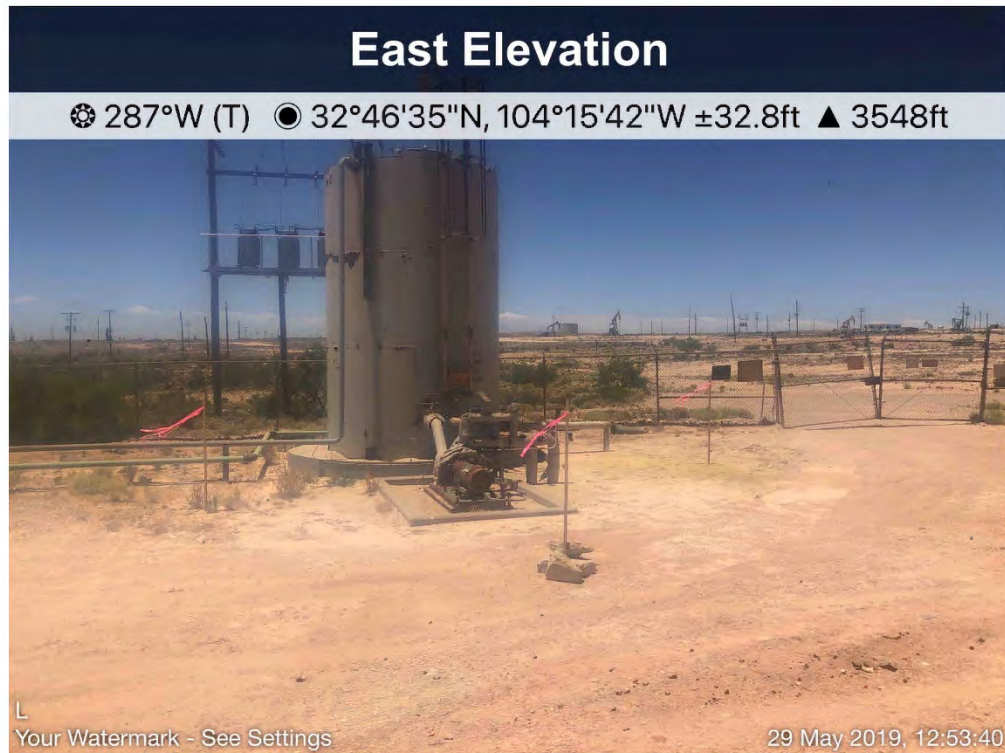
Photographs



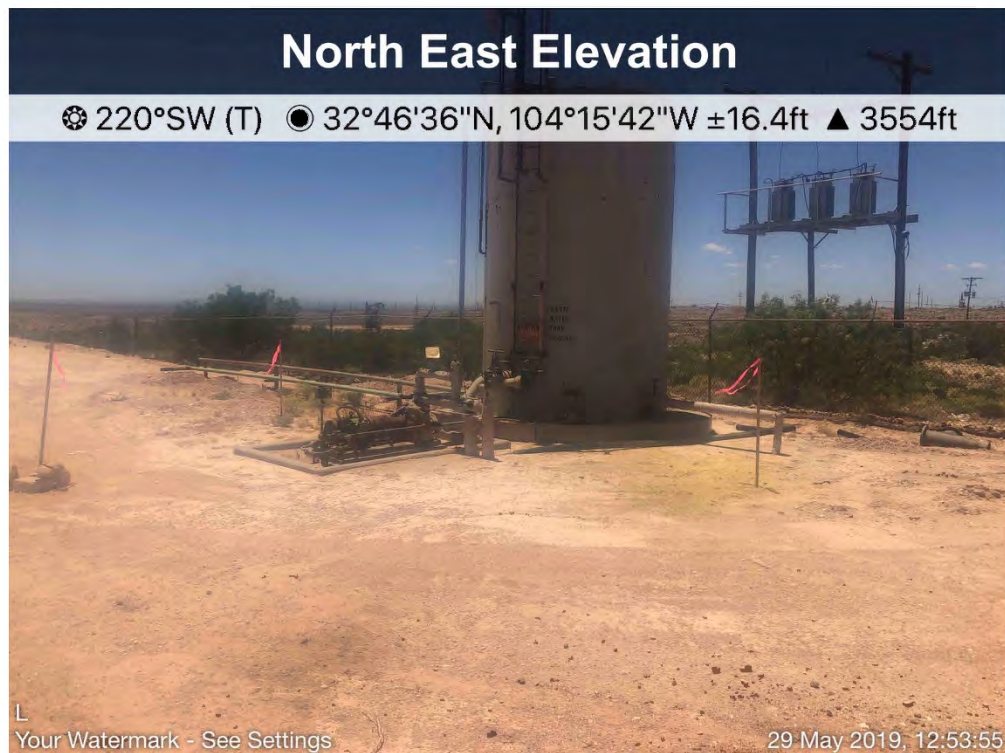
Wastewater Tank Viewing West



Wastewater Tank Viewing North



Wastewater Tank Boring Locations Viewing Northwest



Wastewater Tank Boring Locations Viewing Southwest



Wastewater Tank Excavation EA-02-03 Viewing West, March 25, 2020



Wastewater Tank Excavation EA-02-03 Viewing South, March 25, 2020



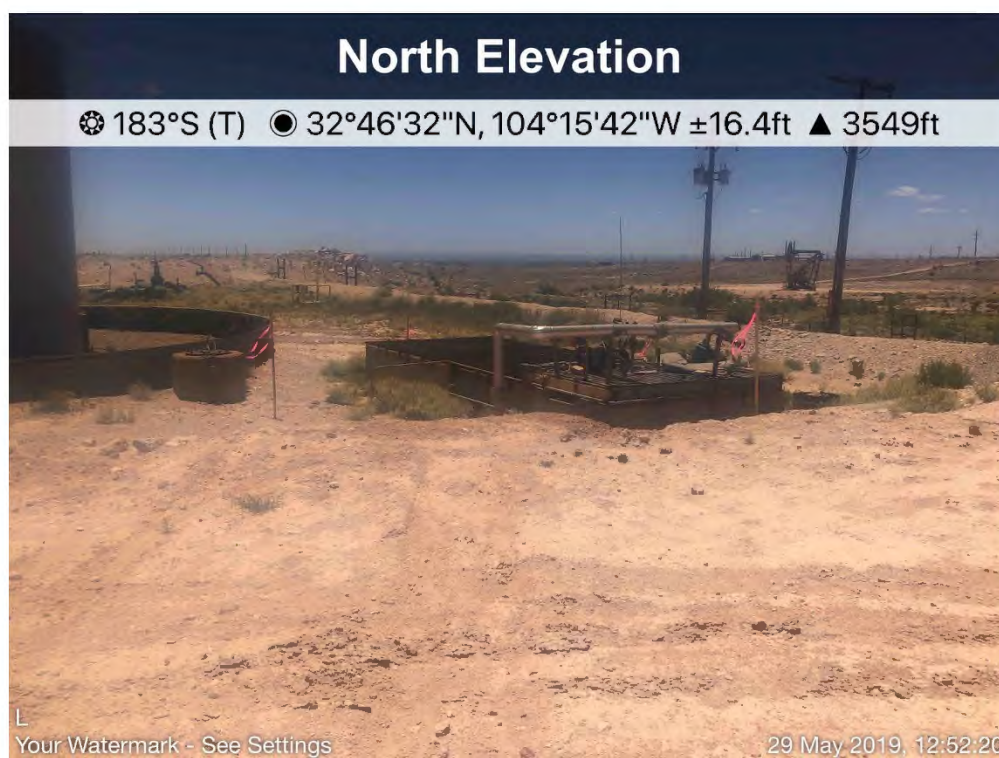
Amine Sump Viewing South



Amine Sump Viewing North



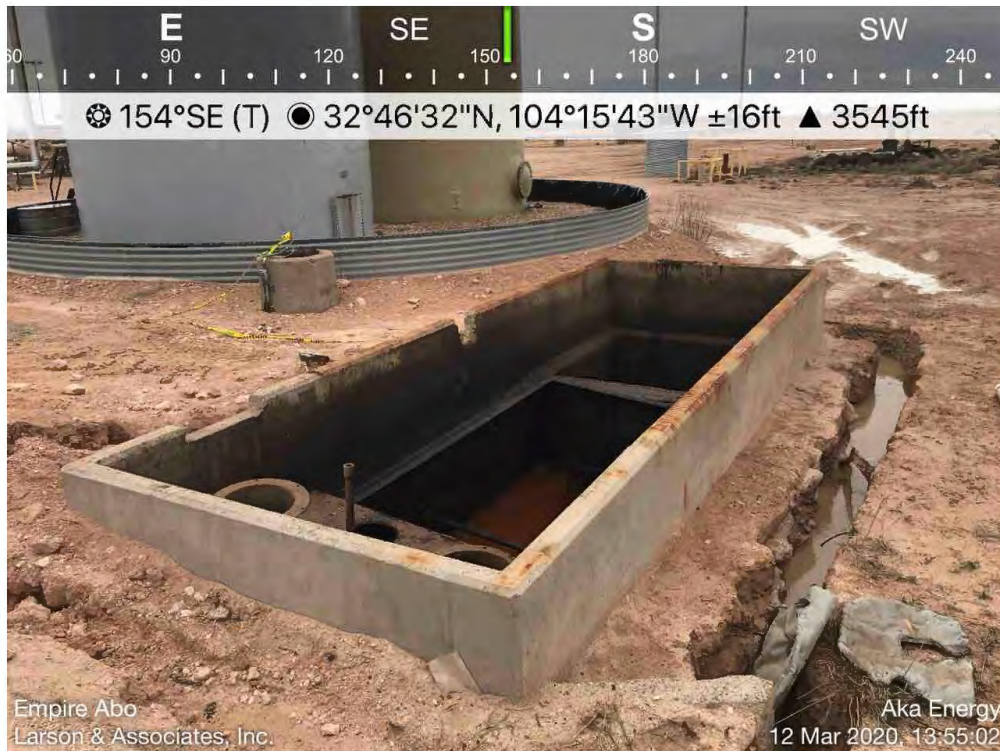
Amine Sump Viewing West



Amine Sump Boring Locations Viewing Southwest



Amine Sump Viewing Southeast, March 12, 2020



Amine Sump Viewing Northeast, March 12, 2020



Amine Sump Viewing North, March 12, 2020



Amine Sump Excavation Viewing North, March 17, 2020



Amine Sump Excavation Viewing Northeast, March 17, 2020



Amine Sump Excavation Viewing East, March 17, 2020

[illegible]

Amine Sump Excavation Viewing West, March 17, 2020



Amine Sump Excavation Viewing North, March 23, 2020



Amine Sump Excavation Viewing Northwest, March 17, 2020



Amine Sump Excavation Viewing North, March 25, 2020



Amine Sump Excavation (West Side) Viewing North, March 25, 2020



Amine Sump Excavation Viewing North, March 25, 2020



Amine Sump Excavation Viewing East, March 25, 2020



Amine Sump Excavation Viewing Northeast, March 25, 2020

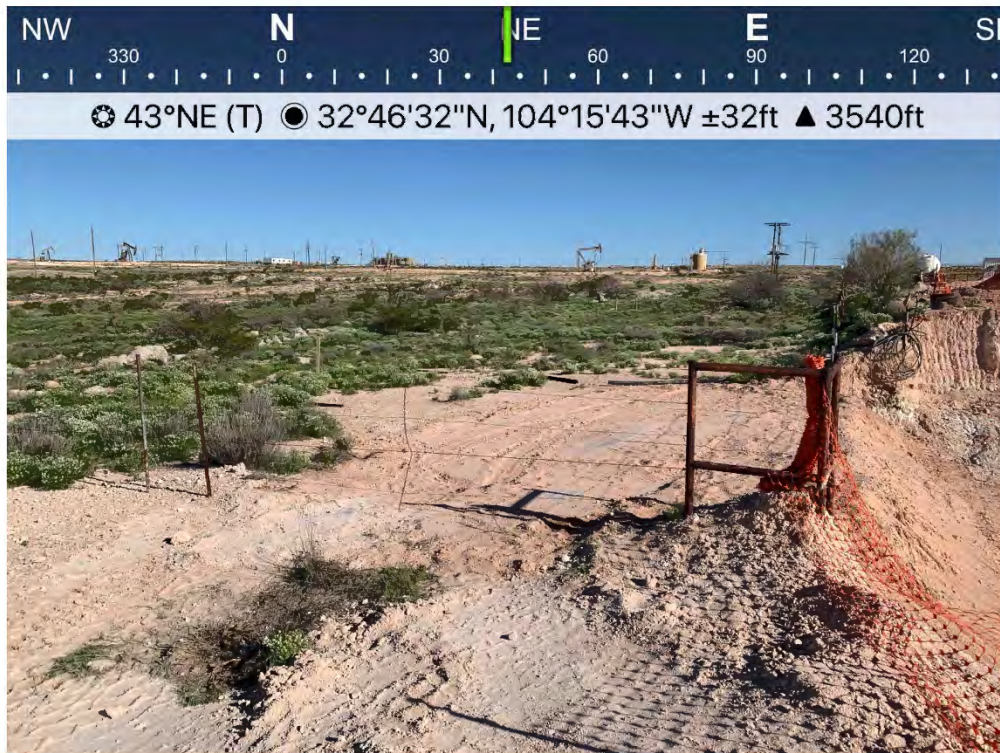


Amine Sump Excavation (West Side) Viewing South, March 25, 2020

Amine Sump (BLM Excavation) Backfilled Viewing Southwest, March 31, 2020



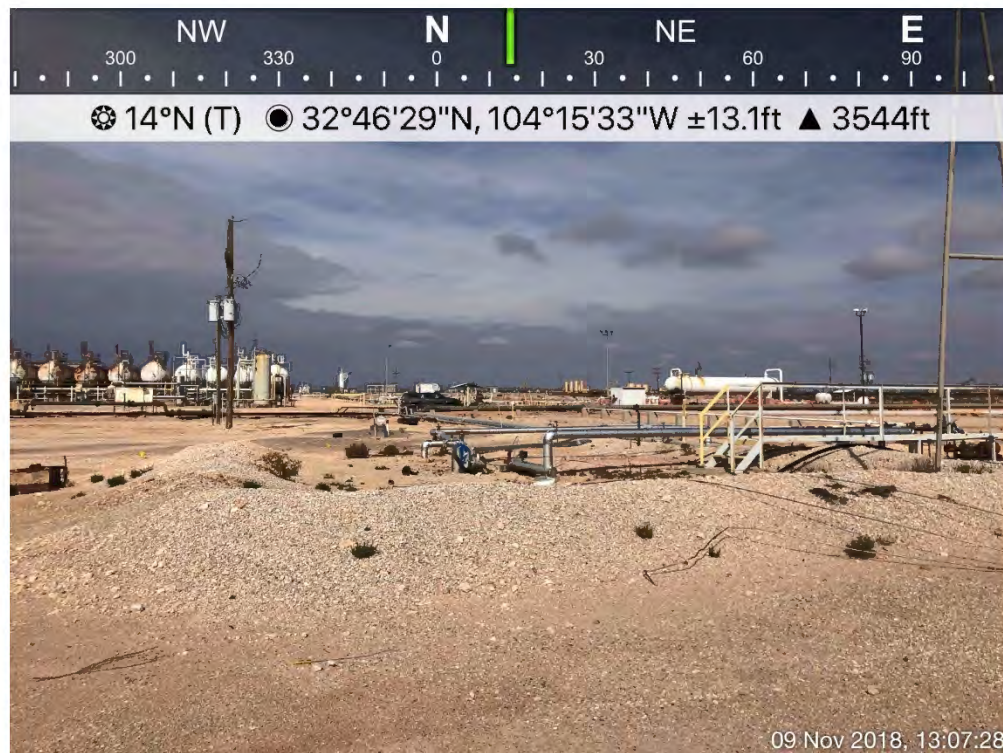
Amine Sump (BLM Excavation) Seeded Viewing Southwest, April 2, 2020



Amine Sump (BLM Excavation) Seeded Viewing Northwest, April 2, 2020



Slop Oil Tanks Location Viewing East



Slop Oil Tanks Location Viewing North



Slop Oil Tanks Hydroexcavating Location EA-05-01, March 8, 2020



Slop Oil Tanks Location Viewing Northwest, March 25, 2020



Slop Oil Tanks Excavation EA-05-01 Viewing Northwest, March 25, 2020



Slop Oil Tanks Excavation EA-05-02 Viewing Northwest, March 25, 2020



Slop Oil Tanks Excavation EA-05-01 Viewing South, March 25, 2020



Slop Oil Tanks Excavation EA-05-01 Viewing Northwest, March 25, 2020



Slop Oil Tanks Excavation EA-05-03 Viewing Southeast, March 25, 2020



Slop Oil Tanks Excavation EA-05-01 Viewing West, March 25, 2020



Cooling Tower Location Viewing South



Cooling Tower Boring Locations Viewing North



Cooling Tower Location Viewing North



Cooling Tower Excavation EA-07-02 Viewing South, March 25, 2020



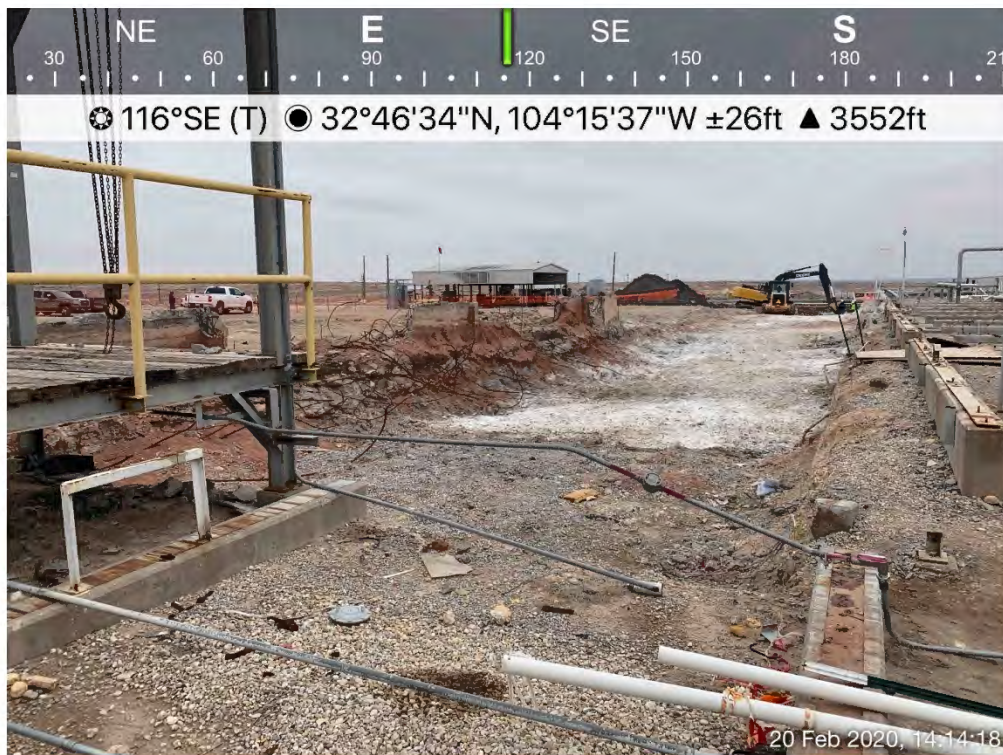
Cooling Tower Excavation EA-07-05 Viewing South, March 25, 2020



Clark Building (EA-12) Excavation (C-2 - C-4) Viewing Northwest, February 20, 2020



Clark Building (EA-12) Excavation (C-2 - C-4) Viewing North, February 20, 2020



Clark Building (EA-12) Excavation (C-2 - C-4) Viewing Northeast, February 20, 2020



Clark Building (EA-12) Excavation (C-10) Viewing Northwest, February 28, 2020



Clark Building (EA-12) Excavation (C-10) Viewing South, February 28, 2020



Clark Building (EA-12) Excavation (C-10) Viewing Northwest, February 28, 2020



Clark Building (EA-12) Excavation (C-10) Viewing Northwest, February 28, 2020



Clark Building (EA-12) Excavation (C-10) Viewing West, February 28, 2020



Excavated Soil at Clark Building (EA-12) Viewing South, February 26, 2020



In-Situ Soil at Clark Building (EA-12) Viewing South, February 26, 2020



Clark Building (EA-12) Excavation (C-12) Viewing Southeast, February 20, 2020



Clark Building (EA-12) Excavation (C-10 – C-12) Viewing South, February 28, 2020



Clark Building (EA-12) South Sidewall Seepage Excavation (C-12), February 28, 2020



Clark Building (EA-12) East Sidewall Seepage Excavation (C-12), February 28, 2020



Clark Building (EA-12) South Sidewall Seepage Excavation (C-12), February 28, 2020



Clark Building (EA-12) Sidewall Seepage Excavation (C-12), March 2, 2020



Clark Building (EA-12) Excavation (C-12) Viewing East, February 28, 2020



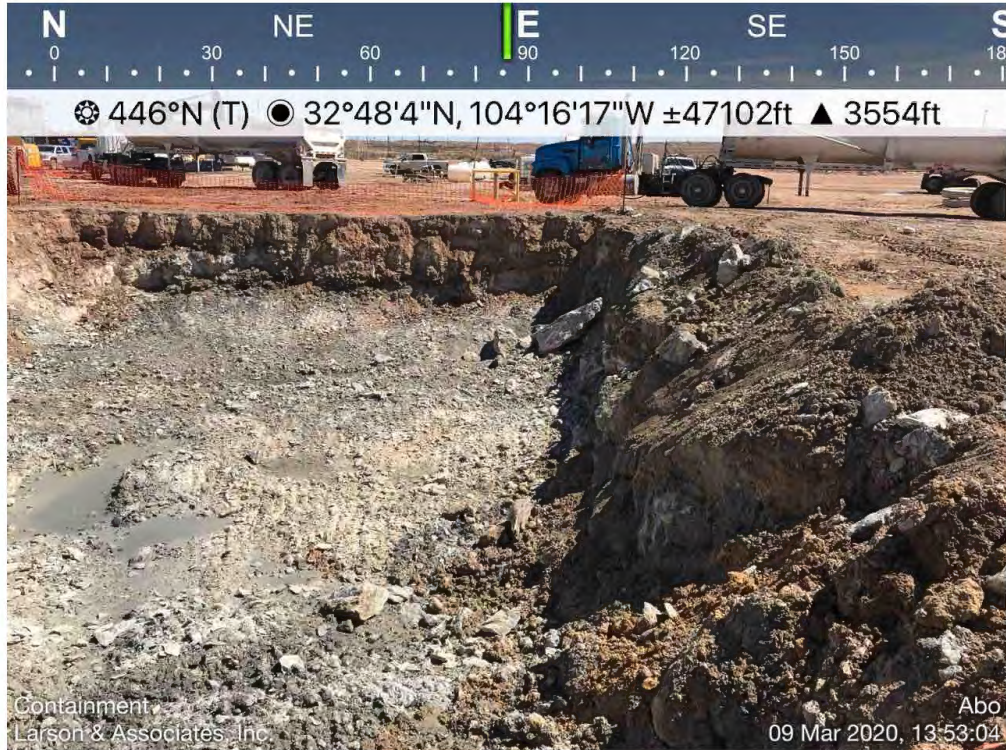
Clark Building (EA-12) Excavation (C-13) Viewing North, February 28, 2020



Clark Building (EA-12) Excavation (C-13) Viewing North, February 28, 2020



Clark Building (EA-12) Excavation (C-13 – C-14) Viewing North, February 28, 2020



Clark Building (EA-12) Excavation (C-15 and C-16) Viewing South, March 9, 2020



Clark Building (EA-12) Excavation (C-2 – C-4) Viewing North, March 25, 2020



Clark Building (EA-12) Excavation (C-2 – C-4) Viewing North, March 25, 2020



Clark Building (EA-12) Excavation (C-10 – C-12) Viewing South, March 25, 2020



Clark Building (EA-12) Excavation (C-13 and C-14) Viewing North, March 25, 2020



Engine 9 Building (EA-13) Excavation Viewing Northwest, February 25, 2020



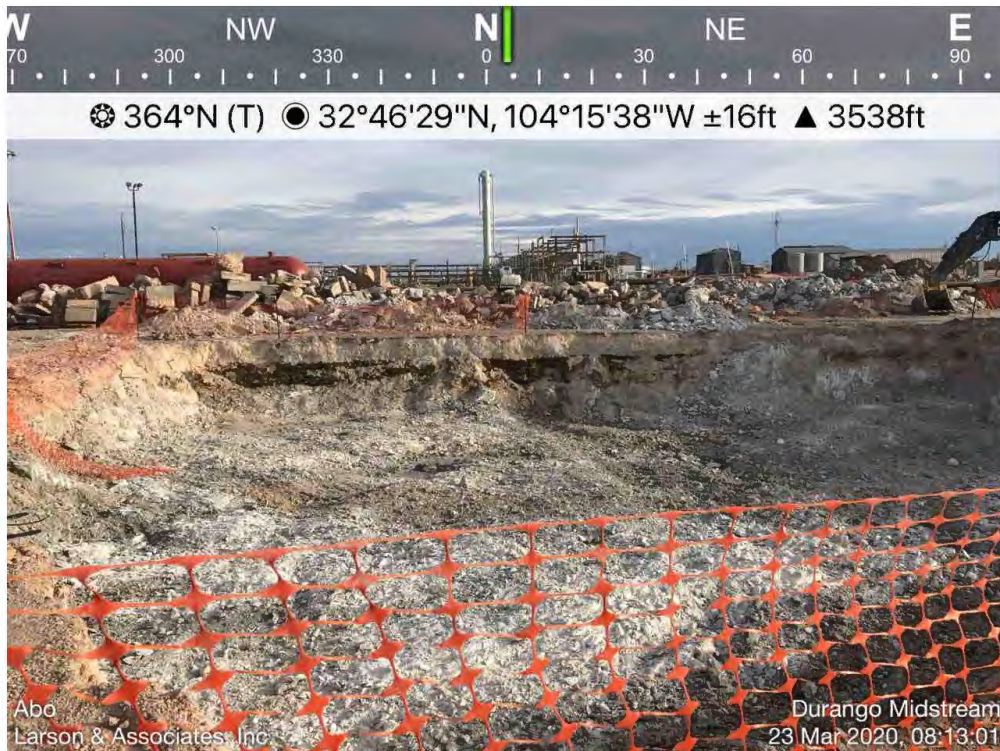
Engine 9 Building (EA-13) Excavation Viewing East, February 25, 2020



Engine 9 Building (EA-13) Excavation Viewing South, February 25, 2020



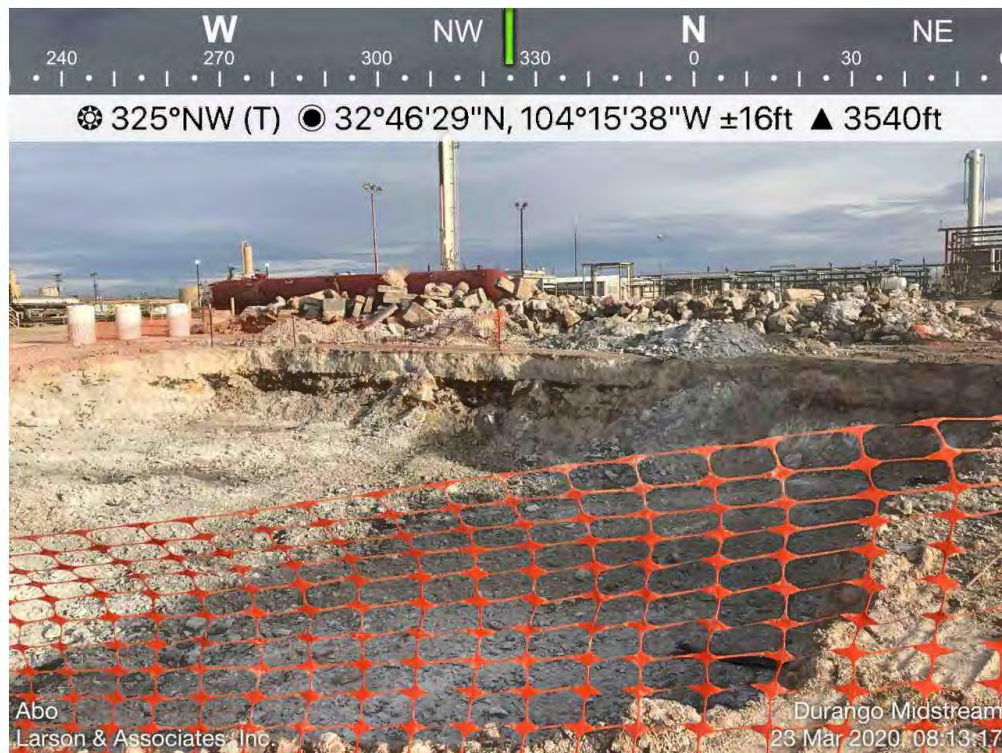
Engine 9 Building (EA-13) Excavation Viewing West, February 25, 2020



Engine 9 Building (EA-13) Excavation Viewing Northeast, March 23, 2020



Engine 9 Building (EA-13) Excavation Viewing Southwest, March 23, 2020



Engine 9 Building (EA-13) Excavation Viewing Northwest, March 23, 2020



Engine 9 Building (EA-13) Excavation Viewing Northeast, March 25, 2020



Engine 9 Building (EA-13) Excavation Viewing North, March 25, 2020



Engine 9 Building (EA-13) Excavation Viewing West, March 25, 2020



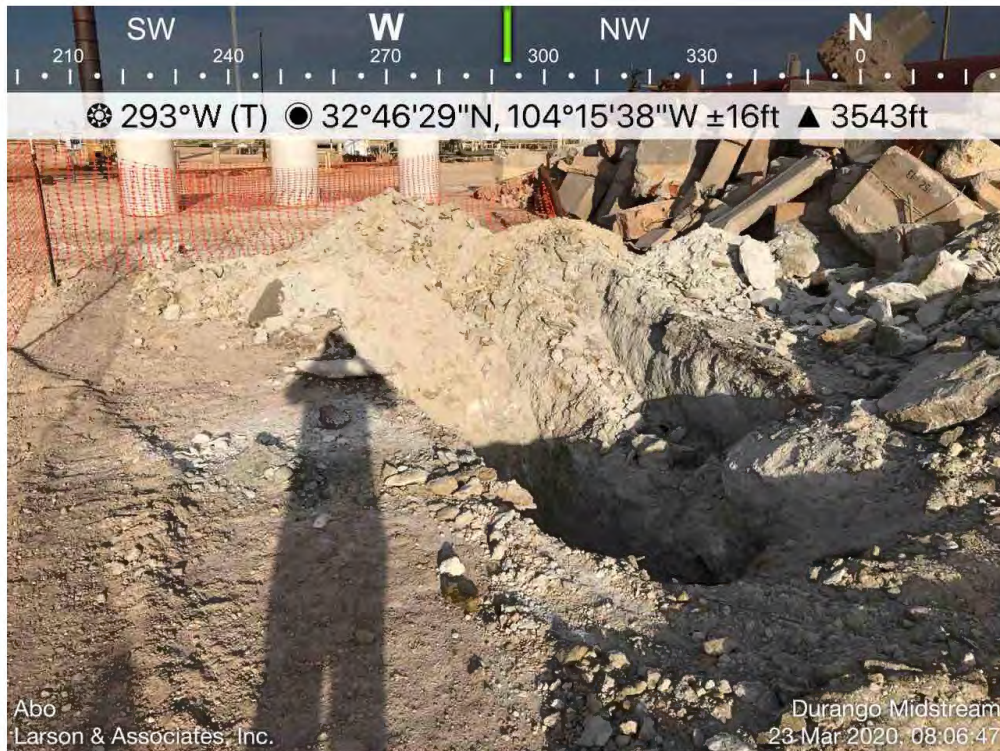
Engine 9 Building (EA-13) Excavation Viewing Northwest, March 25, 2020



Engine 9 Building (EA-13) Excavation Viewing South, March 25, 2020



Area North of Engine 9 Building (S-4A) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-5A) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-5A), March 23, 2020



Area North of Engine 9 (EA-14) Building (S-5A) Viewing East, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-4A) Viewing East, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-10) Viewing Southwest, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-4B) Viewing Northwest, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-4B) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-5B) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-8) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-8) Viewing North, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-11) Viewing West, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-11) Viewing East, March 23, 2020



Area North of Engine 9 (EA-14) Building (S-8) Viewing North, March 25, 2020



Area North of Engine 9 (EA-14) Building (S-9) Viewing West, March 25, 2020



Area North of Engine 9 (EA-14) Building Viewing South, March 25, 2020



Area North of Engine 9 (EA-14) Building Viewing Southwest, March 25, 2020



Hydrovac Containment (EA-15) Viewing East, March 6, 2020



North Containment (EA-15) Viewing Northeast, March 27, 2020



West Containment (EA-15) Viewing North, March 27, 2020



Remediated Containments Viewing Northeast, April 8, 2020