Armando Martinez
Operations Lead, Portfolio Operations Central

October 20, 2021

New Mexico Oil Conservation Division – District I
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Vacuum Glorieta West Satellite 3
Deferral Request Report
NMOCD Case No. 1RP-3648
Lea County, New Mexico

Dear Bradford Billings:

Chevron Environmental Management Company (CEMC) submits herein the *Deferral Request Report* for 1RP-3648, Vacuum Glorieta West Satellite 3. The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of CEMC. Based on the data presented in this Report and concurrence from the NMOCD, a deferral for no further assessments or additional cleanup actions are requested at the Site until after abandonment of the facility.

If you have any questions regarding this submittal, please contact Scott Foord of Arcadis at (713) 953-4853 or me at (505) 690 5408.

Respectfully,

Armando Martinez

Encl. Deferral Request Report - Vacuum Glorietta West Satellite 3

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ENVIRONMENT

Subject:
Deferral Request Report
2018 HES Transfer Site
Vacuum Glorieta West Unit Satellite 3
NMOCD Case No. 1RP-3648
Lea County, New Mexico

Date:
April 28, 2020

Contact:
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Our ref:
B0048616.SAT3

ARCADIS U.S., Inc.
TX Engineering License # F-533
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Dear whom it concerns:

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) prepared this Site Closure Report (Report) for the Vacuum Glorieta West Unit Satellite 3 (VGWU Sat 3), located in Lea County, New Mexico (Site; **Figure 1**). The purpose of the Report is to present final soil boring locations, excavation activities, results of samples collected, and data evaluation performed as part of the investigations after the May 16, 2015 release of 11.31 barrels (bbls) (42 gallons per bbl) of produced water (**Attachment 1**). This Report summarizes the field activities completed and the results of samples collected during soil investigation activities conducted on Site in March, June, and September of 2016, August 2017, and additionally, the remediation via excavation of impacted soils in October 2018.

SITE DESCRIPTION AND BACKGROUND

Site Location and Description

The Site is located within the Vacuum Glorieta West Unit (VGWU) approximately 14.5 miles southwest of Lovington, New Mexico. New Mexico Highway 238 is located approximately 0.44 mile east of the Site.

The Site is located in the western edge of the Permian Basin, a 75,000-square-mile area in west Texas and New Mexico that is populated by numerous oil and gas production wells. In New Mexico, the Permian Basin extends to Roosevelt County to the north and Chaves County to the west.

Climate

Monthly average temperatures near the Site vary from a minimum of 27.9 degrees Fahrenheit (°F) in January to a maximum of 93.9°F in July (Western Regional Climate Center [WRCC] Hobbs, New Mexico [294026] weather station). Average annual precipitation recorded for the area of the Site from the available WRCC period of record between 1912 and 2016 was approximately 15.75 inches per year (WRCC 2019a).

Due to the arid climate, the Site experiences low precipitation and high evaporation rates. The average annual evaporation from the available WRCC period of record between 1914 and 2005 was approximately 87.68 inches per year (WRCC 2019b).

Regional Geology and Hydrogeology

The Site elevation is approximately 4,000 feet (ft) above mean sea level (amsl). The Site is located on the Llano Estacado of the Western High Plains, an ecoregion of the Great Plains of North America. The Site is positioned immediately east of the Mescalero Ridge, which demarcates the western boundary of the (Miocene to Pliocene) High Plains Ogallala Formation (Reeves 1972). A rapid drop in elevation of 200 feet (ft) to 250 ft occurs west of the northwest-trending Mescalero Ridge. The Ogallala formation is unconfined and is predominantly composed of unconsolidated alluvial fan deposits of sand and gravel near the base, overlain by interbedded sand and clay in the upper portion of the formation (Seni 1980). Repeated depositional events on the High Plains surface beginning approximately 7 million years ago, followed by aerial exposure, generated a thick sequence of caliche horizons that are competent enough to act as a cliff for the expression of Mescalero Ridge. These hard caliche deposits form the upper portion of the stratigraphic sequence. In the Site area, the Ogallala Formation is underlain by red beds of the Upper Triassic-age Dockum Group consisting of claystones, sandstones, and siltstones. Aquifers within the Dockum Group are not considered a major water resource in the area of the Site due to poor water production rates and elevated levels of natural dissolved solids.

The main source of fresh groundwater in the area of the Site comes from the Ogallala aquifer. The Ogallala aquifer has a thickness of approximately 100 ft in the vicinity of the Site and is considered the primary source of fresh water in the area. Depth to the groundwater regionally ranges from approximately 120 ft to 135 ft below ground surface (bgs).

Water-supply wells located within the region are completed in the Ogallala aquifer, also known as the High Plains Aquifer (HPA).

Based on satellite imagery, no surface-water bodies were identified within 2 miles of the Site (GoogleEarth 2018). In February 2019, Arcadis reviewed information obtained from the New Mexico Office of the State Engineer (NMOSE) online database (NMOSE 2019). Results of the database inquiry indicated that no water-supply wells are located within a radius of 1,000 ft of the Site. In addition, results of the database review indicate average depth to groundwater is 131 ft bgs (**Attachment 2)**. Depth to groundwater was also measured at VGWUBATTERY-MW1, located approximately 0.70 miles northwest of the Site, at a depth of 133.43 ft bgs on October 1, 2018.

INITIAL RELEASE RESPONSE ACTIVITIES

According to the New Mexico Oil Conservation Division (NMOCD) Notification of Release and Correction Action Form (Form C-141) submitted on May 26, 2015, a release of 11.31 bbls of produced water occurred at the Site on May 16, 2015 due to significant rainfall causing the sump pump to overrun. Chevron personnel from the Mid-Continent Business Unit (MCBU) stopped the release and conducted the initial response activities. On March 29, 2016, Chevron personnel excavated visually affected soil in the area to a depth of approximately 1 foot and collected five discrete confirmation soil samples (1, 2, 3, 4 and 5) from the base of the excavation. Sample locations are presented in **Figure 2**. Soil samples were collected in laboratory provided bottles and submitted to Cardinal Laboratories in Hobbs, NM for the following compounds:

- Benzene, toluene, ethylene, and xylenes (collectively referred to as BTEX) in accordance with United States Environmental Protection Agency (USEPA) Method 8021B
- Chloride in accordance with Standard Method 4500Cl-B
- Total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) in accordance with USEPA Method 8015M

The complete laboratory analytical results with chain of custody documentation are included in **Attachment 3**. Laboratory analytical results are summarized in **Table 1** and displayed on **Figure 2**. The analytical data indicated:

- BTEX compounds were not detected above their respective laboratory reporting limits
- Chloride was detected in each of the five samples collected at concentrations ranging from 304 milligrams per kilogram (mg/kg) (Sample #1) to 928 mg/kg (Sample #5), which prompted additional site assessment activities
- TPH-GRO was not detected above respective laboratory reporting limits; and
- TPH-DRO was detected in Sample #5 at a concentration of 4,250 mg/kg.

After collecting discrete confirmation soil samples, Chevron backfilled the excavation. Information regarding material used to backfill the excavation nor the information regarding the disposal method of the excavated soil was available to Arcadis.

Pursuant to NMOCD requirements (NMOCD 1993), a Form C-141 (**Attachment 1)** detailing the location, volume of release, and initial and planned cleanup efforts was submitted by Chevron for the release.

2016 AND 2017 SOIL INVESTIGATIONS

2016 Soil Investigation

In June and September 2016, Arcadis conducted site assessment activities to characterize the lateral and vertical extents of potentially affected soil at the Site. Soil boring locations were selected based on the results of confirmation soil sampling completed at the Site in March 2016, locations of pipelines and other equipment at the Site, and the extent of the release as documented by Chevron MCBU personnel during the initial response activities. Soil boring locations are shown on **Figure 2**.

Prior to conducting drilling activities, each boring location was cleared for subsurface utilities to caprock refusal at approximately 0.5 ft bgs to 1-ft bgs utilizing air knife soft digging technology. Each soil boring was then advanced using air rotary drilling and soil cuttings were continuously logged according to the Unified Soil Classification System (USCS) for stratigraphic characteristics. Lithologic data indicate that the subsurface material primarily consists of caliche (soil carbonate) profiles including “caprock,” nodular, and sandy caliche layers from approximately 0 ft to 22 ft bgs. Weakly cemented calcareous sandstone is present from 22 ft to 30 ft bgs, with a fine grain sand unit starting at 55 ft bgs. Boring logs for VGWUSAT3-01 through VGWUSAT3-05 are presented in **Attachment 4**. Nineteen soil samples from five soil borings (VGWUSAT3-01 through VGWUSAT3-05) were collected from each boring location ranging from a depth of 4 ft bgs to 60 ft bgs.

Soil samples were placed in laboratory-supplied containers and submitted under appropriate chain of custody protocols to Xenco Laboratories (Xenco) in Midland, TX for the analysis of chloride by USEPA Method 300.0. Analysis of soil samples from VGWUSAT3-01 (20’), VGWUSAT3-01 (30’), VGWUSAT3-04 (10’) and VGWUSAT3-04 (20’) were put on hold pending analytical results. A total of 13 soil samples from the 2016 investigation were analyzed for chloride (**Table 1**).

Following sampling, the boreholes were filled with soil cuttings and grouted to ground surface. The ground surface was restored to match the surrounding conditions.

Chloride was detected in 12 of the 13 soil samples analyzed with concentrations ranging from 12.0 mg/kg (VGWUSAT3-03 at 40 ft bgs) to 3,590 mg/kg (VGWUSAT3-02 at 10 ft bgs). Pursuant to the New Mexico Oil Conservation Division (NMOCD) requirements (NMOCD 1993) directive published in 1993 by the NMOCD, 2016 chloride results were initially compared to the soil remediation action level of 600 mg/kg required for vertical delineation, and 250 mg/kg required for lateral delineation. Although vertical delineation had been achieved, chloride was detected at concentrations greater than the soil remediation action level of 250 mg/kg for lateral delineation in all surface soil samples, with the exception of surface soil samples collected from VGWUSAT3-04.

The cumulative analytical results for chloride are provided in **Table 1**. Laboratory analytical results with chain of custody documentation are provided in **Attachment 3**.

2017 Soil Investigation

To further evaluate the lateral and vertical extent of affected soil at the Site, Arcadis advanced two soil borings (VGWUSAT3-06 and VGWUSAT3-07) on August 14 and 15 of 2017. Soil boring locations are shown on **Figure 2**.

Prior to conducting drilling activities, each boring location was cleared for subsurface utilities to caprock refusal at approximately 0.5 ft bgs to 1-ft bgs utilizing air knife soft digging technology. Each soil boring was then advanced using air rotary drilling and soil cuttings were continuously logged according to the USCS for stratigraphic characteristics. Soil samples were field screened for the presence of volatile organic compounds using a photo ionization detector (PID) and for chloride using Quantab® field screening methodology (Boyer 2004). Soil sample collection intervals and total depths were contingent on chloride concentrations observed during field screening. No staining or elevated PID readings were observed during drilling activities. VGWUSAT3-06 was advanced to 30 ft bgs, and VGWUSAT3-07 was advanced to 60 ft bgs. Based on chloride field screening, samples were collected at the 4, 10, 20, and 30-

ft bgs intervals from VGWUSAT3-06, and at 4, 10, 20, 30, 40, 50, and 60 ft bgs from VGWUSAT3-07. Following sampling, the boreholes were filled with soil cuttings and grouted to ground surface. The ground surface was restored to match the surrounding conditions. Boring logs for VGWUSAT3-06 and VGWUSAT3-07 are presented in **Attachment 4**.

Soil samples were placed in laboratory-supplied containers and submitted under appropriate chain of custody protocols to Xenco Laboratories (Xenco) in Midland, TX for the analysis of chloride by USEPA Method 300.0. Analysis of soil samples from VGWUSAT3-06 (20 ft bgs through 30 ft bgs) were placed on hold pending analytical results. A total of nine soil samples from the 2017 investigation were analyzed for chloride.

Chloride was detected in all nine soil samples analyzed with concentrations ranging from 27.8 mg/kg (VGWUSAT3-06 at 10 ft bgs) to 607 mg/kg (VGWUSAT3-07 at 50 ft bgs). Chloride concentrations were below the historical soil remediation action level for vertical delineation in all samples with the exception of VGWUSAT3-07 (50 ft bgs) which exhibited a chloride concentration of 607 mg/kg. Four of the nine samples (VGWUSAT3-06 at 4 ft bgs and VGWUSAT3-07 at 30, 40, and 50 ft bgs) contained chloride concentrations above the historical lateral delineation limit of 250 mg/kg.

The cumulative analytical results for chloride are provided in **Table 1**. Laboratory analytical results with chain of custody documentation are provided in **Attachment 3**.

2017 GEOPHYSICAL SURVEY

On December 6 and 7, 2017, Arcadis performed an electromagnetic conductivity survey over accessible areas of the Site covering approximately 3.2 acres (**Figures 3** through **5**). The objective of the survey was to determine background electrical conductivity (EC) response and identify EC anomalies within the surveyed area to assess the lateral extent of possible produced water-related soil impacts.

The particularly high electrical conductivity of oil field production water makes the detection of produced water-related soil impacts by geophysical methods sensitive to the electrical conductivity of soil and groundwater a reliable approach. There are several methods that can be used for quantifying the EC of soil and groundwater, but a class of instruments which utilize the concept of electromagnetic induction to measure EC are very effective in many situations. Electromagnetic (EM) instruments that operate in what is known as the frequency domain are well suited for shallow investigations. EM conductivity instruments consist of co-planar transmitter and receiver coils, and a power source that can be handled by one or two persons. During the operation of the instrument, the transmitter coil is energized by an alternating current and radiates an electromagnetic field into the earth. This transmitted primary field induces electrical currents in the earth below the instrument. The magnitude of the induced current is proportional to the EC of the earth materials beneath the instrument. The induced current flow generates a secondary electromagnetic field, phase-lagged behind the primary field, that is detected by the receiver coil on the instrument. The receiver coil also detects the primary field and uses the ratio of the secondary to primary field to calculate the EC of the earth. This reading represents a bulk EC measurement, known as the apparent EC, within a volume of ground directly beneath the instrument down to its effective depth of penetration. The penetration depth is determined by the transmitter frequency, coil separation, height of instrument off the ground surface, and orientation of the coils.

For this Site, Arcadis performed shallow-imaging EM surveys with a GEM-2 broadband electromagnetic sensor manufactured by Geophex Ltd. The GEM-2 is a digital, multi-frequency sensor capable of transmitting and receiving a digitally synthesized arbitrary waveform containing multiple frequencies. The approximate depth of exploration for a given earth medium is determined by the operating frequency of the sensor. By utilizing multiple frequencies to measure the earth response from several depths, a concept of the approximate three-dimensional distribution of subsurface materials can be created. The quad-phase and in-phase instrument response values are stored in a handheld computer for subsequent processing. Data were collected in vertical dipole mode using five discrete frequencies (93 kilohertz (kHz), 63 kHz, 18.3 kHz, 5.3 kHz, and 1.5 kHz). The higher instrument frequencies are sensitive to shallow variations in the subsurface, while the lower instrument frequencies are more sensitive to deeper variations in the subsurface.

Data were collected along lines spaced approximately 10 ft apart with nearly continuous data coverage along these lines. Positioning information was provided by a Hemisphere A100 global positioning system (GPS) receiver with dynamic, real time correction (submeter accuracy). GPS and instrument response data were simultaneously recorded in a handheld field computer. All GPS and geophysical data collected during the survey were merged into a single data file for subsequent data processing.

Once EM data sets were collected, they were transferred to a laptop computer while on Site. The data sets were preprocessed using *WinGEM* from Geophex Ltd. and imported into *Surfer Version 15* to create relative conductivity maps. A raw plot of the GPS positions was created to verify the sufficiency of data coverage, which was verified affirmatively. Preliminary contour plots of the raw apparent conductivity data were also created while on Site to verify that the data were within acceptable bounds and that project objectives were being met.

To further assess EC variations in the subsurface, additional GEM-2 data were collected along a west to east transect line (A-A') and a south to north transect line (B-B') as depicted in **Figure 3**. In order to produce a more robust model, data from nine discrete frequencies were collected along the two transect lines (93 kHz, 80kHz, 63kHz, 38.3kHz, 18.3kHz, 12.4 kHz, 5.3kHz, 2.4kHz, and 1.5 kHz). The data were inverse modeled using the software IX1Dv3 by Interpex to produce electrical resistivity cross-sections of the subsurface. Note that modeled GEM-2 2D data at depths near the limit of the penetration of the GEM-2 instrument are less constrained with results typically displaying distortions near the base of the model.

Interpretation of Geophysical Results

Figures 4 through **5** present color-filled contour maps for the 63kHz GEM2 data (4-ft bgs to 8-ft bgs sensing depth), the 18.3kHz GEM2 data (6-ft bgs to 10-ft bgs sensing depth), and the 5.3kHz GEM2 data (8-ft bgs to 12-ft bgs sensing depth), respectively. **Figures 6** and **7** present GEM-2 2D modelling results along the A-A' and B-B' profiles. Locations of metallic pipelines (based on field observations and aerial photographs) and 2016 soil sample locations are denoted in the figures.

The color scale used in **Figures 3** through **7** is designed to visually portray the deviation from the background EC conditions which are in the gray to blue green range. In contrast, anomalous areas of high EC are shown in upper portion of the color scale, from green to yellow to red, progressively indicating higher EC which is generally assumed to reflect proportionately higher total dissolved solids (TDS) pore fluids (produced water influence) or conductive metallic features (Site structure or subsurface utilities). Anomaly intensity and physical dimensions typically reveal whether the anomalies are due to

pore fluid chemistry or metallic objects. Note that the data output for the GEM-2 model profiles presented in **Figures 6** and **7** is in units of electrical resistivity (ohm-meters, logarithmic scale) which is the inverse quantity of electrical conductivity measured in millisiemens per meter (mS/m). A corresponding logarithmic color scale is used in **Figures 6** and **7** to depict areas of low electrical resistivity in the A-A' and B-B' profiles with warm colors (yellow to red) that correlate to areas of high EC in the contour maps.

In general, an elevated EC response is observed throughout the central portion of the area surveyed with EC values >200 mS/m (red colors) as shown in **Figures 3** through **5**. The lateral footprint of the high EC response intersects the red outlined spill area and extends to the west. The west to east GEM-2 A-A' profile shown in **Figure 6** displays a similar lateral extent of high EC response, with elevated conductivity present throughout the central portion of the A-A' profile. The A-A' model resolves a confined “perched” high conductivity zone that extends from approximately 1 ft bgs to 28 ft bgs, providing some vertical delineation of the elevated EC response and suggesting that produced water impacts may not extend to deeper soils. The south to north GEM-2 B-B' profile shown in **Figure 7** bisects the eastern extent of the high EC zone, within the red outlined spill area. The B-B' model resolves two confined “perched” high conductivity zones that extend to a maximum depth of 15 ft bgs, suggesting that produced water impacts are shallower in depth at the eastern extent of the spill.

2018 SOIL EXCAVATION

To minimize soil containing chloride concentrations exceeding the revised 2018 closure criteria (CC) of 600 mg/kg outlined in Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) concerning natural resources and wildlife, oil and gas, and releases which became effective on August 14, 2018, Arcadis conducted a limited excavation (up to 4 ft bgs) at the Site to establish potential vegetation in the future. On October 22, 2018, Arcadis began potholing the perimeters of the excavation areas as well as exposing buried lines within or in proximity to the area using hydrovac technology. Following line exposure, the area within the potholed perimeters were excavated using a backhoe to approximately 0.5 ft bgs to 4 ft bgs as displayed in **Figure 8**. The excavation boundaries were limited by the requirement to maintain the structural integrity of facility equipment and due to encountering caprock caliche. Three excavations were completed on Site. Approximately 356 cubic yards of impacted soil was excavated and stockpiled on visqeen onsite pending laboratory analytical analysis. A photo log detailing each phase of excavation activities can be seen on **Attachment 5**. Sidewall confirmation soil samples were collected from the base of each wall of the three excavations (**Figure 8**). Four sidewall soil samples were collected from excavation area VGWUSAT3-001 located on the southeast end of the Site at depths between 0.58 ft bgs and 0.60 ft bgs:

- VGWUSAT3-001-N
- VGWUSAT3-001-E
- VGWUSAT3-001-S
- VGWUSAT3-001-W

Four sidewall soil samples were collected from excavation area VGWUSAT3-005 located south of VGWUSAT-001 in the Southeast corner of the Site at depth between 0.25 ft bgs and 0.45 ft bgs.

- VGWUSAT3-005-N
- VGWUSAT3-005-E
- VGWUSAT3-005-S
- VGWUSAT3-005-W

Eighteen sidewall soil samples, including four composite samples, were collected from the larger excavation (VGWUSAT3-Large) located in the north central section of the Site at depths between 0.50 ft bgs and 4 ft bgs:

- VGWUSAT3-Large-#1
- VGWUSAT3-Large-#2
- VGWUSAT3-Large-#3
- VGWUSAT3-Large-#4
- VGWUSAT3-Large-#5
- VGWUSAT3-Large-#6
- VGWUSAT3-Large-#6Stepout
- VGWUSAT3-Large-#7
- VGWUSAT3-Large-#8
- VGWUSAT3-Large-#8Stepout
- VGWUSAT3-Large-#9
- VGWUSAT3-Large-#9Stepout
- VGWUSAT3-Large-#10
- VGWUSAT3-Large-#11
- VGWUSAT3-Large-N Wall Comp
- VGWUSAT3-Large-S Wall Comp
- VGWUSAT3-Large-E Wall Comp
- VGWUSAT3-Large-W Wall Comp

Confirmation sidewall soil samples were placed in laboratory-supplied containers and submitted under appropriate chain of custody protocols to Xenco for the following analysis:

- Chloride by USEPA Method 300.0
- Total Petroleum Hydrocarbons Motor Oil Range Organics (TPH-MRO), TPH-GRO, TPH-DRO, and Total TPH by Method SW8015

Following excavation of the chloride and TPH impacted soils, either to below the revised 2018 CC regulatory limits or to the extent possible due to the location of subsurface or surface infrastructure, clean caliche fill was used to backfill the center section of the large excavation and clean top soil was used to backfill the North and East ends of the large excavation area as well as both VGWUSAT3-001 and VGWUSAT3-005 excavated areas. Due to caprock caliche not being encountered at a depth of 4 ft bgs along the furthermost eastern end of the large excavation, a visqeen liner was installed preventing possible chloride migration into deeper soils. Each excavation area was backfilled with clean topsoil and native grass seed was then spread over each area. Upon receiving laboratory confirmation, the soil removed using hydrovac technology was transported offsite to Environmental Solutions (Controlled Recovery INC. Halfway R-360) in Hobbs, New Mexico on October 24 and 25, 2018 for disposal and the excavated soil using a backhoe was taken to Sundance Services in Eunice, New Mexico for disposal in accordance with state and federal regulations on October 29 through November 1, 2018. Non-hazardous waste manifests for the transportation and disposal of all excavated soils can be viewed in **Attachment 6**.

Soil Sample Results

The analytical data from the soil samples collected in October and November 2018 were compared to the revised 2018 NMAC CC.

A summary of the analytical results for the four sidewall soil samples collected from excavation area VGWUSAT3-001 located on the Southeast end of the Site is as follows:

- TPH-GRO was not detected above the laboratory reporting limit in any of the four samples
- TPH-DRO was not detected above the laboratory reporting limit in any of the four samples

- TPH-MRO was not detected above the laboratory reporting limit in any of the four samples
- Total TPH was not detected above the laboratory reporting limit in any of the four samples
- Chloride was detected in each of the four soil samples with concentrations ranging from 15.5 mg/kg (VGWUSAT3-001-W) to 571 mg/kg (VGWUSAT3-001-S). Chloride concentrations did not exceed the 2018 NMAC CC of 600 mg/kg

A summary of the analytical results for the four sidewall soil samples collected from excavation area VGWUSAT3-005 located South of VGWUSAT-001 is as follows:

- TPH-GRO was not detected above the laboratory reporting limit in any of the four samples
- TPH-DRO was not detected above the laboratory reporting limit in any of the four samples
- TPH-MRO was not detected above the laboratory reporting limit in any of the four samples
- Total TPH was not detected above the laboratory reporting limit in any of the four samples
- Chloride was detected in three of the four soil samples with concentrations ranging from 12.5 mg/kg (VGWUSAT3-005-S) to 150 mg/kg (VGWUSAT3-005-W). Chloride concentrations did not exceed the 2018 NMAC CC of 600 mg/kg

A summary of the analytical results for the 14 sidewall soil samples, excluding the four composite samples, collected from the larger excavation located in the north central section of the Site is as follows:

- TPH-GRO was not detected above the laboratory reporting limit in any of the 14 samples
- TPH-DRO was detected in one (VGWUSAT3-Large- #3) of the 14 samples at a concentration of 83.8 mg/kg
- TPH-MRO was detected in one (VGWUSAT3-Large- #3) of the 14 samples at a concentration of 40.5 mg/kg
- Total TPH was detected in one (VGWUSAT3-Large- #3) of the 14 samples at a concentration of 124 mg/kg. The total TPH concentration detected in VGWUSAT3-Large- #3 slightly exceeds the 2018 NMAC CC of 100 mg/kg
- Chloride was detected in each of the 14 soil samples with concentrations ranging from 44.7 mg/kg (VGWUSAT3-Large- #7) to 3,560 mg/kg (VGWUSAT3-Large- #8). Chloride concentrations exceeded the 2018 NMAC CC of 600 mg/kg in seven of the 14 sidewall soil samples

A summary of the analytical results for the four composite samples collected from the sidewalls of the larger excavation located in the north central section of the Site is as follows:

- TPH-GRO was not detected above the laboratory reporting limit in any of the four samples
- TPH-DRO was detected in each of the 4 soil samples with concentrations ranging from 17.8 mg/kg (VGWUSAT3-Large-S Wall Comp) to 38.5 mg/kg (VGWUSAT3-Large-W Wall Comp)
- TPH-MRO was not detected above the laboratory reporting limit in any of the four samples
- Total TPH was detected in each of the four samples with concentrations ranging from 17.8 mg/kg (VGWUSAT3-Large-S Wall Comp) to 38.5 mg/kg (VGWUSAT3-Large-W Wall Comp). Total TPH

consist entirely of TPH-DRO compounds. The Total TPH concentration does not exceed the 2018 NMAC CC of 100 mg/kg

- Chloride was detected in each of the four soil samples with concentrations ranging from 643 mg/kg (VGWUSAT3-Large-E Wall Comp) to 3,930 mg/kg (VGWUSAT3-Large-W Wall Comp). Chloride concentrations exceeded the 2018 NMAC CC of 600 mg/kg in each of the sidewall composite soil samples

Analytical results for the confirmation soil samples collected from each sidewall of the three excavation areas on Site in October 2018 are presented **Table 1** and displayed in **Figure 8**. The laboratory analytical report is included in **Attachment 3.**

CONCLUSION

A release of produced water occurred at the Site on May 16, 2015 due to a sump pump overrun caused by significant rainfall. Chevron personnel excavated visually affected soil in the area to a depth of approximately 1 ft bgs and collected five discrete confirmation soil samples from the base of the excavation on March 29, 2016. Chloride concentrations in three of the five confirmation soil samples were above the 2009 CC of 500 mg/kg, which prompted additional site assessment activities. In June and September 2016 and August 2017, additional soil samples were collected to assess soil impacts within the observed aerial extent of the release. Of the 22 soil samples collected during the 2016 and 2017 site assessment, only five were above the 2018 NMAC revised closure criteria of 600 mg/kg.

To minimize soil exceeding the 600 mg/kg chloride concentration, Arcadis completed a limited excavation at the Site. Shallow soil (up to 4 ft bgs) with chloride concentrations above 600 mg/kg was excavated to the extent possible and replaced with clean soil to establish regrowth of vegetation at the Site in the future. Sidewall samples collected from the two smaller excavations located in the south-southeastern portion of the Site confirmed chloride concentrations in the soil are below the 2018 NMAC revised CC. Although eight of the eighteen sidewall soil samples collected from the large excavation area in the northern portion of the site were reported with chloride concentrations above 600 mg/kg, chloride impacted soils have been excavated to the extent possible due to the location of subsurface and surface infrastructure at the Site (**Figure 8**).

Soil and geophysical data presented in this report support a conclusion that impacted soil associated with the reported release at the Site poses no significant threat to groundwater resources or other receptors. The A-A' model resolves a confined “perched” high conductivity zone that extends from approximately 1 ft bgs to 28 ft bgs, providing some vertical delineation of the elevated EC response and suggesting that produced water impacts may not extend to deeper soils. The B-B' model resolves two confined “perched” high conductivity zones that extend to a maximum depth of 15 feet bgs, suggesting that produced water impacts are shallower in depth at the eastern extent of the spill. Depth-to-groundwater at the site is expected to be approximately 130 ft bgs (**Attachment 2**).

CLOSING

Chloride impacted soils have been excavated to the extent possible due to the location of oil field production facility structures both aboveground and belowground preventing additional drilling and other subsurface work in this area. Delineation activities beyond the pipelines and oilfield facility equipment

surrounding the release would not be representative of the release area. For similar reasons, full remediation of the May 16, 2015 release location will need to be deferred until operations at the facility cease and the associated structures and equipment are abandoned. Potential migration of remaining chloride to groundwater is not expected due to observed fine-grained nature of caliche layers present beneath the site and the results of the geophysical survey suggesting that produced water impacts may not extend to deeper soils. A visqeen liner was installed to prevent chloride migration into deeper soils at a depth of 4 ft bgs along the furthermost eastern end of the large excavation where the confining caprock was not encountered. Based on the data presented in this Report and concurrence from the NMOCD, a deferral for no further assessments or additional cleanup actions required at the Site until after abandonment of the facility is being requested for the Site.

If you have any questions or comments regarding the information presented in this Report, please contact Scott Foord at 713.953.4853 or at William.Foord@arcadis.com.

Sincerely,

Arcadis U.S., Inc.

Scott Foord
Project Manager

Greg Cutshall
Program Manager

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Jason Michelson (CEMC)

Enclosures:

Tables

1 Soil Sampling Analytical Results

Figures

1 Site Vicinity Map
2 Release and Soil Boring Location Map
3 GEM-2 Conductivity Map – 63kHz
4 GEM-2 Conductivity Map – 18.3kHz
5 GEM-2 Conductivity Map – 5.3kHz
6 Modelled GEM-2 Profile – Section A-A'
7 Modelled GEM-2 Profile – Section B-B'
8 Soil Excavation Analytical Results

Attachments

1 Form C-141
2 New Mexico Office of The State Engineer Water Column/Average Depth to Water
3 Laboratory Reports
4 Soil Boring Logs
5 Photographic Log
6 Non-Hazardous Waste Manifests

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TABLES

Table 1
Soil Analytical Results
Chevron EMC
Vacuum Glorieta West Unit Sat 3
Lea County, New Mexico

ARCADIS Design & Consultancy for natural and built assets

Boring Location ID	Sample Date	Sample Type	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMAC Closure Criteria [(a)]				10	---	---	---	50		2,500		100	600
1	3/29/2016	Confirmation	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	--	--	304
2	3/29/2016	Confirmation	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	--	--	544
3	3/29/2016	Confirmation	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	280	--	--	464
4	3/29/2016	Confirmation	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	--	--	**640**
5	3/29/2016	Confirmation	1	<0.05	<0.05	0.050	<0.150	<0.300	<50.0	**4,250**	--	--	**928**
VGWUSat3-01	6/24/2016	Confirmation	4	--	--	--	--	--	--	--	--	--	**681**
			10	--	--	--	--	--	--	--	--	--	54.4
VGWUSat3-02	6/24/2016	Confirmation	4	--	--	--	--	--	--	--	--	--	**3,340**
			10	--	--	--	--	--	--	--	--	--	**3,590**
			20	--	--	--	--	--	--	--	--	--	546
			30	--	--	--	--	--	--	--	--	--	**635**
			60	--	--	--	--	--	--	--	--	--	22.9
VGWUSat3-03	9/14/2016	Confirmation	4	--	--	--	--	--	--	--	--	--	454.0
			40	--	--	--	--	--	--	--	--	--	12.0
VGWUSat3-04	6/24/2016	Confirmation	4	--	--	--	--	--	--	--	--	--	58.4
			30	--	--	--	--	--	--	--	--	--	72.2
VGWUSat3-05	9/14/2016	Confirmation	4	--	--	--	--	--	--	--	--	--	**943**
			40	--	--	--	--	--	--	--	--	--	<5.0
VGWUSat3-06	8/15/2017	Confirmation	4	--	--	--	--	--	--	--	--	--	279
			10	--	--	--	--	--	--	--	--	--	28
VGWUSat3-07	8/14/2017	Confirmation	4	--	--	--	--	--	--	--	--	--	68.7
			10	--	--	--	--	--	--	--	--	--	36.8
			20	--	--	--	--	--	--	--	--	--	64.9
			30	--	--	--	--	--	--	--	--	--	427
			40	--	--	--	--	--	--	--	--	--	489
			50	--	--	--	--	--	--	--	--	--	**607**
			60	--	--	--	--	--	--	--	--	--	140
VGWUSAT3-001-W	10/23/2018	Confirmation	0.58	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	15.5
VGWUSAT3-001-S	10/23/2018	Confirmation	0.6	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	571
VGWUSAT3-001-N	10/23/2018	Confirmation	0.65	--	--	--	--	--	< 14.9	< 14.9	< 14.9	< 14.9	66.9
VGWUSAT3-001-E	10/23/2018	Confirmation	0.6	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	87.9
VGWUSAT3-005-W	10/23/2018	Confirmation	0.45	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	150
VGWUSAT3-005-S	10/23/2018	Confirmation	0.3	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	12.5
VGWUSAT3-005-N	10/23/2018	Confirmation	0.25	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	66.8
VGWUSAT3-005-E	10/23/2018	Confirmation	0.3	--	--	--	--	--	< 14.9	< 14.9	< 14.9	< 14.9	< 4.95

Table 1
Soil Analytical Results
Chevron EMC
Vacuum Glorieta West Unit Sat 3
Lea County, New Mexico

ARCADIS Design & Consultancy for natural and built assets

Boring Location ID	Sample Date	Sample Type	Sample Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMAC Closure Criteria [(a)]				10	---	---	---	50	2,500			100	600
VGWUSAT3-Large- #1	10/25/2018	Confirmation	0.5	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	67.5
VGWUSAT3-Large- #2	10/25/2018	Confirmation	0.67	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	404
VGWUSAT3-Large- #3	10/25/2018	Discrete	1.4	--	--	--	--	--	< 15.0	83.8	40.5	**124**	159
VGWUSAT3-Large- #4	10/25/2018	Discrete	0.75	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	**974**
VGWUSAT3-Large- #5	10/25/2018	Confirmation	0.6	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	137
VGWUSAT3-Large- #6	10/26/2018	Confirmation	0.68	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	**1020**
VGWUSAT3-Large-#6stepout	10/31/2018	Discrete	0.55	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	260
VGWUSAT3-Large-#7	10/25/2018	Confirmation	3.8	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	44.7
VGWUSAT3-Large-#8	10/26/2018	Discrete	2.3	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	**3560**
VGWUSAT3-Large-#8Stepout	10/26/2018	Discrete	1.3	--	--	--	--	--	< 14.9	< 14.9	< 14.9	< 14.9	**1140**
VGWUSAT3-Large #9	10/26/2018	Discrete	2.2	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	**1460**
VGWUSAT3-Large-#9Stepout	10/26/2018	Discrete	2.3	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	**1320**
VGWUSAT3-Large-#10	10/25/2018	Confirmation	3.2	--	--	--	--	--	< 15.0	< 15.0	< 15.0	< 15.0	137
VGWUSAT3-Large-#11	10/25/2018	Discrete	2.4	--	--	--	--	--	< 14.9	< 14.9	< 14.9	< 14.9	**643**
VGWUSAT3-Large-N Wall Comp	11/1/2018	Composite Confirmation	--	--	--	--	--	--	< 15.0	19.8	< 15.0	19.8	**1140**
VGWUSAT3-Large-W Wall Comp	11/1/2018	Composite Confirmation	--	--	--	--	--	--	< 15.0	38.5	< 15.0	38.5	**3930**
VGWUSAT3-Large-E Wall Comp	11/1/2018	Composite Confirmation	--	--	--	--	--	--	< 14.9	21.8	< 14.9	21.8	**634**
VGWUSAT3-Large-S Wall Comp	11/1/2018	Composite Confirmation	--	--	--	--	--	--	< 15.0	17.8	< 15.0	17.8	**1170**

Legend:

VALUES	Analytical value is greater than or equal to NMAC closure criteria
mg/kg	Miligram(s) per kilogram
<	Analyte was not detected above the specified method reporting limit
--	Not Analyzed/Not Listed
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
NMAC	New Mexico Administrative Code
TPH-GRO	Total Petroleum Hydrocarbons as Gasoline Range Organics
TPH-DRO	Total Petroleum Hydrocarbons as Diesel Range Organics
TPH-MRO	Total Petroleum Hydrocarbons as Motor Oil Range Organics

Notes:
(a) Title 19, Chapter 15 of the NMAC for Natural Resources and Wildlife, Oil and Gas, and Releases, 19.15.29 NMAC. August 2018.

FIGURES

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: B.SMALL PM: TM
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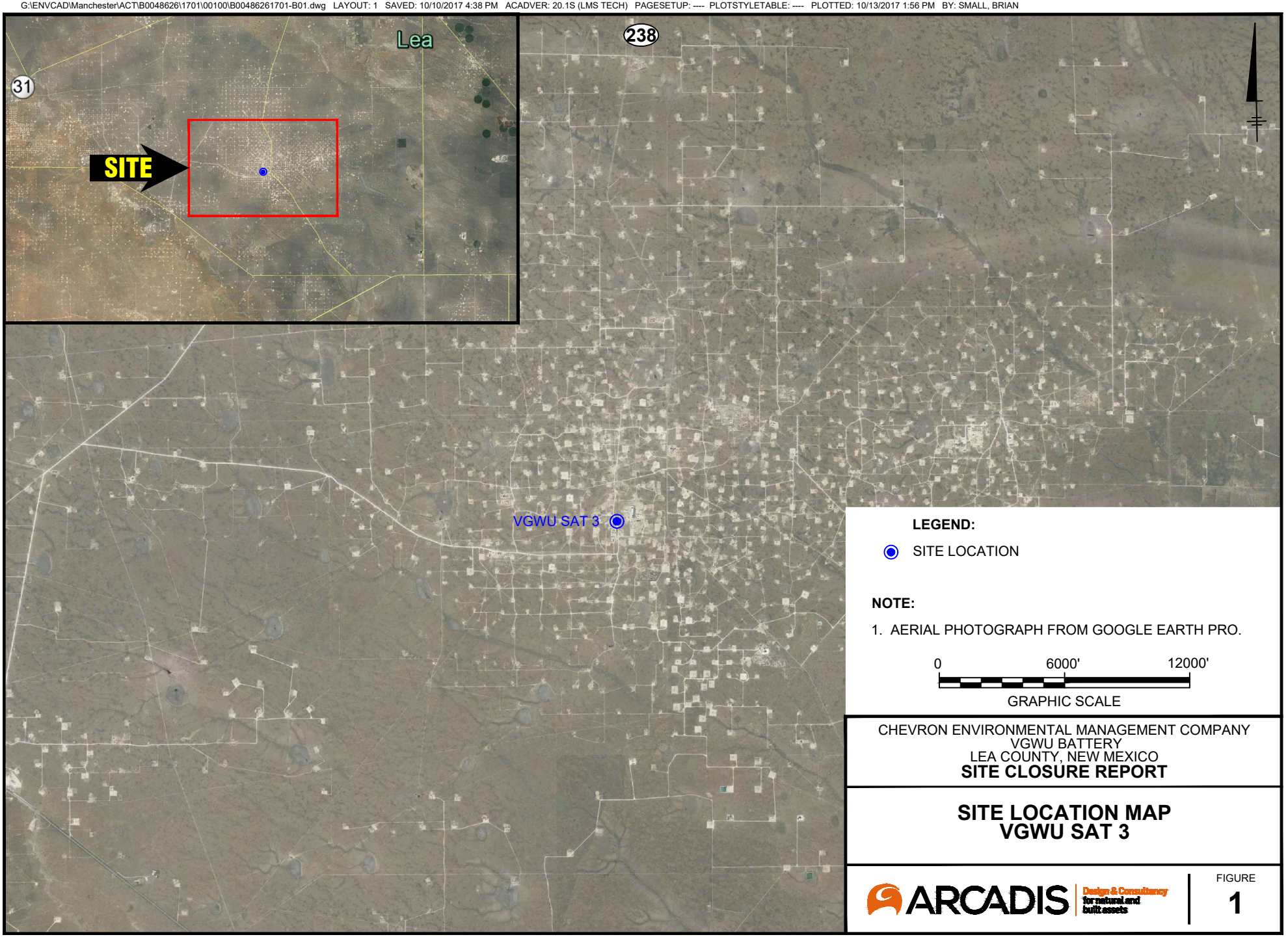


LEGEND:

SITE LOCATION

NOTE:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.

0 6000' 12000'

GRAPHIC SCALE

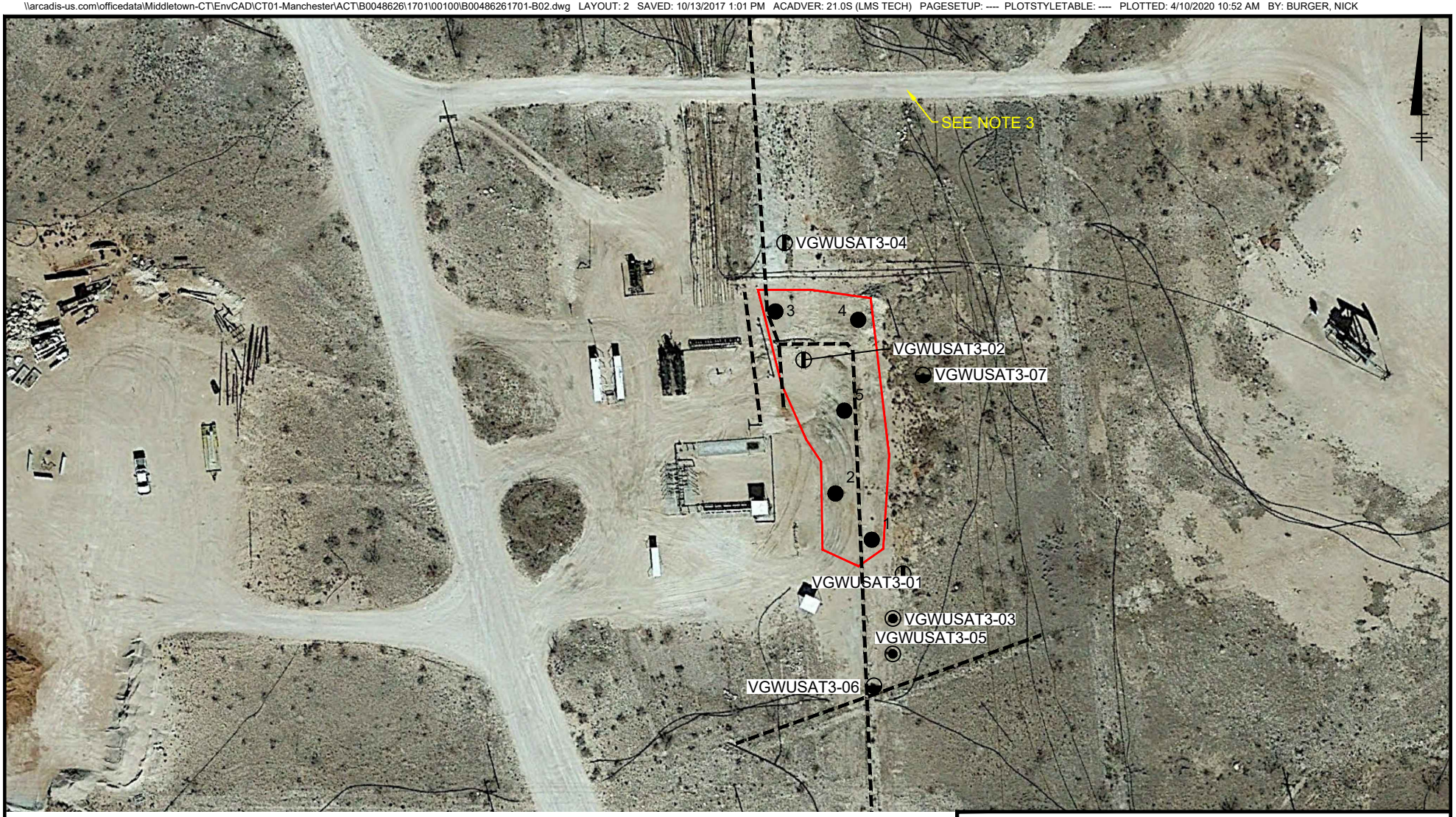
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VGWU BATTERY
LEA COUNTY, NEW MEXICO
SITE CLOSURE REPORT

SITE LOCATION MAP
VGWU SAT 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: B.SMALL PM: TM
\\arcadis-us.com\officedata\Middletown-CT\EnvCAD\CT01-Manchester\ACT\B0048626\1701\00100\B00486261701-B02.dwg LAYOUT: 2 SAVED: 10/13/2017 1:01 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 4/10/2020 10:52 AM BY: BURGER, NICK



LEGEND:

- JULY 2015 ASSESSMENT SOIL SAMPLING LOCATION
- AUGUST 2016 SHALLOW BORING LOCATION
- JUNE 2016 DEEP BORING LOCATION
- AUGUST 2017 SOIL BORING LOCATION
- APPROXIMATE EXTENT OF SPILL
- UNDERGROUND UTILITY LINE

NOTES:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.
2. FMT REQUIRES BORING TO BE AT MINIMUM 10 FEET FROM UNDERGROUND UTILITIES.
3. GROUND IS DISTURBED ALONG THIS CORRIDOR. UNDERGROUND LINES MAY BE PRESENT.

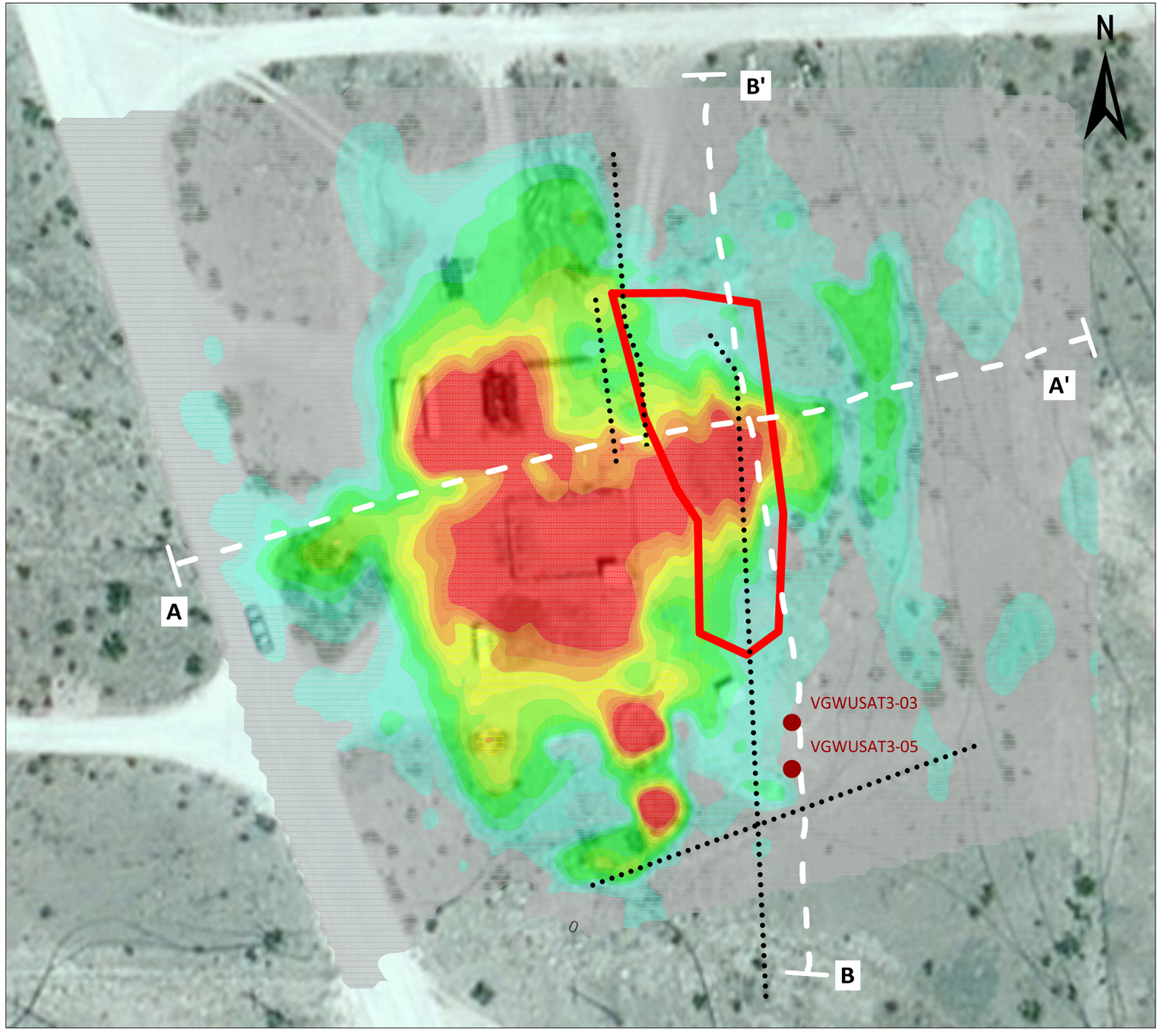
0 80' 160'
GRAPHIC SCALE

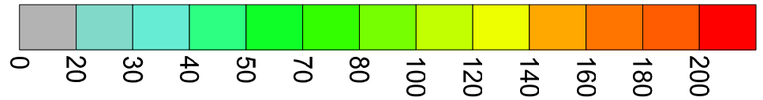
VACUUM AND SKELLY FUNCTIONAL MANAGEMENT TEAM UNITS
LEA AND EDDY COUNTIES, NEW MEXICO
SITE ASSESSMENT REPORT

RELEASE AND SOIL BORING LOCATION MAP - VGWU SAT 3

ARCADIS Design & Consultancy for natural and built assets

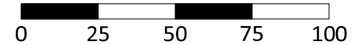
FIGURE
2





LEGEND

- UNDERGROUND UTILITY LINE
- APPROXIMATE EXTENT OF SPILL
- AUGUST 2016 SHALLOW BORING LOCATION
- MODELLED GEM-2 PROFILE



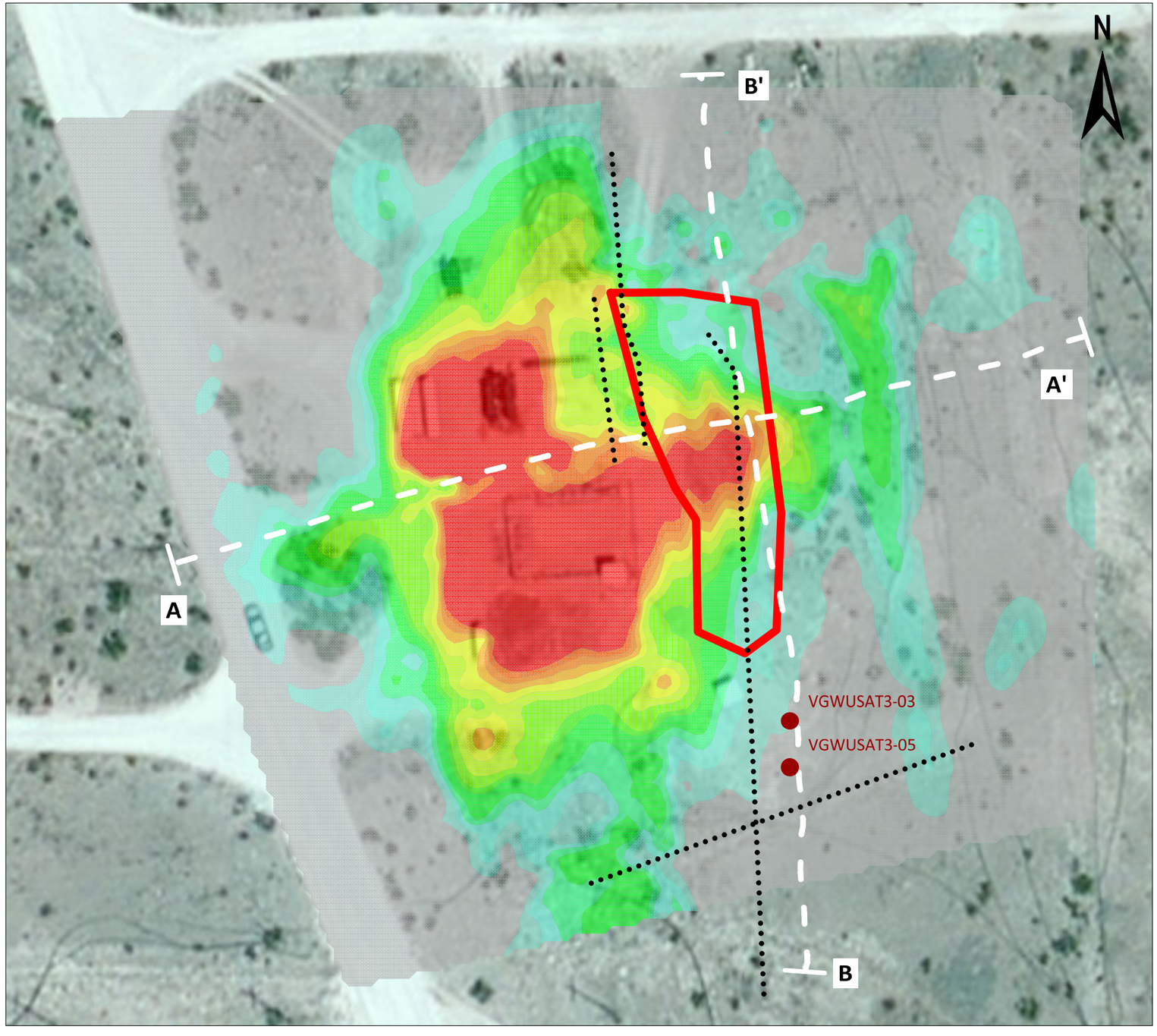
NOTE: AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.

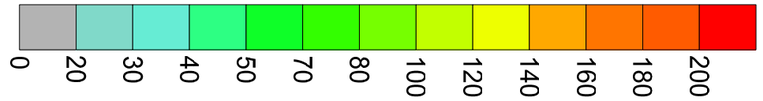
ARCADIS Design & Consultancy for natural and built assets

GEM-2 Electrical Conductivity Depth Map - 63 kHz Frequency
Approximate Penetration Depth of 4 to 8 feet bgs

VGWU SAT 3
Chevron Environmental Management Company
VGWU BATTERY
Lea County, New Mexico

FIGURE 3

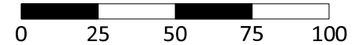




ELECTRICAL CONDUCTIVITY
milliSiemens/meter

LEGEND

- UNDERGROUND UTILITY LINE
- APPROXIMATE EXTENT OF SPILL
- AUGUST 2016 SHALLOW BORING LOCATION
- MODELLED GEM-2 PROFILE



SCALE IN FEET

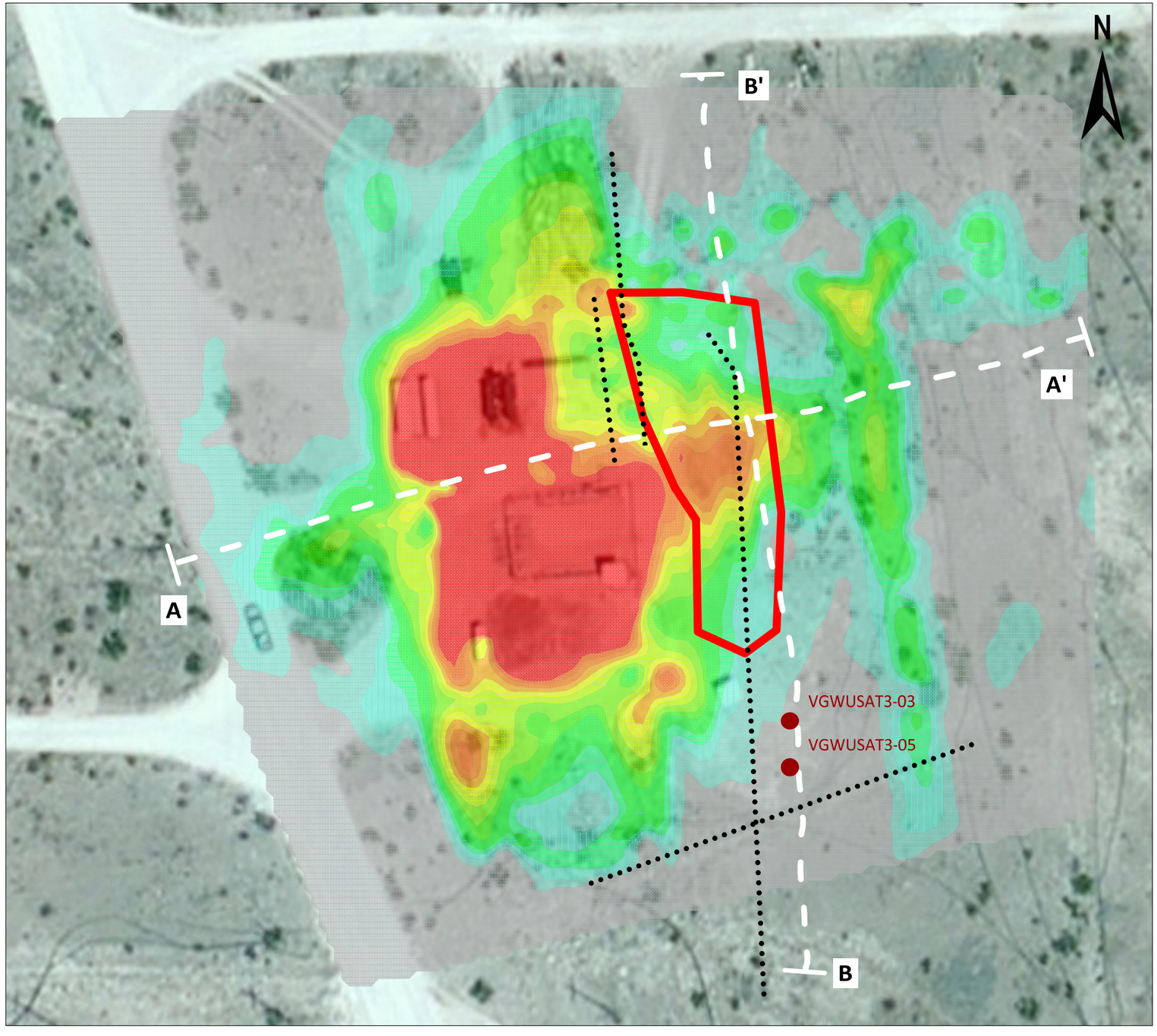
NOTE: AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.

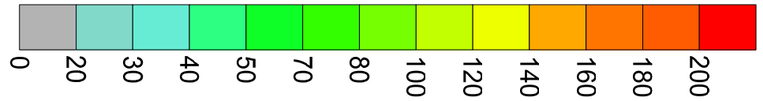
ARCADIS Design & Consultancy for natural and built assets

GEM-2 Electrical Conductivity Depth Map - 18.3 kHz Frequency
Approximate Penetration Depth of 6 to 10 feet bgs

VGWU SAT 3
Chevron Environmental Management Company
VGWU BATTERY
Lea County, New Mexico

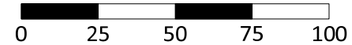
FIGURE 4





LEGEND

- UNDERGROUND UTILITY LINE
- APPROXIMATE EXTENT OF SPILL
- AUGUST 2016 SHALLOW BORING LOCATION
- MODELLED GEM-2 PROFILE



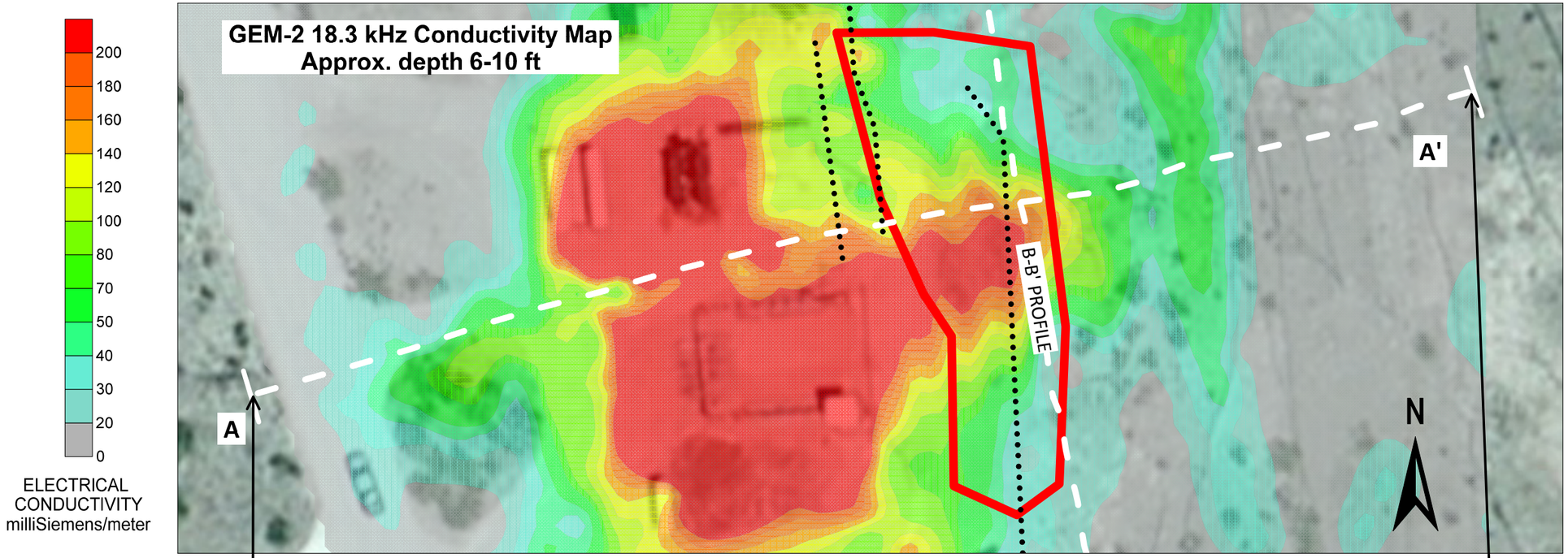
NOTE: AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.

ARCADIS Design & Consultancy for natural and built assets

GEM-2 Electrical Conductivity Depth Map - 5.3 kHz Frequency
Approximate Penetration Depth of 8 to 12 feet bgs

VGWU SAT 3
Chevron Environmental Management Company
VGWU BATTERY
Lea County, New Mexico

FIGURE 5

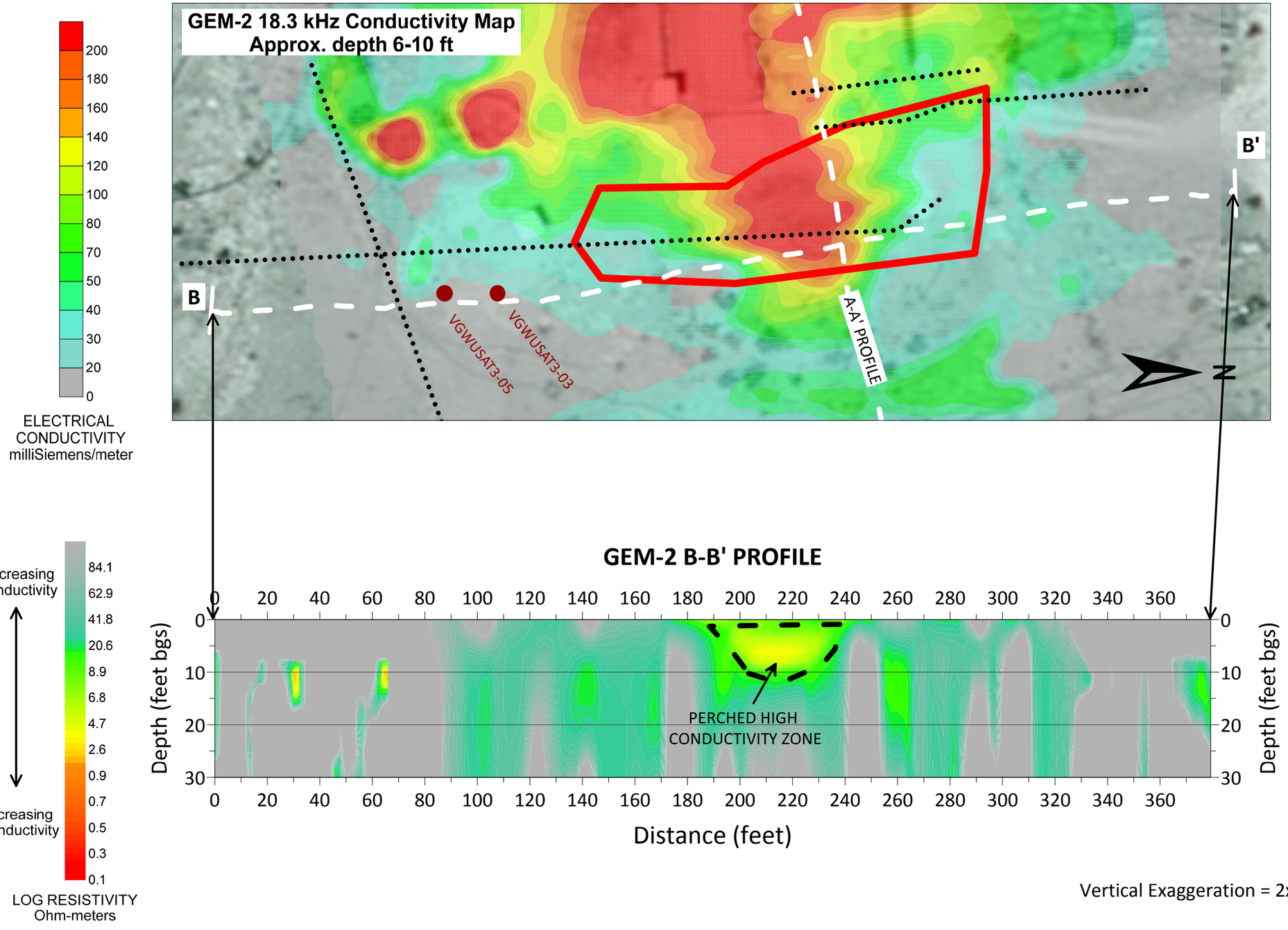


ARCADIS Design & Consultancy for natural and built assets

MODELLED GEM-2 PROFILE - SECTION A-A'

VGWU SAT 3
Chevron Environmental Management Company
VGWU BATTERY
Lea County, New Mexico

FIGURE 6



Vertical Exaggeration = 2x

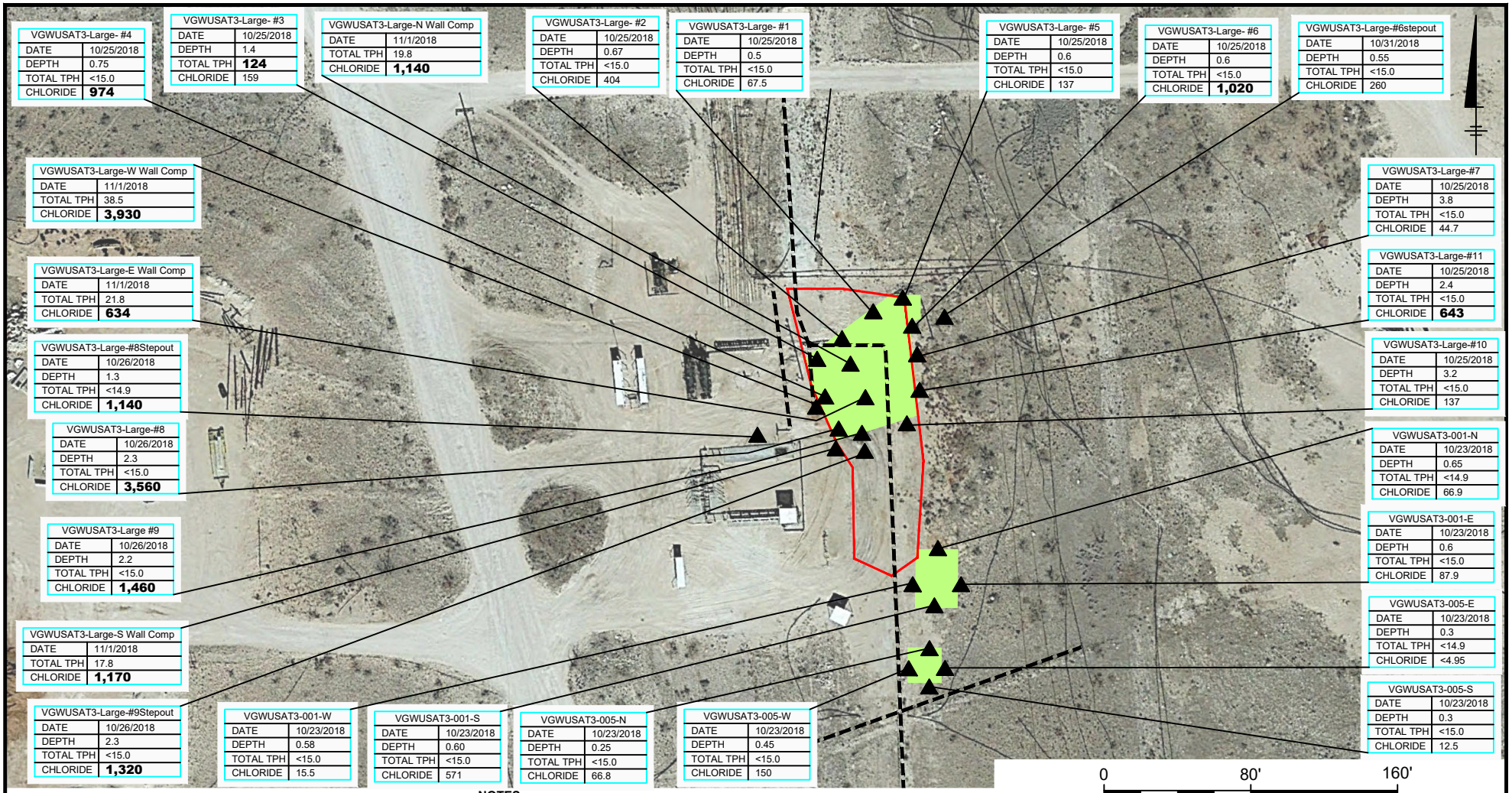
ARCADIS Design & Consultancy for natural and built assets

MODELLED GEM-2 PROFILE - SECTION B-B'

VGWU SAT 3
Chevron Environmental Management Company
VGWU BATTERY
Lea County, New Mexico

FIGURE 7

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: B.SMALL PM: TM
C:\Users\nburger\BIM 360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\VGWU Sat 3\2019\B0048626.1701\01-DWG\P-MW-Data-Fig1.dwg LAYOUT: 2 SAVED: 4/10/2020 1:47 PM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 4/10/2020 1:49 PM BY: BURGER, NICK



GRAPHIC SCALE

LEGEND:

- ▲ SIDEWALL SAMPLE LOCATION
- APPROXIMATE EXTENT OF SPILL
- UNDERGROUND UTILITY LINE
- EXCAVATION AREA
- TPH TOTAL PETROLEUM HYDROCARBONS

NOTES:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.
2. CHEVRON MCBU REQUIRES BORING TO BE AT MINIMUM 10 FEET FROM UNDERGROUND UTILITIES.
3. GROUND IS DISTURBED ALONG THIS CORRIDOR. UNDERGROUND LINES MAY BE PRESENT.
4. ALL RESULTS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg).
5. NEW MEXICO OIL CONSERVATION DIVISION (NMOCD) SOIL REMEDIATION ACTION LEVEL OF 250 mg/kg FOR LATERAL DELINEATION.
6. NEW MEXICO ADMINISTRATIVE CODE CLOSURE CRITERIA OF 600 mg/kg FOR CHLORIDE.
7. NEW MEXICO ADMINISTRATIVE CODE CLOSURE CRITERIA OF 100 mg/kg FOR TOTAL TPH.
8. CLARIFY DEPTH IS MEASURED IN FEET BELOW GROUND SURFACE.

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VGWU BATTERY
LEA AND EDDY COUNTIES, NEW MEXICO

VGWU SAT 3 SOIL EXCAVATION ANALYTICAL RESULTS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
8

ATTACHMENT 1

Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: Chevron USA Inc.	Contact: Edem Sededji
Address: 15 Smith Rd., Midland, TX, 79705	Telephone No. 432-234-4437
Facility Name: VGWU Satellite 3	Facility Type: Satellite

Surface Owner: New Mexico	Mineral Owner: New Mexico	API No. 3002531132

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	1	18S	34E	280	North	2080	East	Lea

Closest well: VGWU 114 **Latitude** 32.7835 **Longitude** -103.5123

NATURE OF RELEASE

Type of Release: Release to land	Volume of Release: 11 bbls of Produced Water	Volume Recovered: 0
Source of Release: Sump pump	Date and Hour of Occurrence: 05/16/2015 09:30 PM	Date and Hour of Discovery 05/16/2015 09:30 PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Sump pump overran due to substantial rain fall causing 11.31 bbls of produced water spilled to ground.

Describe Area Affected and Cleanup Action Taken.*

The area affected was around Vacuum Glorietta West Unit Battery. A vacuum truck was called out and cleaned up the spill. The next step is for backhoe to excavate top layer of soil approximate 12" deep and soil samples will be taken to the laboratory to determine TPH, Benzene and Chlorides contaminants levels. In case any of the contaminants levels are still high, the spill location will be turned over to Chevron management Company (EMC) for further remediation.

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

Signature: Edem Sededji	OIL CONSERVATION DIVISION
Printed Name: Edem Sededji	Approved by Environmental Specialist:
Title: HE Specialist	Approval Date: / Expiration Date:
E-mail Address: etpo@chevron.com	Conditions of Approval: / Attached ☐
Date: 05/26/2015 Phone: 432-234-4437	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: CHEVRON U.S.A. Inc.	Contact: Jason Michelson
Address: 100 Northpark Blvd Covington, LA 70433	Telephone No.: Office: 985.773.6746 Mobile: 281.660.8564
Facility Name: VGWU Satellite 3	Facility Type: Satellite

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 3002531132

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	1	18S	34E	280	North	2080	East	Lea

Closest Well: Latitude 32.7835° **Longitude** -103.5123°

NATURE OF RELEASE

Type of Release: Release to land	Volume of Release: 11 bbls of total fluids	Volume Recovered: 0
Source of Release: Sump pump	Date and Hour of Occurrence: 05/16/15 09:30 PM	Date and Hour of Discovery: 05/16/15 09:30 PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Sump pump overran due to substantial rainfall causing 11.31 barrels (bbls) of produced water to spill onto the ground.

Describe Area Affected and Cleanup Action Taken.*

The area affected was around the Vacuum Glorietta West Unit Battery. Initial response activities consisted of using a vacuum truck to clean up the spill. Affected soil was excavated to a depth of 12 inches and soil samples were collected from the bottom of the excavation and submitted for laboratory analysis of total petroleum hydrocarbons (TPH), TPH diesel range organics (DRO), TPH gasoline range organics (GRO), BTEX (benzene, toluene, ethylbenzene, and total xylenes), total BTEX, and chloride.

In June 2016, September 2016, and August 2017 seven additional soil borings were installed to assess onsite soil conditions. Soil samples were submitted for laboratory analysis of chloride. Analytical data is attached as Table 1.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Jason Michelson	Approved by Environmental Specialist:
Title: Project Manager	Approval Date: / Expiration Date:
E-mail Address: JMichelson@chevron.com	Conditions of Approval: / Attached ☐
Date: Phone: (o) 985.773.6746 (m) 281.660.8564	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

Release Notification

Responsible Party

Responsible Party: Chevron USA	OGRID: 4243
Contact Name: Armando Martinez	Contact Telephone: 505-690-5408
Contact email: amarti@chevron.com	Incident # *(assigned by OCD)* nKJ1514727866
Contact mailing address:	

Location of Release Source

Latitude 32.7835 Longitude -103.5123

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: VGWU Satellite 3	Site Type: Satellite
Date Release Discovered: 05/16/2015	API# *(if applicable):* N/A

Unit Letter	Section	Township	Range	County
B	1	18S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 11	Volume Recovered (bbls): 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Sump pump overran due to substantial rain fall causing 11.31 bbls of produced water spilled to ground.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

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

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	131 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. **Attached.**
Field data: **Attached.**
Data table of soil contaminant concentration data: **Attached.**
Depth to water determination: **Greater than 100 ft bgs.**
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release: **None identified.**
Boring or excavation logs: **Attached**
Photographs including date and GIS information: **Photograph log attached.**
Topographic/Aerial maps; **Aerial map attached.**
Laboratory data including chain of custody: **Attached.**

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

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

Printed Name: Armando Martinez Title: Operations Lead Central

Signature:_____ _____ Date: _10/20/2021_____

email: ____ amarti@chevron.com _____ Telephone: 505-690-5408_____

OCD Only

Received by: _____ Date**:** _____

State of New Mexico
Oil Conservation Division

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

Remediation Plan

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

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

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

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

☒ Extents of contamination must be fully delineated. **Lateral delineation was achieved.**

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

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

Printed Name: Armando Martinez Title: Operation Lead Central

Signature:_____ _____ Date: _10/20/2021_____

email: amarti@chevron.com _____ Telephone: ____505-690-5408_____

OCD Only

Received by: _____ Date: _____

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

Signature: Bradford Billings Date: 11/02/2022

State of New Mexico
Oil Conservation Division

Incident ID	nKJ1514727866
District RP	1RP-3648
Facility ID	30-025-31132
Application ID	pKJ1514728011

ATTACHMENT 2

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

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twp	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 13820 POD1		L	LE	3	1	3	01	18S	34E	639472	3628296	240	150	131	19
L 13820 POD2		L	LE	3	1	3	01	18S	34E	639472	3628296	240	150	131	19

Average Depth to Water: **131 feet**
Minimum Depth: **131 feet**
Maximum Depth: **131 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 639272.6 **Northing (Y):** 3628431.33 **Radius:** 304.8

2/4/19 3:10 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

ATTACHMENT 3

Laboratory Reports

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 04, 2016

NICK HAMPTON

Chevron - Lovington

HCR 60 Box 423

Lovington, NM 88260

RE: SOIL SAMPLES

Enclosed are the results of analyses for samples received by the laboratory on 03/29/16 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Chevron - Lovington
NICK HAMPTON
HCR 60 Box 423
Lovington NM, 88260
Fax To: None

Received:	03/29/2016	Sampling Date:	03/29/2016
Reported:	04/04/2016	Sampling Type:	Soil
Project Name:	SOIL SAMPLES	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VGWU SAT 3 #1 (H600656-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/30/2016	ND	2.11	106	2.00	4.65	
Toluene*	<0.050	0.050	03/30/2016	ND	2.00	99.8	2.00	6.38	
Ethylbenzene*	<0.050	0.050	03/30/2016	ND	1.75	87.7	2.00	6.84	
Total Xylenes*	<0.150	0.150	03/30/2016	ND	5.39	89.8	6.00	6.36	
Total BTEX	<0.300	0.300	03/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/30/2016	ND	173	86.7	200	2.18	
DRO >C10-C28	<10.0	10.0	03/30/2016	ND	157	78.7	200	2.90	

Surrogate: 1-Chlorooctane *52.4 %* *35-147*

Surrogate: 1-Chlorooctadecane *57.3 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Chevron - Lovington
NICK HAMPTON
HCR 60 Box 423
Lovington NM, 88260
Fax To: None

Received:	03/29/2016	Sampling Date:	03/29/2016
Reported:	04/04/2016	Sampling Type:	Soil
Project Name:	SOIL SAMPLES	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VGWU SAT 3 #2 (H600656-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/30/2016	ND	2.11	106	2.00	4.65	
Toluene*	<0.050	0.050	03/30/2016	ND	2.00	99.8	2.00	6.38	
Ethylbenzene*	<0.050	0.050	03/30/2016	ND	1.75	87.7	2.00	6.84	
Total Xylenes*	<0.150	0.150	03/30/2016	ND	5.39	89.8	6.00	6.36	
Total BTEX	<0.300	0.300	03/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/30/2016	ND	173	86.7	200	2.18	
DRO >C10-C28	<10.0	10.0	03/30/2016	ND	157	78.7	200	2.90	

Surrogate: 1-Chlorooctane *79.6 %* *35-147*

Surrogate: 1-Chlorooctadecane *89.2 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Chevron - Lovington
NICK HAMPTON
HCR 60 Box 423
Lovington NM, 88260
Fax To: None

Received:	03/29/2016	Sampling Date:	03/29/2016
Reported:	04/04/2016	Sampling Type:	Soil
Project Name:	SOIL SAMPLES	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VGWU SAT 3 #3 (H600656-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/30/2016	ND	2.11	106	2.00	4.65	
Toluene*	<0.050	0.050	03/30/2016	ND	2.00	99.8	2.00	6.38	
Ethylbenzene*	<0.050	0.050	03/30/2016	ND	1.75	87.7	2.00	6.84	
Total Xylenes*	<0.150	0.150	03/30/2016	ND	5.39	89.8	6.00	6.36	
Total BTEX	<0.300	0.300	03/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/30/2016	ND	173	86.7	200	2.18	
DRO >C10-C28	**280**	10.0	03/30/2016	ND	157	78.7	200	2.90	

Surrogate: 1-Chlorooctane *75.9 %* *35-147*

Surrogate: 1-Chlorooctadecane *100 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Chevron - Lovington
NICK HAMPTON
HCR 60 Box 423
Lovington NM, 88260
Fax To: None

Received:	03/29/2016	Sampling Date:	03/29/2016
Reported:	04/04/2016	Sampling Type:	Soil
Project Name:	SOIL SAMPLES	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VGWU SAT 3 #4 (H600656-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/30/2016	ND	2.11	106	2.00	4.65	
Toluene*	<0.050	0.050	03/30/2016	ND	2.00	99.8	2.00	6.38	
Ethylbenzene*	<0.050	0.050	03/30/2016	ND	1.75	87.7	2.00	6.84	
Total Xylenes*	<0.150	0.150	03/30/2016	ND	5.39	89.8	6.00	6.36	
Total BTEX	<0.300	0.300	03/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/30/2016	ND	173	86.7	200	2.18	
DRO >C10-C28	<10.0	10.0	03/30/2016	ND	157	78.7	200	2.90	

Surrogate: 1-Chlorooctane *71.4 %* *35-147*

Surrogate: 1-Chlorooctadecane *76.3 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Chevron - Lovington
NICK HAMPTON
HCR 60 Box 423
Lovington NM, 88260
Fax To: None

Received:	03/29/2016	Sampling Date:	03/29/2016
Reported:	04/04/2016	Sampling Type:	Soil
Project Name:	SOIL SAMPLES	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VGWU SAT 3 #5 (H600656-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/30/2016	ND	2.11	106	2.00	4.65	
Toluene*	<0.050	0.050	03/30/2016	ND	2.00	99.8	2.00	6.38	
Ethylbenzene*	**0.050**	0.050	03/30/2016	ND	1.75	87.7	2.00	6.84	
Total Xylenes*	<0.150	0.150	03/30/2016	ND	5.39	89.8	6.00	6.36	
Total BTEX	<0.300	0.300	03/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *73.6-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**928**	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/30/2016	ND	173	86.7	200	2.18	
DRO >C10-C28	**4250**	50.0	03/30/2016	ND	157	78.7	200	2.90	

Surrogate: 1-Chlorooctane *74.8 %* *35-147*

Surrogate: 1-Chlorooctadecane *170 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Chevron		**BILL TO**	
Project Manager: Nick Hampton		P.O. #:	
Address: 56 Texas Camp Road		Company:	
City: Lovington	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name: Nick Hampton		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	Benzene	Chlorides
H600656																	
1	VGWU Sat 3 #1	G	1			✓					✓		3/29	11:30am	✓	✓	✓
2	VGWU Sat 3 #2	G	1			✓					✓		3/29		✓	✓	✓
3	VGWU Sat 3 #3	G	1			✓					✓		3/29		✓	✓	✓
4	VGWU Sat 3 #4	G	1			✓					✓		3/29		✓	✓	✓
5	VGWU Sat 3 #5	G	1			✓					✓		3/29		✓	✓	✓

Relinquished By: Nick Hampton	Date: 3/29/16 Time: 12:30pm	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
			REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2.2°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Analytical Report 532368

for

ARCADIS

Project Manager: Arti Patel

Chevron Sites

713.953.4841

21-JUL-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

21-JUL-16

Project Manager: **Arti Patel**
ARCADIS
1004 N. Big Spring St.
Midland, TX 79701

Reference: XENCO Report No(s): **532368**
Chevron Sites
Project Address: Hobbs, NM

Arti Patel:

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) 532368. 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. 532368 will be filed for 60 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
STATEA-10-04 4'	S	06-24-16 00:00	- 4 ft	532368-001
STATEA-10-04 10'	S	06-24-16 00:00	- 10 ft	532368-002
STATEA-10-04 20'	S	06-24-16 00:00	- 20 ft	532368-003
STATEA-10-04 30'	S	06-24-16 00:00	- 30 ft	532368-004
STATEA-10-03 4'	S	06-24-16 00:00	- 4 ft	532368-005
STATEA-10-03 10'	S	06-24-16 00:00	- 10 ft	532368-006
STATEA-10-03 20'	S	06-24-16 00:00	- 20 ft	532368-007
STATEA-10-03 30'	S	06-24-16 00:00	- 30 ft	532368-008
STATEA-10-01 4'	S	06-24-16 00:00	- 4 ft	532368-009
STATEA-10-01 10'	S	06-24-16 00:00	- 10 ft	532368-010
STATEA-10-01 20'	S	06-24-16 00:00	- 20 ft	532368-011
STATEA-10-01 30'	S	06-24-16 00:00	- 30 ft	532368-012
STATEA-10-02 4'	S	06-24-16 00:00	- 4 ft	532368-013
STATEA-10-02 10'	S	06-24-16 00:00	- 10 ft	532368-014
STATEA-10-02 20'	S	06-24-16 00:00	- 20 ft	532368-015
STATEA-10-02 30'	S	06-24-16 00:00	- 30 ft	532368-016
STATEA-10-02 50'	S	06-24-16 00:00	- 50 ft	532368-018
STATEA-10-02 70'	S	06-24-16 00:00	- 70 ft	532368-020
STATEA-10-05 4'	S	06-24-16 00:00	- 4 ft	532368-021
STATEA-10-05 10'	S	06-24-16 00:00	- 10 ft	532368-022
STATEA-10-05 20'	S	06-24-16 00:00	- 20 ft	532368-023
STATEA-10-05 30'	S	06-24-16 00:00	- 30 ft	532368-024
VGWUSAT3-02 4'	S	06-24-16 00:00	- 4 ft	532368-025
VGWUSAT3-02 10'	S	06-24-16 00:00	- 10 ft	532368-026
VGWUSAT3-02 20'	S	06-24-16 00:00	- 20 ft	532368-027
VGWUSAT3-02 30'	S	06-24-16 00:00	- 30 ft	532368-028
VGWUSAT3-02 60'	S	06-24-16 00:00	- 60 ft	532368-031
VGWUSAT3-04 4'	S	06-24-16 00:00	- 4 ft	532368-032
VGWUSAT3-04 30'	S	06-24-16 00:00	- 30 ft	532368-035
VGWUSAT3-01 4'	S	06-24-16 00:00	- 4 ft	532368-036
VGWUSAT3-01 10'	S	06-24-16 00:00	- 10 ft	532368-037
STATEA-10-02 40'	S	06-24-16 00:00	- 40 ft	Not Analyzed
STATEA-10-02 60'	S	06-24-16 00:00	- 60 ft	Not Analyzed
VGWUSAT3-02 40'	S	06-24-16 00:00	- 40 ft	Not Analyzed
VGWUSAT3-02 50'	S	06-24-16 00:00	- 50 ft	Not Analyzed
VGWUSAT3-04 10'	S	06-24-16 00:00	- 10 ft	Not Analyzed
VGWUSAT3-04 20'	S	06-24-16 00:00	- 20 ft	Not Analyzed
VGWUSAT3-01 20'	S	06-24-16 00:00	- 20 ft	Not Analyzed
VGWUSAT3-01 30'	S	06-24-16 00:00	- 30 ft	Not Analyzed

CASE NARRATIVE

Client Name: ARCADIS

Project Name: Chevron Sites

Project ID: *713.953.4841*
Work Order Number(s): *532368*

Report Date: *21-JUL-16*
Date Received: *06/25/2016*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-997612 Inorganic Anions by EPA 300/300.1
Lab Sample ID 532437-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 532368-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -021.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-04 4'** Matrix : Soil % Moisture : 5.73
Lab Sample Id : 532368-001 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	mg/kg	07.06.16 19.22		1

Sample Id : **STATEA-10-04 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-001 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.12	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-04 10'** Matrix : Soil % Moisture : 16.89
Lab Sample Id : 532368-002 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.7	mg/kg	07.06.16 19.30		1

Sample Id : **STATEA-10-04 10'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-002 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.46	SU	07.05.16 11.48		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-04 20'** Matrix : Soil % Moisture : .84
Lab Sample Id : 532368-003 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : TPH By SW8015B Mod Prep Method: TX1005P
Seq Number 997171 Date Prep: 06.28.16 15.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	16.0	mg/kg	06.28.16 22.35		1
Total TPH	PHC635	16.0	mg/kg	06.28.16 22.35		1

Sample Id : **STATEA-10-04 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-003 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.99	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-04 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-004 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.83	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-03 4'** Matrix : Soil % Moisture : 3.94
Lab Sample Id : 532368-005 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	94.3	mg/kg	07.06.16 20.09		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-03 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-005 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.63	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-03 10'** Matrix : Soil % Moisture : 6.18
Lab Sample Id : 532368-006 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	45.9	mg/kg	07.06.16 20.17		1

Sample Id : **STATEA-10-03 10'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-006 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.97	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-03 20'** Matrix : Soil % Moisture : 9.16
Lab Sample Id : 532368-007 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.5	mg/kg	07.06.16 20.25		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-03 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-007 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.97	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-03 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-008 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.04	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-01 4'** Matrix : Soil % Moisture : 4.23
Lab Sample Id : 532368-009 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	441	mg/kg	07.07.16 07.29		1

Sample Id : **STATEA-10-01 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-009 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.22	SU	07.05.16 11.48		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-01 10'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-010 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.08	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-01 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-011 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.11	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-01 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-012 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.82	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-02 4'** Matrix : Soil % Moisture : 9.44
Lab Sample Id : 532368-013 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.4	mg/kg	07.07.16 08.31		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-02 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-013 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.41	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-02 10'** Matrix : Soil % Moisture : 9.6
Lab Sample Id : 532368-014 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	mg/kg	07.07.16 08.39		5

Sample Id : **STATEA-10-02 10'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-014 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.69	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-02 20'** Matrix : Soil % Moisture : 12.62
Lab Sample Id : 532368-015 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	316	mg/kg	07.07.16 08.47		5

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-02 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-015 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.60	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-02 30'** Matrix : Soil % Moisture : 5.72
Lab Sample Id : 532368-016 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	418	mg/kg	07.07.16 08.55		5

Sample Id : **STATEA-10-02 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-016 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997530

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.68	SU	07.05.16 11.48		1

Sample Id : **STATEA-10-02 50'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-018 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 50 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998310 Date Prep: 07.18.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1630	mg/kg	07.18.16 20.11		10

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-02 70'** Matrix : Soil % Moisture : 6.09
Lab Sample Id : 532368-020 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 70 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998464 Date Prep: 07.20.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	865	mg/kg	07.20.16 16.46		5

Sample Id : **STATEA-10-05 4'** Matrix : Soil % Moisture : 3.84
Lab Sample Id : 532368-021 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997612 Date Prep: 07.06.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	47.5	mg/kg	07.07.16 09.02		1

Sample Id : **STATEA-10-05 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-021 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997531

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.92	SU	07.05.16 15.52		1

Sample Id : **STATEA-10-05 10'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-022 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997531

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.04	SU	07.05.16 15.52		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **STATEA-10-05 20'** Matrix : Soil % Moisture : 1.61
Lab Sample Id : 532368-023 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997641 Date Prep: 07.06.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	mg/kg	07.07.16 10.21		1

Sample Id : **STATEA-10-05 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-023 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997531

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	9.27	SU	07.05.16 15.52		1

Sample Id : **STATEA-10-05 30'** Matrix : Soil % Moisture : 8.11
Lab Sample Id : 532368-024 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997641 Date Prep: 07.06.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.4	mg/kg	07.07.16 10.28		1

Sample Id : **STATEA-10-05 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-024 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Soil pH by EPA 9045C
Seq Number 997531

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.84	SU	07.05.16 15.52		1

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **VGWUSAT3-02 4'** Matrix : Soil % Moisture : 0
Lab Sample Id : 532368-025 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998464 Date Prep: 07.20.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3340	mg/kg	07.20.16 17.09		20

Sample Id : **VGWUSAT3-02 10'** Matrix : Soil % Moisture : 0
Lab Sample Id : 532368-026 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 10 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998464 Date Prep: 07.20.16 12.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3590	mg/kg	07.20.16 17.17		20

Sample Id : **VGWUSAT3-02 20'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-027 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 20 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998310 Date Prep: 07.18.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	546	mg/kg	07.18.16 20.18		5

Sample Id : **VGWUSAT3-02 30'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-028 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998310 Date Prep: 07.18.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	635	mg/kg	07.18.16 20.26		5

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **VGWUSAT3-02 60'** Matrix : Soil % Moisture : 7.45
Lab Sample Id : 532368-031 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 60 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997641 Date Prep: 07.06.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.9	mg/kg	07.07.16 10.36		1

Sample Id : **VGWUSAT3-04 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-032 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998310 Date Prep: 07.18.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.4	mg/kg	07.18.16 20.34		1

Sample Id : **VGWUSAT3-04 30'** Matrix : Soil % Moisture : 7.45
Lab Sample Id : 532368-035 Date Collected : 06.24.16 00.00 Basis : Dry Weight
Sample Depth : 30 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 997641 Date Prep: 07.06.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.2	mg/kg	07.07.16 10.44		1

Sample Id : **VGWUSAT3-01 4'** Matrix : Soil % Moisture :
Lab Sample Id : 532368-036 Date Collected : 06.24.16 00.00 Basis : Wet Weight
Sample Depth : 4 ft Date Received : 06.25.16 10.30

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 998310 Date Prep: 07.18.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	681	mg/kg	07.18.16 20.42		5

Hits Summary 532368

ARCADIS, Midland, TX

Chevron Sites

Sample Id : **VGWUSAT3-01 10'**
Lab Sample Id : 532368-037
Sample Depth : 10 ft

Matrix : Soil
Date Collected : 06.24.16 00.00
Date Received : 06.25.16 10.30

% Moisture : 7.45
Basis : Dry Weight

Analytical Method : Inorganic Anions by EPA 300/300.1
Seq Number 997641

Prep Method: E300P
Date Prep: 07.06.16 14.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.4	mg/kg	07.07.16 11.07		1

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-001		532368-002		532368-003		532368-004		532368-005		532368-006	
	Field Id:	STATEA-10-04 4'		STATEA-10-04 10'		STATEA-10-04 20'		STATEA-10-04 30'		STATEA-10-03 4'		STATEA-10-03 10'	
	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Percent Moisture	***Extracted:***												
	Analyzed:	Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.73	1.00	16.9	1.00	<1.00	1.00	5.06	1.00	3.94	1.00	6.18	1.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-001		532368-002		532368-003		532368-004		532368-005		532368-006	
	Field Id:	STATEA-10-04 4'		STATEA-10-04 10'		STATEA-10-04 20'		STATEA-10-04 30'		STATEA-10-03 4'		STATEA-10-03 10'	
	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00	
	Analyzed:	Jul-06-16 19:22		Jul-06-16 19:30		Jul-06-16 19:38		Jul-06-16 20:01		Jul-06-16 20:09		Jul-06-16 20:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		131	10.6	73.7	12.0	<10.1	10.1	<10.5	10.5	94.3	10.4	45.9	10.7
Soil pH by EPA 9045C	***Extracted:***												
	Analyzed:	Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48	
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL
pH		8.12		8.46		8.99		8.83		8.63		8.97	
TPH By SW8015B Mod	***Extracted:***	Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00	
	Analyzed:	Jun-28-16 20:53		Jun-28-16 22:10		Jun-28-16 22:35		Jun-28-16 23:01		Jun-28-16 23:27		Jun-28-16 23:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		<15.9	15.9	<18.0	18.0	16.0	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0
C10-C28 Diesel Range Hydrocarbons		<15.9	15.9	<18.0	18.0	<15.1	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0
Total TPH		<15.9	15.9	<18.0	18.0	16.0	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-007		532368-008		532368-009		532368-010		532368-011		532368-012	
	Field Id:	STATEA-10-03 20'		STATEA-10-03 30'		STATEA-10-01 4'		STATEA-10-01 10'		STATEA-10-01 20'		STATEA-10-01 30'	
	Depth:	20 ft		30 ft		4 ft		10 ft		20 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Percent Moisture	**Extracted:**												
	Analyzed:	Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.16	1.00	6.29	1.00	4.23	1.00	2.90	1.00	3.89	1.00	6.76	1.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-007		532368-008		532368-009		532368-010		532368-011		532368-012	
	Field Id:	STATEA-10-03 20'		STATEA-10-03 30'		STATEA-10-01 4'		STATEA-10-01 10'		STATEA-10-01 20'		STATEA-10-01 30'	
	Depth:	20 ft		30 ft		4 ft		10 ft		20 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00	
	Analyzed:	Jul-06-16 20:25		Jul-06-16 20:32		Jul-07-16 07:29		Jul-07-16 07:52		Jul-07-16 08:00		Jul-07-16 08:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		29.5	11.0	<10.7	10.7	441	10.4	<10.3	10.3	<10.4	10.4	<10.7	10.7
Soil pH by EPA 9045C	***Extracted:***												
	Analyzed:	Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48	
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL
pH		8.97		9.04		8.22		9.08		9.11		8.82	
TPH By SW8015B Mod	***Extracted:***	Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00	
	Analyzed:	Jun-29-16 00:21		Jun-29-16 00:48		Jun-29-16 01:16		Jun-29-16 01:42		Jun-29-16 02:35		Jun-29-16 02:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1
C10-C28 Diesel Range Hydrocarbons		<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1
Total TPH		<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-013		532368-014		532368-015		532368-016		532368-018		532368-020	
	Field Id:	STATEA-10-02 4'		STATEA-10-02 10'		STATEA-10-02 20'		STATEA-10-02 30'		STATEA-10-02 50'		STATEA-10-02 70'	
	Depth:	4 ft		10 ft		20 ft		30 ft		50 ft		70 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Percent Moisture	***Extracted:***												
	Analyzed:	Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.44	1.00	9.60	1.00	12.6	1.00	5.72	1.00	9.15	1.00	6.09	1.00

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-013		532368-014		532368-015		532368-016		532368-018		532368-020	
	Field Id:	STATEA-10-02 4'		STATEA-10-02 10'		STATEA-10-02 20'		STATEA-10-02 30'		STATEA-10-02 50'		STATEA-10-02 70'	
	Depth:	4 ft		10 ft		20 ft		30 ft		50 ft		70 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-06-16 12:00		Jul-18-16 14:00		Jul-20-16 12:00	
	Analyzed:	Jul-07-16 08:31		Jul-07-16 08:39		Jul-07-16 08:47		Jul-07-16 08:55		Jul-18-16 20:11		Jul-20-16 16:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		86.4	11.0	131	55.3	316	57.2	418	53.0	1630	100	865	53.2
Soil pH by EPA 9045C	***Extracted:***												
	Analyzed:	Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48		Jul-05-16 11:48					
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL				
pH		9.41		9.69		9.60		9.68					
TPH By SW8015B Mod	***Extracted:***	Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 15:00					
	Analyzed:	Jun-29-16 03:25		Jun-29-16 03:51		Jun-29-16 04:17		Jun-29-16 04:44					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				
C10-C28 Diesel Range Hydrocarbons		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				
Total TPH		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-021		532368-022		532368-023		532368-024		532368-025		532368-026	
	Field Id:	STATEA-10-05 4'		STATEA-10-05 10'		STATEA-10-05 20'		STATEA-10-05 30'		VGWUSAT3-02 4'		VGWUSAT3-02 10'	
	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Percent Moisture	***Extracted:***												
	Analyzed:	Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05		Jul-01-16 17:05					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		3.84	1.00	7.45	1.00	1.61	1.00	8.11	1.00				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
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Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-021		532368-022		532368-023		532368-024		532368-025		532368-026	
	Field Id:	STATEA-10-05 4'		STATEA-10-05 10'		STATEA-10-05 20'		STATEA-10-05 30'		VGWUSAT3-02 4'		VGWUSAT3-02 10'	
	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-06-16 12:00		Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00		Jul-20-16 12:00		Jul-20-16 12:00	
	Analyzed:	Jul-07-16 09:02		Jul-07-16 09:57		Jul-07-16 10:21		Jul-07-16 10:28		Jul-20-16 17:09		Jul-20-16 17:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		47.5	10.4	<10.8	10.8	14.2	10.2	23.4	10.9	3340	200	3590	200
Soil pH by EPA 9045C	***Extracted:***												
	Analyzed:	Jul-05-16 15:52		Jul-05-16 15:52		Jul-05-16 15:52		Jul-05-16 15:52					
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL				
pH		8.92		9.04		9.27		8.84					
TPH By SW8015B Mod	***Extracted:***	Jun-29-16 14:00		Jun-29-16 14:00		Jun-29-16 14:00		Jun-29-16 14:00					
	Analyzed:	Jun-29-16 15:39		Jun-29-16 16:59		Jun-29-16 17:26		Jun-29-16 17:53					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				
C10-C28 Diesel Range Hydrocarbons		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				
Total TPH		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532368-027		532368-028		532368-031		532368-032		532368-035		532368-036	
	Field Id:	VGWUSAT3-02 20'		VGWUSAT3-02 30'		VGWUSAT3-02 60'		VGWUSAT3-04 4'		VGWUSAT3-04 30'		VGWUSAT3-01 4'	
	Depth:	20 ft		30 ft		60 ft		4 ft		30 ft		4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00		Jun-24-16 00:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-18-16 14:00		Jul-18-16 14:00		Jul-06-16 14:00		Jul-18-16 14:00		Jul-06-16 14:00		Jul-18-16 14:00	
	Analyzed:	Jul-18-16 20:18		Jul-18-16 20:26		Jul-07-16 10:36		Jul-18-16 20:34		Jul-07-16 10:44		Jul-18-16 20:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		546	50.0	635	50.0	22.9	10.8	58.4	10.0	72.2	10.8	681	50.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532368

ARCADIS, Midland, TX

Project Name: Chevron Sites

Project Id: 713.953.4841
Contact: Arti Patel
Project Location: Hobbs, NM

Date Received in Lab: Sat Jun-25-16 10:30 am
Report Date: 21-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	532368-037					
	Field Id:	VGWUSAT3-01 10'					
	Depth:	10 ft					
	Matrix:	SOIL					
	Sampled:	Jun-24-16 00:00					
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-06-16 14:00					
	Analyzed:	Jul-07-16 11:07					
	Units/RL:	mg/kg	RL				
Chloride		54.4	10.8				

Kelsey Brooks
Project Manager

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997171 **Sample:** 532368-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 20:53

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 997171 **Sample:** 532368-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 22:10

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	99.9	97	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 997171 **Sample:** 532368-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 22:35

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.7	94	70-135	
o-Terphenyl	44.2	49.9	89	70-135	

Lab Batch #: 997171 **Sample:** 532368-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 23:01

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	100	84	70-135	
o-Terphenyl	41.0	50.0	82	70-135	

Lab Batch #: 997171 **Sample:** 532368-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 23:27

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.9	99.8	88	70-135	
o-Terphenyl	42.4	49.9	85	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997171 **Sample:** 532368-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 23:55

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.8	92	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 997171 **Sample:** 532368-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 00:21

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	99.7	86	70-135	
o-Terphenyl	42.2	49.9	85	70-135	

Lab Batch #: 997171 **Sample:** 532368-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 00:48

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	99.7	90	70-135	
o-Terphenyl	43.7	49.9	88	70-135	

Lab Batch #: 997171 **Sample:** 532368-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 01:16

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	99.7	93	70-135	
o-Terphenyl	45.0	49.9	90	70-135	

Lab Batch #: 997171 **Sample:** 532368-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 01:42

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.9	99.9	86	70-135	
o-Terphenyl	41.6	50.0	83	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997171 **Sample:** 532368-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 02:35

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.8	93	70-135	
o-Terphenyl	45.9	49.9	92	70-135	

Lab Batch #: 997171 **Sample:** 532368-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 02:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	99.9	100	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

Lab Batch #: 997171 **Sample:** 532368-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 03:25

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	99.9	96	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 997171 **Sample:** 532368-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 03:51

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.7	95	70-135	
o-Terphenyl	46.7	49.9	94	70-135	

Lab Batch #: 997171 **Sample:** 532368-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 04:17

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	49.6	50.0	99	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997171 **Sample:** 532368-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 04:44

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.8	98	70-135	
o-Terphenyl	48.7	49.9	98	70-135	

Lab Batch #: 997250 **Sample:** 532368-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 15:39

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.7	92	70-135	
o-Terphenyl	46.1	49.9	92	70-135	

Lab Batch #: 997250 **Sample:** 532368-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 16:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	99.8	92	70-135	
o-Terphenyl	45.7	49.9	92	70-135	

Lab Batch #: 997250 **Sample:** 532368-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 17:26

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.4	99.7	93	70-135	
o-Terphenyl	44.7	49.9	90	70-135	

Lab Batch #: 997250 **Sample:** 532368-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 17:53

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.9	95	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997171 **Sample:** 710455-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 19:37

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

Lab Batch #: 997250 **Sample:** 710500-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/16 14:19

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

Lab Batch #: 997171 **Sample:** 710455-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 20:02

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 997250 **Sample:** 710500-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/16 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 997171 **Sample:** 710455-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 20:27

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	55.3	50.0	111	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Chevron Sites

Work Orders : 532368, 532368 **Project ID:** 713.953.4841

Lab Batch #: 997250 **Sample:** 710500-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/16 15:12

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	59.2	50.0	118	70-135	

Lab Batch #: 997171 **Sample:** 532368-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 21:19

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 997250 **Sample:** 532368-021 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 16:05

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 997171 **Sample:** 532368-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 21:45

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.8	123	70-135	
o-Terphenyl	54.4	49.9	109	70-135	

Lab Batch #: 997250 **Sample:** 532368-021 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/16 16:32

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.7	109	70-135	
o-Terphenyl	46.1	49.9	92	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Chevron Sites

Work Order #: 532368, 532368 **Project ID:** 713.953.4841

Analyst: MNR **Date Prepared:** 07/06/2016 **Date Analyzed:** 07/06/2016

Lab Batch ID: 997612 **Sample:** 710654-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	236	94	250	228	91	3	90-110	20	

Analyst: MNR **Date Prepared:** 07/06/2016 **Date Analyzed:** 07/07/2016

Lab Batch ID: 997641 **Sample:** 710669-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	231	92	250	233	93	1	90-110	20	

Analyst: MNR **Date Prepared:** 07/18/2016 **Date Analyzed:** 07/18/2016

Lab Batch ID: 998310 **Sample:** 711075-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	246	98	250	250	100	2	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Chevron Sites

Work Order #: 532368, 532368 **Project ID:** 713.953.4841

Analyst: MNR **Date Prepared:** 07/20/2016 **Date Analyzed:** 07/20/2016

Lab Batch ID: 998464 **Sample:** 711178-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	257	103	250	268	107	4	90-110	20	

Analyst: ARM **Date Prepared:** 06/28/2016 **Date Analyzed:** 06/28/2016

Lab Batch ID: 997171 **Sample:** 710455-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	918	92	1000	899	90	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	965	97	1000	963	96	0	70-135	35	

Analyst: ARM **Date Prepared:** 06/29/2016 **Date Analyzed:** 06/29/2016

Lab Batch ID: 997250 **Sample:** 710500-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	991	99	1000	1040	104	5	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1100	110	1000	1080	108	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 997612 **Project ID:** 713.953.4841

Date Analyzed: 07/07/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-009 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	441	261	635	74	80-120	X

Lab Batch #: 997612

Date Analyzed: 07/06/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532437-015 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	529	1250	1620	87	80-120	

Lab Batch #: 997641

Date Analyzed: 07/07/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-022 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<10.8	270	231	86	80-120	

Lab Batch #: 997641

Date Analyzed: 07/07/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532413-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2150	2500	4800	106	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS Recoveries

Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 998310 **Project ID:** 713.953.4841

Date Analyzed: 07/18/2016 **Date Prepared:** 07/18/2016 **Analyst:** MNR

QC- Sample ID: 532328-017 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	28.7	250	258	92	80-120	

Lab Batch #: 998310

Date Analyzed: 07/18/2016 **Date Prepared:** 07/18/2016 **Analyst:** MNR

QC- Sample ID: 533521-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<10.0	250	274	110	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Chevron Sites

Work Order # : 532368 **Project ID:** 713.953.4841

Lab Batch ID: 998464 **QC- Sample ID:** 533505-007 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/20/2016 **Date Prepared:** 07/20/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	717	1250	2040	106	1250	2010	103	1	80-120	20	

Lab Batch ID: 997171 **QC- Sample ID:** 532368-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2016 **Date Prepared:** 06/28/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.9	1060	904	85	1060	1090	103	19	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.9	1060	977	92	1060	1080	102	10	70-135	35	

Lab Batch ID: 997250 **QC- Sample ID:** 532368-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/29/2016 **Date Prepared:** 06/29/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.6	1040	887	85	1040	880	85	1	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.6	1040	1010	97	1040	1010	97	0	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 997612 **Project ID:** 713.953.4841

Date Analyzed: 07/07/2016 07:37 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	441	440	0	20	

Lab Batch #: 997612

Date Analyzed: 07/06/2016 18:51 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532437-015 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	529	502	5	20	

Lab Batch #: 997641

Date Analyzed: 07/07/2016 10:05 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-022 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<10.8	<10.8	0	20	U

Lab Batch #: 997641

Date Analyzed: 07/07/2016 11:54 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532413-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2150	2280	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 998310 **Project ID:** 713.953.4841

Date Analyzed: 07/18/2016 20:57 **Date Prepared:** 07/18/2016 **Analyst:** MNR

QC- Sample ID: 532328-017 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	28.7	25.5	12	20	

Lab Batch #: 998310

Date Analyzed: 07/18/2016 19:08 **Date Prepared:** 07/18/2016 **Analyst:** MNR

QC- Sample ID: 533521-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<10.0	<10.0	0	20	U

Lab Batch #: 997489

Date Analyzed: 07/01/2016 17:05 **Date Prepared:** 07/01/2016 **Analyst:** WRU

QC- Sample ID: 532368-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.73	5.48	4	20	

Lab Batch #: 997489

Date Analyzed: 07/01/2016 17:05 **Date Prepared:** 07/01/2016 **Analyst:** WRU

QC- Sample ID: 532368-011 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.89	3.66	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 997493 **Project ID:** 713.953.4841

Date Analyzed: 07/01/2016 17:05 **Date Prepared:** 07/01/2016 **Analyst:** WRU

QC- Sample ID: 532368-021 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.84	3.95	3	20	

Lab Batch #: 997530

Date Analyzed: 07/05/2016 11:48 **Date Prepared:** 07/05/2016 **Analyst:** WRU

QC- Sample ID: 532585-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: SU

Soil pH by EPA 9045C Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
pH	7.78	7.77	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS

Date/ Time Received: 06/25/2016 10:30:00 AM

Work Order #: 532368

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 06/27/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 06/28/2016

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # 532368

Send Results to:

Contact & Company Name: Arti Patil — Telephone: 713 853 4841

Address: — Fax:

City — State — Zip — E-mail Address: Arti.Patil@arcadis.com

Project Name/Location (City, State): — Project #: —

Sampler's Printed Name: — Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Chloride 24	REMARKS
A-10 SB-4 4	6-24			✓	SOL						test
10											hold
20											hold
30											hold
SB-3 4											Test
10											hold
20											hold
30											hold
SB-1 4											test
10											hold
20											hold
30											hold
SB-2 4											~~test~~ hold
10											hold

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil; SE - Sediment; NL - NAPL/Oil; W - Water; SL - Sludge; SW - Sample Wipe; T - Tissue; A - Air; Other: _____

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name:

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Shipping Tracking #:

Cooler Custody Seal (✓) ☑ Intact ☐ Not Intact

Sample Receipt: Condition/Cooler Temp: 4.5°C

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicas	Printed Name:	Printed Name:	Printed Name: Julian Martinez
Signature:	Signature:	Signature:	Signature:
Firm: Arcadis	Firm/Courier: MS	Firm/Courier:	Firm: Xenco
Date/Time: 6/24 1700	Date/Time: 6/24	Date/Time:	Date/Time: 6-25-16 10:30

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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # 532368

Send Results to:

Contact & Company Name: Arti puri	Telephone: 713.953.4841
Address:	Fax:
City State Zip	E-mail Address: Arti.puri@arcadis.com
Project Name/Location (City, State):	Project #:
Sampler's Printed Name:	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
A-10 SB-2 20	6-24			✓	Soil						hold
30											hold
40											hold
50											hold
60											hold
70											hold
SB-5 4											test
10											hold
20											hold
30											hold
SAT-3 SB-3 4											test
10											hold
20											hold
30											hold

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name:

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Shipping Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: _____

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicks	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm:
Date/Time: 6/24 1700	Date/Time: 6/24/10	Date/Time:	Date/Time:

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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order # 532368

Send Results to:

Contact & Company Name: Arti PuHl	Telephone: 713.953.4841
Address:	Fax:
City State Zip	E-mail Address: APti.PuHl@arcadis.com
Project Name/Location (City, State):	Project #:
Sampler's Printed Name:	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
SWT-3	6-24			✓	SOL						hold ✓
SB-2 4											hold ✓
10											hold ✓
20											hold ✓
30											hold ✓
40											hold ✓
50											hold ✓
60											~~hold~~ test ✓
SB-4 4											hold ✓
10											hold ✓
20											hold ✓
30											test ✓
3											

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Ken Wicks	Printed Name: K Butler	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 6/24 1700	Date/Time: 6/24/16	Date/Time:	Date/Time:

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CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #: 532308

Send Results to:

Contact & Company Name: Arti Patel	Telephone: 713.953.4841
Address:	Fax: Arti.Patel@arcadis.com
City State Zip	E-mail Address:
Project Name/Location (City, State):	Project #:
Sampler's Printed Name:	Sampler's Signature:

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil; SE - Sediment; NL - NAPL/Oil; W - Water; SL - Sludge; SW - Sample Wipe; T - Tissue; A - Air; Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Chlorides	REMARKS
Sat 3 SB4 4	6-24			✓	Soil						Hold
10	↓			↓	↓						~~Hold~~ test
20											Hold
30											~~Dup~~ Hold

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt	Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Printed Name: Ken Wicks	Printed Name: K Butler	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Firm: Arcadis	Firm/Courier: MS	Firm/Courier:	Firm:
Shipping Tracking #:	Date/Time: 6/24 1700	Date/Time: 6/24/16	Date/Time:	Date/Time:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt: Condition/Cooler Temp: _____

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

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Lab Work Order #:

Send Results to:

Contact & Company Name: Arti Patil

Address:

City: State: Zip:

Telephone: 713 853 4841

Fax:

E-mail Address: Arti.patil@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Sample ID			Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Chloride	TPH-GRO	TPH-DRO	Percent moisture	pH	REMARKS
A-10	SB-4	4	6/24			✓	SOIL					X	X	X	X	X	test
		10															hold
		20															hold
		30															hold
	SB-3	4															test
		10															hold
		20															hold
		30															hold
	SB-1	4															test
		10															hold
		20															hold
		30															hold
	SB-2	4															test
		10															hold

Run all Samples

Keys

Preservation Key: A - H_2SO_4, B - HCL, C - HNO_3, D - NaOH, E - None, F - Other, G - Other, H - Other

Container Information Key: 1 - 40 ml Vial, 2 - 1 L Amber, 3 - 250 ml Plastic, 4 - 500 ml Plastic, 5 - Encore, 6 - 2 oz. Glass, 7 - 4 oz. Glass, 8 - 8 oz. Glass, 9 - Other, 10 - Other

Matrix Key: SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other

PARAMETER ANALYSIS & METHOD

Special Instructions/Comments:

Corrections made by A. Patil 06/24/16 18:22

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Printed Name:	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm:	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Condition/Cooler Temp:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 4

Lab Work Order #

Send Results to:

Contact & Company Name: Arti Patel

Address:

City: State: Zip:

Telephone: 713.953.4841

Fax:

E-mail Address: Arti.Patel@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Keys

Preservation Key: A. H_2SO_4 B. HCl C. HNO_3 D. NaOH E. None F. Other: G. Other: H. Other:

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 5 cc. Glass 9. Other: 10. Other:

Matrix Key: SO - Soil SE - Sediment NL - NAPL/Oil W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	PARAMETER ANALYSIS & METHOD: Chlorides	TPH-GRO	TPH-DRO	Percent moisture	pH	REMARKS
A-10	6-24			✓	Soil	X	X	X	X	X	hold
SB-2 20											hold
30											hold
40											hold
50											hold
60											hold
70											test
SB-5 4											hold
10											hold
20											hold
30											test
SAT-3 SB-3 4											hold
10											hold
20											hold
30											

RUN all

Special Instructions/Comments:

Corrections by A Patel 6/24/16 18:22

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name:

Cooler packed with ice (✓)

Specify Turnaround Requirements:

Airbill Tracking #

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp:

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm:	Firm/Courier:	Firm/Courier:	Firm:
Date/Time:	Date/Time:	Date/Time:	Date/Time:

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 3 of 4

Lab Work Order #

Send Results to:

Contact & Company Name: Arti Patil

Address:

City State Zip

Telephone: 713.953.4841

Fax:

E-mail Address: APatil@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
Sat-3	6-24			✓	SOL			4		X	hold ✓
SB-2								10			hold ✓
								20			hold ✓
								30			hold ✓
								40			hold ✓
								50			hold ✓
								60			hold ✓
SB-4								4			~~hold~~ test ✓
								10			hold ✓
								20			hold ✓
								30			hold ✓
								9			test ✓

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: G. Other: H. Other:

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10 Other:

Matrix Key: SO - Soil SE - Sediment NL - NAPL/Oil W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other:

Special Instructions/Comments:

Corrections made by APatil 06/24/16 18:2

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt	Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
☐ Cooler packed with ice (✓)	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements:	Firm:	Firm/Courier:	Firm/Courier:	Firm:
Shipping Tracking #:	Date/Time:			

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp:

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 4 of 4

Lab Work Order #:

Send Results To

Contact & Company Name: Arti Patel

Telephone: 713.953.4841

Address:

Fax:

City / State / Zip:

E-mail Address: Arti.Patel@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Preservative

Filtered (✓)

# of Containers

Comments or Information

PARAMETER ANALYSIS & METHOD

Chlorides

Keys

Preservation Key: A - H_2SO_4; B - HCl; C - HNO_3; D - NaOH; E - None; F - Other: ____; G - Other: ____; H - Other: ____

Container Information Key: 1. 40 ml Vial; 2. 1 L Amber; 3. 250 ml Plastic; 4. 500 ml Plastic; 5. Encore; 6. 2 oz. Glass; 7. 4 oz. Glass; 8. 8 oz. Glass; 9. Other: ____; 10. Other: ____

Matrix Key: SO - Soil; W - Water; T - Tissue; SE - Sediment; SL - Sludge; A - Air; NAPL/DI; SW - Sample Water; Other: ____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix		REMARKS
SAT 3 SB1 4	6-24			✓	SO	X	HOLD
10							~~HOLD~~ test
20							HOLD
30							~~DEL~~ HOLD

Special Instructions/Comments:

Corrections made by A Patel 06/24/16 18:20

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name:

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Shipping Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: ____

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm:	Firm/Courier:	Firm/Courier:	
Date/Time:	Date/Time:		

20730828 CofC AR Form 09.27.2015

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ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of __

Lab Work Order # 532368

Send Results to:

Contact & Company Name: Arti patel
Telephone: 713 853 4841
Address:
Fax:
City / State / Zip
E-mail Address: Arti.patel@arcadis.com
Project Name/Location (City, State)
Project #
Sampler's Printed Name:
Sampler's Signature:

Preservative							
Filtered (✓)							
# of Containers							
Container Information							

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: ____ G. Other: ____ H. Other: ____

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: ____ 10. Other: ____

Matrix Key: SO - Soil, W - Water, T - Tissue, SE - Sediment, SL - Sludge, A - Air, NL - NAPL/Oil, SW - Sample Wipe, Other: ____

PARAMETER ANALYSIS & METHOD

Sample ID	Depth	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Chloride	REMARKS
~~A-10~~ SB-4	4	6-24			✓	SOIL	STATEA10-04 (4')	test ✓
	10						(10')	hold ✓
	20						(20')	hold ✓
	30						(30')	hold ✓
SB-3	4						STATEA10-03 (4')	Test ✓
	10						(10')	hold ✓
	20						(20')	hold ✓
	30						(30')	hold ✓
SB-~~10~~1	4						STATEA10-01 (4')	test ✓
	10						(10')	hold ✓
	20						(20')	hold ✓
	30						(30')	hold ✓
SB-2	4						STATEA10-02 (4')	hold ✓
	10	↓			↓	↓	(10')	~~test~~ hold —
								hold —

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample Name Corrections A. Patel 07/12

Laboratory Information and Receipt

Lab Name:
Cooler packed with ice (✓)
Specify Turnaround Requirements:
Shipping Tracking #:

Cooler Custody Seal (✓) ☑ Intact ☐ Not Intact
Sample Receipt:
Condition/Cooler Temp: 4.5°C

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicus	Printed Name: K Butler	Printed Name:	Printed Name: Julian Martinez
Signature: [signature]	Signature: [signature]	Signature:	Signature: [signature]
Firm: Arcadis	Firm/Courier: MS	Firm/Courier:	Firm: Xenco
Date/Time: 6/24 1700	Date/Time: 6/24	Date/Time:	Date/Time: 6-15-16 1030

20130826 CofC AR Form 08.27.2015

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ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of ___

Lab Work Order # 532368

Send Results to:

Contact & Company Name: Arti puri

Address:

City State Zip

Telephone: 713 953 4841

Fax:

E-mail Address: Arti.puri@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil | SE - Sediment | NL - NAPL/Oil
W - Water | SL - Sludge | SW - Sample Wipe
T - Tissue | A - Air | Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
A-10 SB-2 20	6-24			✓	Soil					STATEA10-02(20')	hold
30										(30')	hold
40										(40')	hold
50										(50')	hold
60										(60')	hold
70										(70')	hold
SB-5 4										STATEA10-05(4')	hold
10										(10')	test
20										(20')	hold
30										(30')	hold
SAT-3 SB-3 4											hold
10											test
20											hold
30											hold
											hold

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample name corrections A. Patel 07/12/

Laboratory Information and Receipt

Name:

Cooler packed with ice (✓)

Turnaround Requirements:

Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: _____

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicas	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm:
Date/Time: 6/24 1700	Date/Time: 6/24/16	Date/Time:	Date/Time:

2016026 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 3 of ___

Lab Work Order #: 532368

Send Results to:

Contact & Company Name: Arti Patel

Telephone: 713.953.4841

Address:

Fax:

City State Zip

E-mail Address: APatel@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix
SB-3 4	6-24			✓	SOIL
10					
20					
30					
40					
50					
60					
SB-4 4					
10					
20					
30					
3					

Preservative

Filtered (✓)

# of Containers

Container Information

PARAMETER ANALYSIS & METHOD

Chlorides

VOA VOA USA T3-02 (4')
(10')
(20')
(30')
(40')
(50')
(60')
VOA VOA USA T3-04 (4')
(10')
(20')
(30')

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

REMARKS

hold
hold
hold
hold
hold
hold
~~hold~~ test
hold
hold
hold
test

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample Name Corrections A Patel 07/12/22

Laboratory Information and Receipt

Lab Name:

☐ Cooler packed with ice (✓)

Special Turnaround Requirements:

Shipping Tracking #:

Cooler Custody Seal (✓)
☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: _____

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicks	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm: ARCADIS	Firm/Couner:	Firm/Couner:	Firm:
Date/Time: 6/24 1700	Date/Time: 6/24/16	Date/Time:	Date/Time:

2015-026 CofC AR Form 08.27.2015

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ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 4 of __

Lab Work Order # 53208

Send Results to:

Contact & Company Name: Arti patel

Telephone: 713.953.4841

Address:

Fax:

City / State / Zip

E-mail Address: Arti.Patel@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

	Preservative							
	Filtered (✓)							
	# of Containers							
	Container Information							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: ____
G. Other: ____
H. Other: ____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: ____
10. Other: ____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: ____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Chlorides							REMARKS
~~Sat 3 SB-1~~ 4	6-24			✓	Soil	VGW U Sat 3 (4')							hold
10	↓			↓	↓	↓ (10')							~~hold~~ test
20	↓			↓	↓	↓ (20')							hold
30	↓			↓	↓	↓ (30')							~~[illegible]~~ hold

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample Name corrections A. Patel 07/14/16

Laboratory Information and Receipt

Lab Name:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Sample Receipt:

Shipping Tracking #:

Condition/Cooler Temp: ____

	Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name:	Ken Wicks	KButler		
Signature:	[signature]	[signature]		
Firm/Courier:	Arcadis	MS		
Date/Time:	6/24 1700	6/24/16		

2073__26 CofC AR Form 08.27.2015

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ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 3 of ___

Lab Work Order #: 532368

Send Results to:

Contact & Company Name: Arti Patil

Address:

City / State / Zip:

Telephone: 713-953-4841

Fax:

E-mail Address: Arti.Patil@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: ___ G. Other: ___ H. Other: ___

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: ___ 10. Other: ___

Matrix Key: SO - Soil, W - Water, T - Tissue, SE - Sediment, SL - Sludge, A - Air, NL - NAPL/Oil, SW - Sample Wipe, Other: ___

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
~~SB-3~~	6-24			✓	SOIL					VGWUSAT3-02(4')	hold
~~SB-3~~ 10										(10')	hold
~~SB-3~~ 20										(20')	hold
~~SB-3~~ 30										(30')	hold
~~SB-3~~ 40										(40')	hold
~~SB-3~~ 50										(50')	hold
~~SB-3~~ 60										(60')	hold
~~SB-4~~ 4										VGWUSAT3-04(4')	~~hold~~ test
~~SB-4~~ 10										(10')	hold
~~SB-4~~ 20										(20')	hold
~~SB-4~~ 30										(30')	hold
~~SB-4~~ 5											test

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample Name Corrections Arti Patil 07/12/16

Laboratory Information and Receipt

Lab Name:

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Shipping Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: ___

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ken Wicks	Printed Name:	Printed Name:	Printed Name:
Signature:	Signature:	Signature:	Signature:
Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm:
Date/Time: 6/24 1700	Date/Time: 6/24/16	Date/Time:	Date/Time:

30826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by Arcadis

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of __

Lab Work Order # 532308

Send Results to:

Contact & Company Name: Artipatel

Telephone: 713.953.4841

Address:

Fax:

City / State / Zip

E-mail Address: Arti.Patel@arcadis.com

Project Name/Location (City, State):

Project #:

Sampler's Printed Name:

Sampler's Signature:

Preservative							
Filtered (✓)							
# of Containers							
Container Information							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:	Container Information Key:
A. H_2SO_4	1. 40 ml Vial
B. HCL	2. 1 L Amber
C. HNO_3	3. 250 ml Plastic
D. NaOH	4. 500 ml Plastic
E. None	5. Encore
F. Other: ____	6. 2 oz. Glass
G. Other: ____	7. 4 oz. Glass
H. Other: ____	8. 8 oz. Glass
	9. Other: ____
	10. Other: ____

Matrix Key: SO - Soil; W - Water; T - Tissue; SE - Sediment; SL - Sludge; A - Air; NL - NAPL/Oil; SW - Sample Wipe; Other: ____

Sample ID	Collection Date	Collection Time	Type Comp	Type Grab	Matrix	Chlorides							REMARKS
~~Sat 3 SB-1~~ 4	6-24			✓	Soil	VGWU Sat 3 (4')							hold
~~10~~	↓			↓	↓	↓ (10')							~~hold~~ test
~~20~~	↓			↓	↓	↓ (20')							hold
~~30~~	↓			↓	↓	↓ (30')							~~test~~ hold

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Sample Name Corrections A. Patel 27/12/16

Laboratory Information and Receipt

Lab Name:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

☐ Cooler packed with ice (✓)

Specify Turnaround Requirements:

Sample Receipt:

Shipping Tracking #:

Condition/Cooler Temp: ____

	Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name:	Ken Wicks	K Butler		
Signature:	[signature]	[signature]		
Firm:	Arcadis	MS		
Date/Time:	6/24 1700	6/24/16		

20730 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results   YELLOW – Lab copy   PINK – Retained by Arcadis

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS

Date/ Time Received: 06/25/2016 10:30:00 AM

Work Order #: 532368

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 06/27/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 06/28/2016

Analytical Report 536864

for

Arcadis - Houston

Project Manager: Jonathan Olsen

HES Transfer

11-OCT-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Table of Contents

11-OCT-16

Project Manager: **Jonathan Olsen**
Arcadis - Houston
2929 Briarpark Dr., Ste 300
Houston, TX 77042

Reference: XENCO Report No(s): **536864**
HES Transfer
Project Address: Lovington NM

Jonathan Olsen:

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) 536864. 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. 536864 will be filed for 60 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 536864

Arcadis - Houston, Houston, TX

HES Transfer

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUO40-12 (2')	S	09-13-16 08:50		536864-001
VGWUO40-12 (4')	S	09-13-16 08:55		536864-002
VGWUO40-17 (2')	S	09-13-16 10:30		536864-003
VGWUO40-17 (4')	S	09-13-16 10:34		536864-004
VGWUO40-16 (2')	S	09-13-16 09:58		536864-005
VGWUO40-16 (4')	S	09-13-16 10:00		536864-006
VGWUO40-16 (50')	S	09-13-16 10:48		536864-007
VGWUO40-19 (2')	S	09-13-16 11:46		536864-008
VGWUO40-19 (4')	S	09-13-16 11:50		536864-009
VGWUO40-18 (2')	S	09-13-16 12:14		536864-010
VGWUO40-18 (4')	S	09-13-16 12:16		536864-011
VGWUO40-18 (70')	S	09-13-16 13:23		536864-012
VGWU85-06 (2')	S	09-13-16 14:41		536864-013
VGWU85-06 (4')	S	09-13-16 14:42		536864-014
VGWU85-06 (10')	S	09-13-16 14:44		536864-016
VGWU85-06 (50')	S	09-13-16 15:27		536864-017
VGWU85-11 (2')	S	09-13-16 16:00		536864-018
VGWU85-11 (4')	S	09-13-16 16:01		536864-019
VGWUSAT3-03 (4')	S	09-14-16 09:49		536864-023
VGWUSAT3-03 (40')	S	09-14-16 10:40		536864-024
VGWUSAT3-05 (4')	S	09-14-16 11:11		536864-025
VGWUSAT3-05 (40')	S	09-14-16 11:55		536864-026
VGWU118-15 (2')	S	09-14-16 14:00		536864-027
VGWU118-15 (4')	S	09-14-16 14:01		536864-028
VGWU118-18 (2')	S	09-14-16 14:30		536864-031
VGWU118-18 (4')	S	09-14-16 14:31		536864-032
VGWU118-18 (7')	S	09-14-16 14:32		536864-033
VGWU118-18 (10')	S	09-14-16 14:33		536864-034
VGWU85-06 (7')	S	09-13-16 14:43		Not Analyzed
VGWU85-11 (7')	S	09-13-16 16:02		Not Analyzed
VGWU85-11 (10')	S	09-13-16 16:05		Not Analyzed
VGWU85-11 (11')	S	09-13-16 16:21		Not Analyzed
VGWU118-15 (7')	S	09-14-16 14:02		Not Analyzed
VGWU118-15 (10')	S	09-14-16 14:03		Not Analyzed

CASE NARRATIVE

Client Name: Arcadis - Houston

Project Name: HES Transfer

Project ID:
Work Order Number(s): *536864*

Report Date: *11-OCT-16*
Date Received: *09/15/2016*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 536864

Arcadis - Houston, Houston, TX

Project Name: HES Transfer

Project Id:
Contact: Jonathan Olsen
Project Location: Lovington NM

Date Received in Lab: Thu Sep-15-16 11:30 am
Report Date: 11-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	536864-001		536864-002		536864-003		536864-004		536864-005		536864-006	
	Field Id:	VGWUO40-12 (2')		VGWUO40-12 (4')		VGWUO40-17 (2')		VGWUO40-17 (4')		VGWUO40-16 (2')		VGWUO40-16 (4')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-13-16 08:50		Sep-13-16 08:55		Sep-13-16 10:30		Sep-13-16 10:34		Sep-13-16 09:58		Sep-13-16 10:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Sep-20-16 08:00		Sep-20-16 08:00		Sep-20-16 08:00		Sep-20-16 08:00		Sep-20-16 08:00		Sep-20-16 08:00	
	Analyzed:	Sep-20-16 14:44		Sep-20-16 14:51		Sep-20-16 14:59		Sep-20-16 15:07		Sep-20-16 15:15		Sep-20-16 15:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		86.6	10.0	54.0	10.0	52.8	10.0	34.8	10.0	329	10.0	881	10.0

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 536864

Arcadis - Houston, Houston, TX

Project Name: HES Transfer

Project Id:
Contact: Jonathan Olsen
Project Location: Lovington NM

Date Received in Lab: Thu Sep-15-16 11:30 am
Report Date: 11-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	536864-007		536864-008		536864-009		536864-010		536864-011		536864-012	
	Field Id:	VGWUO40-16 (50')		VGWUO40-19 (2')		VGWUO40-19 (4')		VGWUO40-18 (2')		VGWUO40-18 (4')		VGWUO40-18 (70')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-13-16 10:48		Sep-13-16 11:46		Sep-13-16 11:50		Sep-13-16 12:14		Sep-13-16 12:16		Sep-13-16 13:23	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Sep-30-16 09:00		Sep-21-16 10:00		Sep-21-16 10:00		Sep-21-16 10:00		Sep-21-16 10:00		Sep-30-16 09:00	
	Analyzed:	Sep-30-16 13:18		Sep-21-16 12:10		Sep-21-16 12:33		Sep-21-16 12:41		Sep-21-16 12:49		Sep-30-16 13:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16.4	5.00	54.2	10.0	59.6	10.0	65.3	10.0	318	10.0	142	5.00

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 536864

Arcadis - Houston, Houston, TX

Project Name: HES Transfer

Project Id:
Contact: Jonathan Olsen
Project Location: Lovington NM

Date Received in Lab: Thu Sep-15-16 11:30 am
Report Date: 11-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	536864-013		536864-014		536864-016		536864-017		536864-018		536864-019	
	Field Id:	VGWU85-06 (2')		VGWU85-06 (4')		VGWU85-06 (10')		VGWU85-06 (50')		VGWU85-11 (2')		VGWU85-11 (4')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-13-16 14:41		Sep-13-16 14:42		Sep-13-16 14:44		Sep-13-16 15:27		Sep-13-16 16:00		Sep-13-16 16:01	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Sep-21-16 10:00		Sep-21-16 10:00		Sep-30-16 09:00		Oct-10-16 09:35		Sep-21-16 10:00		Sep-21-16 10:00	
	Analyzed:	Sep-21-16 12:57		Sep-21-16 17:46		Sep-30-16 13:47		Oct-10-16 19:19		Sep-21-16 13:28		Sep-21-16 13:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6120	100	2540	50.0	3760	50.0	37.8	5.00	14.0	10.0	31.1	10.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 536864

Arcadis - Houston, Houston, TX

Project Name: HES Transfer

Project Id:
Contact: Jonathan Olsen
Project Location: Lovington NM

Date Received in Lab: Thu Sep-15-16 11:30 am
Report Date: 11-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	536864-023		536864-024		536864-025		536864-026		536864-027		536864-028	
	Field Id:	VGWUSAT3-03 (4')		VGWUSAT3-03 (40')		VGWUSAT3-05 (4')		VGWUSAT3-05 (40')		VGWU118-15 (2')		VGWU118-15 (4')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-14-16 09:49		Sep-14-16 10:40		Sep-14-16 11:11		Sep-14-16 11:55		Sep-14-16 14:00		Sep-14-16 14:01	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Sep-21-16 10:00		Sep-30-16 09:00		Sep-30-16 09:00		Oct-10-16 09:35		Sep-21-16 10:00		Sep-21-16 10:00	
	Analyzed:	Sep-21-16 13:44		Sep-30-16 13:54		Sep-30-16 14:01		Oct-10-16 19:26		Sep-21-16 13:51		Sep-21-16 13:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		454	10.0	12.0	5.00	943	5.00	ND	5.00	18.5	10.0	ND	10.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 536864

Arcadis - Houston, Houston, TX

Project Name: HES Transfer

Project Id:

Contact: Jonathan Olsen

Project Location: Lovington NM

Date Received in Lab: Thu Sep-15-16 11:30 am

Report Date: 11-OCT-16

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	536864-031		536864-032		536864-033		536864-034					
	Field Id:	VGWU118-18 (2')		VGWU118-18 (4')		VGWU118-18 (7')		VGWU118-18 (10')					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Sep-14-16 14:30		Sep-14-16 14:31		Sep-14-16 14:32		Sep-14-16 14:33					
Inorganic Anions by EPA 300/300.1	***Extracted:***	Sep-21-16 10:00		Sep-21-16 10:00		Sep-30-16 09:00		Oct-10-16 09:35					
	Analyzed:	Sep-21-16 14:23		Sep-21-16 14:46		Sep-30-16 14:08		Oct-10-16 19:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		91.4	10.0	355	10.0	307	5.00	41.3	5.00				

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Kelsey Brooks
Project Manager

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

+ NELAC certification not offered for this compound.

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

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

BS / BSD Recoveries

Project Name: HES Transfer

Work Order #: 536864 **Project ID:**

Analyst: MNR **Date Prepared:** 09/20/2016 **Date Analyzed:** 09/20/2016

Lab Batch ID: 3000344 **Sample:** 713949-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	250	100	250	257	103	3	90-110	20	

Analyst: MNR **Date Prepared:** 09/21/2016 **Date Analyzed:** 09/21/2016

Lab Batch ID: 3000445 **Sample:** 713999-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	246	98	250	250	100	2	90-110	20	

Analyst: MNR **Date Prepared:** 09/30/2016 **Date Analyzed:** 09/30/2016

Lab Batch ID: 3001120 **Sample:** 714399-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	233	93	250	234	94	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: HES Transfer

Work Order #: 536864 **Project ID:**

Analyst: MNR **Date Prepared:** 10/10/2016 **Date Analyzed:** 10/10/2016

Lab Batch ID: 3001741 **Sample:** 714723-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	250	100	250	262	105	5	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer

Work Order # : 536864 **Project ID:**

Lab Batch ID: 3000344 **QC- Sample ID:** 536602-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/20/2016 **Date Prepared:** 09/20/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2780	1250	4000	98	1250	4030	100	1	90-110	20	

Lab Batch ID: 3000344 **QC- Sample ID:** 536660-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/20/2016 **Date Prepared:** 09/20/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1970	1250	3230	101	1250	3210	99	1	90-110	20	

Lab Batch ID: 3000445 **QC- Sample ID:** 536864-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/21/2016 **Date Prepared:** 09/21/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	54.2	250	298	98	250	294	96	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer

Work Order # : 536864 **Project ID:**

Lab Batch ID: 3000445 **QC- Sample ID:** 536864-028 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/21/2016 **Date Prepared:** 09/21/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	250	100	250	244	98	2	90-110	20	

Lab Batch ID: 3001120 **QC- Sample ID:** 536657-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/30/2016 **Date Prepared:** 09/30/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	920	250	1160	96	250	1150	92	1	90-110	20	

Lab Batch ID: 3001120 **QC- Sample ID:** 537439-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/30/2016 **Date Prepared:** 09/30/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	4120	2500	6760	106	2500	6650	101	2	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer

Work Order # : 536864 **Project ID:**

Lab Batch ID: 3001741 **QC- Sample ID:** 538189-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/10/2016 **Date Prepared:** 10/10/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1720	250	1980	104	250	1970	100	1	90-110	20	

Lab Batch ID: 3001741 **QC- Sample ID:** 538316-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/10/2016 **Date Prepared:** 10/10/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	258	250	501	97	250	493	94	2	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

HES transfer sites
Chevron PM Rob Spear

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 3

Lab Work Order # 53698G4

Send Results to:

Contact & Company Name: Jonathan Olsen Arcadis
Telephone: 713.953.4874
Address: 2929 Briarpark Dr Suite 300
Fax:
City: Houston State: TX Zip: 77042
E-mail Address: Jonathan.Olsen@arcadis.com
Project Name/Location (City, State): Lovington, NM (HES)
Project #:
Sampler's Printed Name: Melisa Phan
Sampler's Signature:

Preservative	E							
Filtered (✓)	NA							
# of Containers	1							
Container Information	7							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Chloride	REMARKS
VGWU040-12(2')	9/13/16	850		X	SO	X	
VGWU040-12(4')	9/13/16	855		X	SO	X	
VGWU040-17(2')	9/13/16	1030		X	SO	X	
VGWU040-17(4')	9/13/16	1034		X	SO	X	
VGWU040-16(2')	9/13/16	958		X	SO	X	
VGWU040-16(4')	9/13/16	1000		X	SO	X	
VGWU040-16(58')	9/13/16	1048		X	SO	X	HOLD
VGWU040-19(2')	9/13/16	1146		X	SO	X	
VGWU040-19(4')	9/13/16	1150		X	SO	X	
VGWU040-18(2')	9/13/16	1214		X	SO	X	
VGWU040-18(4')	9/13/16	1216		X	SO	X	
VGWU040-18(70')	9/13/16	1323		X	SO	X	HOLD
~~VGWU040-85'~~ (4)							
VGWU85-06(2')	9/13/16	1441		X	SO	X	

Special Instructions/Comments:
Standard TAT

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: Melisa Phan	Printed Name: Desiree Cossio	Printed Name:	Printed Name: J KRAMER
☒ Cooler packed with ice (✓)	☒ Intact ☐ Not Intact	Signature:	Signature: Desiree Cossio	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier: MS.	Firm/Courier:	Firm: Xenco
Shipping Tracking #:	Condition/Cooler Temp: 12 °C	Date/Time: 9/14/16 1600	Date/Time: 9/14/16 4:00 pm	Date/Time:	Date/Time: 9.15.16 1130

20730826 CofC AR Form 08.27.2015

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Received 6.3°C

Chevron PM - Rob Speer
HES Transfer Sites

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 2 of 3

Lab Work Order # 536864

Send Results to:

Contact & Company Name: Jonathan Olsen Arcadis
Address: 2929 Briarpark Dr Suite 300
City: Houston State: TX Zip: 77092
Telephone: 713.953.4874
Fax:
E-mail Address: Jonathan.Olsen@arcadis.com
Project Name/Location (City, State): Lovington, NM (HES)
Project #:
Sampler's Printed Name: Melisa Pham
Sampler's Signature:

Preservative	~~E/H~~
Filtered (Y)	NA
# of Containers	1
Container Information	7

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: _____ G. Other: _____ H. Other: _____

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: _____ 10. Other: _____

Matrix Key: SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	PARAMETER ANALYSIS & METHOD: Chloride	REMARKS
VGWU85-06(4')	9/13/16	1442		X	SO	X	
VGWU85-06(7')	9/13/16	1443		X	SO	X	HOLD
VGWU85-06(10')	9/13/16	1444		X	SO	X	HOLD
VGWU85-06(50')	9/13/16	1527		X	SO	X	HOLD
VGWU85-11(2')	9/13/16	1600		X	SO	X	~~HOLD~~
VGWU85-11(4')	9/13/16	1601		X	SO	X	
VGWU85-11(7')	9/13/16	1602		X	SO	X	HOLD
VGWU85-11(18')	9/13/16	1605		X	SO	X	HOLD
VGWU85-11(40)	9/13/16	1621		X	SO	X	HOLD
VGWUSAT3-03(4')	9/14/16	949		X	SO	X	
VGWUSAT3-03(40')	9/14/16	1040		X	SO	X	HOLD
VGWUSAT3-05(4')	9/14/16	1111		X	SO	X	HOLD
VGWUSAT3-05(40')	9/14/16	1155		X	SO	X	HOLD
VGWU118-15(2')	9/14/16	~~1300~~ 1400		X	SO	X	

Special Instructions/Comments: Standard TAT

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: Melisa Pham	Printed Name: Dessirae Coon	Printed Name:	Printed Name: KRAMER
☒ Cooler packed with ice (✓)	☒ Intact ☐ Not Intact	Signature:	Signature: Dessirae Coon	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier: MS	Firm/Courier:	Firm: Xenco
Shipping Tracking #:	Condition/Cooler Temp: 12°C	Date/Time: 9/14/16 1600	Date/Time: 9/14/16 4:00pm	Date/Time:	Date/Time: 9/15/16 1138

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HES Transfer Sites
Chevron PM Rob Speer

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order # 53609604

Send Results to:

Contact & Company Name: Jonathan Olsen Arcadis
Address: 2929 Briarpark Dr Suite 300
City: Houston State: TX Zip: 77042
Telephone: 713_953.4874
Fax:
E-mail Address: Jonathan.Olsen@arcadis.com
Project Name/Location (City, State): (HES) Lovington, NM
Project #:
Sampler's Printed Name: Melisa Phan
Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	Chloride	REMARKS
						E	NA	1	7		
VGWM118-15(4')	9/14/16	1401									
VGWM118-15(7')	9/14/16	1402									HOLD
VGWM118-15(10')	9/14/16	1403									HOLD
VGWM118-18(2')	9/14/16	1430									
VGWM118-18(4')	9/14/16	1431									
VGWM118-18(7')	9/14/16	1432									HOLD
VGWM118-18(10')	9/14/16	1433									HOLD

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Special Instructions/Comments:

Standard TAT

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name:	Cooler Custody Seal (✓)	Printed Name: Melisa Phan	Printed Name: Dessirae Cobos	Printed Name:	Printed Name: [illegible]
☒ Cooler packed with ice (✓)	☒ Intact ☐ Not Intact	Signature: [signature]	Signature: Dessirae Cobos	Signature:	Signature:
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier: MS.	Firm/Courier:	Firm: Xenco
Shipping Tracking #:	Condition/Cooler Temp: 12°C	Date/Time: 9/14/16 1600	Date/Time: 9/14/16 4:00pm	Date/Time:	Date/Time: 9.15.16 1130

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Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

6.3°C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Houston

Date/ Time Received: 09/15/2016 11:30:00 AM

Work Order #: 536864

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**Yes**
#5 *Custody Seals intact on shipping container/ cooler?	**Yes**
#6 Custody Seals intact on sample bottles?	**Yes**
#7 *Custody Seals Signed and dated?	**Yes**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 09/15/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 09/16/2016

Certificate of Analysis Summary 603504

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Thu Oct-25-18 11:35 am
Report Date: 26-OCT-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	603504-001		603504-002		603504-003		603504-004		603504-005		603504-006	
	Field Id:	VGWUSAT3-001-W-181023		VGWUSAT3-005-W-181023		VGWUSAT3-001-S-181023		VGWUSAT3-005-S-181023		VGWUSAT3-005-N-181023		VGWUSAT3-001-N-181023	
	Depth:	0.58- ft		0.45- ft		0.60- ft		0.30- ft		0.25- ft		0.65- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-23-18 12:58		Oct-23-18 12:45		Oct-23-18 14:55		Oct-23-18 12:50		Oct-23-18 13:57		Oct-23-18 17:04	
Chloride by EPA 300	***Extracted:***	Oct-25-18 14:30		Oct-25-18 14:30		Oct-25-18 14:30		Oct-25-18 14:30		Oct-25-18 14:30		Oct-25-18 14:30	
	Analyzed:	Oct-25-18 17:01		Oct-25-18 17:16		Oct-25-18 17:22		Oct-25-18 17:27		Oct-25-18 17:32		Oct-25-18 17:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.5	4.95	150	4.98	571	4.95	12.5	4.95	66.8	4.97	66.9	4.96
TPH By SW8015 Mod	***Extracted:***	Oct-25-18 16:00		Oct-25-18 16:00		Oct-25-18 16:00		Oct-25-18 16:00		Oct-25-18 16:00		Oct-25-18 16:00	
	Analyzed:	Oct-25-18 21:23		Oct-25-18 22:21		Oct-25-18 22:40		Oct-25-18 22:59		Oct-25-18 23:18		Oct-25-18 23:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 603504

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Thu Oct-25-18 11:35 am
Report Date: 26-OCT-18
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	603504-007		603504-008					
	Field Id:	VGWUSAT3-001-E-181023		VGWUSAT3-005-E-181023					
	Depth:	0.60- ft		0.30- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Oct-23-18 14:36		Oct-23-18 12:40					
Chloride by EPA 300	***Extracted:***	Oct-25-18 14:30		Oct-25-18 14:30					
	Analyzed:	Oct-25-18 17:54		Oct-25-18 17:59					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		87.9	5.00	<4.95	4.95				
TPH By SW8015 Mod	***Extracted:***	Oct-25-18 16:00		Oct-25-18 16:00					
	Analyzed:	Oct-25-18 23:56		Oct-26-18 00:15					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9				
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9				
Total TPH		<15.0	15.0	<14.9	14.9				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 603504

for

Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

SAT-3

B0048616.SAT3

26-OCT-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

26-OCT-18

Project Manager: **Brett Krehbiel**
Arcadis - Roseville, CA
101 Creekside Ridge
CT 200
Roseville, CA 95678

Reference: XENCO Report No(s): **603504**
SAT-3
Project Address:

Brett Krehbiel:

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) 603504. 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. 603504 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,

Kelsey Brooks
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 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUSAT3-001-W-181023	S	10-23-18 12:58	0.58 ft	603504-001
VGWUSAT3-005-W-181023	S	10-23-18 12:45	0.45 ft	603504-002
VGWUSAT3-001-S-181023	S	10-23-18 14:55	0.60 ft	603504-003
VGWUSAT3-005-S-181023	S	10-23-18 12:50	0.30 ft	603504-004
VGWUSAT3-005-N-181023	S	10-23-18 13:57	0.25 ft	603504-005
VGWUSAT3-001-N-181023	S	10-23-18 17:04	0.65 ft	603504-006
VGWUSAT3-001-E-181023	S	10-23-18 14:36	0.60 ft	603504-007
VGWUSAT3-005-E-181023	S	10-23-18 12:40	0.30 ft	603504-008

CASE NARRATIVE

Client Name: Arcadis - Roseville, CA
Project Name: SAT-3

Project ID: *B0048616.SAT3*
Work Order Number(s): *603504*

Report Date: *26-OCT-18*
Date Received: *10/25/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-001-W-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-001	Date Collected:	10.23.18 12.58	Sample Depth:	0.58 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.5**	4.95	mg/kg	10.25.18 17.01		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 21.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 21.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 21.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.25.18 21.23	
o-Terphenyl	84-15-1	97	%	70-135	10.25.18 21.23	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-005-W-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-002	Date Collected:	10.23.18 12.45	Sample Depth:	0.45 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**150**	4.98	mg/kg	10.25.18 17.16		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 22.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 22.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.25.18 22.21	
o-Terphenyl	84-15-1	99	%	70-135	10.25.18 22.21	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-001-S-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-003	Date Collected:	10.23.18 14.55	Sample Depth:	0.60 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**571**	4.95	mg/kg	10.25.18 17.22		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 22.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 22.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 22.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.25.18 22.40	
o-Terphenyl	84-15-1	94	%	70-135	10.25.18 22.40	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-005-S-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-004	Date Collected:	10.23.18 12.50	Sample Depth:	0.30 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.5**	4.95	mg/kg	10.25.18 17.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 22.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 22.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 22.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 22.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.25.18 22.59	
o-Terphenyl	84-15-1	96	%	70-135	10.25.18 22.59	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-005-N-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-005	Date Collected:	10.23.18 13.57	Sample Depth:	0.25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.8**	4.97	mg/kg	10.25.18 17.32		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 23.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 23.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 23.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 23.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.25.18 23.18	
o-Terphenyl	84-15-1	98	%	70-135	10.25.18 23.18	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-001-N-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-006	Date Collected:	10.23.18 17.04	Sample Depth:	0.65 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.9**	4.96	mg/kg	10.25.18 17.48		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.25.18 23.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.25.18 23.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.25.18 23.37	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.25.18 23.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.25.18 23.37	
o-Terphenyl	84-15-1	94	%	70-135	10.25.18 23.37	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-001-E-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-007	Date Collected:	10.23.18 14.36	Sample Depth:	0.60 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**87.9**	5.00	mg/kg	10.25.18 17.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.25.18 23.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.25.18 23.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.25.18 23.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.25.18 23.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.25.18 23.56	
o-Terphenyl	84-15-1	97	%	70-135	10.25.18 23.56	

Certificate of Analytical Results 603504

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-005-E-181023**	Matrix:	Soil	Date Received:	10.25.18 11.35
Lab Sample Id:	603504-008	Date Collected:	10.23.18 12.40	Sample Depth:	0.30 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.25.18 14.30	Basis:	Wet Weight
Seq Number:	3067615				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	10.25.18 17.59	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.25.18 16.00	Basis:	Wet Weight
Seq Number:	3067717				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 00.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 00.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 00.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.26.18 00.15	
o-Terphenyl	84-15-1	96	%	70-135	10.26.18 00.15	

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 603504

Arcadis - Roseville, CA

SAT-3

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3067615 Matrix: Solid Date Prep: 10.25.18
MB Sample Id: 7664859-1-BLK LCS Sample Id: 7664859-1-BKS LCSD Sample Id: 7664859-1-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	272	109	274	110	90-110	1	20	mg/kg	10.25.18 16:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3067615 Matrix: Soil Date Prep: 10.25.18
Parent Sample Id: 603504-001 MS Sample Id: 603504-001 S MSD Sample Id: 603504-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.5	248	280	107	282	107	90-110	1	20	mg/kg	10.25.18 17:06	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3067615 Matrix: Soil Date Prep: 10.25.18
Parent Sample Id: 603552-003 MS Sample Id: 603552-003 S MSD Sample Id: 603552-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	262	106	262	106	90-110	0	20	mg/kg	10.25.18 18:20	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3067717 Matrix: Solid Date Prep: 10.25.18
MB Sample Id: 7664894-1-BLK LCS Sample Id: 7664894-1-BKS LCSD Sample Id: 7664894-1-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)	<8.00	1000	991	99	1040	104	70-135	5	20	mg/kg	10.25.18 20:45	
Diesel Range Organics (DRO)	<8.13	1000	992	99	1070	107	70-135	8	20	mg/kg	10.25.18 20:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		129		122		70-135	%	10.25.18 20:45
o-Terphenyl	102		103		109		70-135	%	10.25.18 20:45

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

QC Summary 603504

Arcadis - Roseville, CA

SAT-3

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P

Seq Number: 3067717 Matrix: Soil Date Prep: 10.25.18

Parent Sample Id: 603504-001 MS Sample Id: 603504-001 S MSD Sample Id: 603504-001 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)	<7.99	999	1090	109	1020	102	70-135	7	20	mg/kg	10.25.18 21:42	
Diesel Range Organics (DRO)	<8.12	999	1130	113	1060	106	70-135	6	20	mg/kg	10.25.18 21:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		118		70-135	%	10.25.18 21:42
o-Terphenyl	118		100		70-135	%	10.25.18 21:42

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 1003504

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Brett Krabbiel	Bill to: (if different)	NA
Company Name:	Arcadis	Company Name:	NA
Address:	101 Creekside Ridge Court, Suite 200	Address:	NA
City, State ZIP:	Roseville, CA 95678	City, State ZIP:	NA
Phone:	(916) 786-5382	Email:	Brett.Krabbiel@Arcadis.com

Work Order Comments

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

Project Name:	SAT-3	Turn Around	
Project Number:	B004816, SAT3	Routine ☐	
P.O. Number:	NA	Rush: 24-hr	
Sampler's Name:	Ryan Nanny	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3	Thermometer ID:	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0.0
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH-GRO,DRO,ORO(8015M) Chloride (EPA 300.0)														Work Order Notes
VGWUSAT3-001-W-181023	SO	10-23-18	1258	0.58'	1	1														TAT starts the day recevied by the lab, if received by 4:30pm
VGWUSAT3-005-W-181023	SO	10-23-18	1245	0.45'	1	1														Sample Comments
VGWUSAT3-001-S-181023	SO	10-23-18	1455	0.60'	1	1														
VGWUSAT3-005-S-181023	SO	10-23-18	1250	0.30'	1	1														
VGWUSAT3-005-N-181023	SO	10-23-18	1357	0.25'	1	1														
VGWUSAT3-001-N-181023	SO	10-23-18	1407	0.65'	1	1														
VGWUSAT3-001-E-181023	SO	10-23-18	1436	0.60'	1	1														
VGWUSAT3-005-E-181023	SO	10-23-18	1240	0.30'	1	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 Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Espy Cook 1.2	10/24/18 1:37	2 Espy Cook		10/25/18 1135
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

ORIGIN ID:HOBA (575) [illegible]
** MAIL SERVICES ETC, LLC
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US

SHIP DATE: 24OCT18
ACTWGT: 24.00 LB MAN
CAD: 0909328/CAFE3211
DIMS: 15X13X12 IN
BILL RECIPIENT

TO XENCO LABORATORIES
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S
MIDLAND TX 79711
(432) 563-1800 REF:
INV:
PO: DEPT:

FedEx Express

J181118060501uv

TRK# 0201 6606 3918 1108

THU - 25 OCT HOLD
STANDARD OVERNIGHT HOLD

41 MAFA
MAFA LBB
TX-US

Part # 156148-434 RIT EXP 03/19 SS

551C1/88FB/184C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Roseville, CA

Date/ Time Received: 10/25/2018 11:35:00 AM

Work Order #: 603504

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**N/A**
#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: 10/25/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 10/25/2018

Kelsey Brooks

Certificate of Analysis Summary 603875

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Tue Oct-30-18 10:53 am
Report Date: 01-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	603875-001		603875-002		603875-003		603875-004		603875-005		603875-006	
	Field Id:	VGWUSAT3-Large- #1-181		VGWUSAT3-Large- #2-181		VGWUSAT3-Large- #3-181		VGWUSAT3-Large- #4-181		VGWUSAT3-Large- #5-181		VGWUSAT3-Large-#10-181	
	Depth:	0.50- ft		0.67- ft		1.40- ft		0.75- ft		0.60- ft		3.20- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-18 09:40		Oct-25-18 09:50		Oct-25-18 09:55		Oct-25-18 11:00		Oct-25-18 13:40		Oct-25-18 18:00	
Chloride by EPA 300	***Extracted:***	Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00	
	Analyzed:	Oct-30-18 15:50		Oct-30-18 15:55		Oct-30-18 16:17		Oct-30-18 16:22		Oct-30-18 16:43		Oct-30-18 16:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		67.5	4.99	404	4.95	159	5.00	974	25.0	137	4.99	137	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 603875

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Tue Oct-30-18 10:53 am
Report Date: 01-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	603875-001		603875-002		603875-003		603875-004		603875-005		603875-006	
	Field Id:	VGWUSAT3-Large- #1-181		VGWUSAT3-Large- #2-181		VGWUSAT3-Large- #3-181		VGWUSAT3-Large- #4-181		VGWUSAT3-Large- #5-181		VGWUSAT3-Large-#10-181	
	Depth:	0.50- ft		0.67- ft		1.40- ft		0.75- ft		0.60- ft		3.20- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-18 09:40		Oct-25-18 09:50		Oct-25-18 09:55		Oct-25-18 11:00		Oct-25-18 13:40		Oct-25-18 18:00	
TPH By SW8015 Mod	***Extracted:***	Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00	
	Analyzed:	Oct-30-18 12:19		Oct-30-18 13:17		Oct-30-18 13:37		Oct-30-18 13:57		Oct-30-18 14:16		Oct-30-18 14:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	83.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	40.5	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	124	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 603875

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Tue Oct-30-18 10:53 am
Report Date: 01-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	603875-007		603875-008		603875-009		603875-010		603875-011		603875-012	
	Field Id:	VGWUSAT3-Large-#11-181		VGWUSAT3-Large-#8-1810		VGWUSAT3-Large-#8Stepd		VGWUSAT3-Large-#9Stepd		VGWUSAT3-Large #9 1810		VGWUSAT3-Large #6 1810	
	Depth:	2.40- ft		2.30- ft		1.30- ft		2.30- ft		2.20- ft		0.68- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-18 18:40		Oct-26-18 10:52		Oct-26-18 11:55		Oct-26-18 15:21		Oct-25-18 15:31		Oct-26-18 15:36	
Chloride by EPA 300	***Extracted:***	Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-30-18 14:00		Oct-31-18 08:30	
	Analyzed:	Oct-30-18 16:54		Oct-30-18 16:59		Oct-30-18 17:04		Oct-30-18 17:10		Oct-30-18 17:15		Oct-31-18 09:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		643	5.00	3560	25.0	1140	25.0	1320	25.0	1460	25.0	1020	4.95

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 603875

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Tue Oct-30-18 10:53 am
Report Date: 01-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	603875-007		603875-008		603875-009		603875-010		603875-011		603875-012	
	Field Id:	VGWUSAT3-Large-#11-181		VGWUSAT3-Large-#8-1810		VGWUSAT3-Large-#8Stepc		VGWUSAT3-Large-#9Stepc		VGWUSAT3-Large #9 1810		VGWUSAT3-Large #6 1810	
	Depth:	2.40- ft		2.30- ft		1.30- ft		2.30- ft		2.20- ft		0.68- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-18 18:40		Oct-26-18 10:52		Oct-26-18 11:55		Oct-26-18 15:21		Oct-25-18 15:31		Oct-26-18 15:36	
TPH By SW8015 Mod	***Extracted:***	Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00		Oct-30-18 11:00	
	Analyzed:	Oct-30-18 14:56		Oct-30-18 15:15		Oct-30-18 15:35		Oct-30-18 15:55		Oct-30-18 16:54		Oct-30-18 17:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 603875

Arcadis - Roseville, CA, Roseville, CA

Project Name: SAT-3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location:

Date Received in Lab: Tue Oct-30-18 10:53 am
Report Date: 01-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	603875-013						
	Field Id:	VGWUSAT3-Large-#6stepou						
	Depth:	0.55- ft						
	Matrix:	SOIL						
	Sampled:	Oct-26-18 16:00						
Chloride by EPA 300	***Extracted:***	Oct-31-18 08:30						
	Analyzed:	Oct-31-18 09:34						
	Units/RL:	mg/kg	RL					
Chloride		260	5.00					
TPH By SW8015 Mod	***Extracted:***	Oct-30-18 11:00						
	Analyzed:	Oct-30-18 17:32						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0					
Diesel Range Organics (DRO)		<15.0	15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0					
Total TPH		<15.0	15.0					

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 603875

for

Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

SAT-3

B0048616.SAT3

01-NOV-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

01-NOV-18

Project Manager: **Brett Krehbiel**
Arcadis - Roseville, CA
101 Creekside Ridge
CT 200
Roseville, CA 95678

Reference: XENCO Report No(s): **603875**
SAT-3
Project Address:

Brett Krehbiel:

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) 603875. 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. 603875 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUSAT3-Large- #1-181025	S	10-25-18 09:40	0.50 ft	603875-001
VGWUSAT3-Large- #2-181025	S	10-25-18 09:50	0.67 ft	603875-002
VGWUSAT3-Large- #3-181025	S	10-25-18 09:55	1.40 ft	603875-003
VGWUSAT3-Large- #4-181025	S	10-25-18 11:00	0.75 ft	603875-004
VGWUSAT3-Large- #5-181025	S	10-25-18 13:40	0.60 ft	603875-005
VGWUSAT3-Large-#10-181025	S	10-25-18 18:00	3.20 ft	603875-006
VGWUSAT3-Large-#11-181025	S	10-25-18 18:40	2.40 ft	603875-007
VGWUSAT3-Large-#8-181026	S	10-26-18 10:52	2.30 ft	603875-008
VGWUSAT3-Large-#8Stepout- 1810256	S	10-26-18 11:55	1.30 ft	603875-009
VGWUSAT3-Large-#9Stepout- 181026	S	10-26-18 15:21	2.30 ft	603875-010
VGWUSAT3-Large #9 181026	S	10-25-18 15:31	2.20 ft	603875-011
VGWUSAT3-Large #6 181026	S	10-26-18 15:36	0.68 ft	603875-012
VGWUSAT3-Large-#6stepout-181026	S	10-26-18 16:00	0.55 ft	603875-013

CASE NARRATIVE

Client Name: Arcadis - Roseville, CA
Project Name: SAT-3

Project ID: *B0048616.SAT3*
Work Order Number(s): *603875*

Report Date: *01-NOV-18*
Date Received: *10/30/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large- #1-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-001	Date Collected:	10.25.18 09.40	Sample Depth:	0.50 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**67.5**	4.99	mg/kg	10.30.18 15.50		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 12.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 12.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 12.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 12.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.30.18 12.19	
o-Terphenyl	84-15-1	93	%	70-135	10.30.18 12.19	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large- #2-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-002	Date Collected:	10.25.18 09.50	Sample Depth:	0.67 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**404**	4.95	mg/kg	10.30.18 15.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 13.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 13.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 13.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 13.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.30.18 13.17	
o-Terphenyl	84-15-1	99	%	70-135	10.30.18 13.17	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large- #3-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-003	Date Collected:	10.25.18 09.55	Sample Depth:	1.40 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**159**	5.00	mg/kg	10.30.18 16.17		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 13.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.8**	15.0	mg/kg	10.30.18 13.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**40.5**	15.0	mg/kg	10.30.18 13.37		1
Total TPH	PHC635	**124**	15.0	mg/kg	10.30.18 13.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.30.18 13.37	
o-Terphenyl	84-15-1	97	%	70-135	10.30.18 13.37	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large- #4-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-004	Date Collected:	10.25.18 11.00	Sample Depth:	0.75 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**974**	25.0	mg/kg	10.30.18 16.22		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 13.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 13.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 13.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 13.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.30.18 13.57	
o-Terphenyl	84-15-1	98	%	70-135	10.30.18 13.57	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large- #5-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-005	Date Collected:	10.25.18 13.40	Sample Depth:	0.60 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	4.99	mg/kg	10.30.18 16.43		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 14.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 14.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 14.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.30.18 14.16	
o-Terphenyl	84-15-1	99	%	70-135	10.30.18 14.16	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#10-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-006	Date Collected:	10.25.18 18.00	Sample Depth:	3.20 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**137**	5.00	mg/kg	10.30.18 16.48		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 14.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 14.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 14.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 14.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.30.18 14.36	
o-Terphenyl	84-15-1	96	%	70-135	10.30.18 14.36	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#11-181025**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-007	Date Collected:	10.25.18 18.40	Sample Depth:	2.40 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**643**	5.00	mg/kg	10.30.18 16.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.30.18 14.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.30.18 14.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.30.18 14.56	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.30.18 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.30.18 14.56	
o-Terphenyl	84-15-1	96	%	70-135	10.30.18 14.56	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#8-181026**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-008	Date Collected:	10.26.18 10.52	Sample Depth:	2.30 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3560**	25.0	mg/kg	10.30.18 16.59		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 15.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 15.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 15.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 15.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.30.18 15.15	
o-Terphenyl	84-15-1	95	%	70-135	10.30.18 15.15	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#8Stepout- 1810256**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-009	Date Collected:	10.26.18 11.55	Sample Depth:	1.30 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	25.0	mg/kg	10.30.18 17.04		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.30.18 15.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.30.18 15.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.30.18 15.35	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.30.18 15.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.30.18 15.35	
o-Terphenyl	84-15-1	94	%	70-135	10.30.18 15.35	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#9Stepout- 181026**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-010	Date Collected:	10.26.18 15.21	Sample Depth:	2.30 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1320**	25.0	mg/kg	10.30.18 17.10		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 15.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 15.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 15.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 15.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	10.30.18 15.55	
o-Terphenyl	84-15-1	92	%	70-135	10.30.18 15.55	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large #9 181026**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-011	Date Collected:	10.25.18 15.31	Sample Depth:	2.20 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.30.18 14.00	Basis:	Wet Weight
Seq Number:	3068092				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1460**	25.0	mg/kg	10.30.18 17.15		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 16.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 16.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 16.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.30.18 16.54	
o-Terphenyl	84-15-1	98	%	70-135	10.30.18 16.54	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large #6 181026**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-012	Date Collected:	10.26.18 15.36	Sample Depth:	0.68 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.31.18 08.30	Basis:	Wet Weight
Seq Number:	3068104				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1020**	4.95	mg/kg	10.31.18 09.29		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 17.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 17.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 17.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.30.18 17.13	
o-Terphenyl	84-15-1	97	%	70-135	10.30.18 17.13	

Certificate of Analytical Results 603875

Arcadis - Roseville, CA, Roseville, CA

SAT-3

Sample Id:	**VGWUSAT3-Large-#6stepout-181026**	Matrix:	Soil	Date Received:	10.30.18 10.53
Lab Sample Id:	603875-013	Date Collected:	10.26.18 16.00	Sample Depth:	0.55 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.31.18 08.30	Basis:	Wet Weight
Seq Number:	3068104				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**260**	5.00	mg/kg	10.31.18 09.34		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.30.18 11.00	Basis:	Wet Weight
Seq Number:	3068063				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.30.18 17.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.30.18 17.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.30.18 17.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.30.18 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.30.18 17.32	
o-Terphenyl	84-15-1	99	%	70-135	10.30.18 17.32	

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.

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 603875

Arcadis - Roseville, CA

SAT-3

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068092 — Matrix: Solid — Date Prep: 10.30.18
MB Sample Id: 7665156-1-BLK — LCS Sample Id: 7665156-1-BKS — LCSD Sample Id: 7665156-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	249	100	90-110	0	20	mg/kg	10.30.18 14:36	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068104 — Matrix: Solid — Date Prep: 10.31.18
MB Sample Id: 7665180-1-BLK — LCS Sample Id: 7665180-1-BKS — LCSD Sample Id: 7665180-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	247	99	90-110	0	20	mg/kg	10.31.18 08:57	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068092 — Matrix: Soil — Date Prep: 10.30.18
Parent Sample Id: 603861-002 — MS Sample Id: 603861-002 S — MSD Sample Id: 603861-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	778	251	1020	96	1030	100	90-110	1	20	mg/kg	10.30.18 14:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068092 — Matrix: Soil — Date Prep: 10.30.18
Parent Sample Id: 603861-003 — MS Sample Id: 603861-003 S — MSD Sample Id: 603861-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	965	248	1160	79	1160	79	90-110	0	20	mg/kg	10.30.18 16:06	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068104 — Matrix: Soil — Date Prep: 10.31.18
Parent Sample Id: 603879-001 — MS Sample Id: 603879-001 S — MSD Sample Id: 603879-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.9	248	281	102	282	102	90-110	0	20	mg/kg	10.31.18 09:18	

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

QC Summary 603875

Arcadis - Roseville, CA

SAT-3

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3068104 Matrix: Soil Date Prep: 10.31.18
Parent Sample Id: 603879-002 MS Sample Id: 603879-002 S MSD Sample Id: 603879-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	73.2	248	327	102	330	104	90-110	1	20	mg/kg	10.31.18 10:42	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3068063 Matrix: Solid Date Prep: 10.30.18
MB Sample Id: 7665163-1-BLK LCS Sample Id: 7665163-1-BKS LCSD Sample Id: 7665163-1-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)	<8.00	1000	957	96	957	96	70-135	0	20	mg/kg	10.30.18 11:40	
Diesel Range Organics (DRO)	<8.13	1000	996	100	998	100	70-135	0	20	mg/kg	10.30.18 11:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		122		122		70-135	%	10.30.18 11:40
o-Terphenyl	102		111		104		70-135	%	10.30.18 11:40

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3068063 Matrix: Soil Date Prep: 10.30.18
Parent Sample Id: 603875-001 MS Sample Id: 603875-001 S MSD Sample Id: 603875-001 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)	<7.98	997	958	96	933	93	70-135	3	20	mg/kg	10.30.18 12:39	
Diesel Range Organics (DRO)	<8.10	997	996	100	959	96	70-135	4	20	mg/kg	10.30.18 12:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		124		70-135	%	10.30.18 12:39
o-Terphenyl	100		101		70-135	%	10.30.18 12:39

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 603875

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

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Project Manager:	Brett Krehbiel	Bill to: (if different)	NA
Company Name:	Arcadis	Company Name:	NA
Address:	101 Creekside Ridge Court, Suite 200	Address:	NA
City, State ZIP:	Roseville, CA 95678	City, State ZIP:	NA
Phone:	(916) 786-5382	Email:	Brett.Krehbiel@Arcadis.com

Work Order Comments

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

Project Name:	SAT-3	Turn Around	
Project Number:	B004861 6.SAT3	Routine ☐	
P.O. Number:	NA	Rush: 24-hr	
Sampler's Name:	Ryan Nanny	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.2	Thermometer ID:	150
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	0.0
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH-DRO,ORO,GRO (8015M) Chloride (EPA300.0)
VGWUSAT3-Large-#1-181025	SO	10-25-18	0940	0.50'	1	X
VGWUSAT3-Large-#2-181025	SO	10-25-18	0950	0.67'	1	X
VGWUSAT3-Large-#3-181025	SO	10-25-18	0955	1.40'	1	X
VGWUSAT3-Large-#4-181025	SO	10-25-18	1100	0.75'	1	X
VGWUSAT3-Large-#5-181025	SO	10-25-18	1340	0.60'	1	X
~~VGWUSAT3-Large-#6-181025~~	~~SO~~	~~10-25-18~~	~~1350~~	~~0.68'~~	~~1~~	~~X~~
VGWUSAT3-Large-#10-181025	SO	10-25-18	1800	3.20'	1	X
VGWUSAT3-Large-#11-181025	SO	10-25-18	1840	2.40'	1	X
VGWUSAT3-Large-#8-181026	SO	10-26-18	1052	2.30'	1	X
VGWUSAT3-Large-#8StepOut-181026	SO	10-26-18	1155	1.30'	1	X

Rev 10-25-18

Work Order Notes

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

Sample Comments

Rev 10-25-18

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

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Erga Gosaj 2.2	10/29/18 2:19	2 Erga Gosaj		
3			4		1430 1053
5			6		

Revised Date 051418 Rev. 2018.1

XENCO LABORATORIES

Chain of Custody

Work Order No: 1023675

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

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Project Manager:	Brett Krahbiel	Bill to: (if different)	NA
Company Name:	Arcadis	Company Name:	NA
Address:	101 Creekside Ridge Court, Suite 200	Address:	NA
City, State ZIP:	Roseville, CA 95678	City, State ZIP:	NA
Phone:	(916) 786-5382	Email:	Brett.Krahbiel@Arcadis.com

Work Order Comments

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

Project Name:	SAT-3	Turn Around	
Project Number:	B004816.SAT3	Routine ☐	
P.O. Number:	NA	Rush: 24-hr	
Sampler's Name:	Ryan Nanny	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.2	Thermometer ID	R6
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0.0
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH-DRO, GRO, ORO (8015M) Chlorides (EPA 300.0)
~~VGWUSAT3-large-#6Stepout-181026~~	~~SO~~	~~10-26-18~~	~~1320~~	~~1.0'~~	1	X
VGWUSAT3-large-#9Stepout-181026	SO	10-26-18	1521	2.30'	1	X
VGWUSAT3-large-#9-181026	SO	10-26-18	1531	2.20'	1	X
VGWUSAT3-large-#6-181026	SO	10-26-18	1536	0.68'	1	X
VGWUSAT3-large-#6Stepout-181026	SO	10-26-18	1600	0.55'	1	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Expa Gonzalez 2.2	10/29/18 2:19	2 Expa Gonzalez		
3			4		10/30 1053
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Roseville, CA

Date/ Time Received: 10/30/2018 10:53:00 AM

Work Order #: 603875

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.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: 10/30/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 10/31/2018

Kelsey Brooks

Certificate of Analysis Summary 604294

Arcadis - Roseville, CA, Roseville, CA

Project Name: VGWU SAT 3

Project Id: B0048616.sat3
Contact: Brett Krehbiel
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-02-18 10:20 am
Report Date: 05-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	604294-001						
	Field Id:	VGWUSAT3-Large-#7 1810						
	Depth:							
	Matrix:	SOIL						
	Sampled:	Oct-25-18 15:16						
Chloride by EPA 300	***Extracted:***	Nov-03-18 11:00						
	Analyzed:	Nov-03-18 17:16						
	Units/RL:	mg/kg	RL					
Chloride		44.7	4.95					
TPH By SW8015 Mod	***Extracted:***	Nov-02-18 13:00						
	Analyzed:	Nov-02-18 21:24						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0					
Diesel Range Organics (DRO)		<15.0	15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0					
Total TPH		<15.0	15.0					

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 604294

for

Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

VGWU SAT 3

B0048616.sat3

05-NOV-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

05-NOV-18

Project Manager: **Brett Krehbiel**
Arcadis - Roseville, CA
101 Creekside Ridge
CT 200
Roseville, CA 95678

Reference: XENCO Report No(s): **604294**
VGWU SAT 3
Project Address: Lea County, NM

Brett Krehbiel:

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) 604294. 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. 604294 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 604294

Arcadis - Roseville, CA, Roseville, CA

VGWU SAT 3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUSAT3-Large-#7 181025	S	10-25-18 15:16		604294-001

Version: 1.%

CASE NARRATIVE

Client Name: Arcadis - Roseville, CA
Project Name: VGWU SAT 3

Project ID: *B0048616.sat3*
Work Order Number(s): *604294*

Report Date: *05-NOV-18*
Date Received: *11/02/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 604294

Arcadis - Roseville, CA, Roseville, CA

VGWU SAT 3

Sample Id: **VGWUSAT3-Large-#7 181025** Matrix: Soil Date Received:11.02.18 10.20

Lab Sample Id: 604294-001 Date Collected: 10.25.18 15.16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 11.03.18 11.00 Basis: Wet Weight

Seq Number: 3068464

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.7**	4.95	mg/kg	11.03.18 17.16		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.18 13.00 Basis: Wet Weight

Seq Number: 3068439

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.18 21.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.18 21.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.02.18 21.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	11.02.18 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	11.02.18 21.24	
o-Terphenyl	84-15-1	96	%	70-135	11.02.18 21.24	

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 604294

Arcadis - Roseville, CA

VGWU SAT 3

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3068464 Matrix: Solid Date Prep: 11.03.18
MB Sample Id: 7665432-1-BLK LCS Sample Id: 7665432-1-BKS LCSD Sample Id: 7665432-1-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	273	109	240	96	90-110	13	20	mg/kg	11.03.18 14:53	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3068464 Matrix: Soil Date Prep: 11.03.18
Parent Sample Id: 604276-082 MS Sample Id: 604276-082 S MSD Sample Id: 604276-082 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	712	248	926	86	928	87	90-110	0	20	mg/kg	11.03.18 15:09	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3068464 Matrix: Soil Date Prep: 11.03.18
Parent Sample Id: 604276-084 MS Sample Id: 604276-084 S MSD Sample Id: 604276-084 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	246	249	492	99	499	102	90-110	1	20	mg/kg	11.03.18 16:23	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3068439 Matrix: Solid Date Prep: 11.02.18
MB Sample Id: 7665416-1-BLK LCS Sample Id: 7665416-1-BKS LCSD Sample Id: 7665416-1-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)	<8.00	1000	993	99	1010	101	70-135	2	20	mg/kg	11.02.18 20:46	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1070	107	70-135	1	20	mg/kg	11.02.18 20:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		127		128		70-135	%	11.02.18 20:46
o-Terphenyl	107		112		115		70-135	%	11.02.18 20:46

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

QC Summary 604294

Arcadis - Roseville, CA

VGWU SAT 3

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P

Seq Number: 3068439 Matrix: Soil Date Prep: 11.02.18

Parent Sample Id: 604294-001 MS Sample Id: 604294-001 S MSD Sample Id: 604294-001 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)	9.62	999	1020	101	932	93	70-135	9	20	mg/kg	11.02.18 21:42	
Diesel Range Organics (DRO)	<8.12	999	1080	108	1060	106	70-135	2	20	mg/kg	11.02.18 21:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		109		70-135	%	11.02.18 21:42
o-Terphenyl	104		95		70-135	%	11.02.18 21:42

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

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #: 604294

Send Results to:

Contact & Company Name: Brett Krehbiel (Arcadis)	Telephone: 916-786-5382
Address: 101 Creekside Ridge Court, Suite 200	Fax:
City: Roseville / State: CA / Zip: 95678	E-mail Address: brett.krehbiel@arcadis.com
Project Name/Location (City, State): VGWU SAT 3, Lea County, NM	Project #: B0048616.SAT3
Sampler's Printed Name: Ryan Nanny	Sampler's Signature:

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TPH-GRO, DRO, ORO - USEPA 8015M	Chloride - EPA 300.0	Per 10-25-18	REMARKS
VGWUSAT3-Large-#7-181025	10-25-18	1516		✓	SO	E	—	1	7	X	X		

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name: Xenco

☑ Cooler packed with ice (✓)

Specify Turnaround Requirements: 24-HOUR TAT

Shipping Tracking #:

Cooler Custody Seal (✓): ☐ Intact ☐ Not Intact

Sample Receipt:

Condition/Cooler Temp: 0.3/0.0

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ryan Nanny	Printed Name: Esperanza Gonzalez	Printed Name: Esperanza Gonzalez	Printed Name: Brianna Teel
Signature:	Signature: Esp Gonz	Signature: Esp Gonz	Signature:
Firm: Arcadis	Firm/Courier: Mail Service	Firm/Courier: Mail Services	Firm: Xenco
Date/Time: 10-30-18 / 3:59	Date/Time: 10/31/18 3:59 3.5	Date/Time: 10/31/18 4:13	Date/Time: 11/2 1020

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by Arcadis

ORIGIN ID:HOBA (575) 392-7550
**
MAIL SERVICES ETC, LLC
4008 N GRIMES

HOBBS, NM 88240
UNITED STATES US

SHIP DATE: 31OCT18
ACTWGT: 12.00 LB MAN
CAD: 0909328/CAFE3211
DIMS: 16x14x13 IN

BILL RECIPIENT

TO XENCO LABORATORIES
FEDEX EXPRESS SHIP CENTER
FEDEX EXPRESS SHIP CENTER
3600 COUNTY ROAD 1276 SOUTH

MIDLAND TX 79711

(432) 563-1800 REF:
INV:
PO: DEPT:

551C1/38E7/184C

FedEx Express

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STANDARD OVERNIGHT
HLD

TRK# 0201 6606 3918 1748

41 MAFA

MAFA
TX-US LBB

Part # 158148-434 RRT EXP 03/19 **

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Roseville, CA

Date/ Time Received: 11/02/2018 10:20:00 AM

Work Order #: 604294

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#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: 11/02/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 11/02/2018

Kelsey Brooks

Certificate of Analysis Summary 604296

Arcadis - Roseville, CA, Roseville, CA

Project Name: VGWU Sat 3

Project Id: B0048616.SAT3
Contact: Brett Krehbiel
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-02-18 10:20 am
Report Date: 05-NOV-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	604296-001		604296-002		604296-003		604296-004					
	Field Id:	VGWUSAT3-Large-N Wall C		VGWUSAT3-Large-W Wall		VGWUSAT3-Large-E Wall C		VGWUSAT3-Large-S Wall C					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Nov-01-18 08:00		Nov-01-18 08:45		Nov-01-18 08:20		Nov-01-18 09:00					
Chloride by EPA 300	***Extracted:***	Nov-03-18 11:00		Nov-03-18 11:00		Nov-03-18 11:30		Nov-03-18 11:30					
	Analyzed:	Nov-03-18 17:21		Nov-03-18 17:26		Nov-03-18 18:14		Nov-03-18 18:19					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1140	24.8	3930	24.8	634	4.99	1170	24.9				
TPH By SW8015 Mod	***Extracted:***	Nov-02-18 13:00		Nov-02-18 13:00		Nov-02-18 13:00		Nov-02-18 13:00					
	Analyzed:	Nov-03-18 00:55		Nov-03-18 01:52		Nov-03-18 02:12		Nov-03-18 02:31					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Diesel Range Organics (DRO)		19.8	15.0	38.5	15.0	21.8	14.9	17.8	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0				
Total TPH		19.8	15.0	38.5	15.0	21.8	14.9	17.8	15.0				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 604296

for

Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

VGWU Sat 3

B0048616.SAT3

05-NOV-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

05-NOV-18

Project Manager: **Brett Krehbiel**
Arcadis - Roseville, CA
101 Creekside Ridge
CT 200
Roseville, CA 95678

Reference: XENCO Report No(s): **604296**
VGWU Sat 3
Project Address: Lea County, NM

Brett Krehbiel:

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) 604296. 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. 604296 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 604296

Arcadis - Roseville, CA, Roseville, CA

VGWU Sat 3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUSAT3-Large-N Wall Comp. 181101	S	11-01-18 08:00		604296-001
VGWUSAT3-Large-W Wall Comp. 181101	S	11-01-18 08:45		604296-002
VGWUSAT3-Large-E Wall Comp. 181101	S	11-01-18 08:20		604296-003
VGWUSAT3-Large-S Wall Comp. 181101	S	11-01-18 09:00		604296-004

CASE NARRATIVE

Client Name: Arcadis - Roseville, CA
Project Name: VGWU Sat 3

Project ID: *B0048616.SAT3*
Work Order Number(s): *604296*

Report Date: *05-NOV-18*
Date Received: *11/02/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 604296

Arcadis - Roseville, CA, Roseville, CA

VGWU Sat 3

Sample Id: **VGWUSAT3-Large-N Wall Comp. 181101** Matrix: Soil Date Received:11.02.18 10.20

Lab Sample Id: 604296-001 Date Collected: 11.01.18 08.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 11.03.18 11.00 Basis: Wet Weight

Seq Number: 3068464

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	24.8	mg/kg	11.03.18 17.21		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.18 13.00 Basis: Wet Weight

Seq Number: 3068439

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.03.18 00.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.8**	15.0	mg/kg	11.03.18 00.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.03.18 00.55	U	1
Total TPH	PHC635	**19.8**	15.0	mg/kg	11.03.18 00.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	11.03.18 00.55	
o-Terphenyl	84-15-1	94	%	70-135	11.03.18 00.55	

Certificate of Analytical Results 604296

Arcadis - Roseville, CA, Roseville, CA

VGWU Sat 3

Sample Id: **VGWUSAT3-Large-W Wall Comp. 18110** Matrix: Soil Date Received:11.02.18 10.20

Lab Sample Id: 604296-002 Date Collected: 11.01.18 08.45

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 11.03.18 11.00 Basis: Wet Weight

Seq Number: 3068464

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3930**	24.8	mg/kg	11.03.18 17.26		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.18 13.00 Basis: Wet Weight

Seq Number: 3068439

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.03.18 01.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**38.5**	15.0	mg/kg	11.03.18 01.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.03.18 01.52	U	1
Total TPH	PHC635	**38.5**	15.0	mg/kg	11.03.18 01.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	11.03.18 01.52	
o-Terphenyl	84-15-1	97	%	70-135	11.03.18 01.52	

Certificate of Analytical Results 604296

Arcadis - Roseville, CA, Roseville, CA

VGWU Sat 3

Sample Id: **VGWUSAT3-Large-E Wall Comp. 181101** Matrix: Soil Date Received:11.02.18 10.20

Lab Sample Id: 604296-003 Date Collected: 11.01.18 08.20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 11.03.18 11.30 Basis: Wet Weight

Seq Number: 3068465

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**634**	4.99	mg/kg	11.03.18 18.14		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.18 13.00 Basis: Wet Weight

Seq Number: 3068439

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	11.03.18 02.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**21.8**	14.9	mg/kg	11.03.18 02.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	11.03.18 02.12	U	1
Total TPH	PHC635	**21.8**	14.9	mg/kg	11.03.18 02.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.03.18 02.12	
o-Terphenyl	84-15-1	110	%	70-135	11.03.18 02.12	

Certificate of Analytical Results 604296

Arcadis - Roseville, CA, Roseville, CA

VGWU Sat 3

Sample Id: **VGWUSAT3-Large-S Wall Comp. 181101** Matrix: Soil Date Received:11.02.18 10.20

Lab Sample Id: 604296-004 Date Collected: 11.01.18 09.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 11.03.18 11.30 Basis: Wet Weight

Seq Number: 3068465

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1170**	24.9	mg/kg	11.03.18 18.19		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.18 13.00 Basis: Wet Weight

Seq Number: 3068439

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.03.18 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	**17.8**	15.0	mg/kg	11.03.18 02.31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	11.03.18 02.31	U	1
Total TPH	PHC635	**17.8**	15.0	mg/kg	11.03.18 02.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	11.03.18 02.31	
o-Terphenyl	84-15-1	92	%	70-135	11.03.18 02.31	

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 604296

Arcadis - Roseville, CA

VGWU Sat 3

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068464 — Matrix: Solid — Date Prep: 11.03.18
MB Sample Id: 7665432-1-BLK — LCS Sample Id: 7665432-1-BKS — LCSD Sample Id: 7665432-1-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	273	109	240	96	90-110	13	20	mg/kg	11.03.18 14:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068465 — Matrix: Solid — Date Prep: 11.03.18
MB Sample Id: 7665433-1-BLK — LCS Sample Id: 7665433-1-BKS — LCSD Sample Id: 7665433-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	256	102	90-110	3	20	mg/kg	11.03.18 17:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068464 — Matrix: Soil — Date Prep: 11.03.18
Parent Sample Id: 604276-082 — MS Sample Id: 604276-082 S — MSD Sample Id: 604276-082 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	712	248	926	86	928	87	90-110	0	20	mg/kg	11.03.18 15:09	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068464 — Matrix: Soil — Date Prep: 11.03.18
Parent Sample Id: 604276-084 — MS Sample Id: 604276-084 S — MSD Sample Id: 604276-084 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	246	249	492	99	499	102	90-110	1	20	mg/kg	11.03.18 16:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3068465 — Matrix: Soil — Date Prep: 11.03.18
Parent Sample Id: 604389-001 — MS Sample Id: 604389-001 S — MSD Sample Id: 604389-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	272	110	267	108	90-110	2	20	mg/kg	11.03.18 18:03	

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

QC Summary 604296

Arcadis - Roseville, CA

VGWU Sat 3

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3068465 Matrix: Soil Date Prep: 11.03.18
Parent Sample Id: 604389-006 MS Sample Id: 604389-006 S MSD Sample Id: 604389-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	134	249	427	118	431	119	90-110	1	20	mg/kg	11.03.18 19:18	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3068439 Matrix: Solid Date Prep: 11.02.18
MB Sample Id: 7665416-1-BLK LCS Sample Id: 7665416-1-BKS LCSD Sample Id: 7665416-1-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)	<8.00	1000	993	99	1010	101	70-135	2	20	mg/kg	11.02.18 20:46	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1070	107	70-135	1	20	mg/kg	11.02.18 20:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		127		128		70-135	%	11.02.18 20:46
o-Terphenyl	107		112		115		70-135	%	11.02.18 20:46

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3068439 Matrix: Soil Date Prep: 11.02.18
Parent Sample Id: 604294-001 MS Sample Id: 604294-001 S MSD Sample Id: 604294-001 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)	9.62	999	1020	101	932	93	70-135	9	20	mg/kg	11.02.18 21:42	
Diesel Range Organics (DRO)	<8.12	999	1080	108	1060	106	70-135	2	20	mg/kg	11.02.18 21:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		109		70-135	%	11.02.18 21:42
o-Terphenyl	104		95		70-135	%	11.02.18 21:42

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

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #: 160496

Send Results to:

Contact & Company Name: Brett Krehbiel (Arcadis)
Telephone: 916-786-5382
Address: 101 Creekside Ridge Court, Suite 200
Fax: NA
City: Roseville State: CA Zip: 95678
E-mail Address: brett.krehbiel@arcadis.com
Project Name/Location (City, State): VGWU SAT 3, Lea County, NM
Project #: B0048616.SAT3
Sampler's Printed Name: Ryan Nanny
Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TPH-GRO, DRO, ORO - USEPA 8015M	Chloride - EPA 300.0
						E	—	4	7		
VGWUSAT3-Large-N wall Comp. 181101	11-1-18	0800	✓		SO			1			
VGWUSAT3-Large-W wall Comp. 181101	11-1-18	0845	✓		SO			1			
VGWUSAT3-Large-E wall Comp. 181101	11-1-18	0820	✓		SO			1			
VGWUSAT3-Large-S wall Comp. 181101	11-1-18	0900	✓		SO			1			

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

REMARKS

Special Instructions/Comments:

3.2 Cooling

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name: Xenco
☑ Cooler packed with ice (✓)
Specify Turnaround Requirements: 24-HOUR TAT
Shipping Tracking #:

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact
Sample Receipt:
Condition/Cooler Temp: 0.3 °C

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ryan Nanny	Printed Name: Jasmine Shearer	Printed Name: Jasmine Shearer	Printed Name: Brianna Teel
Signature:	Signature: JShearer	Signature: JShearer	Signature: Brianna Teel
Firm: Arcadis	Firm/Courier: Mail Services	Firm/Courier: Mail Services	Firm: Xenco
Date/Time: 11-1-18 / 3:35	Date/Time: 11-1-18 3:35	Date/Time: 11-1-18 3:44	Date/Time: 11-2-18 1020

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

ORIGIN ID:HOBA (575) 392-7550
MAIL SERVICES ETC, LLC
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US

SHIP DATE: 01NOV18
ACTWGT: 20.00 LB MAN
CAD: 0909328/CAFE3211
DIMS: 20x16x14 IN
BILL RECIPIENT

TO XENCO LABORATORIES
FEDEX EXPRESS SHIP CENTER
FEDEX EXPRESS SHIP CENTER
3600 COUNTY ROAD 1276 SOUTH

MIDLAND TX 79711
(432) 563-1800
REF:
INV:
PO:
DEPT:

551C1/30E7/104C

FedEx Express

J181111806501uv

TRK# 0201 6606 3918 1851

FRI - 02 NOV HOLD
STANDARD OVERNIGHT
HLD

41 MAFA

MAFA
TX-US LBB

Part # 155148-434 RIT EXP 03/19 ##

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Roseville, CA

Date/ Time Received: 11/02/2018 10:20:00 AM

Work Order #: 604296

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#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: 11/02/2018

Brianna Teel

Checklist reviewed by: Kelsey Brooks Date: 11/02/2018

Kelsey Brooks

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Chevron Environmental Management Waste Company 1400 St. Pl. Houston, TX 77001 Jason Michelson 281.660.8564
JMichelson@chevron.com

2. Originating Site:
HES Transfer Site: Vacuum Glorietta West Unit SAT 3 (VGWU SAT 3)

3. Location of Material (Street Address, City, State or ULSTR):
56 Texas Camp Road Lovington, NM 88260

4. Source and Description of Waste:

Soil excavation

Estimated Volume 700 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Jason Michelson, representative or authorized agent for Chevron Environmental Management Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
Diamondback Disposal Services, Inc. DOT# 1141543

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Sundance Services ParaboFacility #NM-01-0003

Address of Facility:42 Sundance Lane Eunice, NM 88231

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☑ Landfill ☐ Other

Waste Acceptance Status:

☑ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Dom Tellez TITLE: Sales DATE: 10/29/18

SIGNATURE: Dom Tellez TELEPHONE NO.: 575-408-2606

Surface Waste Management Facility Authorized Agent

Analytical Report 560294

for

Arcadis - Houston

Project Manager: Jonathan Olsen

HES Transfer Sites

14-SEP-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

14-SEP-17

Project Manager: **Jonathan Olsen**
Arcadis - Houston
10205 Westheimer Rd., Suite 800
Houston, TX 77042

Reference: XENCO Report No(s): **560294**
HES Transfer Sites
Project Address: Buckeye NM

Jonathan Olsen:

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) 560294. 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. 560294 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 560294

Arcadis - Houston, Houston, TX

HES Transfer Sites

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
VGWUSAT3-07(4')	S	08-14-17 13:56		560294-001
VGWUSAT3-07(10')	S	08-14-17 14:00		560294-002
VGWUSAT3-07(20')	S	08-14-17 14:13		560294-003
VGWUSAT3-07(30')	S	08-14-17 14:20		560294-004
VGWUSAT3-07(60')	S	08-14-17 15:55		560294-005
VGWUSAT3-06(4')	S	08-15-17 08:25		560294-006
VGWUSAT3-06(10')	S	08-15-17 08:30		560294-007
VGWUSAT3-07(40')	S	08-15-17 15:04		560294-010
VGWUSAT3-07(50')	S	08-15-17 15:30		560294-011
VGWUSAT3-06(20')	S	08-15-17 08:36		Not Analyzed
VGWUSAT3-06(30')	S	08-15-17 08:44		Not Analyzed

CASE NARRATIVE

Client Name: Arcadis - Houston

Project Name: HES Transfer Sites

Project ID:
Work Order Number(s): *560294*

Report Date: *14-SEP-17*
Date Received: *08/16/2017*

Sample receipt non conformances and comments:

Samples 560294-007 and 560294-010 released from hold per Melisa Darrow e-mail 08/24/17-- KB

VGWUSAT3-07 (50') released from hold 09/05/17 per Melisa Darrow E-mail-- KB
VGWUSAT3-07 (60') released from hold 09/12/17 per Melisa Darrow E-mail-- KB

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 560294

Arcadis - Houston, Houston, TX

Project Name: HES Transfer Sites

Project Id:
Contact: Jonathan Olsen
Project Location: Buckeye NM

Date Received in Lab: Wed Aug-16-17 10:00 am
Report Date: 14-SEP-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	560294-001		560294-002		560294-003		560294-004		560294-005		560294-006	
	Field Id:	VGWUSAT3-07(4')		VGWUSAT3-07(10')		VGWUSAT3-07(20')		VGWUSAT3-07(30')		VGWUSAT3-07(60')		VGWUSAT3-06(4')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-17 13:56		Aug-14-17 14:00		Aug-14-17 14:13		Aug-14-17 14:20		Aug-14-17 15:55		Aug-15-17 08:25	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-22-17 10:30		Aug-22-17 10:30		Aug-22-17 10:30		Aug-22-17 10:30		Sep-12-17 17:15		Aug-22-17 10:30	
	Analyzed:	Aug-22-17 18:55		Aug-22-17 19:03		Aug-22-17 19:10		Aug-22-17 19:18		Sep-13-17 00:45		Aug-22-17 19:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		68.7	4.99	36.8	5.00	64.9	4.87	427	4.98	140	4.91	279	4.94

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 560294

Arcadis - Houston, Houston, TX

Project Name: HES Transfer Sites

Project Id:

Contact: Jonathan Olsen

Project Location: Buckeye NM

Date Received in Lab: Wed Aug-16-17 10:00 am

Report Date: 14-SEP-17

Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	560294-007		560294-010		560294-011					
	Field Id:	VGWUSAT3-06(10')		VGWUSAT3-07(40')		VGWUSAT3-07(50')					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Aug-15-17 08:30		Aug-15-17 15:04		Aug-15-17 15:30					
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-30-17 14:25		Aug-30-17 14:25		Sep-11-17 14:15					
	Analyzed:	Aug-30-17 18:22		Aug-30-17 18:53		Sep-11-17 21:45					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		27.8	5.00	489	5.00	607	4.99				

Kelsey Brooks
Project Manager

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

+ NELAC certification not offered for this compound.

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

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

Certified and approved by numerous States and Agencies.

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Houston - Dallas - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

BS / BSD Recoveries

Project Name: HES Transfer Sites

Work Order #: 560294 **Project ID:**

Analyst: MGO **Date Prepared:** 08/22/2017 **Date Analyzed:** 08/22/2017

Lab Batch ID: 3025725 **Sample:** 729750-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<4.90	245	228	93	248	236	95	3	90-110	20	

Analyst: MNV **Date Prepared:** 08/30/2017 **Date Analyzed:** 08/30/2017

Lab Batch ID: 3026341 **Sample:** 730135-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	241	96	250	241	96	0	90-110	20	

Analyst: MNV **Date Prepared:** 09/11/2017 **Date Analyzed:** 09/11/2017

Lab Batch ID: 3027337 **Sample:** 730721-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	246	98	250	246	98	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: HES Transfer Sites

Work Order #: 560294 **Project ID:**

Analyst: MNV **Date Prepared:** 09/12/2017 **Date Analyzed:** 09/12/2017

Lab Batch ID: 3027464 **Sample:** 730807-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	254	102	250	253	101	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer Sites

Work Order # : 560294 **Project ID:**

Lab Batch ID: 3025725 **QC- Sample ID:** 560112-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/22/2017 **Date Prepared:** 08/22/2017 **Analyst:** MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	697	246	924	92	246	917	89	1	90-110	20	X

Lab Batch ID: 3025725 **QC- Sample ID:** 560113-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/22/2017 **Date Prepared:** 08/22/2017 **Analyst:** MGO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	14.2	246	279	108	246	277	107	1	90-110	20	

Lab Batch ID: 3026341 **QC- Sample ID:** 561557-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/30/2017 **Date Prepared:** 08/30/2017 **Analyst:** MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	265	250	529	106	250	529	106	0	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer Sites

Work Order # : 560294 **Project ID:**

Lab Batch ID: 3027337 **QC- Sample ID:** 562386-013 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/11/2017 **Date Prepared:** 09/11/2017 **Analyst:** MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	24.4	250	258	93	250	258	93	0	90-110	20	

Lab Batch ID: 3027337 **QC- Sample ID:** 562386-023 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/11/2017 **Date Prepared:** 09/11/2017 **Analyst:** MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	12000	249	11800	0	250	11900	0	1	90-110	20	X

Lab Batch ID: 3027464 **QC- Sample ID:** 562543-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/13/2017 **Date Prepared:** 09/12/2017 **Analyst:** MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	4270	250	4380	44	250	4370	40	0	90-110	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: HES Transfer Sites

Work Order # : 560294 **Project ID:**

Lab Batch ID: 3027464 **QC- Sample ID:** 562543-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/13/2017 **Date Prepared:** 09/12/2017 **Analyst:** MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	7440	249	7550	44	249	7530	36	0	90-110	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order # 560294

Send Results to:

Contact & Company Name: Jonathan Olsen / Arcadis

Telephone: 713-953-4874

Address: 10205 Westheimer Road Suite 800

Fax: NA

City: Houston State: TX Zip: 77042

E-mail Address: jonathan.olsen@arcadis.com

Project Name/Location (City, State): HES Transfer Sites / Buckeye, NM

Project #: B00486261701

Sampler's Printed Name: Ryan Nanny

Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: Chlorides	REMARKS
						E	—	11	7		
VGWUSAT3-07(4')	8-14-17	1356		✓	SO			1		1	
VGWUSAT3-07(10')	8-14-17	1400		✓	SO			1		1	
VGWUSAT3-07(20')	8-14-17	1413		✓	SO			1		1	
VGWUSAT3-07(30')	8-14-17	1420		✓	SO			1		1	
VGWUSAT3-07(60')	8-14-17	1555		✓	SO			1		1	Hold Sample.
VGWUSAT3-06(4')	8-15-17	0825		✓	SO			1		1	
VGWUSAT3-06(10')	8-15-17	0830		✓	SO			1		1	Hold Sample.
VGWUSAT3-06(20')	8-15-17	0836		✓	SO			1		1	Hold Sample.
VGWUSAT3-06(30')	8-15-17	0844		✓	SO			1		1	Hold Sample.
VGWUSAT3-07(40')	8-14-17	1504		✓	SO			1		1	Hold Sample.
VGWUSAT3-07(50')	8-14-17	1530		✓	SO			1		1	Hold Sample.

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

Temp: 1.4 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 1.2

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt

Lab Name: Xenco

☑ Cooler packed with ice (✓)

Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact

Specify Turnaround Requirements: Standard TAT

Shipping Tracking #:

Sample Receipt:

Condition/Cooler Temp: 2.6.0

Relinquished By	Received By	Relinquished By	Laboratory Received By
Printed Name: Ryan Nanny	Printed Name: Karina Ramirez	Printed Name: Karina Ramirez	Printed Name: Shawnee Smith
Signature:	Signature:	Signature:	Signature: Shawnee Smith
Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm: Xenco
Date/Time: 8-15-17 / 1600	Date/Time:	Date/Time:	Date/Time: 8-16-17 10:00

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis - Houston

Date/ Time Received: 08/16/2017 10:00:00 AM

Work Order #: 560294

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 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: Shawnee Smith Date: 08/16/2017
Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 08/16/2017
Kelsey Brooks

ATTACHMENT 4

Soil Boring Logs

ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSat3-01

Soil Boring Log

Sheet: 1 of 1

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 09/14/2016
Date Completed: 09/14/2016

Logger: Ken Wicks
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–10						SAND, coarse; some silt; well graded; dry; gray.	Borehole backfilled with Native material	
1–10						SAND, fine; some silt; dry; tan.		
10–20						SAND, fine, some coarse sand; some silt; dry; tan.		
20–30						SAND, fine, some coarse sand; some silt; dry; tan.		
31						End of boring at 30.0 ft bgs.		

Drilling Co.: HCI Drilling
Driller: Kenny Cooper
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

CHEVRON HES D:\A-PROJECT FILES\BORELOGS\HES-BORING LOGS\GEC BANGALORE\TEMPLATE-48625\GINT TEMPLATE (EXISTING)-HES 48625.GPJ ARCADIS.GDT 31/1/19

ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSat3-02

Soil Boring Log

Sheet: 1 of 2

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 09/14/2016
Date Completed: 09/14/2016

Logger: Ken Wicks
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–4						SAND, fine; some silt; poorly graded; dry; tan.	Borehole backfilled with Native material	
5–10						SAND, fine, some coarse sand; some silt; poorly graded; dry; tan.		
11–20						SAND, fine, some coarse sand; some silt; poorly graded; dry; tan.		
21–30						SAND, fine; few gravel; some silt; dry; tan.		

Drilling Co.: HCI Drilling
Driller: Kenny Cooper
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

CHEVRON HES D:\A-PROJECT FILES\BORELOGS\HES-BORING LOGS\GEC BANGALORE\TEMPLATE-48625\GINT TEMPLATE (EXISTING)-HES 48625.GPJ ARCADIS.GDT 3/1/19

ARCADIS Design & Consultancy for natural and built assets

Soil Boring Log

Chevron

Boring No.: VGWUSat3-02

Sheet: 2 of 2

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 09/14/2016
Date Completed: 09/14/2016

Logger: Ken Wicks
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
31						SAND, fine; some silt; dry; tan.		
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50							Borehole backfilled with Native material	
51						SAND, fine; some silt; moist; tan.		
52								
53								
54								
55								
56								
57								
58								
59								
60								
61						End of boring at 60.0 ft bgs.		
62								

Remarks:

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ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSat3-03

Soil Boring Log

Sheet: 1 of 1

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 09/14/2016
Date Completed: 09/14/2016

Logger: Mphan
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–10			VGWUSAT3-03(4') @ 0949			90% SILT, non plastic; 5% SAND, fine to medium grained; dry; high reaction to HCl; pink (7.5YR 8/3).	Borehole backfilled with Native material	
11–30								
31–40			VGWUSAT3-03(40') @ 1040			90% SAND, very fine to medium grained; 10% SILT, non plastic; weak reaction to HCl; dry; pink (7.5YR 7/3).		
41						End of boring at 40.0 ft bgs.		

Drilling Co.: HCI Drilling
Driller: Kenny Cooper
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

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ARCADIS Design & Consultancy for natural and built assets

Soil Boring Log

Chevron

Boring No.: VGWUSat3-04

Sheet: 1 of 1

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 08/14/2017
Date Completed: 08/14/2017

Logger: R. Nanny
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–4						SAND, some fines; well graded; dry; tan.		
5–10						SAND, fine; some silt; poorly graded; dry; tan.		
11–20						SAND, fine to medium; some silt; poorly graded; dry; tan.	Borehole backfilled with Native material	
21–30						SAND, fine; some silt; poorly graded; dry; tan.		
31						End of boring at 30.0 ft bgs.		

Drilling Co.: White Drilling
Driller: Bo Atkins
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

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ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSat3-05

Soil Boring Log

Sheet: 1 of 1

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 09/14/2016
Date Completed: 09/14/2016

Logger: Mphan
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–10			VGWUSAT3-05(4') @ 1111			90% SILT, non plastic; 5% SAND, fine to medium grained; dry; high reaction to HCl; pink (7.5YR 8/3).	Borehole backfilled with Native material	
11–30								
31–40			VGWUSAT3-05(40') @ 1155			90% SAND, very fine to medium grained; 10% SILT, non plastic; weak reaction to HCl; dry; pink (7.5YR 7/3).		
41						End of boring at 40.0 ft bgs.		

Drilling Co.: HCI Drilling
Driller: Kenny Cooper
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

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ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSAT3-06

Soil Boring Log

Sheet: 1 of 1

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 08/15/2017
Date Completed: 08/15/2017

Logger: R. Nanny
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–30				0.0		CLAYEY SAND; brown (10YR 4/3); fine grained; subrounded; moderately sorted; firm; friable; containing some intergranular clay; dry; roots; trace in sample. Formation also contains trace Caprock Caliche; white (2.5Y 8/1); laminated with pale yellow (2.5Y 8/2); hard 0.05' to 0.30' in size fragments; dry.	Borehole backfilled with Native material	
						CAPROCK CALICHE; White (2.5Y 8/1) lensed with pale yellow (2.5Y 8/2); hard; fractured; formation contains trace fine grains; subrounded; poorly sorted; dry.		
				0.0		NODULAR CALICHE; pink (7.5YR 8/3); moderately firm; dry; containing punky matrix; trace very fine and fine grains; subrounded; moderately sorted in matrix.		
				0.0		SILICEOUS CALICHE; light yellowish brown (10YR 6/4); flinty; indurated; dry.		
						SANDY CALICHE; very pale brown (10YR 8/3); moderately soft; dry; containing some very fine and fine grains; trace medium grains in sample; subrounded; poorly sorted.		
				0.0		SANDSTONE; pink (7.5YR 8/3); fine grained; trace medium grained; subrounded; poorly sorted; weakly cemented; calcareous; dry.		
31						End of boring at 30.0 ft bgs.		

Drilling Co.: White Drilling
Driller: Bo Atkins
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale. <29mg/L (<116mg/kg C1-).

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

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ARCADIS Design & Consultancy for natural and built assets

Chevron

Boring No.: VGWUSAT3-07

Soil Boring Log

Sheet: 1 of 2

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 08/14/2017
Date Completed: 08/14/2017
Weather Conditions: NA

Logger: R. Nanny
Editor: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1–4				0.0		SANDY CLAY; brown (7.5YR 4/2); very firm; blocky containing little sand; fine grained; trace medium grains in sample; poorly sorted; dry; trace roots in sample.		
						CLAYEY SAND; yellowish brown (10YR 5/6); very fine to fine grained; subrounded; poorly sorted; friable; soft; dry.		
5–6						CLAYEY SAND; brown (10YR 5/3); fine grained; subrounded; poorly sorted; dry; firm; friable; formation contains caprock caliche; white (2.5Y 8/1) laminated with pale yellow (2.5Y 8/2); hard; nodules & fragments; little 0.05' to 0.5' in size.		
7–10				0.0		SANDY CALICHE; very pale brown (10YR 8/3); hard; dry; containing some fine grains; subrounded; poorly sorted.		
11–15				0.0		SILICEOUS CALICHE; light yellowish brown (10YR 6/4); flinty; indurated; dry; high silica content.	Borehole backfilled with Native material	
16–20						SANDY CALICHE; very pale brown (10YR 8/3); firm; dry; containing little fine and medium grains; trace coarse grains in sample; subrounded; poorly sorted.		
21–30				0.0		SANDSTONE; very pale brown (10YR 7/4); fine grained; subrounded; poorly sorted; weakly cemented; calcareous; dry. Formation became slightly lighter in color and moderately firm; blocky; showing trace medium sand grains beginning at 47'. Formation began showing Caliche-Nodules; white; silty; firm 0.1 cm to 0.2 cm in size at 50'.		

Drilling Co.: White Drilling
Driller: Bo Atkins
Drilling Method: Air Rotary
Drilling Fluid: None
Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface;
ppm = parts per million; NA = not available or not applicable. Quantab
Reading- 30' : 0.6 unit = Reading below scale.

Sampling Method: Shovel
Sampling Interval: NA
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA
Converted to Well: ☐ Yes ☒ No
Surface Elev.: NA
North Coor: NA
East Coor: NA

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ARCADIS Design & Consultancy for natural and built assets

Soil Boring Log

Chevron

Boring No.: VGWUSAT3-07

Sheet: 2 of 2

Project Name: Chevron EMC
Project Number: B0048616.SAT3
Project Location: HES Transfer Sites

Date Started: 08/14/2017
Date Completed: 08/14/2017
Logger: R. Nanny
Editor: NA
Weather Conditions: NA

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
31–40				0.0		SANDSTONE; very pale brown (10YR 7/4); fine grained; subrounded; poorly sorted; weakly cemented; calcareous; dry. Formation became slightly lighter in color and moderately firm; blocky; showing trace medium sand grains beginning at 47'. Formation began showing Caliche-Nodules; white; silty; firm 0.1 cm to 0.2 cm in size at 50'.	Borehole backfilled with Native material	
41–50				0.0				
51–60				0.0		SAND; brownish yellow (10YR 6/6); fine grained; trace medium grains in sample; subrounded; moderately sorted; slight moisture; loose.		
61–62						End of boring at 60.0 ft bgs.		

Remarks: Quantab Readings:
30': 3.2 units = 94 mg/Lx4 = 376 mg/kg Cl-; 40': 137mg/Lx4 = 548 mg/kg Cl-; 50': 137mg/Lx4 = 548mg/kg Cl-; 60': 40mg/Lx4 = 160mg/kg Cl-.

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ATTACHMENT 5

Photographic Log

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
1	Oct. 2018

Description:

IPS Hydrovacing Perimeter of SAT3-005 Proposed Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
2	Oct. 2018

Description:

Perimeter of SAT3-005 Hydrovaced Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
3	Oct. 2018

Description:

IPS Hydrovacing Perimeter of SAT3-001 Proposed Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
4	Oct. 2018

Description:

Perimeter of SAT3-001 Hydrovaced Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
5	Oct. 2018

Description:

6mil. Plastic Excavated Soil Containment.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
6	Oct. 2018

Description:

IPS Emptying Hydrovaced Soil onto Containment.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
7	Oct. 2018

Description:

Diamondback Excavating Contaminated Soil at SAT3-005.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
8	Oct. 2018

Description:

Diamondback Excavating Contaminated Soil at SAT3-001.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
9	Oct. 2018

Description:

SAT3-005 Excavated Down to Caprock Caliche and Secured Using Snow Fencing.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
10	Oct. 2018

Description:

SAT3-001 Excavated Down to Caprock Caliche and Secured Using Snow Fencing.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
11	Oct. 2018

Description:

Diamondback Delivering Caliche Fill to SAT3.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
12	Oct. 2018

Description:

Diamondback Offloading Top Soil at SAT3.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
13	Oct. 2018

Description:

IPS Hydrovacing SAT3 Large Excavation Perimeter Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
14	Oct. 2018

Description:

Two IPS Rigs Hydrovacing SAT3 Large Excavation Perimeter Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
15	Oct. 2018

Description:

Exposed Electric Line with Tracer Wire at Northwest Corner of SAT3 Large Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
16	Oct. 2018

Description:

Old Abandoned Flow Line Exposed at The Northwest Corner of SAT3 Large Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
17	Oct. 2018

Description:

Diamondback Excavating Northeast Section of SAT3 Large Excavation Using a John Deere Backhoe and Utilizing a Line Spotter.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
18	Oct. 2018

Description:

Diamondback Excavating East Section of SAT3 Large Excavation Using a John Deere Backhoe and Utilizing a Line Spotter.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
19	Oct. 2018

Description:

Diamondback Excavating Northeast Center Section of SAT3 Large Excavation Using a John Deere Backhoe and Utilizing a Line Spotter.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
20	Oct. 2018

Description:

Diamondback Excavating Center Section of SAT3 Large Excavation Using a John Deere Backhoe.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
21	Oct. 2018

Description:

Northeast Section of SAT3 Large Excavation Excavated Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
22	Oct. 2018

Description:

East Section of SAT3 Large Excavation Excavated Down to Caprock Caliche Encroaching on Previously Excavation Indicated by Change in Soil Type at South End of East Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
23	Oct. 2018

Description:

Center Section of SAT3 Large Excavation Excavated Down to Caprock Caliche.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
24	Oct. 2018

Description:

Excavated Contaminated Soil Placed on Plastic Liner Containment.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
25	Oct. 2018

Description:

Excavated Contaminated Soil Placed on Plastic Liner Containment.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
26	Oct. 2018

Description:

Loading Excavated Soil Into 12 Yard Dump Trucks.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
27	Oct. 2018

Description:

Diamondback Leveling Topsoil Placed in SAT3-001 and SAT3-005.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
28	Oct. 2018

Description:

Topsoil Leveled and Lightly Compacted at SAT3-001 and SAT3-005.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
29	Oct. 2018

Description:

Diamondback Installing Caliche Fill Inside SAT3 Large Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
30	Oct. 2018

Description:

Diamondback Using John Deere Backhoe to Level and Compact Caliche Fill in SAT3 Large Excavation.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
31	Oct. 2018

Description:

Diamondback Leveling and Compacting Topsoil Added to The Containment Area After All Contaminated Soil was Removed.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
32	Oct. 2018

Description:

Diamondback Laying Down Native Grass Seed at Containment Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
33	Oct. 2018

Description:

Diamondback Laying Down Native Grass Seed on East Side of SAT3 Large Excavation Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
34	Oct. 2018

Description:

Native Grass Seed Laid Down on Northeast End of SAT3 Large Excavation Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
35	Oct. 2018

Description:

Completed View of SAT3-001, SAT3-005 and Containment Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
36	Oct. 2018

Description:

Completed View of The Northeast End of SAT3 Large Excavation Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Property Name:	Location:	Project No.
Vacuum Glorieta West Unit Satellite 3	Chevron U.S.A. Inc. VGWU Sat 3 Lea County, New Mexico	B0048616.SAT3

Photo No.	Date:
37	Oct. 2018

Description:

Completed Center View of SAT3 Large Excavation Area.

ARCADIS Design & Consultancy for natural and built assets

PHOTOGRAPHIC LOG

Photo No.	Date:
38	Oct. 2018

Description:

Completed Center View of SAT3 Large Excavation Area.

ATTACHMENT 6

Non-Hazardous Waste Manifests

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON Emc PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-24-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil/Water waste	1	TP	17 cu yds	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT. 3 Location Jason Michelson UWDCP-M6011-SFH

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

~~HES SPECIALIST~~ Rr 10-24-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. Rr 10-24-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEmc	on behalf of CEmc	10-24-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: T.P.S	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Jessie Dominguez	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 631-9199	EMERGENCY PHONE:
18. TRANSPORTER (1): Acknowledgment of receipt of material	18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME: Jonathon Tapia	PRINTED/TYPED NAME:
SIGNATURE:	SIGNATURE: DATE:
DATE: 10-24-18	

DISPOSAL FACILITY

DISPOSAL FACILITY:	ADDRESS:	PHONE:
R360 Environmental Solutions (Controlled Recovery INC. Halfway) [Hobbs]	4507 W Carlsbad Hwy Hobbs, New Mexico	575-393-1079

PERMIT NO. NM 1-006

20. COMMENTS: Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON MCBU

VACUUM FMT

NO 1

NON-HAZARDOUS WASTE MANIFEST

1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelson 281-611-8564	56 Texas Camp Rd. CITY Lovington STATE NM ZIP 88260	10-24-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil/water waste	1	TP	17cu yds	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT 3 Location

Jason Michelson UWDCP-MCBU-SFH

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

~~HES SPECIALIST~~ NW 10-24-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RN 10-24-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Norris on behalf of CEMC	[signature] on behalf of CEMC	10-24-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: JPS	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Jel...	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575)631-9129	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Jonathan Tapia	PRINTED/TYPED NAME
SIGNATURE [signature] DATE 10-24-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: R360 Environmental Solutions (Controlled Recovery Inc. Halfway) [Hobbs]	ADDRESS: 4507 W. Carlsbad Hwy Hobbs, New Mexico	PHONE: 575-393-1079
PERMIT NO. NM1-006	20. COMMENTS Jason Michelson UWDCP-MCBU-SFH	

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:

RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: **CHEVRON**
PHONE NO. **575-396-4414**
Jason Michelsen 281-660-8564

4. ADDRESS: **56 Texas Camp Rd.**
CITY **Lovington** STATE **NM** ZIP **88260**

5. **PICK-UP DATE:** 10-25-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil/water Waste	1	TP	17cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT3 Location Jason Michelsen UwDCP-M6011-5FH

TO

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**
~~HES SPECIALIST~~ RT 10-25-18
Chemtrec 1-800-424-9300
24-HOUR EMERGENCY NO. RT 10-25-18
~~575 396 4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Nanny on behalf of CEMC
SIGNATURE: on behalf of CEMC DATE: 10-25-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: I.P.S.
IN CASE OF EMERGENCY CONTACT: Jessic Domingucz
EMERGENCY PHONE: 575-631-9129

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Jonathan Tapia
SIGNATURE: DATE: 10-25-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: R360 Environmental Solutions (Controlled Recovery INC, Halfway) [Hobbs]
ADDRESS: 4507 W. Carlsbad HWY Hobbs, NM
PHONE: 575-393-1079

PERMIT NO. NM 1-006

20. COMMENTS: Jason Michelsen UwDCP-M6011-5FH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO • PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelsen 281-660-8564	56 Texas Camp Rd.			10-29-18
	CITY	STATE	ZIP	
	Lovington	NM	88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	BT DT RV 10-29-18	12cu Yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT 3 Location Jason Michelsen UWOCP-M6011-SFH

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

~~HES SPECIALIST~~ RV 10-29-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RV 10-29-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: BT Trucking #4 USDOT# 2908491	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Baldemar Tarin	PRINTED/TYPED NAME
SIGNATURE Baldemar Tarin DATE 10-29-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511
PERMIT NO. NM-01-0003	20. COMMENTS NIA, C-138 Form Jason Michelson UWOCP-M6011-SFH	

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE__OF__ 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd.			10-29-18
	CITY Lovington	STATE NM	ZIP 88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. Exempt (RCRA) Oil Field Soil Waste	1	DT	12 cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT3 Location Jason Michelson UW DCP-M6011-SFH

TO

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

~~HES SPECIALIST~~ RW 10-29-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-29-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nunn on behalf of CEMI	on behalf of CEMI	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
USDOT# 1749163	
TRUCKING COMPANY NAME: JC Dump Trucking	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Jubencio Castilla	PRINTED/TYPED NAME
SIGNATURE DATE	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	N/A, C-138 Form Jason Michelson UW DCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd.			10-29-18
	CITY Lovington	STATE NM	ZIP 88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cuyards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT 3 Location Jason Michelson UW DCP-M6011-SFH

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

~~HES SPECIALIST~~ RY 10-29-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RY 10-29-18
~~575-396-4414~~ (DIAL 1 AFTER HOURS)

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: JP Trucking US DOT # 3027467	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Jose Perez	PRINTED/TYPED NAME
SIGNATURE Jose Perez DATE 10-29-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	NIA, C-138 Form Jason Michelson UW DCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO

NON-HAZARDOUS WASTE MANIFEST 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON Emc
PHONE NO. 575-396-4414
Jason Michelson 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 10-29-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cy yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT 3 Location

Jason Michelson UWDCP-M6011-SFH

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

~~HES SPECIALIST~~ RW 10-29-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-29-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Mcvay on behalf of CEmc	on behalf of CEmc	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: JC Dump Trucking # 2	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. TRANSPORTER (1): Acknowledgment of receipt of material	18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME Jubencio Castillo	PRINTED/TYPED NAME
SIGNATURE [signature] DATE 10-29-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services

ADDRESS: 42 Sundance Lane Eunice ~~Eunice~~, NM 88231 RW 10-29-18

PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form

Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-29-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil Waste	1	OT	12cu yards		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT 3 Location Jason Michelson UWDCP-M6011-5FH

TO

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

~~HES SPECIALIST~~ RW 10-29-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-29-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

R

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME:	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Baldemar Tarin	PRINTED/TYPED NAME
SIGNATURE B. TARIN DATE 10-29-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	NIA, C-138 Form Jason Michelson UWDCP-M6011-5FH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE__OF__ 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC	56 Texas Camp Rd.			10-29-18
PHONE NO. 575-396-4414	CITY	STATE	ZIP	
Jason Michelson 281-660-8564	Lovington	NM	88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil Waste	1	DT	12 cu yards		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT 3 Location Jason Michelson UWDCP-M6011-SFH

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

~~HES SPECIALIST~~ RW 10-29-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-29-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-29-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: J.P. TRUCKING	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. TRANSPORTER (1): Acknowledgment of receipt of material	18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME Jose Perez	PRINTED/TYPED NAME
SIGNATURE Jose Perez DATE 10-29-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	N/A. C-138 Form Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE:
CHEVRON EMC PHONE NO. **575-396-4414** Jason Michelson 281-660-7564	**56 Texas Camp Rd.** CITY **Lovington** STATE **NM** ZIP **88260**	10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil waste	1	DT	12 cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SHT-3 Location
Jason Michelson UWPEF-MEOH-SEN

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

~~HES SPECIALIST~~ JM 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. 10-30-18 JM
575-396-4414 ~~(DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
[illegible] on behalf of EMC	[signature] on behalf of EMC	10-30-18

TRANSPORTERS

16. **TRANSPORTER (1)**	17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME: BT TRUCK #4	**TRUCKING COMPANY NAME:**
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Baldemar Torix	PRINTED/TYPED NAME
SIGNATURE Baldemar Torix DATE 10-30-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance disposal services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	N/A C-138 Form Jason Michelson UWPEF-MEOH-SEN

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO

NON-HAZARDOUS WASTE MANIFEST 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME
CHEVRON Emt
PHONE NO. **575-396-4414**
Jason Middleton 281-660-5514

4. ADDRESS
56 Texas Camp Rd.
CITY **Lovington** STATE **NM** ZIP **88260**

5. PICK-UP DATE: 10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil waste	1	DT	12 cu yards	
b.				
c.				
d.				

12. NAME OF LEASE:
Buckeye SAT-3 Location
Jason Middleton UWDCL-MBOll-SCH

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

~~HES SPECIALIST~~ 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO.
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Mowery on behalf of Chevron
SIGNATURE: [signature] on behalf of Chevron
DATE: 10-30-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: JC Dump Trucking #2
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Jubencio Castillo
SIGNATURE: Jubencio Castillo DATE 10-30-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME
SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 1/2 Sundance, Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS NTP, C-138 Fx
Jason Middleton UWDCL-MBOll-SCH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME
CHEVRON Eric
PHONE NO. **575-396-4414**

4. ADDRESS
56 Texas Camp Rd.
CITY **Lovington** STATE **NM** ZIP **88260**

5. **PICK-UP DATE:** 10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:

	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt oilfield Soil waste	1	DT	[illegible]	
b.				
c.				
d.				

12. NAME OF LEASE:
Buckeye SAT-3 Location

14. IN CASE OF EMERGENCY OR SPILL, CONTACT
~~HES SPECIALIST~~ 10-30-18
Chemtrec 1-800-424-9300
24-HOUR EMERGENCY NO. 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME [illegible]
SIGNATURE [signature]
DATE 10-30-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME:
Sparks Trucking LLC
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Guadalupe Sparks
SIGNATURE [signature] DATE 10-30-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME
SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Parabo
ADDRESS: 42 Sundance Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form

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

AUTHORIZED SIGNATURE | CELL NO. | DATE | TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO

NON-HAZARDOUS WASTE MANIFEST 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME
CHEVRON Emc
PHONE NO. **575-396-4414**

4. ADDRESS
56 Texas Camp Rd.
CITY **Lovington** STATE **NM** ZIP **88260**

5. PICK-UP DATE: 10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil Waste	1	DT	[illegible]		
b.					
c.					
d.					

12. NAME OF LEASE:
Buckeye SWT-3 Location

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

~~HES SPECIALIST~~ 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan [illegible] on behalf of CEMC
SIGNATURE: [signature] on behalf of CEMC
DATE: 10-30-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: JC Dump Trucking # 2
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Julencio Castillo
SIGNATURE: [signature] DATE 10-30-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME
SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane, Eunice NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC	56 Texas Camp Rd.			10-30-18
PHONE NO. 575-396-4414	CITY	STATE	ZIP	
Jason Michelson 281-66-8564	Lovington	NM	88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt oil Field Soil waste	1	DT	17cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location Jason Michelson UWDCP-M6011-SFH

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

~~HES SPECIALIST~~ Rev 10-30-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. Rev 10-30-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of LEMC	on behalf of LEMC	10-30-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: BJ TRUCK #4	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME BALDEMAR TARIN	PRINTED/TYPED NAME
SIGNATURE Baldemar Tarin DATE 10-30-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	NIA, C-138 Form Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON Emc PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12 cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location Jason Michelson UWDCP-M6011-SFH

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

~~HES SPECIALIST~~ RW 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEmc	on behalf of CEmc	10-30-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: Morales Trucking	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Guadalupe Morales	PRINTED/TYPED NAME
SIGNATURE DATE 10-30-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511
PERMIT NO. NM-01-0003	20. COMMENTS N/A. C-138 Form Jason Michelson UWDCP-M604-SFH	

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

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON Emi PHONE NO. 575-396-4414 Jason Michelsen 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil waste	1	DT	12cu yards		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location

Jason Michelsen uwDCP-M6011-SFH

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

~~HES SPECIALIST~~ RY 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RY 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEmi	on behalf of CEmi	10-30-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: JC Dump Trucking # 2	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Subencio Castillo	PRINTED/TYPED NAME
SIGNATURE Subencio Castillo DATE 10-30-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511
PERMIT NO. NM-01-0003	20. COMMENTS N/A, C-138 Form Jason Michelsen uwDCP-M6011-SFH	

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: **CHEVRON** Emc
PHONE NO. **575-396-4414**
Jason Michelson 281-660-8564

4. ADDRESS: **56 Texas Camp Rd.**
CITY **Lovington** STATE **NM** ZIP **88260**

5. **PICK-UP DATE:** 10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson UWDCP-M6011-SFH

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

~~**HES SPECIALIST**~~ RW 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Nanny on behalf of CEMC

SIGNATURE: [signature] on behalf of CEMC DATE: 10-30-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: Morales Trucking #4
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Guadalupe Morales
SIGNATURE: [signature] DATE: 10-30-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form
Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON Emc PHONE NO. 575-396-4414 Jason Michalson 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-30-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil waste	1	DT	12cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 location Jason Michalson UWDCP-M60H-SFH

GENERATOR

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

~~HES SPECIALIST~~ Rv 10-30-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO Rv 10-30-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEmc	on behalf of CEmc	10-30-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: BT TRUCK #4	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME BALDEMAR JARIN	PRINTED/TYPED NAME
SIGNATURE Baldemar Jarin DATE 10-30-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	N/A, C-138 Form Jason Michalson UWDCP-M60H-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michalson 281-660-8564	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-31-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cu yard	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michalson uwDCP-M6011-SFH

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

~~HES SPECIALIST~~ RM 10-31-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RM 10-31-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-31-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: BT TRUCK #4	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. TRANSPORTER (1): Acknowledgment of receipt of material	18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME: BALDEMAR TARIN	PRINTED/TYPED NAME:
SIGNATURE: Baldmar Tarin DATE: 10-31-18	SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0007	NIA, C-138 Form Jason Michalson uwDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON EMC
PHONE NO. 575-396-4414
Jason Michelson 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 10-31-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/VoL	
a. RCRA Exempt Oil Field Soil waste	1	DT	12cu yard		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson uwDCP-MB011-SFH

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

~~HES SPECIALIST~~ RW 10-31-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-31-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	10-31-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: JC Dump Trucking # 2
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Subencio Costillo
SIGNATURE [signature] DATE 10-31-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME _____
SIGNATURE _____ DATE _____

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS NIA, C-138 Form
Jason Michelson uwDCP-MB011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michelson 281-660-8564	56 Texas Camp Rd.			10-31-18
	CITY Lovington	STATE NM	ZIP 88260	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt oil Field Soil Waste	1	DT	12 cu yards		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location Jason Michelson UWDCP-M6011-SFH

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

HES SPECIALIST RM 10-31-18 Chemtrel 1-800-424-9300

24-HOUR EMERGENCY NO. RM 10-31-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of EMC	Ryan Nanny on behalf of EMC	10-31-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: Morales Trucking #4	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Guadalupe Morales	PRINTED/TYPED NAME
SIGNATURE Guadalupe Morales DATE 10-31-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice NM, 88231	575-394-2511
PERMIT NO. NM 01-0003	20. COMMENTS N/A, C-138 Form Jason Michelson UWDCP-M6011-SFH	

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE:
CHEVRON EMC PHONE NO. 575-396-4414 Jason Michalson	56 Texas Camp Rd. CITY: Lovington	STATE: NM	ZIP: 88260	10-31-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field waste (Soil)	1	DT	12 cu yard		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location — Jason Michalson 4H DCP MB011-SFH

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

~~IES SPECIALIST~~ RJV 10-31-18
Chantine 1-800-424-9300

24-HOUR EMERGENCY NO. RJV 10-31-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nunn on behalf of CEMC	on behalf of CEMC	10-31-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: JC Dump Trucking #2	TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9886	EMERGENCY PHONE:
18. TRANSPORTER (1): Acknowledgment of receipt of material	18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME: Jubencio Castillo	PRINTED/TYPED NAME:
SIGNATURE: Jubencio Castillo DATE: 10-31-18	SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	NIA, C-138 Form Jason Michalson 4H DCP MB011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON EMC
PHONE NO. 575-396-4414
Jason Michelson 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 10-31-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cu yard		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson UWDCP-M6011-SFH

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**
~~HES SPECIALIST~~ RV 10-31-18
Chemtrec 1-800-424-9300
24-HOUR EMERGENCY NO. RV 10-31-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Nanny on behalf of CEMC
SIGNATURE: [signature] on behalf of CEMC
DATE: 10-31-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: BT Truck #4
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: BALDEMAR TARIN
SIGNATURE: Baldemar Tarin DATE: 10-31-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME
SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane, Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003
20. COMMENTS: NIA, C-138 Form
Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON Emc
PHONE NO. 575-396-4414
Jason Michelson 281-660-8464

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 10-31-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12 cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson UWDCP-M6011-SFH

14. IN CASE OF EMERGENCY OR SPILL, CONTACT
~~HES SPECIALIST~~ RM 10-31-18
Chemtrec 1-800-424-9300
24-HOUR EMERGENCY NO. RM 10-31-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Mann on behalf of EMC
SIGNATURE: on behalf of Emc DATE: 10-31-18

TRANSPORTERS

16. TRANSPORTER (1)
TRUCKING COMPANY NAME: Morales Trucking
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-8586

17. TRANSPORTER (2)
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Guadalupe Morales
SIGNATURE: [signature] DATE: 10-31-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane Eunice NM 88231
PHONE: 575-394-2511 RM 10-31-18

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form
Jason Michelson UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON EMC
PHONE NO. 575-396-4414
Jason Michelson 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: ~~10-31-18~~ RW 10-1-18
11-1-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson uwDCP-M6011-SFH

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

~~HES SPECIALIST~~ RW 10-31-18
Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RW 10-31-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Nanny on behalf of CEMC
SIGNATURE: on behalf of CEMC DATE: ~~10-31-18~~ RW 11-1-18 11-1-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: Darrel Beck
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-8586

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Alicia Quezada
SIGNATURE: RW 11-1-18 DATE: 11-1-18 ~~10-31-18~~

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form
Jason Michelson uwDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON EMC
PHONE NO. 575-396-4414
Jason Michelson 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 11-1-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED (RV 11-1-18)	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.	
a. RCRA Exempt Oil Field Soil Waste	1	DT	12 cu yard		
b.					
c.					
d.					

12. NAME OF LEASE: Buckeye SAT-3 Location
Jason Michelson uwDCP-M6011-SFH

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

~~HES SPECIALIST~~ (RV 11-1-18) Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. (RV 11-1-18) ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	on behalf of CEMC	11-1-18

TRANSPORTERS

16. TRANSPORTER (1)
TRUCKING COMPANY NAME: Diamondback
IN CASE OF EMERGENCY CONTACT: Justin Roberts
EMERGENCY PHONE: 575-631-9586

17. TRANSPORTER (2)
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. TRANSPORTER (1): Acknowledgment of receipt of material
PRINTED/TYPED NAME: Alicia Quezada
SIGNATURE: [signature] DATE: 11-1-18

18. TRANSPORTER (2): Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: Sundance Disposal Services
ADDRESS: 42 Sundance Lane Eunice, NM 88231
PHONE: 575-394-2511

PERMIT NO. NM-01-0003

20. COMMENTS N/A, C-138 Form
Jason Michelson uwDCP-M6011-SFH

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

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON
MCBU

VACUUM FMT

NO **NON-HAZARDOUS WASTE MANIFEST** 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE:
CHEVRON EmC PHONE NO. **575-396-4414** Jason Michelson 281-660-8564	**56 Texas Camp Rd.** CITY **Lovington** STATE **NM** ZIP **88260**	11-1-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil Waste	1	DT	12cuyds	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT-3 Location

Jason Michelson uwDCR-M6011-SFH

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

~~HES SPECIALIST~~ RN 11-1-18 Chemtrec 1-800-424-9300

24-HOUR EMERGENCY NO. RN 11-1-18 ~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME	SIGNATURE	DATE
Ryan Nanny on behalf of CEMC	[signature] on behalf of CEMC	11-1-18

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
TRUCKING COMPANY NAME: DiamondBack	**TRUCKING COMPANY NAME:**
IN CASE OF EMERGENCY CONTACT: Justin Roberts	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: 575-631-9586	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Alicia Quezada	PRINTED/TYPED NAME
SIGNATURE [signature] DATE 11-1-18	SIGNATURE DATE

DISPOSAL FACILITY INFO

DISPOSAL FACILITY:	ADDRESS:	PHONE:
Sundance Disposal Services	42 Sundance Lane Eunice, NM 88231	RN 11-1-18 575-394-2511

PERMIT NO.	20. COMMENTS
NM-01-0003	N/A, C-138 Form Jason Michelson uwDCR-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO - PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

CHEVRON MCBU

VACUUM FMT

NON-HAZARDOUS WASTE MANIFEST

NO 1. PAGE 1 OF 1 2. Truck NO.

GENERATOR

3. COMPANY NAME: CHEVRON Emc
PHONE NO. 575-396-4414
Jason Michelsen 281-660-8564

4. ADDRESS: 56 Texas Camp Rd.
CITY: Lovington STATE: NM ZIP: 88260

5. PICK-UP DATE: 10-24-18

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT WT/Vol.
a. RCRA Exempt Oil Field Soil/water waste	1	TP	17cu yards	
b.				
c.				
d.				

12. NAME OF LEASE: Buckeye SAT 3 Location Jason Michelsen UWDCP-M6011-SFH

IN CASE OF EMERGENCY OR SPILL, CONTACT

14. ~~HES SPECIALIST~~ RM 10-24-18
Chemtrec 1-800-424-9300
24-HOUR EMERGENCY NO. RM 10-24-18
~~575-396-4414 (DIAL 1 AFTER HOURS)~~

15. **Chevron Representative:** Hereby declare that the contents of this consignment are fully and accurately described above.

PRINTED TYPED NAME: Ryan Nanny on behalf of CEmc
SIGNATURE: on behalf of CEmc DATE: 10-24-18

TRANSPORTERS

16. **TRANSPORTER (1)**
TRUCKING COMPANY NAME: I.P.S.
IN CASE OF EMERGENCY CONTACT: Jessie Dominguez
EMERGENCY PHONE (575) 631-9129

17. **TRANSPORTER (2)**
TRUCKING COMPANY NAME:
IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE:

18. **TRANSPORTER (1):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Jonathon Tapia
SIGNATURE: DATE: 10-24-18

18. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME:
SIGNATURE: DATE:

DISPOSAL FACILITY INFO

DISPOSAL FACILITY: R 360 Environmental Solutions (Controlled Recovery INC, Halfway) [Hobbs]
ADDRESS: 4507 W. Carlsbad HWY Hobbs, NM
PHONE: 575-393-1079

PERMIT NO. NM1-006

20. COMMENTS: Jason Michelsen UWDCP-M6011-SFH

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

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME

PLEASE REMIT COMPLETED MANIFEST VIA MAIL, EMAIL OR FAX TO THE BELOW LISTED CONTACT:
RIMY ALVARADO • PHONE: (575) 396-441 X223 • FAX: (575) 396-6913 • EMAIL: RIMYALVARADO@CHEVRON.COM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 59876

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 59876
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	DEFFERAL is APPROVED. Incident is not closed. Open until Section 13 of 29 is done when opportunity happens of at location P&A	11/2/2022