

Bryan W. Shaw, Ph.D., P.E., *Chairman*
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 02, 2016

Mr. Jess Mayfield, President
Arenosa Creek Ranch
PO Box 6870
San Antonio, Texas 78209-0870

Re: Complaint Investigation at:
Arenosa Creek Ranch, J2 Ranch Road, Inez (Victoria County), Texas
Regulated Entity No.: 103911889, TCEQ ID No.: WQ0004666000, Investigation No.: 1329480,
Incident No. 232060

Dear Mr. Mayfield:

On October 1, 2015, to January 7, 2016, Mr. Bill Ross of the Texas Commission on Environmental Quality (TCEQ) Corpus Christi Region Office along with several members of the water section conducted an investigation of the above-referenced regulated entity to evaluate compliance with applicable requirements for land application of wastewater treatment plant biosolids. No violations are being alleged as a result of the investigation.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Mr. Ross in the Corpus Christi Region Office at 361-825-3100.

Sincerely,

A handwritten signature in black ink, appearing to read "Melanie Edwards".

Melanie Edwards
Water Section Manager
Corpus Christi Region Office

ME/BR/jmc

Enclosure: Summary of Investigation Findings

IWD_WQ00004666000_CO_20150904_Investigation Report
Texas Commission on Environmental Quality
Investigation Report

The TCEQ is committed to accessibility. If you need assistance in accessing this document, please contact oee@tceq.texas.gov

Customer: Beneficial Land Management, LLC.
Customer Number: CN600919591

Regulated Entity Name: ARENOSA CREEK RANCH
Regulated Entity Number: RN103911889

| | |
|---|--|
| Investigation # 1329480 | Incident Numbers 232060 |
| Investigator: BILL ROSS | Site Classification SLUDGE BENEFICIAL LAND USE |
| Conducted: 10/01/2015 -- 01/07/2016 | SIC Code: 0139 NAIC Code: 111998 |
| Program(s): SLUDGE | |
| Investigation Type: Compliance Investigation | Location: TEN MI NW OF THE CITY OF INEZ, ON FM 444 AND 2.5 MI NE OF INTERSECTION OF KARNES RD AND FM 444 IN VICTORIA COUNTY |
| Additional ID(s): WQ0004666000 | |

| | |
|--------------------------|--|
| Address: , , , | Local Unit: REGION 14 - CORPUS CHRISTI |
| | Activity Type(s): SGECMPL - SGE Complaint SGENGRECON - SGE Non-Grant Recon |

Principal(s):

| Role | Name |
|-------------|--------------------------------|
| RESPONDENT | BENEFICIAL LAND MANAGEMENT LLC |

Contact(s):

| Role | Title | Name | Phone |
|-------------------------------|------------------------|--------------------|---|
| PARTICIPATED IN | PRESIDENT | MR JESS L MAYFIELD | Work (210) 828-0525 Home (210) 828-7025 Cell (210) 260-9545 Fax (210) 359-6301 |
| REGULATED ENTITY MAIL CONTACT | PRESIDENT | MR JESS L MAYFIELD | Cell (210) 260-9545 Fax (210) 359-6301 Home (210) 828-7025 Work (210) 828-0525 |
| PARTICIPATED IN | DIRECTOR OF COMPLIANCE | MR CARTER MAYFIELD | Work (210) 828-0525 |
| REGULATED ENTITY CONTACT | CONSULTANT | JAMES THOMAS | Cell (979) 575-5107 |

Other Staff Member(s):

| Role | Name |
|--------------|---------------------|
| Investigator | ERIC LINDGREN |
| QA Reviewer | JAY HALEPESKA |
| Supervisor | MELANIE EDWARDS |
| Investigator | BLAS RIZZO |
| Investigator | GERARDO ARRAMBIDE |
| Supervisor | ANTHONY BUCK |
| Investigator | CHRISTOPHER WIATREK |
| Investigator | JAY HALEPESKA |

Associated Check List

| <u>Checklist Name</u> | <u>Unit Name</u> |
|---|-------------------------|
| WQ COMPLAINT INVESTIGATION | 1 |
| SLUDGE BENEFICIAL USE SITE ASSESSMENT CHECKLIST | 2 |

Investigation Comments:

INTRODUCTION:

On October 1, 2015, an environmental sampling event was initiated at the Arenosa Creek Ranch (ACR) in response to a complaint received by the Texas Commission on Environmental Quality (TCEQ) on September 4, 2015 (Incident No. 232060). The complainant alleged groundwater and surface water contamination from the land application of waste. Regulated entity contacts during the sampling event were Mr. Jess Mayfield, President, and Mr. Carter Mayfield, Director of Compliance.

GENERAL FACILITY AND PROCESS INFORMATION:

Beneficial Land Management (BLM), which operates the ACR site located in the drainage area of Lavaca Bay and Chocolate Bay in Segment No. 2453 of the Lavaca-Guadalupe Coastal River Basin, is authorized to land apply wastewater treatment plant (WWTP) sludge on 793.4 acres located within the 2,881 acre ranch.

BACKGROUND:

Permit No. WQ0004666000, to land apply wastewater treatment plant sludge was issued to BLM on May 31, 2007 and expired on May 31, 2012. The permit renewal application was received by TCEQ on December 5, 2011. According to TCEQ rules, if permit renewal procedures are initiated before the permit expiration date, the permit remains in full force and effect until commission action on the application for renewal is final.

ADDITIONAL INFORMATION:

Between October 01, 2015 and January 07, 2016, the Texas Commission on Environmental Quality (TCEQ) conducted several sampling events at Arenosa Creek, accessible groundwater wells located on or adjacent to the land application site, the land application site, a recreational lake, and a wetland. The samples were collected and analyzed to determine if contaminants were present at detectable levels.

A detailed report of the sampling event and conclusions can be found in Attachment A.

Based on the sample results, a general compliance letter was sent to the regulated entity.

No Violations Associated to this Investigation

Signed

Environmental Investigator

Date

5/2/2016

Signed

Supervisor

Date

5/2/16

Attachments: (in order of final report submittal)

Enforcement Action Request (EAR)

Letter to Facility (specify type) : GC

Investigation Report

Sample Analysis Results

Manifests

Notice of Registration

Maps, Plans, Sketches

Photographs

Correspondence from the facility

Other (specify) :

A - Environmental Sampling Event

Attachment A

Environmental Sampling Event Report



Texas Commission on Environmental Quality

Corpus Christi Region 14 – Water Section

Beneficial Land Management

ARENOSA CREEK RANCH ENVIRONMENTAL SAMPLING EVENT

Texas Commission on Environmental Quality

15 APRIL 2016

BENEFICIAL LAND MANAGEMENT

ENVIRONMENTAL SAMPLING EVENT RESULTS & CONCLUSIONS

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INTRODUCTION

This environmental sampling event was conducted in response to a complaint received by the Texas Commission on Environmental Quality (TCEQ) on September 4, 2015, (Incident No. 232060). The complainant expressed concerns regarding contamination of groundwater and surface water from the land application of waste on Arenosa Creek Ranch (ACR). Beneficial Land Management (BLM), which operates the ACR land application site, is authorized to land apply wastewater treatment plant (WWTP) sludge on 793.4 acres located within the 2,881 acre ranch.

Between October 01, 2015 and January 07, 2016, the Texas Commission on Environmental Quality (TCEQ) conducted several sampling events at Arenosa Creek, accessible groundwater wells located on or adjacent to the land application site, the land application site, a recreational lake, and a wetland. The samples were collected and analyzed to determine if contaminants were present at detectable levels. **See Appendix 1 for Map of Location.**

BLM ENVIRONMENTAL SAMPLING EVENT

Surface Water Sampling of Arenosa Creek

On October 1, 2015, TCEQ staff arrived at ACR to conduct surface water sampling at two sites, ACR Upper and ACR Lower, along Arenosa Creek. Field parameters were collected using an YSI model 6920 V2 multi-parameter sonde. The sonde was calibrated before leaving the Regional office and post calibrated upon return. Surface water samples were obtained through the collection of grab samples.

Lower Site Sample Collection

TCEQ Staff arrived at approximately 0900 hours at the ACR Lower site, located at 29.006631 North (N) and -96.8257 West (W). A TCEQ staff member operated the sonde to collect field measurements, and would verbally communicate the measurements to a staff member on-shore for recording. Samples were collected after the field parameters were recorded. One staff member waded into the creek to collect samples, once collected another staff member prepared them for shipping by placing them on ice. Samples were collected at 0930 hours. It should be noted that TCEQ staff documented the presence of frogs, small fish, and water bugs during sampling.

Upper Site Sample Collection

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TCEQ Staff arrived at approximately 1100 hours at the ACR Upper site, located at 29.949072 N and -96.8038 W. Field measurements were collected using the same sonde and collection method used at the lower sampling site. Samples were collected at 1140 hours. It should be noted that TCEQ staff documented the presence of frogs, small fish, and water bugs during sampling.

On October 05, 2015, TCEQ staff returned to the Upper and Lower Creek locations to collect water samples to be analyzed for the presence of *E. Coli*. Field parameters were not collected on this day. Samples were collected at 1113 hours at the upper site, and at 1145 hours at the lower site.

Groundwater Sampling of Water Wells

On November 23, 2015, at approximately 1027 hours TCEQ staff arrived at an off-site location to sample groundwater for the presence of contaminants. The first well location (windmill) was not sampled due to lack of wind to turn the mill.

Off-site Well # C1 Sampling Collection

TCEQ Staff arrived at the well site, located at 28.988442 N and -96.805233 W, at approximately 1048 hours. The hose bib in the well house was too close to the ground for proper disinfection prior to sampling. The well was sampled through the hose bib located in a corral. Proper disinfection protocol was followed using a hypochlorination solution. At approximately 1059 hours staff began flushing the line and flushed for 15 minutes while recording field parameters at 5 minute intervals until the parameters stabilized. It was noted that at 1101 hours a strong sulfur smell was present, and persisted for the duration of sampling. After the parameters stabilized, the hose bib was disinfected with bleach and allowed approximately 2-3 minutes for disinfection before samples were collected. At approximately 1135 hours bacteriological samples were collected by TCEQ staff, and sampling concluded at approximately 1142 hours.

On December 2, 2015, TCEQ staff arrived on-site at ACR along with a representative from BLM, Victoria County Groundwater Conservation District (VCGWCD) staff, and VCGWCD sampling contractor Pastor, Behling, and Wheeler, LLC (PBW), to sample four groundwater wells for the presence of contaminants. Sampling of the wells was conducted in the following order: BLM collected samples first, PBW collected samples on behalf of VCGWCD second, and TCEQ staff collected samples third.

ACR Well # 1 Sampling Collection

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50' hose to the bib and running it to a bucket for sampling. Proper disinfection protocol was followed using a hypochlorination solution. TCEQ staff disinfected the hose bib, both the hose ends, the inside of the hose, and a bucket. The disinfected parts were allowed to dry completely. At approximately 1056 hours flushing of the line began and lasted for 15 minutes while recording field parameters at 5 minute intervals until the parameters stabilized. It was noted that at a flow rate of 8 gallons per minute (gpm) a strong sulfur odor was present and persisted the duration of the sampling. Samples were collected directly from the hose stream over the bucket. At approximately 1140 hours bacteriological samples were collected by TCEQ staff, and sampling concluded at approximately 1147 hours.

ACR Well # 2 Sampling Collection

TCEQ Staff arrived at the well site, located at 28.9929 N and -96.84604 W at approximately 1150 hours and noted the well was inoperable due to the string being pulled from the well casing, and could not be sampled. The well was not capped, and the nearby livestock trough was supplied water from Well # 1.

ACR Well # 3 Sampling Collection

TCEQ Staff arrived at the well site, located at 28.999033 N and -96.83805 W, at approximately 1159 hours and noted the well was operable, but could not be sampled due to lack of wind to turn the windmill. The well would be sampled at another date when the weather conditions were conducive to sampling.

ACR Well # 4 Sampling Collection

TCEQ Staff arrived at the well site, located at 28.982589 N and -96.819892 W, at approximately 1221 hours and followed the same collection and sampling method as described with Well #1. At approximately 1230 hours, flushing of the line began, and lasted for 15 minutes while recording field parameters at 5 minute intervals until the parameters stabilized. TCEQ staff collected samples at approximately 1303 hours and sampling was concluded at approximately 1317 hours.

On January 07, 2016 at approximately 1330 hours, TCEQ staff and TCEQ contractor SWS Environmental Services (SWS) arrived on-site at ACR to sample two groundwater wells for the presence of contaminants.

ACR Well # 3 Sampling Collection

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SWS & TCEQ Staff arrived at approximately 1344 hours and noted the well had a 4 inch steel cap, a depth to water of 44 feet and a total depth of greater than 104 feet. Groundwater sampling was initiated at approximately 1404 hours after allowing 20 minutes for flushing of the line.

Off-site Well #C2 Sampling Collection

SWS & TCEQ Staff arrived at the well site, located at 28.986525 N and -96.796003 W, at approximately 1515 hours. It was documented the well had an electric pump. Flushing of the line lasted 20 minutes before initiating sampling at approximately 1625 hours.

Surface Water and Sediment Sampling of ACR Property

On December 02, 2015, at approximately 1320 hours, TCEQ staff arrived on-site at a recreational lake, located at 28.984394 N and -96.829994 W, to sample the sediment and surface water for the presence of contaminants. Immediately upon arrival, field parameters were collected using a YSI model 6920 V2 multi-parameter sonde. The sonde was calibrated before leaving the Regional office and post calibrated upon return. One staff member would verbally communicate the parameters to a staff member for recording. A secchi disk was used to evaluate the transparency of the water. Sediment sampling was initiated at approximately 1330 hours, and was achieved by collecting grab samples from a wooden bridge halfway between an island and the roadway. An Ekman dredge was used to collect three sediment grab samples. The three sediment grab samples were composited into a single sample for laboratory analysis. Sediment sampling concluded at approximately 1340 hours. Surface water grab samples were collected for laboratory analysis. Surface water sampling started at approximately 1350 hours, and concluded at approximately 1404 hours.

On December 30, 2015, TCEQ staff arrived on-site at ACR to conduct sampling of a wetland, located at 28.985075 N and -96.828078 W, for the presence of contaminants. Sampling collection was conducted from a fourteen foot flat bottom boat due to accessibility restrictions. At approximately 1420 hours field parameters were collected where a staff member verbally communicated the parameters to another staff member for recording. Surface water sampling was initiated at approximately 1410 hours, and collected for laboratory analysis. Surface water sampling concluded at approximately 1415 hours. Sediment sampling was initiated at approximately 1425 hours, and was achieved by collecting three grab samples, using an Ekman dredge. The three sediment grab samples were composited into a single sample for laboratory analysis. A secchi disk was used to evaluate the transparency of the water. Sediment sampling concluded at approximately 1440 hours.

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Soil Sampling of ACR Property

On December 14 and 15, 2015, TCEQ staff from Region 14 and Region 04 met with BLM on-site at ACR to evaluate the site for soil sampling. The site conditions were not compatible with TCEQ sampling equipment and required an environmental contractor to perform soil sampling for potential contaminants.

On December 22, 2015, representatives from SWS met TCEQ Staff to evaluate the area and develop a cost estimate to conduct soil sampling on ACR for the areas within the boundary of the land application area (approximately 800 acres) as designated in the existing permit. A representative of TCEQ was on-site during the entire sampling event. SWS collected soil samples in ten (10) areas, approximately 80 acres per area, plus a grab sample (soil) from a suspect grit trap waste location. The ten areas (locations A-J) were sampled at depths 0-6 inches, 6-12 inches, and 6-24 inches, and each depth was composited from 10-15 random samples collected per area. The composited samples were analyzed for a suite of parameters per a soil sampling plan. Below outlines the dates and activities for soil sampling:

- On December 28, 2015, SWS initiated soil sampling at location E for all depths. Samples were composited for analytical analysis between 1630 hours and 1642 hours.
- On December 29, 2015, SWS initiated soil sampling at locations I and J for all depths. Samples were collected at location J between 0730 hours and 1100 hours, and composited for analytical analysis between 1220 hours and 1252 hours. Samples were collected at location I between 1140 hours and 1530 hours, and composited for analytical analysis between 1655 hours and 1715 hours.
- On December 30, 2015, SWS initiated soil sampling at location D for all depths, and location H for a depth 6-24 inches. Samples were collected at location D between 0730 hours and 1145 hours, and were composited for analytical analysis between 1210 hours and 1235 hours. Samples were collected at location H between 1230 hours and 1630 hours, and was composited for analytical analysis at 1655 hours.
- On December 31, 2015, SWS initiated soil sampling at location G for all depths. Samples were collected between 0736 hours and 1215 hours, and were composited for analytical analysis between 1245 hours and 1310 hours.
- On January 05, 2016, SWS initiated soil sampling at locations A and B for all depths. Samples for location A were collected between 0730 hours and 1200 hours, and were composited for analytical analysis between 1220 hours and 1252 hours. Samples for location B were collected approximately 1530 hours

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and 1645 hours, and composited for analytical analysis between 1655 hours and 1715 hours.

- On January 06, 2016, SWS initiated soil sampling at location C for all depths, location H for depths 0-6 inches and 6-12 inches, and the location of suspected Grit Trap Waste for depth 0-3 inches. Samples were collected at location C between 0730 hours and 1130 hours, and composited for analytical analysis between 1140 hours and 1155 hours. A grab sample was collected at the suspected grit trap waste site (location E-58) at 1258 hours. Samples at location H were composited for analytical analysis between 1610 hours and 1625 hours.
- On January 07, 2016, SWS initiated soil sampling at location F for all depths. Samples were collected between 0800 hours and 1128 hours, and composited for analytical analysis between 1150 hours and 1215 hours.

It should be noted that between each area (locations A – J), sampling equipment was decontaminated by SWS. The decontamination was assured by capturing equipment blanks tested at the laboratory for any signs of residual contamination. **Appendix 2. SWS Final Report.**

ANALYTICAL ANALYSIS OF SAMPLING EVENTS

Three independent laboratories were utilized to analyze the environmental samples collected during this event. One laboratory analyzed surface water and sediment samples, one laboratory analyzed groundwater and soil samples, and one laboratory analyzed groundwater bacteriological samples.

Analytical Analysis of Surface Water and Sediment

LCRA Environmental Laboratory Services (ELS), a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, located in Austin, (Travis County) Texas analyzed surface water and sediment samples for potential contamination. The following analyses were requested for all surface water samples: Biological Oxygen Demand (BOD), Sodium Hydroxide (NaOH) and Cyanide, Total Dissolved Solids (TDS), Routine Chemical¹, Chemical Oxygen Demand (COD), *E. Coli*, Orthophosphate, Oil & Grease (O&G), Volatile Organic Compounds (VOCs), Semi-Volatiles, and Total Metals².

¹ Routine Chemical analysis: Total Alkalinity, Chloride, Total Suspended Solids (TSS), Volatile Suspended Solids (VSS), Nitrate, Nitrite, Potassium, Selenium, Silver, Sodium, and Zinc.

²Total Metals (Water) analysis: Aluminum, Arsenic, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury (Total), Nickel, Potassium, Selenium (Total), Silver, Sodium, and Zinc.

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Volatiles, and Total Metals². The following Analyses were requested for all sediment samples: Total Metals³, Conventionals⁴, Volatile Organics, and Semi-Volatiles.

Arenosa Creek Surface Water and Sediment Analysis

On October 02, 2015, ELS received surface water and sediment samples collected from locations AC Upper and AC Lower to determine if contamination was present. The samples were collected by TCEQ staff to be analyzed by the laboratory. According to the analysis of surface water samples, all parameters were below the Texas Risk Reduction (TRRP) Human Health Surface Water Risk Based Exposure Limits (RBELs). According to the analysis of sediment samples, all parameters were below the Human Health Sediment Protective Concentration Limits (PCLs).

On October 06, 2015, ELS received surface water samples collected from locations AC Upper and AC Lower to determine the presence of *E. Coli* bacteria. According to the analysis, *E. Coli* levels were below the RBELs standards.

ACR Lake Surface Water and Sediment Analysis

On December 03, 2015, ELS received surface water and sediment samples collected from ACR Lake to determine if contamination was present. The samples were collected by TCEQ staff to be analyzed by the laboratory. According to the analysis of surface water samples, all parameters were below the TRRP Human Health Surface Water RBELs. According to the analysis of sediment samples, all parameters were below the TRRP Human Health Sediment PCLs.

ACR Wetland Surface Water and Sediment Analysis

On December 31, 2015, ELS received surface water and sediment samples collected from ACR Wetland to determine if contamination was present. The samples were collected by TCEQ staff into 18 containers of various sizes to be processed by the

²Total Metals (Water) analysis: Aluminum, Arsenic, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury (Total), Nickel, Potassium, Selenium (Total), Silver, Sodium, and Zinc.

³ Total Metals (Sediment) analysis: Aluminum, Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, and Zinc.

⁴ Conventionals analysis: Percent Total Solids, Total Organic Carbon (TOC), and Sediment Grain Size.

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laboratory. According to the analysis of surface water samples, all parameters were below the Human Health Surface Water Risk Based Exposure Limits (RBELs). According to the analysis of sediment samples, all parameters were below the Human Health Sediment Protective Concentration Limits (PCLs).

Analytical Analysis of Groundwater and Soil

ALS Environmental (ALS), a NELAP accredited laboratory, located in Houston, (Harris County) Texas analyzed groundwater and soil samples for potential contamination. The following analyses were requested for all groundwater samples: Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), Methyl Tert-Butyl Ether (MTBE), Texas Petroleum Hydrocarbons (TPH), Chloride, Nitrate-Nitrogen, Sulfate, Ammonia-Nitrogen, Phosphorus (Total), TKN, TDS, and Total Metals⁵. The following analyses were requested for all soil samples 0-6 inches: Nutrients⁶, Percent Hydrogen (pH), Total Metals, BTEX, MTBE, and TPH. The following analyses were requested for all soil samples 6-12 inches: BTEX, MTBE, and TPH. The following analyses were requested for all soil samples 6-24 inches: Nutrients, TKN, and pH.

Off-site Groundwater Analysis

On November 24, 2015, ALS received groundwater samples collected from off-site well #C1 to determine if contamination was present. The samples were collected by TCEQ staff into bottles prepared by ALS. According to the analysis of groundwater samples, all parameters were below the Groundwater Residential PCLs and Drinking Water Systems Maximum Contaminant Level (MCLs).

On January 08, 2016, ALS received groundwater samples collected from off-site well #C2 to determine if contamination was present. The samples were collected by SWS staff into 9 bottles, prepared by ALS. According to the analysis of groundwater samples, all parameters were below the TRRP Groundwater Residential PCLs and Drinking Water Systems MCLs.

⁵ Total Metals (Water) analysis consists of the following: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Potassium, Selenium, Silver, Vanadium, and Zinc.

⁶ Nutrients analysis consists of the following: Ammonia as N (KCL extract), TKN, Conductivity, Nitrate/Nitrite, Calcium, Magnesium, Phosphorus, Potassium, and Sodium.

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ACR Groundwater Analysis

On December 03, 2015, ALS received groundwater samples collected from ACR wells #1 and #4 to determine if contamination was present. The samples were collected by TCEQ staff into bottles prepared by ALS. According to the analysis of groundwater samples, all parameters were below the TRRP Groundwater Residential PCLs and Drinking Water Systems MCLs.

On January 08, 2016, ALS received groundwater samples collected from ACR well #3 to determine if contamination was present. The samples were collected by TCEQ staff into bottles prepared by ALS. According to the analysis of groundwater samples, all parameters were below the TRRP Groundwater Residential PCLs and Drinking Water Systems MCLs.

ACR Soil Analysis

On December 29, 2015, ALS received three composite soil samples for location E at depths of 0-6 inches, 6-12 inches, and 6-24 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis, all parameters were below TRRP Tier 1 Residential PCLs for a 30 Acre Source.

On December 30, 2015, ALS received six composite soil samples for locations I and J at depths of 0-6 inches, 6-12 inches, and 6-24 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis, all parameters were below TRRP Tier 1 Residential PCLs for a 30 Acre Source.

On December 31, 2015, ALS received seven composite soil samples for locations D and G at depths of 0-6 inches, 6-12 inches, and 6-24 inches, and location H at a depth of 6-24 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis, all parameters were below TRRP Tier 1 Residential PCLs for a 30 Acre Source.

On January 06, 2016, ALS received six composite soil samples for locations A and B at depths of 0-6 inches, 6-12 inches, and 6-24 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis of soil samples, all parameters were below TRRP Tier 1 Residential PCLs for a 30 Acre Source.

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On January 07, 2016, ALS received five composite soil samples for location C at depths of 0-6 inches, 6-12 inches, and 6-24 inches, location H at depths of 0-6 inches and 6-12 inches, and a grab sample at a suspect grit trap waste location (E-58) at a depth of 0-3 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis, all parameters were below TRRP Tier 1 Residential PCLs for a 30 Acre Source.

On January 6, 2016, ALS received three composite soil samples for location F at depths of 0-6 inches, 6-12 inches, and 6-24 inches to determine if contamination was present. The samples were collected by SWS into containers prepared by ALS. According to the analysis of soil samples, all parameters were below Tier 1 Residential PCLs for a 30 Acre Source.

Bacteriological Analysis of Groundwater Wells

Corpus Christi – Nueces County Public Health District Laboratory (NCL), a NELAP accredited laboratory, located in Corpus Christi, (Nueces County) Texas analyzed all bacteriological samples collected from groundwater wells for the presence or absence of Coliforms and *E. Coli*.

Off-site Groundwater Analysis

On November 23, 2015, NCL received groundwater samples collected from off-site well #C1 to determine the presence or absence of bacteria. The samples were collected by TCEQ staff into one 100 milliliter plastic vial, prepared by NCL. According to the analysis, the groundwater samples showed the absence of bacteria.

On January 08, 2016, NCL received groundwater samples collected from off-site well #C2 to determine the presence or absence of bacteria. The samples were collected by SWS staff into one 100 milliliter plastic vial, prepared by NCL. According to the analysis, the groundwater samples showed the presence of coliforms, and the absence of *E. Coli*.

ACR Groundwater Analysis

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On December 02, 2015, NCL received groundwater samples collected from ACR wells #1 and #4 to determine the presence or absence of bacteria. The samples were collected by TCEQ staff into two 100 milliliter plastic vials, prepared by NCL. According to the analysis, the groundwater samples showed the absence of bacteria for both wells.

On January 08, 2016, NCL received groundwater samples collected from ACR well #3 to determine the presence or absence of bacteria. The samples were collected by SWS staff into one 100 milliliter plastic vial, prepared by NCL. According to the analysis, the groundwater samples showed the presence of coliforms, and the absence of *E. Coli*.

CONCLUSIONS

Samples were collected from four media on or near ACR: Groundwater, Surface Water, Sediment, and Soil. The analytical data collected from these categories were then analyzed by TCEQ experts against human health and environmental protection criteria standards.

Surface Water Sampling Conclusions

TCEQ Water Quality Standards Implementation Team reviewed the results of the surface water sampling data to conclude on the technical findings. In regards to the metals analysis, all results were within applicable water quality standards except for silver. The analysis for silver was below the detection limit of 1 microgram per liter; however, it was above the water quality standard of 0.8 micrograms per liter. In regards to the organic compounds analysis, VOC analysis, and semi-volatiles, all results were within the applicable water quality standards. *E. Coli* was detected in comparable levels and all general water quality data obtained were within water quality standards and at levels that would support aquatic life. The data was compared to TRRP Human Health Surface Water RBELs to show the parameters were below the standards for constituents of concern for human health.

Sediment Sampling Conclusions

TCEQ Water Quality Standards Implementation Team reviewed the results of the sediment sampling data to conclude on the technical findings. In regards to the metals analysis, organic compounds analysis, VOC analysis, and semi-volatiles, all results were within the applicable water quality standards. The data was compared to TRRP Human Health Sediment PCLs to show the parameters were below the standards for constituents

BENEFICIAL LAND MANAGEMENT

ENVIRONMENTAL SAMPLING EVENT RESULTS & CONCLUSIONS

of concern for human health. For specific parameters and details please refer to **Appendix 3. Surface Water and Sediment Analysis and Conclusions.**

Groundwater Sampling Conclusions

TCEQ Professional Geoscientist (P.G.) within the Water Quality Assessment Team reviewed the results of the groundwater sampling data to conclude on the technical findings. In regards to TPH and VOCs, all parameters were found in concentrations below detection limits. In regards to metals, all parameters except for Barium, Copper, Potassium, and Zinc were found in concentrations below detection limits. Barium was detected in each well in concentrations within applicable drinking water standards. Copper was detected in each well in concentrations within the applicable secondary drinking water standard. Potassium is not a human health concern and does not have a drinking water standard. Zinc was detected in each well in concentrations within the applicable secondary drinking water standard. In regards to “other parameters”⁷ all concentration were found either below detection limits or within applicable water quality standards. In regards to bacteria, coliform bacteria was detected in ACR Well #3 and off-site Well #C2. E. coli is the type of coliform bacteria that is the best indicator of fecal contamination, so it is notable that E. coli was not present in the samples collected from these wells. The coliform positive samples may be due to contamination introduced during sampling. The outlets were not disinfected to ensure destruction of any bacteria. The data was compared to TRRP Groundwater Residential PCLs to show the parameters were below the standards for constituents of concern for human health. For specific parameters and details please refer to **Appendix 4. Groundwater and Soil Analysis Conclusions.**

Soil Sampling Conclusions

TCEQ professional Agronomist reviewed the results of the soil sampling data to conclude on the technical findings. In regards to the standard suite of Texas Land Application Permit (TLAP) soil monitoring parameters⁸, it was concluded the results fell within normal agronomic ranges. In regards to the organic analysis⁹, it was concluded the results

⁷ Other Parameters: pH, TDS, Sulfate, Chloride, TKN, Nitrate-Nitrogen, Ammonia-Nitrogen, Phosphorus, Coliform bacteria, and E. Coli.

⁸ TLAP parameters: pH, Electrical Conductivity, Nitrate-N, Ammonia-N, TKN, Phosphorus, Potassium, Sodium, Magnesium, Calcium, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc.

⁹ Organic Analysis: BTEX, 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, Toluene-d8, TPH, 2-Fluorobiphenil, and Trifluoromethyl benzene.

BENEFICIAL LAND MANAGEMENT

ENVIRONMENTAL SAMPLING EVENT RESULTS & CONCLUSIONS

were found in concentrations below detection limits. In regards to the suspect grit trap waste soil analysis, it was concluded that there was an absence of grit trap waste residuals in the soil, and that soil fertility and total metal content were within normal agronomic ranges. The data was compared to the TRRP Tier 1 Residential PCLs for a 30 acre source to show the parameters were below the standards for constituents of concern for human health. For specific parameters and details please refer to **Appendix 4. Groundwater and Soil Analysis Conclusions.**

APPENDICES

1. Map of Location
2. SWS Final Report
3. Surface Water and Sediment Analysis and Conclusions
4. Groundwater and Soil Analysis and Conclusions

Appendix 1

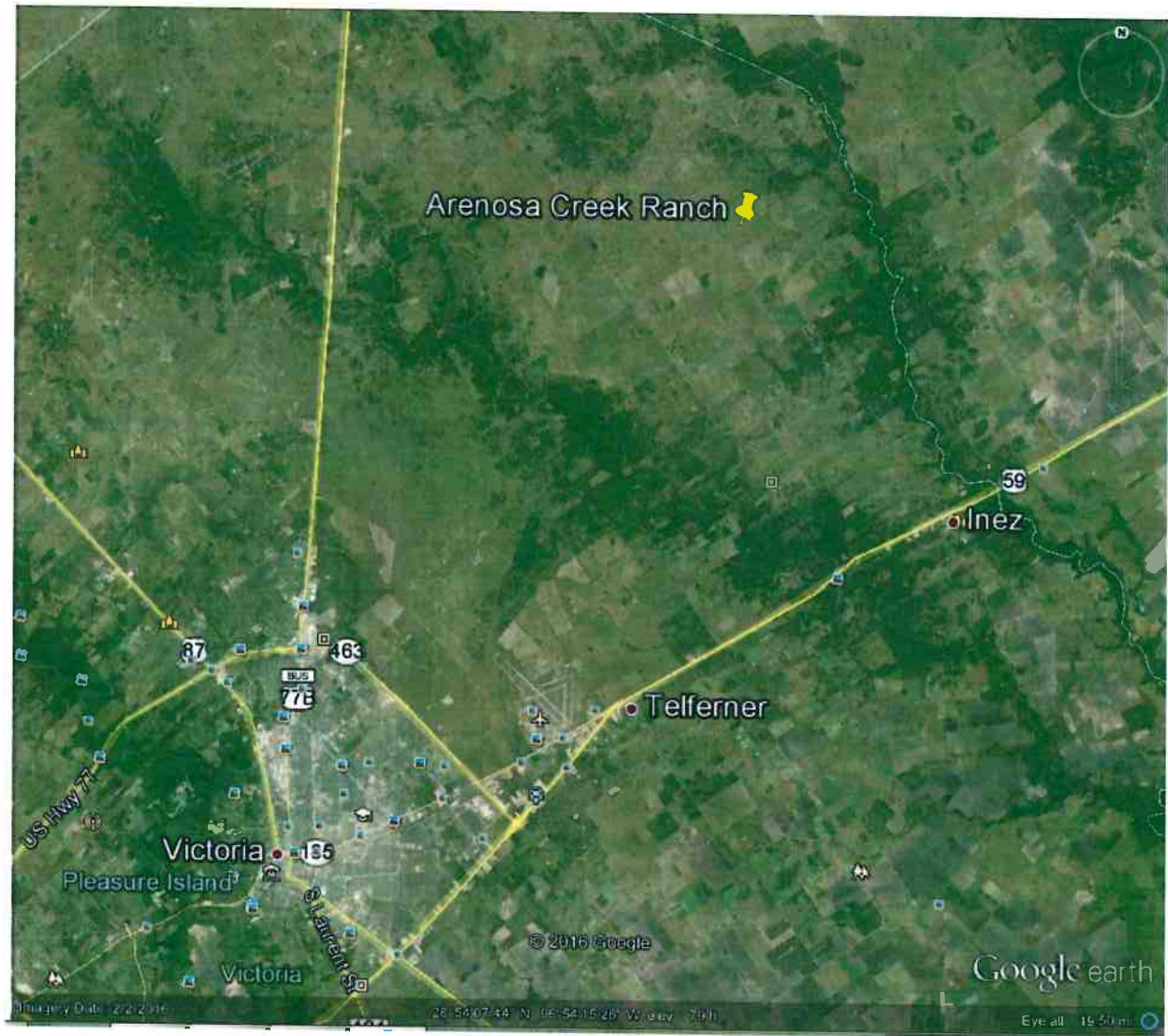
Map of Location



Texas Commission on Environmental Quality

Corpus Christi Region 14 – Water Section

Arenosa Creek Ranch Location



Arenosa Creek Ranch Land Application Site



Appendix 2

SWS Final Report



Texas Commission on Environmental Quality

Corpus Christi Region 14 – Water Section



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January 20, 2016

Mr. Anthony Buck
Texas Commission on Environmental Quality
MC-177
P.O. Box 13087
Austin, TX 78711-3087

Re: Arenosa Creek Ranch Sampling Report, TCEQ Project # 2016-007, SWS Job #RW2-512-1577

Mr. Buck:

SWS Environmental Services (SWS) Geologist, Henry M. Wise, met with Anthony Buck and Chris Wiatrek (TCEQ, Austin), and Jay Halepeska (TCEQ Region 14) on December 22, 2015 at Arenosa Creek Ranch, located on J-2 Ranch Road, Inez, Texas 77968, latitude 28.98559, longitude -96.85843 (Figure 1), to discuss the sampling requirements. Mr. Wise immediately put together a work plan and cost estimate for the work to begin on Monday, December 28, 2015. The cost estimate was delivered to the TCEQ on Wednesday, December 23, 2015. Mr. Wise, Tanner Swimmer (Response Technician), Gilbert Rodriguez (Laborer), and Mathers Environmental Drilling, Inc. (MEDI) mobilized to Victoria on Sunday evening, December 27, 2015 so that the work, which was on a very short time schedule, could begin as early as possible on Monday, December 27, 2015. Mr. Tanner suffered an injury on the way to Victoria and was replaced by Marcus Smith (Laborer) on Monday, December 27, 2015. Mr. Wise and Mr. Smith were replaced by Damon Waresback (Geologist) and Robert King (Response Technician) on Monday, January 4, 2016. A representative (Mr. Bill Ross) of the TCEQ Region 14 Office in Corpus Christi was on-site everyday of the field activities to monitor and oversee the project. In addition, TCEQ representatives from the TCEQ central office (Chris Wiatrek, Jack Lunday and Terry Sullivan) were also onsite on January 5, 2016 to observe the field operations. On January 7, 2016, Susan Clewis and Melanie Edwards of the TCEQ Region 14 Office in Corpus Christi were onsite to observe the soil boring, sample collection and other field activities including oversight of sampling of suspect grit trap waste material. Two, two-wheel drive trucks, and two, four-wheel drive trucks, one drum trailer, and one track-mounted drill rig were used. All field activities were completed on January 8, 2016.

SAMPLE COLLECTION

In accordance with the TCEQ requirements, the site, which consists of approximately 800 acres, was divided into ten, 80-acre sections (Figure 2). Ten to 15 soil samples per section were collected from the depths of 0-6 inches, 6-12 inches, and 6-24 inches and each depth was composited for laboratory analysis. Three composite samples per section (30 samples total for the project), one for each depth, were sent daily to ALS Environmental for various analyses. The soil sampling analyses for the various samples were specified by the TCEQ and are attached. The TCEQ contracted directly with the laboratory and all laboratory results were sent from the

laboratory directly to the TCEQ. SWS does not have copies of the laboratory results and so will not discuss those results in this report.

As per the TCEQ requirements, 15 sampling locations were randomly selected for each 80-acre section. Each section was divided into approximately 100 tracts, the exact number being determined by the actual size and shape of each section. An Excel spreadsheet was used to randomly select 15 locations per section. If the random number generator selected the same number more than once, those duplicate numbers were re-run so that there would be 15 different numbers selected per section. The center of each tract was used to determine the latitude and longitude as to where to take the actual sample (See attached tables and Figure 3). If the exact location was inaccessible, the closest usable point was used to collect the sample and the new location's latitude and longitude was noted. If the entire tract was unusable, that location was not used to collect a sample (Figure 4).

At the request of the TCEQ, one additional grab soil sample was collected from Section E-58, from a depth of 0-3 inches. This location is the site of suspected grit trap waste and is an area of stressed vegetation. Its exact location is noted in the Soil Sample Location table for Section E.

Due to the wet field conditions, all sampling sites were accessed by foot, with the exception of Mather's track-mounted drilling rig. Even the 4-wheel drive trucks often got stuck after leaving the dirt roads. In addition, the short days limited the number of working hours available, so a maximum of only two sections could be sampled in a day.

The samples were collected using Mather's track-mounted push drilling rig. All sampling equipment was decontaminated between sections using soap and water, followed by a distilled water rinse. New sampling gloves were used for each sampling section.

Mather collected two sets of samples per location because of the overlap in the sampling depths. The first push collected the 0-6 inch and 6-12 inch samples. The push-tool then offset the original hole by about a foot to collect the 6-24 inch sample. The samples were collected using a split-spoon sampler that used a new plastic liner for each sample. The liner was then cut in half and then the samples were divided and placed into new plastic buckets that were numbered with the section and depth of each sample. The buckets were opened one sample at a time so that there would be no confusion with putting the lids on the wrong buckets and mixing different depths. The buckets were opened just long enough to add the new sample and then immediately closed before obtaining the next depth for the next bucket.

After all 10-15 samples were collected for each section, before moving onto another section, the material in each bucket was composited by mixing by hand and then placed in appropriate sample jars, as provided by the laboratory. New sampling gloves were used for each sample so as to prevent cross-contamination between samples. The samples were then properly labeled and placed on ice in an ice chest. Standard chain-of-custody protocols were used to deliver the samples to the laboratory. At the end of each sampling day the ice chest was sealed with a custody seal and kept in the back of the pickup truck, in a locked camper, until delivered to the laboratory the next day. SWS delivered the samples directly to their Houston, Texas location.

Quality assurance/quality control of the samples was provided through the use of equipment and trip blanks.

On the last day of sampling, January 7, 2016, at the request of the TCEQ, SWS sampled the Mayfield No. 3 well and another off-site well for BTEX/MTBE (EPA Method 8260), TPH (Texas Method 1005), EPA Method 300-Chloride, SO₄, EPA Method 2540 – Total Dissolved Solids), EPA Method 300 (“NO₃” – 48 hr. hold), TKN, Ammonia, Total Phosphorous, and 12 Total Metals (EPA Methods 6020/7470). The pumps were allowed to run for at least 20 minutes before sampling. All samples were collected in laboratory-prepared bottles and handled and delivered to the laboratory as described above for the soil samples.

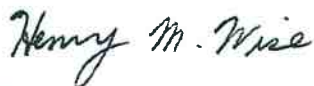
Section H was re-sampled on January 6, 2016 for samples 0-6 inches and 6-12 inches because an error in sampling occurred that could not be rectified at the time. Because of this sampling error, the SWS Geologist rejected these samples and required that they be re-done. These two original samples were never submitted to the laboratory for analysis.

WASTE MANAGEMENT

All used buckets were stored on-site, adjacent to the metal barn until the laboratory analyses become available and a determination as to which type of landfill they can be profiled into can be determined. The unused soil samples were left in their individual buckets so that any samples that might be determined to be hazardous could be disposed separately from any non-hazardous sample material.

SWS is always pleased to help you with your projects. Please call Damon Waresback (817) 847-1333 or myself (281-867-9131) if you have questions or comments.

Thank you.



Henry M. Wise, P.G.
Texas #940

SAMPLING PLAN

Henry Wise

From: Sandy Johnson
Sent: Monday, December 21, 2015 4:42 PM
To: Henry Wise; Damon Waresback
Subject: RE: Sampling Protocols

Sent email to henry

From: Henry Wise
Sent: Friday, December 18, 2015 1:29 PM
To: Sandy Johnson; Damon Waresback
Subject: RE: Sampling Protocols

Sandy,

Only 3 of the 6 sampling notes are provided. Can we get a copy with all 6 notes attached?

Henry

From: Sandy Johnson
Sent: Thursday, December 17, 2015 11:41 AM
To: Damon Waresback; Henry Wise
Subject: FW: Sampling Protocols

Here we go boys.....

We need to decide on a time for Tuesday. He would rather meet Tuesday than Monday. If we need to meet Monday, he can do so. He will need a quote as well and will get us a work order number.

Site is 800 ACRES. They will break the acreage up into 10 – 80 acre tracts. They want 10-15 random samples per tract, at 0-6", 6-12", 12-24".

From: Anthony Buck [<mailto:Anthony.Buck@tceq.texas.gov>]
Sent: Thursday, December 17, 2015 10:42 AM
To: Sandy Johnson
Subject: Sampling Protocols

As requested

1. Sampling Parameters

Utilization of randomized sampling on the approximately 800 acres used for land application. The 800 acres will be delineated into ten 80 acre tracts. Within each 80 acre tract 10 – 15 sample locations will be chosen randomly and geospatial data for the location logged. At each sample site identified, samples will be obtained corresponding to three different depths: 0-6 inches, 6-12 inches, and 6-24 inches. All soil sampled per 80 acre tract will need to be composited and duplicate samples collected. Parameters for analysis are listed within Table 1 below. Precautions will need to be taken to minimize the exposure of the soil to air to keep volatiles from escaping.

TABLE 1.SOIL SAMPLING PARAMETERS FOR BLM

| No. | PARAMETER | NOTE | SAMPLE DEPTH | | |
|-----|---|------|--------------|----------|----------|
| | | | 0" - 6" | 6" - 12" | 6" - 24" |
| 1 | Nitrate Nitrogen (NO ₃ -N, mg/kg) | 1 | X | N/A | X |
| 2 | Ammonium Nitrogen (NH ₄ -N, mg/kg) | 1 | X | N/A | X |
| 3 | Total Nitrogen (TKN, mg/kg) | 2 | X | N/A | X |
| 4 | Phosphorus (plant available, mg/kg) | 3 | X | N/A | X |
| 5 | Potassium (plant available, mg/kg) | 3 | X | N/A | X |
| 6 | Sodium (plant available, mg/kg) | 3 | X | N/A | X |
| 7 | Magnesium (plant available, mg/kg) | 3 | X | N/A | X |
| 8 | Calcium (plant available, mg/kg) | 3 | X | N/A | X |
| 9 | Electrical Conductivity | 4 | X | N/A | X |
| 10 | Soil Water pH (S.U.) | 5 | X | N/A | X |
| 11 | Total Arsenic (mg/kg) | 6 | X | N/A | N/A |
| 12 | Total Barium (mg/kg) | 6 | X | N/A | N/A |
| 13 | Total Cadmium (mg/kg) | 6 | X | N/A | N/A |
| 14 | Total Chromium (mg/kg) | 6 | X | N/A | N/A |
| 15 | Total Copper (mg/kg) | 6 | X | N/A | N/A |
| 16 | Total Lead (mg/kg) | 6 | X | N/A | N/A |
| 17 | Total Mercury (mg/kg) | 6 | X | N/A | N/A |
| 18 | Total Molybdenum (mg/kg) | 6 | X | N/A | N/A |
| 19 | Total Nickel (mg/kg) | 6 | X | N/A | N/A |
| 20 | Total Selenium (mg/kg) | 6 | X | N/A | N/A |
| 21 | Total Zinc | 6 | X | N/A | N/A |
| 22 | TPH extraction | | X | X | N/A |
| 23 | TPH Total | | X | X | N/A |
| 24 | TPH, C6-C12 | | X | X | N/A |

| | | | | |
|----|--------------------------------|---|---|-----|
| 25 | TPH, >C12-C28 | X | X | N/A |
| 26 | TPH, >C28-C36 | X | X | N/A |
| 27 | MTBE | X | X | N/A |
| 28 | Benzene | X | X | N/A |
| 29 | Toluene | X | X | N/A |
| 30 | Ethylbenzene | X | X | N/A |
| 31 | Xylenes, Total | X | X | N/A |
| 32 | Toluene-d8 (surrogate) | X | X | N/A |
| 33 | Bromofluorobenzene (surrogate) | X | X | N/A |

Sampling Parameter Note References:

1. Determined in a 1 N KCl soil extract (<http://soiltest.tamu.edu/webpages/swftmethods1209.html>).
2. Determined by Kjeldahl digestion or an equivalent accepted procedure. Methods that rely on Mercury as a catalyst are not acceptable.
3. Mehlich III extraction (yields plant-available concentrations) with inductively coupled plasma.

Soil Sampling Locations
Section A
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|-----------------------------|
| 38 | 28.98360 | -96.85794 | |
| 70 | 28.98294 | -96.85605 | |
| 62 | 28.98050 | -96.85994 | |
| 30 | 28.98463 | -96.85735 | |
| 54 | 28.98157 | -96.85934 | |
| 91 | 28.97903 | -96.85953 | |
| 8 | 28.98476 | -96.85901 | |
| 51 | 28.98064 | 196.86082 | |
| 13 | 28.92690 | -96.86087 | Moved due to standing water |
| 49 | 28.98355 | -96.85743 | Experimental Plot Edge |
| 53 | 28.98120 | -96.85979 | |
| 50 | 28.98376 | -96.85671 | Experimental Plot Edge |
| 87 | 28.98121 | -96.85692 | |
| 83 | 28.97999 | -96.85888 | |
| 9 | 28.98508 | -96.85849 | |

Soil Sampling Locations
Section B
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---------------------------------|
| 82 | 28.98094 | -96.85274 | |
| 91 | 28.98201 | -96.85460 | |
| 95 | 28.98319 | -96.85260 | |
| 6 | 28.98714 | -96.85502 | |
| 37 | 28.98625 | -96.85356 | |
| 40 | 28.98716 | -96.85207 | Not taken due to standing water |
| 61 | 28.98319 | -96.85558 | |
| 96 | 28.98351 | -96.85212 | |
| 49 | 28.98641 | -96.85228 | |
| 30 | 28.98754 | -96.85240 | Not taken due to standing water |
| 53 | 28.98423 | -96.85489 | |
| 11 | 28.98542 | -96.85691 | |
| 70 | 28.98594 | -96.85118 | Moved due to standing water |
| 80 | 28.98553 | -96.85077 | |
| 16 | 28.98674 | -96.85472 | |

Soil Sampling Locations
Section C
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---------------------------------|
| 16 | 28.98989 | -96.84969 | Moved due to brush |
| 38 | 28.98958 | -96.84827 | |
| 37 | 28.98925 | -96.84864 | |
| 76 | 28.98734 | -96.84791 | |
| 58 | 28.98882 | -96.84756 | |
| 82 | 28.98575 | -96.84945 | |
| 61 | 28.98623 | -96.85064 | |
| 30 | 28.99060 | -96.84752 | Not taken due to standing water |
| 90 | 28.98813 | -96.84557 | |
| 43 | 28.98761 | -96.85030 | |
| 95 | 28.98630 | -96.84774 | |
| 6 | 28.99029 | -96.85017 | |
| 44 | 28.98792 | -96.84978 | |
| 72 | 28.98612 | -96.84981 | |
| 34 | 28.98827 | -96.85024 | Moved due to brush/trees |

Soil Sampling Locations
Section D
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---------------------------------|
| 2 | 28.99205 | -96.84724 | Not taken due to standing water |
| 3 | 28.99236 | -96.84675 | |
| 20 | 28.99391 | -96.84279 | |
| 74 | 28.98975 | -96.84394 | |
| 4 | 28.99264 | -96.84625 | |
| 66 | 28.99059 | -96.84335 | |
| 86 | 28.90980 | -96.84272 | |
| 40 | 28.99309 | -96.84210 | |
| 18 | 28.99325 | -96.84377 | Moved due to standing water |
| 93 | 28.98847 | -96.84351 | Not taken - in different field |
| 24 | 28.99183 | -96.84559 | |
| 99 | 28.99032 | -96.84070 | |
| 100 | 28.99062 | -96.84021 | |
| 37 | 28.99208 | -96.84361 | |
| 6 | 28.99308 | -96.84512 | Not taken - in a lot of brush |

Soil Sampling Locations
Section E
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|-----------------------------|
| 60 | 28.99527 | -96.83691 | |
| 54 | 28.99340 | -96.83984 | |
| 72 | 28.99200 | -96.84021 | |
| 45 | 28.99419 | -96.83975 | |
| 100 | 28.99358 | -96.83573 | |
| 77 | 28.99355 | -96.83770 | |
| 48 | 28.99502 | -96.83225 | Moved due to standing water |
| 35 | 28.99453 | -96.84001 | |
| 114 | 28.99478 | -96.83387 | |
| 50 | 28.99567 | -96.83720 | |
| 68 | 28.99423 | -96.83756 | |
| 103 | 28.99515 | -96.83611 | |
| 75 | 28.99289 | -96.83873 | |
| 65 | 28.99328 | -96.83907 | |
| 104 | 28.99545 | -96.83566 | |

One grab sample was collected at a depth of 0-3 inches from a suspected grit trap waste/stressed vegetation site located in Section E-58, N 28.99439°, W 096.83779°

Soil Sampling Locations
Section F
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---------------------------------|
| 38 | 28.98204 | -96.84925 | |
| 27 | 28.98233 | -96.85014 | |
| 45 | 28.98079 | -96.84987 | |
| 100 | 28.97857 | -96.84584 | Moved due to standing water |
| 97 | 28.97837 | -96.84691 | |
| 16 | 28.98269 | -96.85093 | |
| 53 | 28.97978 | -96.85014 | |
| 26 | 28.98213 | -96.85049 | |
| 66 | 28.97985 | -96.84861 | Not taken due to standing water |
| 32 | 28.98076 | -96.85191 | |
| 19 | 28.98334 | -96.84986 | |
| 34 | 28.98117 | -96.85064 | |
| 61 | 28.97880 | -96.85038 | Not taken due to standing water |
| 11 | 28.98166 | -96.85267 | |
| 23 | 28.98147 | -96.85152 | |

Soil Sampling Locations
Section G
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---------------------------------|
| 68 | 28.98244 | -96.84443 | |
| 39 | 28.98439 | -96.84536 | |
| 65 | 28.98181 | -96.84550 | |
| 76 | 28.98149 | -96.84467 | |
| 93 | 28.97966 | -96.84482 | |
| 2 | 28.98603 | -96.84928 | |
| 92 | 28.97943 | -96.84519 | |
| 25 | 28.98411 | -96.84736 | |
| 50 | 28.98061 | -96.84458 | |
| 61 | 28.98096 | -96.84935 | Not taken due to standing water |
| 31 | 28.98273 | -96.84824 | |
| 22 | 28.98351 | -96.84833 | |
| 42 | 28.98243 | -96.84741 | Moved due to standing water |
| 60 | 28.98355 | -96.84408 | Moved due to standing water |
| 36 | 28.98379 | -96.84642 | |

Soil Sampling Locations
Section H
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|---|
| 16 | 28.98715 | -96.84366 | Moved due to standing water |
| 92 | 28.98177 | -96.84172 | |
| 95 | 28.98262 | -96.84072 | |
| 5 | 28.98749 | -96.84444 | |
| 76 | 28.98383 | -96.84111 | |
| 78 | 28.98428 | -96.84037 | Not sampled due to dark (end of daylight) |
| 73 | 28.98310 | -96.84221 | |
| 3 | 28.98702 | -96.84516 | |
| 68 | 28.98486 | -96.84077 | Moved due to standing water |
| 4 | 28.98721 | -96.84481 | |
| 25 | 28.98639 | -96.84358 | |
| 15 | 28.98690 | -96.84405 | |
| 18 | 28.98764 | -96.84291 | Not sampled due to dark (end of daylight) |
| 77 | 28.98404 | -96.84071 | Not sampled due to dark (end of daylight) |
| 45 | 28.98524 | -96.84275 | |

These same locations were re-sampled for 0-6 inches and 6-12 inches due to an error that caused the original samples for these depths to be determined to be invalid.

Soil Sampling Locations
Section I
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|--------------------------------|
| 32 | 28.98765 | -98.84079 | |
| 93 | 28.98507 | -98.83802 | |
| 61 | 28.98600 | -98.84015 | Not taken - in different field |
| 78 | 28.98748 | -98.83634 | |
| 72 | 28.98574 | -96.83923 | |
| 76 | 28.98687 | -96.83731 | |
| 89 | 28.98735 | -96.83551 | |
| 25 | 28.98900 | -96.83968 | |
| 46 | 28.98833 | -96.83844 | |
| 79 | 28.98780 | -96.83590 | |
| 8 | 28.99086 | -96.83902 | |
| 9 | 28.99114 | -96.83855 | |
| 84 | 28.98583 | -96.83788 | |
| 65 | 28.98709 | -96.83816 | |
| 26 | 28.98930 | -96.83920 | |

Soil Sampling Locations
Section J
Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

| Location | Latitude | Longitude | Comments |
|----------|----------|-----------|-----------------------------|
| 4 | 28.99167 | -96.83772 | |
| 15 | 28.99238 | -96.83545 | |
| 12 | 28.99149 | -96.83685 | |
| 57 | 28.99092 | -96.83284 | |
| 45 | 28.99083 | -96.83422 | |
| 89 | 28.99008 | -96.83071 | |
| 39 | 28.99263 | -96.83280 | |
| 9 | 28.99407 | -96.83395 | |
| 78 | 28.99026 | -96.83161 | |
| 5 | 28.99286 | -96.83581 | |
| 29 | 28.99306 | -96.83316 | |
| 32 | 28.99050 | -96.83610 | |
| 43 | 28.99026 | -96.83519 | |
| 71 | 28.98831 | -96.83970 | |
| 59 | 28.99170 | -96.83192 | Moved due to standing water |



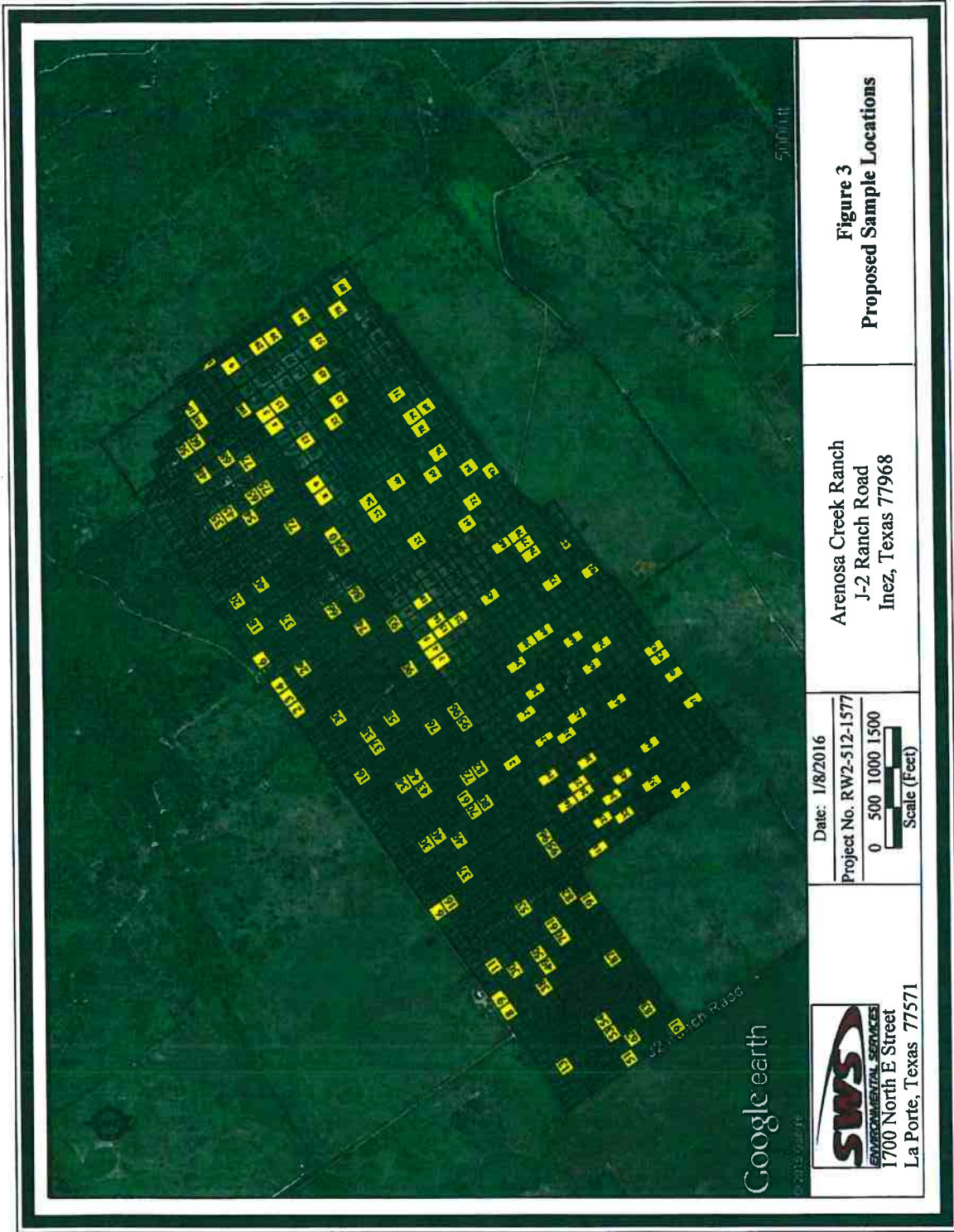
**Figure 2
Site Map**

**Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968**

Date: 1/8/2016
Project No. RW2-512-1577
0 500 1000 1500
Scale (Feet)

Google earth

SWS
ENVIRONMENTAL SERVICES
1700 North E Street
La Porte, Texas 77571



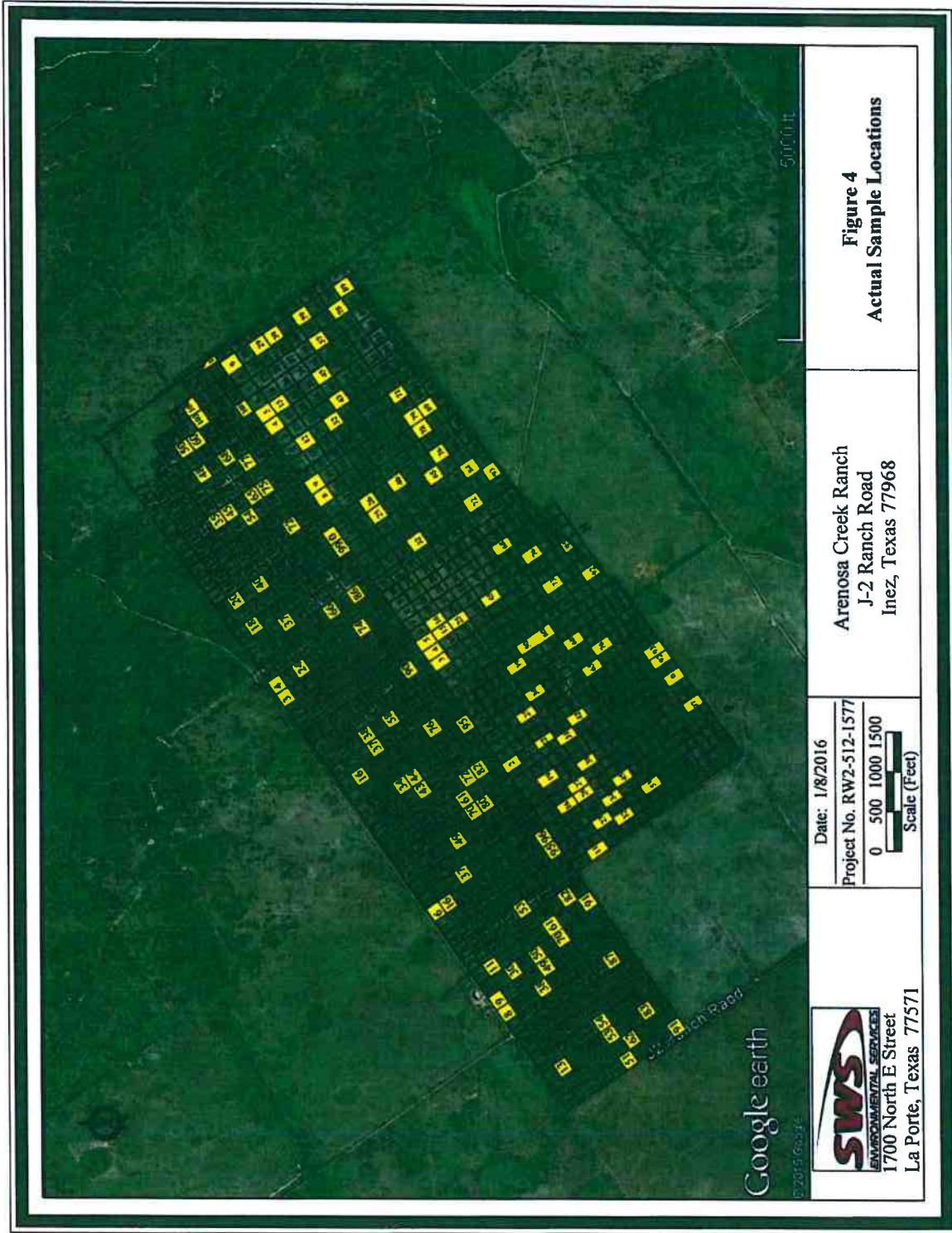


Figure 4
Actual Sample Locations

Arenosa Creek Ranch
J-2 Ranch Road
Inez, Texas 77968

Date: 1/8/2016
Project No. RW2-512-1577
0 500 1000 1500
Scale (Feet)

Google earth

SWS
ENVIRONMENTAL SERVICES
1700 North E Street
La Porte, Texas 77571

PHOTOGRAPHS



Photo 1: Using the GPS to locate the next sampling location.

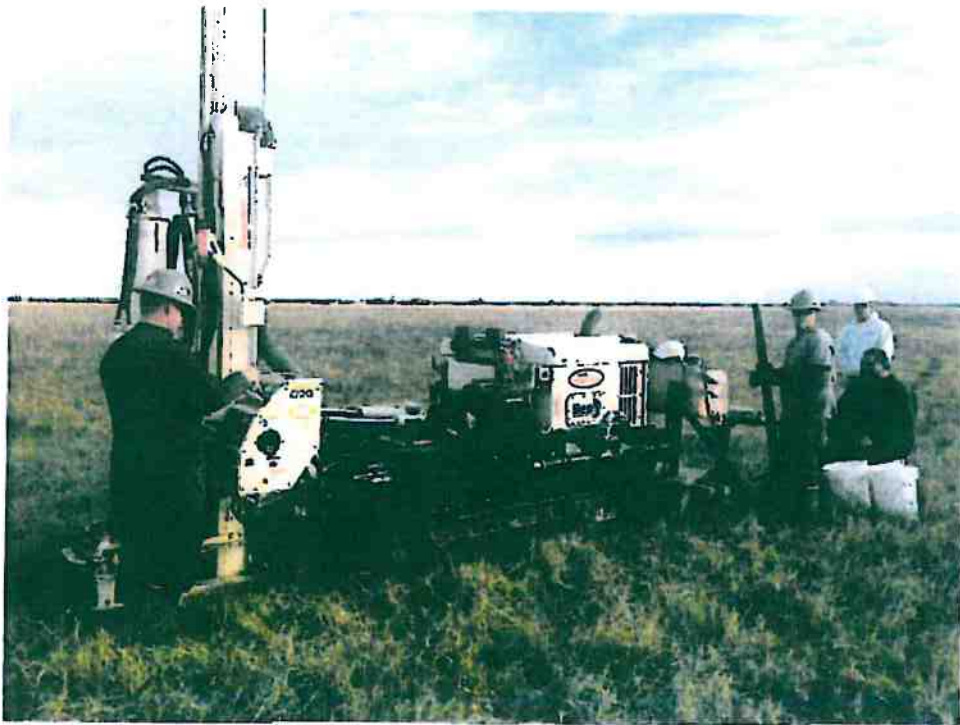


Photo 2: Push sampling drill rig in a typical location.

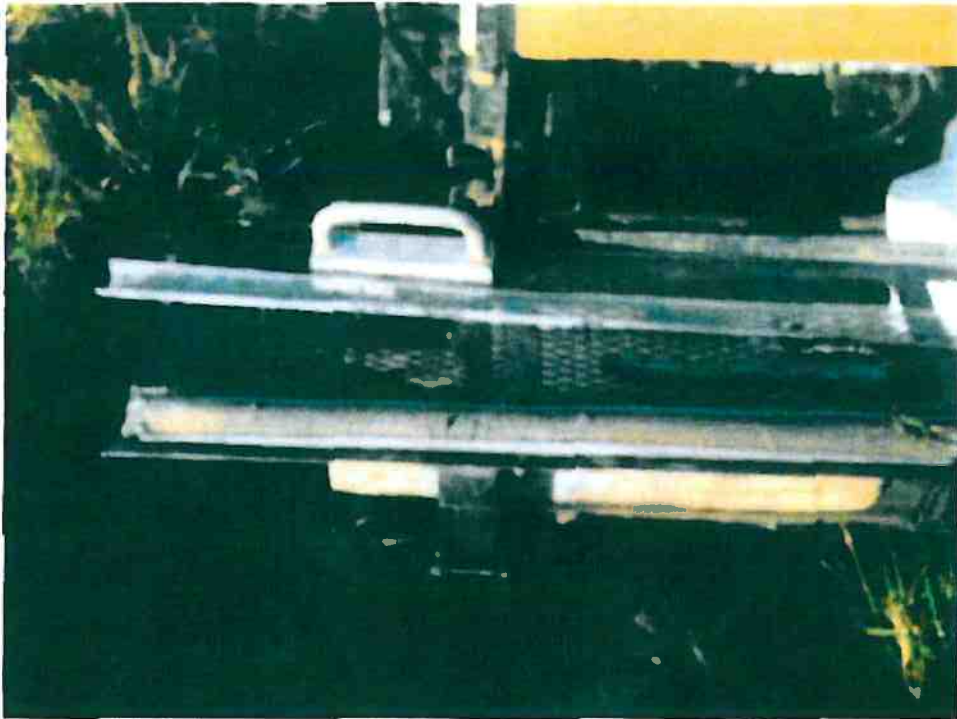


Photo 3: Typical core sample.



Photo 4: View of the sampling buckets showing how they were labeled (section and depth on side and lid).



Photo 7: Water sample collection at . electric pump/well.



Photo 8: Water sample collection at Mayfield No. 3.



Photo 5: Moving between locations. The sample buckets were attached to the drill rig during transport.



Photo 6: Area of suspected grit trap waste/stressed vegetation where an extra soil sample was collected from 0-3 inches.



Photo 9: View of water sample containers.

FIELD NOTES

Arenosa Creek Ranch Soil Sampling Locations

| | | | | |
|------|-----------|------------|---|------------------------|
| A 38 | 28.983595 | -96.857938 | ✓ | |
| 70 | 28.982944 | -96.856054 | ✓ | |
| 62 | 28.980500 | -96.859944 | ✓ | |
| 36 | 28.984631 | -96.857354 | ✓ | |
| 54 | 28.981567 | -96.859338 | ✓ | |
| 91 | 28.979026 | -96.859534 | ✓ | |
| 8 | 28.984757 | -96.859013 | ✓ | |
| 51 | 28.980637 | -96.860822 | ✓ | 28.98 |
| 13 | 28.982879 | -96.861127 | ✓ | 28.9269 Old Road |
| 49 | 28.983553 | -96.857431 | ✓ | Experimental Plot Edge |
| 53 | 28.981195 | -96.859787 | ✓ | |
| 50 | 28.983759 | -96.856707 | ✓ | Experimental Plot |
| 87 | 28.981208 | -96.856921 | ✓ | |
| 83 | 28.979990 | -96.858875 | ✓ | |
| 9 | 28.985077 | -96.858491 | ✓ | |

| | | | | |
|------|-----------|------------|---|--|
| B 82 | 28.980944 | -96.852793 | ✓ | |
| 91 | 28.982006 | -96.854596 | ✓ | |
| 95 | 28.983193 | -96.852597 | ✓ | |
| 6 | 28.987142 | -96.855020 | ✓ | |
| 37 | 28.986245 | -96.853555 | ✓ | |
| 40 | 28.987157 | -96.852065 | | Standing Water |
| 61 | 28.983188 | -96.855584 | ✓ | |
| 96 | 28.983510 | -96.852115 | ✓ | |
| 49 | 28.986413 | -96.852275 | ✓ | |
| 30 | 28.987535 | -96.852402 | | Standing Water |
| 53 | 28.984231 | -96.854887 | ✓ | |
| 11 | 28.985416 | -96.856913 | ✓ | |
| 70 | 28.985939 | -96.851137 | ✓ | moved to 28.985433 28.985433 - 96.851137 due to winter |
| 80 | 28.985529 | -96.850772 | ✓ | |
| 16 | 28.986742 | -96.854717 | ✓ | |

| | | | |
|-------|------------------------------------|-------------------------------------|--|
| ✓ 116 | 28.989867 | -96.849767 | Brush Moved to N. 28.9886, 096.84969 |
| ✓ 38 | 28.989580 | -96.848274 | |
| ✓ 37 | 28.989 8 ²⁵² | -96.8486 2 ³⁹ | |
| ✓ 76 | 28.987344 | -96.847906 | |
| ✓ 58 | 28.988824 | -96.847563 | |
| ✓ 82 | 28.985751 | -96.849448 | |
| ✓ 61 | 28.986227 | -96.850638 | |
| 30 | 28.980601 | -96.847517 | |
| ✓ 90 | 28.988127 | -96.845566 | Standing Water |
| ✓ 43 | 28.987606 | -96.850297 | |
| ✓ 95 | 28.986299 | -96.847742 | |
| 6 | 28.990294 | -96.850171 | |
| ✓ 44 | 28.987919 | -96.849784 | |
| ✓ 72 | 28.986123 | -96.849805 | |
| ✓ 34 | 28.988281 | -96.850074 | Moved to N 28.98821, W 096.85024 Due to brush/trees |

| | | |
|-------|-----------|------------|
| D 2 | 28.992053 | -96.847240 |
| ✓ 3 | 28.992356 | -96.846747 |
| ✓ 20 | 28.993911 | -96.842787 |
| ✓ 74 | 28.989745 | -96.843939 |
| ✓ 4 | 28.992637 | -96.846245 |
| ✓ 66 | 28.990588 | -96.843354 |
| ✓ 86 | 28.989747 | -96.842716 |
| ✓ 40 | 28.993092 | -96.842097 |
| ✓ 18 | 28.993253 | -96.843790 |
| ✓ 93 | 28.988468 | -96.843510 |
| ✓ 24 | 28.991828 | -96.845591 |
| ✓ 99 | 28.990315 | -96.840704 |
| ✓ 100 | 28.990620 | -96.840209 |
| ✓ 37 | 28.992077 | -96.843606 |
| ✓ 6 | 28.993075 | -96.845124 |

| | | |
|--------|------------------------|---------------------------------------|
| E 60 ✓ | 28.995265 | -96.836907 |
| ✓ 54 | 28.993401 | -96.839843 |
| ✓ 72 | 28.991999 | -96.840214 |
| ✓ 45 | 28.994193 | -96.839750 |
| ✓ 100 | 28.993576 | -96.835731 |
| ✓ 77 | 28.993547 | -96.837702 |
| ✓ 48 | 28.995018 | -96.838 ²²⁵ 225 |
| ✓ 35 | 28.994529 | -96.840007 |
| ✓ 114 | 28.994780 | -96.833874 |
| ✓ 50 | 28.995669 | -96.837203 |
| ✓ 68 | 28.994 2 27 | -96.837558 |
| ✓ 103 | 28.995147 | -96.836111 |
| ✓ 75 | 28.992889 | -96.838729 |
| ✓ 65 | 28.993284 | -96.839069 |
| ✓ 104 | 28.993451 | -96.835664 |

Initiated 1/7/14

| | | | |
|------|-----------|------------|---|
| F√38 | 28.982038 | -96.849249 | |
| √27 | 28.982331 | -96.850138 | |
| √45 | 28.980789 | -96.849865 | |
| √100 | 28.979001 | -96.845841 | Moved to 28. ⁹⁷⁸⁵⁷ 97857 W 96.84584 |
| √97 | 28.978366 | -96.846910 | |
| √16 | 28.982694 | -96.850931 | |
| √53 | 28.979783 | -96.850137 | |
| √26 | 28.982128 | -96.850485 | |
| -66 | 28.979849 | -96.848608 | Too wet/inaccessible. |
| √32 | 28.980755 | -96.851910 | |
| √19 | 28.983344 | -96.849862 | |
| √34 | 28.981169 | -96.850639 | |
| -61 | 28.978800 | -96.850378 | Water Standing 6" - Inaccessible |
| √11 | 28.981655 | -96.852673 | |
| √23 | 28.981472 | -96.851522 | |

Completed 13 Locations 26 Boats.

500 Locations were inaccessible and located in
areas of high standing water

Completed @ 11:28 a.m.

| | | | |
|--------|-----------------------|--------------------------|---|
| G 68 ✓ | 28.982437 | -96.844433 | |
| ✓ 39 | 28.984386 | -96.845363 | |
| ✓ 65 | 28.981811 | -96.845497 | |
| ✓ 76 | 28.981485 | -96.844674 | |
| ✓ 93 | 28.979657 | -96.844815 | |
| ✓ 2 | 28.984603 | -96.849275 | |
| ✓ 92 | 28.989431 | -96.845190 | |
| ✓ 25 | 28.984105 | -96.847364 | |
| ✓ 50 | 28.984061 | -96.844582 | |
| 61 | 28.980962 | -96.846935 | - standing water enough ^{to see} |
| ✓ 31 | 28.982728 | -96.848237 | |
| ✓ 22 | 28.983511 | -96.848333 | |
| ✓ 42 | 28.9825 ⁴³ | -96.8474 ³³ | |
| ✓ 60 | 28.9834 ⁵⁵ | -96.84418 ²⁰⁸ | - moved data to water |
| ✓ 36 | 28.983793 | -96.846419 | |

| | | |
|------|-------------------------------------|--|
| H 16 | 28.987 ¹⁴⁹ 76 | -96.84 ³⁶⁵⁸ 4083 ✓ |
| ✓ 92 | 28.981769 | -96.841717 ✓ |
| ✓ 95 | 28.982623 | -96.840717 ✓ |
| ✓ 5 | 28.98749 8 | -96.8444 ³⁸ ✓ |
| ✓ 26 | 28.983830 | -96.841110 ✓ |
| 78 | 28.984284 | -96.840365 |
| ✓ 73 | 28.983102 | -96.842212 ✓ |
| ✓ 3 | 28.987017 | -96.845164 ✓ |
| ✓ 68 | 28.9848 ⁶ 8 | -96.8407 ⁷⁷ 86 ✓ |
| ✓ 4 | 28.987214 | -96.84 ⁸ 8 12 ✓ |
| ✓ 25 | 28.986389 | -96.843576 ✓ |
| ✓ 15 | 28.986904 | -96.844045 ✓ |
| 18 | 28.987637 | -96.842912 |
| 77 | 28.984037 | -96.840709 |
| ✓ 45 | 28.985243 | -96.842749 ✓ |

Remaining not collected due to dark ~~and~~ mud water in ditches to get around - took long time in each case

need to resample for 0-6" & 6-12" - problem with bucket labels - wrong lids on buckets. No one seems to know when it happened, or there 2 samples have been rejected

1/6/16 Redrilled 12 borings for samples 0-6"
6"-12"

| | | | |
|--------|---------------------------------------|--|----------------------------------|
| I 32 ✓ | 28.987652 | -96.840790 | |
| ✓ 93 | 28.985066 | -96.838018 | |
| 61 | 28.98 5003 ⁵⁰⁰³ | -96. 840153 ⁸⁴⁰¹⁵³ | - not taken - in different field |
| ✓ 78 | 28.98 5003 ⁷⁴⁸² | -96. 836336 ⁸³⁶³³⁶ | |
| ✓ 72 | 28.98 5735 ⁵⁷³⁵ | -96.839230 | |
| ✓ 76 | 28.986873 | -96.837307 | |
| ✓ 89 | 28.987353 | -96.835506 | |
| ✓ 25 | 28.988995 | -96.839676 | |
| ✓ 46 | 28.988325 | -96.838439 | |
| ✓ 79 | 28.987802 | -96.835899 | |
| ✓ 8 | 28.990857 | -96.839022 | |
| ✓ 9 | 28.9911 52 ³² | -96.8385 52 ⁵² | |
| ✓ 84 | 28.98 549 ⁵⁸²⁹ | -96.8378 52 ⁷⁸ | |
| ✓ 65 | 28.987090 | -96.838161 | |
| ✓ 26 | 28.989298 | -96.839204 | |

D-2 - top next to 5 : get to
 D-93 - discarded - only one in that field
 P-6 - inaccessible - in bush
 D-13 28.99325 - -96.84377

| | | | |
|------|-------------------------------------|---------------------------|------------------|
| ✓ 54 | 28.991670 | -96.837715 | |
| ✓ 15 | 28.992377 | -96.835445 | |
| ✓ 12 | 28.991486 | -96.836847 | |
| ✓ 57 | 28.990920 | -96.832842 | |
| ✓ 45 | 28.990834 | -96.834223 | |
| ✓ 89 | 28.990079 | -96.830709 | |
| ✓ 39 | 28.992626 | -96.832803 | |
| ✓ 9 | 28.994073 | -96.833946 | |
| ✓ 78 | 28.990262 | -96.831671 | |
| ✓ 5 | 28.992863 | -96.835813 | |
| ✓ 29 | 28.993062 | -96.833157 | |
| ✓ 32 | 28.990502 | -96.836096 | |
| ✓ 43 | 28.990264 | -96.835193 | |
| ✓ 71 | 28.988305 | -96.834970 | |
| 159 | 28.991 ⁷⁰ 159 | -96.83 159 192 | moved due to wet |

1/11/2016 cont.

13:30 Mayfield No. 2.
Depth to Water - 52.11'
TD > 104'

4" PVC open
No well string

Abandoned DTW - 28.27'
TD 36.40'

Mayfield No. 3 4" steel casing
DTW 44.09'
TD > 104'

Mayfield No. 3 Sampled & HOD 10 Bottles

Gauged second abandoned well steel 4" uncapped
DTW - 39.9'
TD - 60.2'

Mobilized to Ranch - onsite at
15:50 met me at gate. Checked windmill
no wind; did not know if windmill working
though does not have enough water for
windmill to be working

Walked to well with electric pump
collected water sample in 10 bottles & 16.25
packaged samples

Added ice for transport - dewstore to hotel

| | | |
|------|-------------------------------------|--|
| H 16 | 28.987 ¹⁴⁹ 63 | -96.84 ³⁶⁵⁸ 4282 |
| V 92 | 28.981769 | -96.841717 |
| V 95 | 28.982623 | -96.840717 |
| V 5 | 28.987490 | -96.844 ³⁸ |
| V 76 | 28.983830 | -96.841110 |
| 78 | 28.984284 | -96.840365 |
| V 73 | 28.983102 | -96.842212 |
| V 3 | 28.987017 | -96.845164 |
| V 68 | 28.9848 ⁶ 23 | -96.8407 ⁷⁷ 86 |
| V 4 | 28.987214 | -96.84 ⁴ 819 |
| V 25 | 28.986389 | -96.843576 |
| V 15 | 28.986904 | -96.844045 |
| 18 | 28.987637 | -96.842912 |
| 77 | 28.984037 | -96.840709 |
| V 45 | 28.985243 | -96.842749 |

Remaining not collected due to dark ~~and~~ mud water in ditches to get around - took long time in case

need to resample for 0-6" & 6-12" - problem with bucket labels - wrong label on bucket. No one seems to know when it happened, or these 2 samples have been rejected

Monday Jan 4: 2016

9:30am Robert King / Damon Washstock mobilized to job site for
Gilbert Rodriguez mobilized from La Porte - met at
Arenosa Creek ranch and did site recce from road.

Tuesday - January 5, 2016

6:50 onsite met with Shawn Mathers and Kevin Co.
Conduct safety meeting / sign out
0700 Bill Ross onsite for safety briefing.

7:15 Installed soil boring installation on Section A

moved one location to # 73 to 28.9269, w.
with

Two locations in experimental plot - # 79

10:30 Chris Wiatlicki, Jack Lunday and Terry Sullivan
from Austin onsite for inspection of operation

Completed Section A @ 11:40am
collected samples from 0-6" @ 12:20
6"-12" @ 12:42
6"-24" @ 12:52

Installed soil boring installation north end of
Section B

Two locations (30 and 40) in standing water
and inaccessible - did not collect samples
70 moved to 28.985939, 096.85117
due to water

Completed Section B @ 16:30 - bottled samples
16:55 - 17:15

Jan 6, 2014 (Wednesday)
Section C

on site @ 7:00 / Safety Meeting
Begin prep for soil boring installation
Completed @ 11:15 / Bottled samples
Melanie / Susan Cifers on site
Suspect Grit Trap Waste / Stressed Vegetation
N 28° 94439 0'-3"
W 096.8376 12:58
~~17' 9"~~ X
15' X 10.5'

Initiated soil boring reinstallation of
Section H @ 13:16 - one boring at
each of 12 locations for collection
of samples 1'0"-6' and 1'6"-12'
Completed @ 16:00
Bottled samples for shipment to lab

Following sample prep - inspected windmill
damages @ 17:00

1/7/14
0700 Safety Meeting
Rain during night
7:15 initiated soil boring installation
on Section F. Field wet.
Installed 26 Borings
2 locations inaccessible w/ skip
due to high water. Completed field work at 11:30

HEALTH AND SAFETY

**SWS
Health and Safety/ Site Security Plan
Emergency Response for: Arenosa Creek Ranch Sampling
Event**

| | | |
|----------------------|----------------------------|--------------------------|
| Job Information | Date: 12/28/2015 | Job Number: RW2-512-1577 |
| Client: | TCEQ | |
| Contact: | Anthony Buck | |
| Phone/Pager Numbers: | 512 239-1511 | |
| Location: | Arenosa Creek Ranch, Texas | |

Product involved: Soil with potential various unknown constituents of concern

Site Activities: Collecting soil samples from shallow borings over an 800 acre tract of land; borings will be advanced approximately 2 ft. into the subsurface and soil samples from depth intervals of 0-0.5ft., 0.5 ft – 1.0 ft and 1.5 -2.0 ft will be collected for laboratory analytical testing.

Anticipated Duration: 4-6 days _____

SWS Chain of Command:

| | Print | Signature |
|--------------------|--------------|-----------|
| Project Manager: | Henry Wise | _____ |
| Response Tech: | Marcus Smith | _____ |
| Safety Specialist: | Chuck Davis | _____ |
| | _____ | _____ |
| | _____ | _____ |
| | _____ | _____ |
| | _____ | _____ |

(use attachment if necessary)

All personnel have received the appropriate safety training in accordance with 29 CFR 1910.120 section Q and are currently under medical surveillance in accordance with 29 CFR 1910.120 section (f).

Tailgate Safety Meeting

By signing the above chain of command, I acknowledge that, I have been instructed in the information that will be covered in the Tailgate safety meeting with all personnel that will be involved with the site sampling activities. The PM (Henry Wise) will conduct the Tailgate Meeting and cover the topics outlined in this Health and Safety Plan and the work order/work plan. Henry Wise will keep all Agency, HUB's, all outside Organization, and SWS apprised as to ongoing updates and changes to the Health and Safety plan when they come about.

Outside Organizations:

| Name | Agency/Company | Phone Number | Pager Number |
|------|----------------|--------------|--------------|
| | | | |
| | | | |
| | | | |

Site Security and Control

Site Security and control of the Work Area will be the responsibility of the SWS Onsite PM: Henry Wise with Assistance from the Onsite Response Technician

No unauthorized persons will be permitted within this area. All activities and arriving/departing personnel will coordinate with the site Supervisor. Initially the entire site will be considered the Work Area.

Decontamination

All materials leaving the work area will be thoroughly decontaminated using a water and phosphate free detergent. The PPE will be collected and drummed for later disposal.

Personal Protective Equipment will consist of the following items:

Task: Sampling of, sediment and impacted soil media.

| Protective Suit | Glove(s) | Respiratory Protection | Standard Equipment |
|------------------|----------------------|------------------------|--------------------|
| $\frac{1}{2x}$ | $\frac{1}{2x}$ | $\frac{1}{2x}$ | $\frac{1}{2x}$ |
| None anticipated | Nitrile/latex Gloves | | |
| | | | |
| | | | |

Task: Decontamination

| Protective Suit | Glove(s) | Respiratory Protection | Standard Equipment |
|-----------------|----------------------|------------------------|-----------------------|
| $\frac{1}{2x}$ | $\frac{1}{2x}$ | $\frac{1}{2x}$ | $\frac{1}{2x}$ |
| | Nitrile/latex Gloves | | Clean water/detergent |
| | | | |
| | | | |

The failure to use mandatory PPE will result in the immediate removal from job site and a write up in your employee file.

Monitoring Equipment to be used:

- None

Emergency Alerting:

In addition to visual and verbal communication, air-horn signaling will be utilized as follows:

| Air-horn Signaling | Meaning |
|--------------------------------|-----------------------------------|
| One Long Blast | Break |
| Two Short Blasts | In Need of Supervisor |
| Multiple Short Blasts | Emergency Evacuation |
| Visual Signaling | Meaning |
| Hands on top of Head | Need assistance |
| Hands on Chest | Respiratory Problems |
| Hands Pointing to Side of Head | Return to Decon for Consultation |
| Thumbs Up | O.K., I'm all right, I understand |
| Thumbs Down | No, Negative |

Site Safety Concerns: Check appropriate site specific concerns:

Weather concerns:

| Temperature - Cold | Winds | Conditions |
|--------------------|-------|-----------------------|
| Cool | Light | Potential Wet & Rainy |

Heat/Dehydration/Sunburn Concerns: All employees will drink plenty of bottle water only. Use sun protection lotions as necessary. Take adequate numbers of breaks. Heat stress is a concern.

Chemical Concerns: All employees must wear appropriate PPE while on the job site. Minimum requirements will be Level D. Soil sampling will require Level D which will include steel toed boots, eye-protection, hard hat, gloves- latex and/or nitrile

Environmental Concerns: Several biological concerns are often encountered while in the field. Arachnid, insect, mammal and reptile injuries (bites and stings) can all become medical problems while in the field.

Medical Emergency: The following procedure is to be followed in the event of a medical Emergency. Employees will be provided medical attention at no personal cost.

Hospital: Warm Springs Specialty Hospital

Hospital Address: 102 Medical Drive, Victoria, TX - Ph # 361 576 6200

Immediately contact the Site Safety Specialist Chuck Davis about Injuries and Illnesses reported. Please have injured prepare a statement and the Supervisor will complete an Incident Analysis Report within 8 hours. These documents must be turned in the following day. **Report Near Miss Incidents** to Safety Specialist for analysis and correction.

Emergency Meeting Point: Identify an emergency meeting location and/or a facility emergency evacuation plan and meeting point prior to commencement.

Site Map: (please include wind direction, CRZ, exclusion zone, support zone, decon area, and significant landmarks (roads, mile markers, etc.)

**SWS
 Health and Safety/ Site Security Plan
 Emergency Response for: Arenosa Creek Ranch Sampling
 Event**

| | | |
|----------------------|----------------------------|--------------------------|
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| Contact: | Anthony Buck | |
| Phone/Pager Numbers: | 512 239-1511 | |
| Location: | Arenosa Creek Ranch, Texas | |

Product involved: Soil with potential various unknown constituents of concern

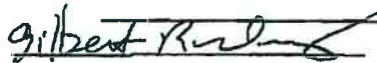
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Anticipated Duration: 4-6 days

SWS Chain of Command:

Project Manager: Print Damon Waresback
 Response Tech: Robert King
 Safety Specialist: Chuck Davis

Signature

(use attachment
 if necessary)

All personnel have received the appropriate safety training in accordance with 29 CFR 1910.120 section Q and are currently under medical surveillance in accordance with 29 CFR 1910.120 section (f).

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Personal Protective Equipment will consist of the following items:

Task: Sampling of, sediment and impacted soil media.

| Protective Suit | Glove(s) | Respiratory Protection | Standard Equipment |
|------------------|----------------------|------------------------|--------------------|
| None anticipated | Nitrile/latex Gloves | | |
| | | | |
| | | | |
| | | | |

Task: Decontamination

| Protective Suit | Glove(s) | Respiratory Protection | Standard Equipment |
|-----------------|----------------------|------------------------|-----------------------|
| | Nitrile/latex Gloves | | Clean water/detergent |
| | | | |
| | | | |
| | | | |

The failure to use mandatory PPE will result in the immediate removal from job site and a write up in your employee file.

Monitoring Equipment to be used:

- None

Emergency Alerting:

In addition to visual and verbal communication, air-horn signaling will be utilized as follows:

| Air-horn Signaling | Meaning |
|--------------------------------|-----------------------------------|
| One Long Blast | Break |
| Two Short Blasts | In Need of Supervisor |
| Multiple Short Blasts | Emergency Evacuation |
| Visual Signaling | Meaning |
| Hands on top of Head | Need assistance |
| Hands on Chest | Respiratory Problems |
| Hands Pointing to Side of Head | Return to Decon for Consultation |
| Thumbs Up | O.K., I'm all right, I understand |
| Thumbs Down | No, Negative |

Site Safety Concerns: Check appropriate site specific concerns:

Weather concerns:

| Temperature - Cold | Winds | Conditions |
|--------------------|-------|-----------------------|
| Cool | Light | Potential Wet & Rainy |

Heat/Dehydration/Sunburn Concerns: All employees will drink plenty of bottle water only. Use sun protection lotions as necessary. Take adequate numbers of breaks. Heat stress is a concern.

Chemical Concerns: All employees must wear appropriate PPE while on the job site. Minimum requirements will be Level D. Soil sampling will require Level D which will include steel toed boots, eye-protection, hard hat, gloves- latex and/or nitrile

Environmental Concerns: Several biological concerns are often encountered while in the field. Arachnid, insect, mammal and reptile injuries (bites and stings) can all become medical problems while in the field.

Medical Emergency: The following procedure is to be followed in the event of a medical Emergency. Employees will be provided medical attention at no personal cost.

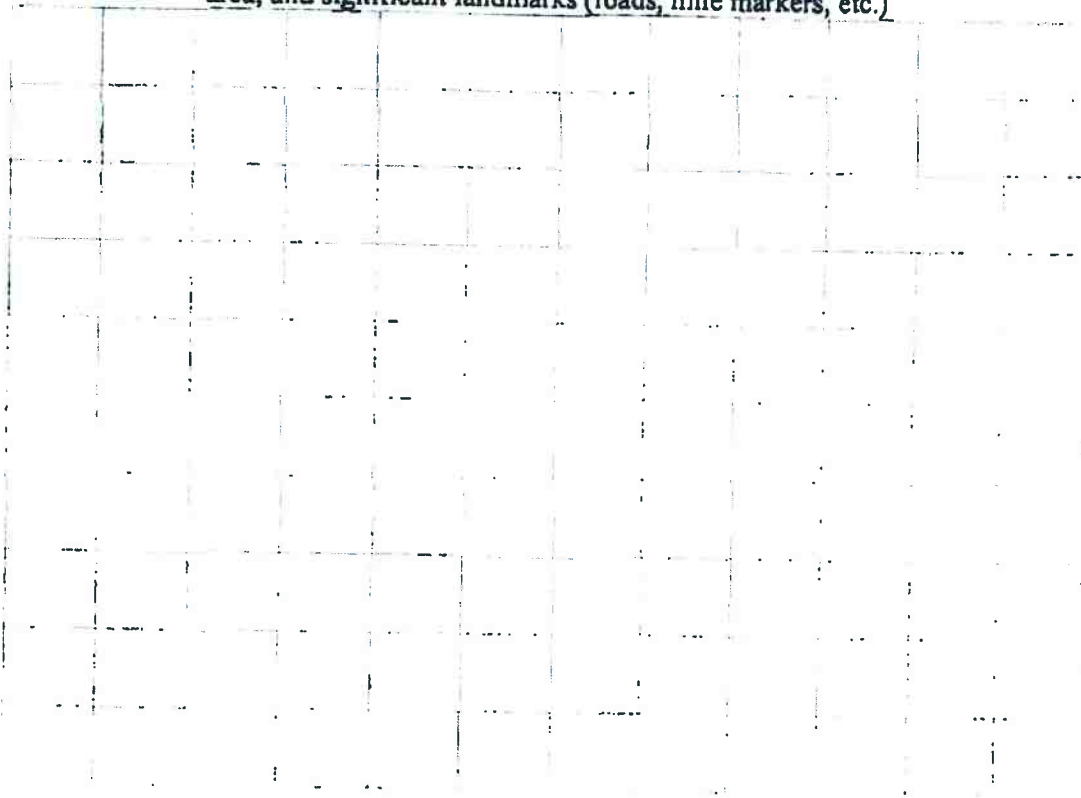
Hospital: Warm Springs Specialty Hospital

Hospital Address: 102 Medical Drive, Victoria, TX - Ph # 361 576 6200

Immediately contact the Site Safety Specialist Chuck Davis about Injuries and Illnesses reported. Please have injured prepare a statement and the Supervisor will complete an Incident Analysis Report within 8 hours. These documents must be turned in the following day. Report Near Miss Incidents to Safety Specialist for analysis and correction.

Emergency Meeting Point: Identify an emergency meeting location and/or a facility emergency evacuation plan and meeting point prior to commencement.

Site Map: (please include wind direction, CRZ, exclusion zone, support zone, decon area, and significant landmarks (roads, mile markers, etc.)





SWS RW2-512-1577 JSA Meeting Sign In

| | PRINT NAME | SIGNATURE | COMPANY | DATE |
|----|--------------------|--------------------|---------|----------|
| 1 | Damon Worsfold | <i>[Signature]</i> | SWS | 1/5/16 |
| 2 | Robert King | <i>[Signature]</i> | SWS | 1/5/16 |
| 3 | Gilbert Rodriguez | <i>[Signature]</i> | SWS | 1/5/16 |
| 4 | Bill Ross | <i>[Signature]</i> | TCEQ | 1/5/16 |
| 5 | Shawn Malins | <i>[Signature]</i> | MEDI | 1/5/16 |
| 6 | Kevin Hochmuth | <i>[Signature]</i> | MEDI | 1/5/16 |
| 7 | <i>[Signature]</i> | <i>[Signature]</i> | TCEQ | 1/5/16 |
| 8 | Jack Lindsay | <i>[Signature]</i> | TCEQ | 1/5/16 |
| 9 | Terry Sullivan | <i>[Signature]</i> | TCEQ | 1/5/16 |
| 10 | Damon Worsfold | <i>[Signature]</i> | SWS | 1/6/16 |
| 11 | Shawn Malins | <i>[Signature]</i> | MEDI | 1/6/16 |
| 12 | Robert King | <i>[Signature]</i> | SWS | 1/6/16 |
| 13 | Gilbert R | <i>[Signature]</i> | SWS | 1/6/16 |
| 14 | Kevin Hochmuth | <i>[Signature]</i> | MEDI | 1/6/16 |
| 15 | Bill Ross | <i>[Signature]</i> | TCEQ | 1/6/2016 |
| 16 | Susan Lewis | <i>[Signature]</i> | TCEQ | 1/6/16 |
| 17 | MARLENE EDWARDS | <i>[Signature]</i> | TCEQ | 1/6/16 |
| 18 | Damon Worsfold | <i>[Signature]</i> | SWS | 1/7/16 |
| 19 | Shawn Malins | <i>[Signature]</i> | MEDI | 1/7/16 |
| 20 | Kevin Hochmuth | <i>[Signature]</i> | MEDI | 1/7/16 |
| 21 | Robert King | <i>[Signature]</i> | SWS | 1/7/16 |
| 22 | Bill Ross | <i>[Signature]</i> | TCEQ | 1/7/2016 |
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Appendix 3

Surface Water and Sediment Analysis



Texas Commission on Environmental Quality

Corpus Christi Region 14 – Water Section

TCEQ Internal Memorandum

To: Gregg Easley, Manager
Water Quality Assessment Section

From: Peter Schaefer, Standards Implementation Team Leader
Water Quality Assessment Team

Date: February 12, 2016

Subject: **Review of Surface Water Data (RE: Beneficial Land Management, Arenosa Creek Ranch, Renewal No. 4666-000, Victoria County)**

On February 9, 2016, the Standards Implementation Team was asked to review surface water and sediment data from recent sampling of Arenosa Creek, a small lake, and a wetland all of which were near the Beneficial Land Management sludge application site near Victoria, Texas. Sampling of Arenosa Creek took place at one location upstream of the sludge application area and one location downstream of the sludge application area.

Samples were analyzed for a full suite of chemicals including metals, organic compounds, volatile and semivolatile compounds, and general water quality such as pH, specific conductivity, temperature, dissolved oxygen, salinity and *E coli* bacteria. Water sample data were compared to human health and aquatic life protection criteria in the Texas Surface Water Quality Standards. Sediment sample data were compared to screening levels developed by TCEQ's Ecological Assessment Program outlined in Table 3.5 of the 2014 Guidance for Assessing and Reporting Surface Water Quality in Texas.

Results

Sediment: All samples analyzed for metals were below detection limits or below all applicable screening levels.

All samples analyzed for organic compounds were below detection limits or below all applicable screening levels.

All samples analyzed for volatile compounds were below detection limits.

All samples analyzed for semivolatiles were below detection limits.

Water: All samples analyzed for metals were well within applicable water quality standards with a notable uncertainty regarding silver. The analysis for silver was below the detection limit of 1 microgram per liter, however, the water quality standard for silver is 0.8 micrograms per liter.

TCEQ Internal Memorandum

All samples analyzed for organic compounds were within applicable water quality standards.

All samples analyzed for volatile compounds were within applicable water quality standards.

All samples analyzed for semivolatiles were within applicable water quality standards.

E. coli was detected in the upstream and downstream Arenosa Creek sampling locations, with no obvious difference in bacteria levels between the two sampling sites.

All general water quality data obtained, such as pH, specific conductivity, temperature, dissolved oxygen, and salinity were within water quality standards and at levels that would support aquatic life.

Arenosa Creek Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Human Health Surface Water Risk Based Exposure Limits (RBELs)

2010 Texas Surface Water Quality Standards, Table 1 and 2

| Laboratory Work Orders | | Q1538683 | Q1538683 | Q1550371 | Q1547925 | |
|-------------------------------------|--|----------|----------|----------|----------|-------|
| Parameters | Freshwater chronic criteria from TSWQS Table 1 using TexTox program | RBELs | AC Upper | AC Lower | Wetland | Lake |
| Field Data | | | | | | |
| pH (su) | --- | --- | 7.83 | 7.64 | 7.78 | 8.48 |
| Specific Conductivity (µSiemens/cm) | --- | --- | 1041 | 723 | 206 | 267 |
| Temperature (oC) | --- | --- | 24.74 | 23.77 | 12.62 | 15.37 |
| Dissolved Oxygen (µg/L) | --- | --- | 0.51 | 4.18 | 9.87 | 9.92 |
| Salinity (ppt) | --- | --- | 0.51 | 0.35 | 0.1 | 0.13 |
| Inorganics | | | | | | |
| Aluminum (µg/L) | 1 | --- | 197 | 260 | 378 | 53.2 |
| Arsenic (µg/L) | 340 | 10 | 3.93 | 4.74 | ND | 2.26 |
| Cadmium (µg/L) | 1.194 | 5 | ND | ND | ND | ND |
| Calcium (µg/L) | --- | --- | 47500 | 37400 | 12400 | 25900 |
| Chromium (µg/L) | 480.5 | 62 | ND | ND | ND | ND |
| Copper (µg/L) | 66.57 | 1300 | ND | ND | ND | ND |
| Iron (µg/L) | --- | --- | 254 | 397 | 325 | ND |
| Lead (µg/L) | 26.65 | 1.15 | ND | ND | 1.09 | ND |
| Magnesium (µg/L) | --- | --- | 14700 | 12000 | 3810 | 6620 |
| Manganese (µg/L) | --- | 50 | 105 | 98.1 | 21.6 | 11.2 |
| Mercury (µg/L) | 2.4 | 0.0122 | ND | ND | ND | ND |
| Nickel (µg/L) | 358.6 | 332 | ND | ND | ND | 3.48 |
| Potassium (µg/L) | --- | --- | 5490 | 7310 | 5730 | 3420 |
| Selenium (µg/L) | 20 | 50 | ND | ND | ND | ND |
| Silver (µg/L) | 0.8 | --- | ND | ND | ND | ND |
| Sodium (µg/L) | --- | --- | 149000 | 99100 | 20500 | 18700 |
| Zinc (µg/L) | 817 | 7400 | ND | ND | 11.2 | 40.1 |

Arenosa Creek Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Human Health Surface Water Risk Based Exposure Limits (RBELs)

2010 Texas Surface Water Quality Standards, Table 1 and 2

| Laboratory Work Orders | | Q1538683 | Q1538683 | Q1550371 | Q1547925 | |
|----------------------------------|--|----------|-----------|------------|----------|--------|
| Parameters | Freshwater chronic criteria from TSWQS Table 1 using TexTox program | RBELs | AC Upper | AC Lower | Wetland | Lake |
| Organics | | | | | | |
| Biochemical Oxygen Demand (mg/L) | --- | --- | ND | ND | 4.87 | ND |
| Total Organic Carbon (mg/L) | --- | --- | 8.19 | 10.5 | 11 | 6.65 |
| Anions/ Ions | --- | --- | | | | |
| Chloride (mg/L) | --- | --- | 166 | 109 | 31.6 | 26.9 |
| Cyanide (mg/L) | 45.8 | 4 | ND | ND | ND | ND |
| Flouride (mg/L) | --- | 4000 | 0.377 | 0.259 | 0.133 | 0.162 |
| Nitrate + Nitrite (mg/L) | --- | 10000 | ND | ND | ND | ND |
| Nitrogen, as Ammonia (mg/L) | --- | --- | 0.05 | 0.0377 | ND | ND |
| Orthophosphate - P (mg/L) | --- | --- | 0.129 | 0.147 | 0.0243 | 0.0611 |
| Sulfate (mg/L) | --- | --- | 16.4 | 4.29 | 1.01 | 1.11 |
| TKN (mg/L) | --- | --- | 1.42 | 1.12 | 0.868 | 0.613 |
| Total Phosphorus (mg/L) | --- | --- | 0.174 | 0.201 | 0.0475 | ND |
| Volatiles | | | | | | |
| All (µg/L) | --- | --- | ND | ND | ND | ND |
| Semivolatiles | --- | --- | | | | |
| All (µg/L) | --- | --- | ND | ND | ND | ND |
| Solids | --- | --- | | | | |
| Volatile Suspended Solids (mg/L) | --- | --- | 4.29 | 4.25 | 3.94 | ND |
| Total Suspended Solids (mg/L) | --- | --- | 32.7 | 26 | 20.3 | 2.79 |
| Total Dissolved Solids (mg/L) | --- | --- | 575 | 421 | 146 | 134 |
| Other | | | | | | |
| E. Coli (MPN/100ml) | --- | --- | 365 / 411 | 407 / 14.8 | --- | ND |
| Oil and Grease (mg/L) | --- | --- | ND | ND | ND | ND |
| Total Alkalinity (mg/L) | --- | --- | 241 | 173 | 52.8 | 87.1 |

*TexTox calculation based on very conservative estimates presuming low flow (0.1 cfs) in creek, and low dilution (92% effluent) in wetland and lake and using ambient water quality data from SWQM station 13295 on Arenosa Creek and segment 2453.
 *** The detection limits vary between samples.



LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

January 15, 2016

GERARDO ARRAMBIDE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY
P.O. Box 13087, MC-165
Austin, TX 78711-3087

RE: Final Analytical Report
ELS Workorder Q1547925

Attn: GERARDO ARRAMBIDE

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Authorized for release by:

Project Manager

Enclosures



T104704218

Report ID: 184991 - 2159412

DRAFT

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SAMPLE SUMMARY

Workorder: Q1547925

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|------------|---------|-----------------|-----------------|
| Q1547925001 | LAKE | Aqueous | 12/2/2015 13:50 | 12/3/2015 11:15 |
| Q1547925002 | WETLANDS | Aqueous | 12/2/2015 15:10 | 12/3/2015 11:15 |
| Q1547925003 | LAKE | Solid | 12/2/2015 13:50 | 12/3/2015 11:15 |
| Q1547925004 | WETLANDS | Solid | 12/2/2015 15:10 | 12/3/2015 11:15 |
| Q1547925005 | TRIP BLANK | Aqueous | 12/2/2015 13:50 | 12/3/2015 11:15 |

Report Definitions

| | |
|------|----------------------------------|
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| ML | Maximum Limit - Client Specified |
| DF | Dilution Factor |
| Qual | Qualifiers |

PROJECT SUMMARY

Workorder: Q1547925

Sample Analysis Comments

| | | |
|--|-----------------|------------------------------------|
| Lab ID: Q1547925001 Improperly Preserved | Sample ID: LAKE | Analyte: Acrylonitrile |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,1,1-Trichloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,1,2,2-Tetrachloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,1,2-Trichloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,1-Dichloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,1-Dichloroethene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,2-Dibromoethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,2-Dichloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 1,2-Dichloropropane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 2-Hexanone |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: 4-Methyl-2-pentanone |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Acetone |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Acrylonitrile |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Benzene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Bromodichloromethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Bromoform |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Carbon disulfide |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Carbon tetrachloride |

PROJECT SUMMARY

Workorder: Q1547925

Sample Analysis Comments

| | | |
|--|-----------------|-----------------------------------|
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Chlorobenzene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Chloroethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Chloroform |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Chloromethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Dibromochloromethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Dichlorodifluoromethane |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Ethyl Benzene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Methylene chloride |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Styrene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Tetrachloroethene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Toluene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Trichloroethene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Vinyl chloride |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: Xylene (total) |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: cis-1,3-Dichloropropene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: m,p-Xylene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: o-Xylene |
| Lab ID: Q1547925003 Analyzed Past Hold Time | Sample ID: LAKE | Analyte: trans-1,2-Dichloroethene |

PROJECT SUMMARY

Workorder: Q1547925

Sample Analysis Comments

Lab ID: Q1547925003

Sample ID: LAKE

Analyte: trans-1,3-Dichloropropene

Analyzed Past Hold Time

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925001** Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
 Sample ID: **LAKE** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|--------|------|----|----------------|----|----------------|----|------|
| Volatile Suspended Solids | | | | | | | | | | |
| Analysis Desc: E160.4 Ignition at 550C | | Preparation Method: E160.4 Ignition at 550C | | | | | | | | |
| | | Analytical Method: E160.4 Ignition at 550C | | | | | | | | |
| Volatile Suspended Solids | <1.33 mg/L | 1.33 | 1.33 | 1.33 | | 12/09/15 15:56 | JM | 12/09/15 15:56 | JM | |
| INORGANICS | | | | | | | | | | |
| Analysis Desc: E200.7 Metals, Trace Elements | | Preparation Method: E200.7 Prep | | | | | | | | |
| | | Analytical Method: E200.7 Metals, Trace Elements | | | | | | | | |
| Calcium Total | 25900 ug/L | 70.0 | 200 | | 1 | 12/07/15 | FM | 12/09/15 15:47 | MV | |
| Iron Total | <50.0 ug/L | 20.0 | 50.0 | | 1 | 12/07/15 | FM | 12/09/15 15:47 | MV | |
| Magnesium Total | 6620 ug/L | 70.0 | 200 | | 1 | 12/07/15 | FM | 12/09/15 15:47 | MV | |
| Potassium Total | 3420 ug/L | 70.0 | 200 | | 1 | 12/07/15 | FM | 12/09/15 15:47 | MV | |
| Sodium Total | 18700 ug/L | 200 | 600 | | 1 | 12/07/15 | FM | 12/09/15 15:47 | MV | |
| Analysis Desc: E200.8, ICP-MS | | Preparation Method: E200.8, ICP-MS Prep | | | | | | | | |
| | | Analytical Method: E200.8, ICP-MS | | | | | | | | |
| Aluminum Total | 53.2 ug/L | 4.00 | 10.0 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Arsenic Total | 2.26 ug/L | 0.700 | 2.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Cadmium Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Chromium Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Copper Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Lead Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Manganese Total | 11.2 ug/L | 0.400 | 1.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Nickel Total | 3.48 ug/L | 0.700 | 2.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Selenium Total | <4.00 ug/L | 1.50 | 4.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Silver Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Zinc Total | 40.1 ug/L | 1.70 | 5.00 | | 1 | 12/07/15 | FM | 12/08/15 13:48 | FO | |
| Analysis Desc: E300.0, Anions | | Preparation Method: E300.0, Anions | | | | | | | | |
| | | Analytical Method: E300.0, Anions | | | | | | | | |
| Chloride | 26.9 mg/L | 0.400 | 1.00 | | 1 | 12/03/15 21:10 | WR | 12/03/15 21:10 | WR | |
| Fluoride | 0.162 mg/L | 0.00400 | 0.0100 | | 1 | 12/03/15 21:10 | WR | 12/03/15 21:10 | WR | |
| ortho-Phosphate (as P) | 0.0611 mg/L | 0.00400 | 0.0100 | | 1 | 12/03/15 21:10 | WR | 12/03/15 21:10 | WR | |
| Sulfate | 1.11 mg/L | 0.400 | 1.00 | | 1 | 12/03/15 21:10 | WR | 12/03/15 21:10 | WR | |

ANALYTICAL RESULTS

Workorder: Q1547925

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1547925001 | Date Received: | 12/3/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | LAKE | Date Collected: | 12/2/2015 13:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|--|--------|----|----|----------------|----|----------------|----|------|
| CYANIDE, TOTAL | | | | | | | | | | |
| Analysis Desc: E335.4 CN, SemiAuto Col | | Preparation Method: E335.4 CN, SemiAuto Col | | | | | | | | |
| | | Analytical Method: E335.4 CN, SemiAuto Col | | | | | | | | |
| Cyanide, Total | <0.0200 mg/L | 0.00500 | 0.0200 | | 1 | 12/08/15 14:13 | KW | 12/09/15 | | CM |
| AMMONIA AS N | | | | | | | | | | |
| Analysis Desc: E350.1 NH3-N by SemiAuto Col | | Preparation Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| Nitrogen, Ammonia (as N) | <0.0200 mg/L | 0.00800 | 0.0200 | | 1 | 12/17/15 | CM | 12/17/15 | | CM |
| TOTAL KJELDAHL NITROGEN | | | | | | | | | | |
| Analysis Desc: E351.2 TKN by SemiAuto Col | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E351.2 TKN by SemiAuto Col | | | | | | | | |
| Nitrogen, Kjeldahl, Total | 0.613 mg/L | 0.0400 | 0.100 | | 1 | 12/14/15 13:21 | MM | 12/16/15 | | ML |
| TOTAL PHOSPHATE AS P | | | | | | | | | | |
| Analysis Desc: E365.4 Phosphorus, Total | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E365.4 Phosphorus, Total | | | | | | | | |
| Phosphorus, Total (As P) | <0.0200 mg/L | 0.00800 | 0.0200 | | 1 | 12/14/15 13:21 | MM | 12/16/15 | | CM |
| CHEMICAL OXYGEN DEMAND | | | | | | | | | | |
| Analysis Desc: E410.4 COD by SemiAuto Col | | Preparation Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| COD | 22.6 mg/L | 3.50 | 7.00 | | 1 | 12/14/15 10:48 | ML | 12/15/15 | | ML |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | | CO |

Report ID: 184991 - 2159412

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ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925001** Date Received: 12/3/2015 11:15 Matrix: Aqueous
Sample ID: **LAKE** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 2-Butanone | <20.0 ug/L | 5.00 | 20.0 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |

Acrolein and Acrylonitrile

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|---------------|------------|------|------|--|---|----------------|----|----------------|----|---|
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | I |
|---------------|------------|------|------|--|---|----------------|----|----------------|----|---|

Purgeable Aromatic Hydrocarbon

ANALYTICAL RESULTS

Workorder: Q1547925

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1547925001 | Date Received: | 12/3/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | LAKE | Date Collected: | 12/2/2015 13:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------------|---------------|--|----------|----|----|----------------|----|----------------|----|------|
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 4-Bromofluorobenzene (S) | 86.7 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Toluene d8 (S) | 89.4 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 4-Bromofluorobenzene (S) | 86.7 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Toluene d8 (S) | 89.4 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| 4-Bromofluorobenzene (S) | 86.7 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Toluene d8 (S) | 89.4 % | | 70 - 130 | | | 12/11/15 14:24 | CO | 12/11/15 14:24 | CO | |
| Semivolatiles | | | | | | | | | | |
| Analysis Desc: SW-846 8270C | | Preparation Method: SW3520C, Liquid/Liquid Extract | | | | | | | | |
| | | Analytical Method: SW-846 8270C | | | | | | | | |
| Pyridine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |

ANALYTICAL RESULTS

Workorder: Q1547925

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1547925001 | Date Received: 12/3/2015 11:15 | Matrix: Aqueous |
| Sample ID: LAKE | Date Collected: 12/2/2015 13:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| n-Nitrosodimethylamine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Picoline | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Methyl methanesulfonate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| n-Nitrosodiethylamine | <20.5 ug/L | 4.11 | 20.5 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Ethyl methanesulfonate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Aniline | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Phenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Chlorophenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Bis(2-Chloroethyl)ether | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,3-Dichlorobenzene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,4-Dichlorobenzene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,2-Dichlorobenzene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzyl alcohol | <10.3 ug/L | 5.13 | 10.3 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Methylphenol (o-Cresol) | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Bis(2-Chloroisopropyl)ether | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Acetophenone | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Hexachloroethane | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| n-Nitrosodi-n-propylamine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| m,p-Cresol | <10.3 ug/L | 4.11 | 10.3 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Nitrobenzene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| n-Nitrosopiperidine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Isophorone | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Nitrophenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4-Dimethylphenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzoic acid | <51.3 ug/L | 20.5 | 51.3 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Bis(2-Chloroethoxy)methane | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4-Dichlorophenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,2,4-Trichlorobenzene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Naphthalene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,6-Dichlorophenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Chloroaniline | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Hexachlorobutadiene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| n-Nitrosodi-n-butylamine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Chloro-3-methylphenol | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925001**
Sample ID: **LAKE**
Project ID: **FOD-LIKE SWQM TESTS**

Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| 2-Methylnaphthalene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,2,4,5-Tetrachlorobenzene | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Hexachlorocyclopentadiene | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4,6-Trichlorophenol | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4,5-Trichlorophenol | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1&2-Chloronaphthalene | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Nitroaniline | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Acenaphthylene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Dimethyl phthalate | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,6-Dinitrotoluene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 3-Nitroaniline | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Acenaphthene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4-Dinitrophenol | <51.3 ug/L | 20.5 | 51.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Dibenzofuran | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Nitrophenol | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Pentachlorobenzene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,4-Dinitrotoluene | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1-Naphthylamine | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | N |
| 2-Naphthylamine | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2,3,4,6-Tetrachlorophenol | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Fluorene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Diethyl phthalate | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Chlorophenyl phenyl ether | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Nitroaniline | <10.3 ug/L | 4.11 | 10.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4,6-Dinitro-2-methylphenol | <51.3 ug/L | 20.5 | 51.3 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| n-Nitrosodiphenylamine | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 1,2 Diphenylhydrazine | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Hexachlorobenzene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Bromophenyl phenyl ether | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Atrazine | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | N |
| Phenacetin | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 4-Aminobiphenyl | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Pentachlorophenol | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Pentachloronitrobenzene | <5.13 ug/L | 2.05 | 5.13 | 1 | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |

Report ID: 184991 - 2159412

DRAFT

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ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: Q1547925001 Date Received: 12/3/2015 11:15 Matrix: Aqueous
Sample ID: LAKE Date Collected: 12/2/2015 13:50 Sample Type: SAMPLE
Project ID: FOD-LIKE SWQM TESTS

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|------------|----|----|----------------|----|----------------|----|------|
| Phenanthrene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Pronamide | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Anthracene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Carbazole | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Carbaryl (Sevin) | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Di-n-butyl phthalate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Fluoranthene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzidine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Pyrene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| p-(Dimethylamino)azobenzene | <10.3 ug/L | 4.11 | 10.3 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | N |
| Butyl benzyl phthalate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzo(a)anthracene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Chrysene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 3,3'-Dichlorobenzidine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Bis(2-Ethylhexyl)phthalate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Di-n-octyl phthalate | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzo(b)fluoranthene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzo(k)fluoranthene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 7,12-Dimethylbenz[a]anthracene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzo(a)pyrene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 3-Methylcholanthrene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Indeno(1,2,3-cd)pyrene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Dibenz(a,j)acridine | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Dibenz(a,h)anthracene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Benzo(g,h,i)perylene | <5.13 ug/L | 2.05 | 5.13 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Cresols | <15.4 ug/L | 4.11 | 15.4 | | 1 | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | N |
| 2,4,6-Tribromophenol (S) | 49.9 % | | 0 - 146 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Fluorobiphenyl (S) | 46.9 % | | 29.8 - 157 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| 2-Fluorophenol (S) | 27.5 % | | 0 - 89 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Nitrobenzene-d5 (S) | 51.2 % | | 15.1 - 165 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Phenol-d5 (S) | 36.4 % | | 0 - 105 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |
| Terphenyl-d14 (S) | 17.9 % | | 14.6 - 174 | | | 12/07/15 10:30 | MH | 12/18/15 03:36 | CO | |

TOTAL DISSOLVED SOLIDS

ANALYTICAL RESULTS

Workorder: Q1547925

| | | | |
|--|---------------------------------|----------------------------|--|
| Lab ID: Q1547925001 | Date Received: 12/3/2015 11:15 | Matrix: Aqueous | |
| Sample ID: LAKE | Date Collected: 12/2/2015 13:50 | Sample Type: SAMPLE | |
| Project ID: FOD-LIKE SWQM TESTS | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|-----------------|--|--------|------|----|----------------|-----|----------------|-----|------|
| Analysis Desc: SM2540C, TDS | | Preparation Method: SM2540C, TDS | | | | | | | | |
| | | Analytical Method: SM2540C, TDS | | | | | | | | |
| Total Dissolved Solids(TDS) | 134 mg/L | 25.0 | 25.0 | 10 | | 12/09/15 09:08 | JM | 12/09/15 09:08 | JM | |
| TOTAL SUSPENDED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540D, TSS | | Preparation Method: SM2540D, TSS | | | | | | | | |
| | | Analytical Method: SM2540D, TSS | | | | | | | | |
| Total Suspended Solids | 2.79 mg/L | 1.33 | 1.33 | 1.33 | | 12/09/15 15:56 | JM | 12/09/15 15:56 | JM | |
| ALKALINITY | | | | | | | | | | |
| Analysis Desc: SM2320B, Alkalinity | | Preparation Method: SM2320B, Alkalinity | | | | | | | | |
| | | Analytical Method: SM2320B, Alkalinity | | | | | | | | |
| Total Alkalinity | 87.1 mg/L | 20.0 | 20.0 | 1 | | 12/15/15 | ADG | 12/15/15 | ADG | |
| OIL and GREASE | | | | | | | | | | |
| Analysis Desc: E1664A, Gravimetric | | Preparation Method: E1664A, Gravimetric | | | | | | | | |
| | | Analytical Method: E1664A, Gravimetric | | | | | | | | |
| Oil and Grease | <2.50 mg/L | 2.50 | 2.50 | | | 12/03/15 12:42 | KW | 12/03/15 12:42 | KW | |
| E-COLI by IDEXX | | | | | | | | | | |
| Analysis Desc: SM9223, IDEXX | | Preparation Method: SM9223, IDEXX | | | | | | | | |
| | | Analytical Method: SM9223, IDEXX | | | | | | | | |
| Ecoli | <1.00 MPN/100mL | 1.00 | 1.00 | 1 | | 12/03/15 13:30 | WR | 12/03/15 13:30 | WR | |
| NITRATE AND NITRITE | | | | | | | | | | |
| Analysis Desc: SM4500-NO3-H, Nitrate/Nitrite | | Preparation Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | |
| | | Analytical Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | |
| Nitrate/Nitrite | <0.0200 mg/L | 0.00800 | 0.0200 | 1 | | 12/14/15 | ML | 12/14/15 | ML | |
| BOD, 5 DAY, 20°C | | | | | | | | | | |
| Analysis Desc: SM5210B | | Preparation Method: SM5210B | | | | | | | | |
| | | Analytical Method: SM5210B | | | | | | | | |
| Biochemical Oxygen Demand | <3.00 mg/L | 3.00 | 3.00 | 3 | | 12/04/15 11:25 | ML | 12/04/15 11:25 | ML | |
| ORGANIC CARBON, TOTAL | | | | | | | | | | |

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ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925001** Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
 Sample ID: **LAKE** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|-------|----|----|----------------|---------|----------|----|------|
| Analysis Desc: SM5310D, Total Organic Carbon | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: SM5310D, Total Organic Carbon | | | | | | | | |
| Total Organic Carbon | 6.65 mg/L | 0.200 | 0.500 | | 1 | 12/03/15 14:40 | CA M | 12/17/15 | | CM |

HEAVY METALS

| | | | | | | | | | | |
|-------------------------------------|--------------|--|-------|--|---|----------|----|----------------|--|----|
| Analysis Desc: E245.1 Mercury Water | | Preparation Method: E245.1 Mercury Water | | | | | | | | |
| | | Analytical Method: E245.1 Mercury Water | | | | | | | | |
| Mercury Total | <0.0700 ug/L | 0.0700 | 0.200 | | 1 | 12/09/15 | FM | 12/10/15 08:58 | | FM |



ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925002** Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
 Sample ID: **WETLANDS** Date Collected: 12/2/2015 15:10 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results | Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------------------------|---------|-----------|-----------------------------------|------|----|----|----------------|----|----------------|----|------|
| E-COLI by IDEXX | | | | | | | | | | | |
| Analysis Desc: SM9223, IDEXX | | | Preparation Method: SM9223, IDEXX | | | | | | | | |
| | | | Analytical Method: SM9223, IDEXX | | | | | | | | |
| Ecoli | 2.00 | MPN/100mL | 2.00 | 2.00 | | 2 | 12/03/15 13:30 | WR | 12/03/15 13:30 | WR | |

ANALYTICAL RESULTS

Workorder: Q1547925

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|--------|
| Lab ID: | Q1547925003 | Date Received: | 12/3/2015 11:15 | Matrix: | Solid |
| Sample ID: | LAKE | Date Collected: | 12/2/2015 13:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

INORGANICS

| | |
|------------------------------|--|
| Analysis Desc: SW6020 ICP-MS | Preparation Method: SW3050B, Metals Prep |
| | Analytical Method: SW6020 ICP-MS |

| | | | | | | | | |
|-----------------|--------------|-------|-------|-----|----------|----|----------------|-----|
| Aluminum Total | 5190 mg/kg | 263 | 657 | 500 | 12/10/15 | FM | 12/11/15 15:35 | SLW |
| Arsenic Total | 2.13 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Barium Total | 165 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Cadmium Total | <0.657 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Chromium Total | 5.32 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Copper Total | 4.54 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Lead Total | 8.61 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Manganese Total | 270 mg/kg | 0.263 | 0.657 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Nickel Total | 3.95 mg/kg | 0.526 | 1.31 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Selenium Total | <2.63 mg/kg | 0.920 | 2.63 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |
| Silver Total | <0.664 mg/kg | 0.266 | 0.664 | 5 | 12/10/15 | FM | 12/15/15 14:15 | SLW |
| Zinc Total | <13.1 mg/kg | 5.26 | 13.1 | 5 | 12/10/15 | FM | 12/11/15 16:03 | SLW |

Volatiles

| | |
|-----------------------------|----------------------------------|
| Analysis Desc: SW-846 8260B | Preparation Method: SW-846 8260B |
| | Analytical Method: SW-846 8260B |

| | | | | | | | | | |
|--------------------------|-------------|------|------|---|----------------|----|----------------|----|---|
| Dichlorodifluoromethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Chloromethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Vinyl chloride | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Chloroethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,1-Dichloroethene | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Acetone | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Carbon disulfide | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Methylene chloride | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| trans-1,2-Dichloroethene | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Acrylonitrile | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,1-Dichloroethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Chloroform | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,1,1-Trichloroethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Carbon tetrachloride | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,2-Dichloroethane | <13.0 ug/Kg | 5.19 | 13.0 | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925003** Date Received: 12/3/2015 11:15 Matrix: Solid
Sample ID: **LAKE** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------|---------------|------|----------|----|----|----------------|----|----------------|----|------|
| Benzene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Trichloroethene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,2-Dichloropropane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Bromodichloromethane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| cis-1,3-Dichloropropene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 4-Methyl-2-pentanone | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Toluene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| trans-1,3-Dichloropropene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,1,2-Trichloroethane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Tetrachloroethene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 2-Hexanone | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Dibromochloromethane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,2-Dibromoethane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Chlorobenzene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Ethyl Benzene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| m,p-Xylene | <25.9 ug/Kg | 10.4 | 25.9 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| o-Xylene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Styrene | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Bromoform | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,1,2,2-Tetrachloroethane | <13.0 ug/Kg | 5.19 | 13.0 | | 1 | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| Xylene (total) | <13.1 ug/Kg | 13.1 | 13.1 | | | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | H |
| 1,2-Dichloroethane-d4 (S) | 92.4 % | | 70 - 130 | | | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | |
| 4-Bromofluorobenzene (S) | 99.8 % | | 70 - 130 | | | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | |
| Dibromofluoromethane (S) | 99.7 % | | 70 - 130 | | | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | |
| Toluene d8 (S) | 99.1 % | | 70 - 130 | | | 12/17/15 15:19 | CO | 12/17/15 15:19 | CO | |

Semivolatiles

Analysis Desc: SW-846 8270C

Preparation Method: SW3540, Soxhlet Extraction

Analytical Method: SW-846 8270C

| | | | | | | | | | | |
|-------------------------|------------|-----|-----|--|---|----------------|----|----------------|----|--|
| Pyridine | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| n-Nitrosodimethylamine | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Phenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Chlorophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Bis(2-Chloroethyl)ether | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |

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ANALYTICAL RESULTS

Workorder: Q1547925

| | | |
|---------------------------------|---------------------------------|---------------------|
| Lab ID: Q1547925003 | Date Received: 12/3/2015 11:15 | Matrix: Solid |
| Sample ID: LAKE | Date Collected: 12/2/2015 13:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|-----|------|----|----|----------------|----|----------------|----|------|
| 1,3-Dichlorobenzene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 1,4-Dichlorobenzene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 1,2-Dichlorobenzene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Methylphenol (o-Cresol) | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Bis(2-Chloroisopropyl)ether | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Hexachloroethane | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| n-Nitrosodi-n-propylamine | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| m,p-Cresol | <438 ug/Kg | 350 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Nitrobenzene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Isophorone | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Nitrophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4-Dimethylphenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Bis(2-Chloroethoxy)methane | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4-Dichlorophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 1,2,4-Trichlorobenzene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Naphthalene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Hexachlorobutadiene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 4-Chloro-3-methylphenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Methylnaphthalene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Hexachlorocyclopentadiene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4,6-Trichlorophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4,5-Trichlorophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 1&2-Chloronaphthalene | <876 ug/Kg | 350 | 876 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Acenaphthylene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Dimethyl phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,6-Dinitrotoluene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Acenaphthene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4-Dinitrophenol | <1750 ug/Kg | 701 | 1750 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 4-Nitrophenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4-Dinitrotoluene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Fluorene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Diethyl phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 4-Chlorophenyl phenyl ether | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 4,6-Dinitro-2-methylphenol | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |



ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925003** Date Received: 12/3/2015 11:15 Matrix: Solid
 Sample ID: **LAKE** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|----------------------------|---------------|-----|------------|----|----|----------------|----|----------------|----|------|
| 4-Bromophenyl phenyl ether | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Phenanthrene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Anthracene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Di-n-butyl phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Fluoranthene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Pyrene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Butyl benzyl phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Benzo(a)anthracene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Chrysene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Bis(2-Ethylhexyl)phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Di-n-octyl phthalate | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Benzo(b)fluoranthene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Benzo(k)fluoranthene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Benzo(a)pyrene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Indeno(1,2,3-cd)pyrene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Dibenz(a,h)anthracene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Benzo(g,h,i)perylene | <438 ug/Kg | 175 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Cresols | <438 ug/Kg | 438 | 438 | | 1 | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2,4,6-Tribromophenol (S) | 53.4 % | | 26.4 - 139 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Fluorobiphenyl (S) | 45.5 % | | 11 - 126 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| 2-Fluorophenol (S) | 43.5 % | | 1.27 - 100 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Nitrobenzene-d5 (S) | 49.7 % | | 7.94 - 113 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Phenol-d5 (S) | 47.5 % | | 6.69 - 106 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |
| Terphenyl-d14 (S) | 48.2 % | | 21.5 - 146 | | | 12/07/15 13:00 | MF | 12/18/15 06:25 | CO | |

ORGANIC CARBON, TOTAL

| | | | | | | | | | | |
|---|-------------|--|------|--|---|----------------|----|----------------|----|--|
| Analysis Desc: SW9060A Total Organic Carbon | | Preparation Method: SW9060A Total Organic Carbon | | | | | | | | |
| | | Analytical Method: SW9060A Total Organic Carbon | | | | | | | | |
| Total Organic Carbon | 21700 mg/kg | 1310 | 3940 | | 1 | 12/22/15 10:08 | CM | 12/22/15 10:08 | CM | |

Wet Chemistry

| | | | | | | | | | | |
|--|--------|---|--|--|--|----------|----|----------|----|--|
| Analysis Desc: SM2540G, Percent Solids | | Preparation Method: SM2540G, Percent Solids | | | | | | | | |
| | | Analytical Method: SM2540G, Percent Solids | | | | | | | | |
| Percent Total Solids | 38.0 % | | | | | 12/03/15 | FM | 12/03/15 | FM | |

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: Q1547925003 Date Received: 12/3/2015 11:15 Matrix: Solid
Sample ID: LAKE Date Collected: 12/2/2015 13:50 Sample Type: SAMPLE
Project ID: FOD-LIKE SWQM TESTS

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

INORGANICS

| | | | | | | | | | | |
|---|---------------|--|-------|---|--|----------|----|----------------|--|----|
| Analysis Desc: SW7471A Hg in Solid, Semisolid | | Preparation Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| | | Analytical Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| Mercury Total | <0.0800 mg/kg | 0.0800 | 0.229 | 1 | | 12/09/15 | FM | 12/09/15 13:48 | | FO |

| | | | | | | | | | | |
|--------------------------------|------------|--|-----|----|--|----------|----|----------------|--|----|
| Analysis Desc: SW6010B ICP-AES | | Preparation Method: SW3050B, Metals Prep | | | | | | | | |
| | | Analytical Method: SW6010B ICP-AES | | | | | | | | |
| Iron Total | 3870 mg/kg | 39.4 | 118 | 10 | | 12/10/15 | FM | 12/15/15 12:22 | | MV |

Wet Chemistry

| | | | | | | | | | | |
|----------------------------|--------|---------------------------------|--|--|--|----------|-----|----------|-----|---|
| Analysis Desc: 600/2-78-54 | | Preparation Method: 600/2-78-54 | | | | | | | | |
| | | Analytical Method: 600/2-78-54 | | | | | | | | |
| Texture, Clay <0.002mm | 22.8 % | | | | | 12/10/15 | ADG | 12/10/15 | ADG | N |
| Texture, Gravel >2.0mm | 1.08 % | | | | | 12/10/15 | ADG | 12/10/15 | ADG | N |
| Texture, Sand 0.05-2.0mm | 49.8 % | | | | | 12/10/15 | ADG | 12/10/15 | ADG | N |
| Texture, Silt 0.002-0.05mm | 26.3 % | | | | | 12/10/15 | ADG | 12/10/15 | ADG | N |

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925005** Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
 Sample ID: **TRIP BLANK** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|----------------------------------|------|----|----|----------------|----|----------------|----|------|
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 2-Butanone | <20.0 ug/L | 5.00 | 20.0 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

Report ID: 184991 - 2159412

DRAFT

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ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: Q1547925005 Date Received: 12/3/2015 11:15 Matrix: Aqueous
Sample ID: TRIP BLANK Date Collected: 12/2/2015 13:50 Sample Type: SAMPLE
Project ID: FOD-LIKE SWQM TESTS

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|----------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

Acrolein and Acrylonitrile

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|---------------|------------|------|------|--|---|----------------|----|----------------|----|--|
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
|---------------|------------|------|------|--|---|----------------|----|----------------|----|--|

Purgeable Aromatic Hydrocarbon

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|--------------------------|------------|------|------|--|---|----------------|----|----------------|----|--|
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

Acrolein and Acrylonitrile

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|---------------------------|--------|--|----------|--|--|----------------|----|----------------|----|--|
| 1,2-Dichloroethane-d4 (S) | 112 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 4-Bromofluorobenzene (S) | 86.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Toluene d8 (S) | 89.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

Purgeable Aromatic Hydrocarbon

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|---------------------------|--------|--|----------|--|--|----------------|----|----------------|----|--|
| 1,2-Dichloroethane-d4 (S) | 112 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 4-Bromofluorobenzene (S) | 86.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Toluene d8 (S) | 89.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

Purgeable Halocarbons

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | | |
|---------------------------|--------|--|----------|--|--|----------------|----|----------------|----|--|
| 1,2-Dichloroethane-d4 (S) | 112 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| 4-Bromofluorobenzene (S) | 86.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

ANALYTICAL RESULTS

Workorder: Q1547925

Lab ID: **Q1547925005** Date Received: 12/3/2015 11:15 Matrix: **Aqueous**
 Sample ID: **TRIP BLANK** Date Collected: 12/2/2015 13:50 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------|---------------|-----|----------|----|----|----------------|----|----------------|----|------|
| Dibromofluoromethane (S) | 110 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |
| Toluene d8 (S) | 89.1 % | | 70 - 130 | | | 12/11/15 15:14 | CO | 12/11/15 15:14 | CO | |

ANALYTICAL RESULTS QUALIFIERS

Workorder: Q1547925

PARAMETER QUALIFIERS

Lab ID: Q1547925001

I Improperly Preserved
N Not Accredited

Lab ID: Q1547925003

H Analyzed Past Hold Time
N Not Accredited

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9210 Analysis Method: SM2540G, Percent Solids
QC Batch Method: SM2540G, Percent Solids
Associated Lab Samples: Q1547925003

SAMPLE DUPLICATE: 574394 ORIGINAL: Q1547644001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------------|-------|-----------------|------------|-----|---------|------------|
| Percent Total Solids | % | 1.1 | 1.07 | 2.8 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: OVOL/2400 Analysis Method: SW-846 8260B

QC Batch Method: SW-846 8260B

Associated Lab Samples: Q1547925001, Q1547925005

METHOD BLANK: 574773

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------------|-------|--------------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1,2,2-Tetrachloroethane | ug/L | <5.00 | 5.00 | |
| 1,1,2-Trichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1-Dichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1-Dichloroethene | ug/L | <5.00 | 5.00 | |
| 1,2-Dibromoethane | ug/L | <5.00 | 5.00 | |
| 1,2-Dichloroethane | ug/L | <5.00 | 5.00 | |
| 1,2-Dichloropropane | ug/L | <5.00 | 5.00 | |
| 2-Butanone | ug/L | <20.0 | 20.0 | |
| 2-Chloroethylvinyl ether | ug/L | <5.00 | 5.00 | |
| Acrylonitrile | ug/L | <5.00 | 5.00 | |
| Benzene | ug/L | <5.00 | 5.00 | |
| Bromodichloromethane | ug/L | <5.00 | 5.00 | |
| Bromoform | ug/L | <5.00 | 5.00 | |
| Bromomethane | ug/L | <5.00 | 5.00 | |
| Carbon tetrachloride | ug/L | <5.00 | 5.00 | |
| Chlorobenzene | ug/L | <5.00 | 5.00 | |
| Chloroethane | ug/L | <5.00 | 5.00 | |
| Chloroform | ug/L | <5.00 | 5.00 | |
| Chloromethane | ug/L | <5.00 | 5.00 | |
| Dibromochloromethane | ug/L | <5.00 | 5.00 | |
| Ethyl Benzene | ug/L | <5.00 | 5.00 | |
| Methylene chloride | ug/L | <5.00 | 5.00 | |
| Styrene | ug/L | <5.00 | 5.00 | |
| Tetrachloroethene | ug/L | <5.00 | 5.00 | |
| Toluene | ug/L | <5.00 | 5.00 | |
| Trichloroethene | ug/L | <5.00 | 5.00 | |
| Vinyl chloride | ug/L | <5.00 | 5.00 | |
| cis-1,3-Dichloropropene | ug/L | <5.00 | 5.00 | |
| m,p-Xylene | ug/L | <10.0 | 10.0 | |
| o-Xylene | ug/L | <5.00 | 5.00 | |
| tert-Butyl methyl ether (MTBE) | ug/L | <5.00 | 5.00 | |
| trans-1,2-Dichloroethene | ug/L | <5.00 | 5.00 | |
| trans-1,3-Dichloropropene | ug/L | <5.00 | 5.00 | |
| trans-1,4-Dichloro-2-butene | ug/L | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 574773

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,2-Dichloroethane-d4 (S) | % | 109 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 86.2 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 108 | 70 - 130 | |
| Toluene d8 (S) | % | 90.2 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 574774

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------------|-------------|-------------|-------------|-------------|------------|-----------------|-------------|-------------|
| 1,1,1-Trichloroethane | ug/L | 50 | 48.7 | 59.1 | 97.4 | 118 | 65 - 135 | 19.3 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 48.6 | 62.5 | 97.1 | 125 | 65 - 135 | 25 | 30 |
| 1,1,2-Trichloroethane | ug/L | 50 | 48.4 | 49.9 | 96.7 | 99.8 | 65 - 135 | 3.05 | 30 |
| 1,1-Dichloroethane | ug/L | 50 | 49.2 | 58.9 | 98.4 | 118 | 65 - 135 | 17.9 | 30 |
| 1,1-Dichloroethene | ug/L | 50 | 49.1 | 58.5 | 98.3 | 117 | 65 - 135 | 17.5 | 30 |
| 1,2-Dibromoethane | ug/L | 50 | 49.9 | 50.2 | 99.8 | 100 | 65 - 135 | .599 | 30 |
| 1,2-Dichloroethane | ug/L | 50 | 49.9 | 59.9 | 99.7 | 120 | 65 - 135 | 18.2 | 30 |
| 1,2-Dichloropropane | ug/L | 50 | 48.4 | 58.3 | 96.7 | 117 | 65 - 135 | 18.6 | 30 |
| 2-Butanone | ug/L | 50 | 42.7 | 58.5 | 85.4 | 117 | 65 - 135 | 31.2 | 30 |
| 2-Chloroethylvinyl ether | ug/L | 50 | 45.4 | 55.9 | 90.8 | 112 | 65 - 135 | 20.7 | 30 |
| Acrylonitrile | ug/L | 50 | 50.8 | 53.9 | 102 | 108 | 65 - 135 | 5.92 | 30 |
| Benzene | ug/L | 50 | 49.3 | 58.6 | 98.7 | 117 | 65 - 135 | 17.2 | 30 |
| Bromodichloromethane | ug/L | 50 | 49.4 | 60.1 | 98.8 | 120 | 65 - 135 | 19.5 | 30 |
| Bromoform | ug/L | 50 | 50 | 50.4 | 99.9 | 101 | 65 - 135 | .797 | 30 |
| Bromomethane | ug/L | 50 | 48.3 | 58.2 | 96.6 | 116 | 65 - 135 | 18.6 | 30 |
| Carbon tetrachloride | ug/L | 50 | 48.6 | 58.7 | 97.3 | 117 | 65 - 135 | 18.8 | 30 |
| Chlorobenzene | ug/L | 50 | 48.7 | 49.5 | 97.4 | 99 | 65 - 135 | 1.63 | 30 |
| Chloroethane | ug/L | 50 | 49.2 | 59 | 98.4 | 118 | 65 - 135 | 18.1 | 30 |
| Chloroform | ug/L | 50 | 48.2 | 57.6 | 96.5 | 115 | 65 - 135 | 17.8 | 30 |
| Chloromethane | ug/L | 50 | 47.6 | 55.2 | 95.3 | 110 | 65 - 135 | 14.8 | 30 |
| Dibromochloromethane | ug/L | 50 | 49 | 50 | 97.9 | 100 | 65 - 135 | 2.02 | 30 |
| Ethyl Benzene | ug/L | 50 | 48.9 | 49.5 | 97.8 | 99 | 65 - 135 | 1.22 | 30 |
| Methylene chloride | ug/L | 50 | 49.8 | 59.1 | 99.7 | 118 | 65 - 135 | 17.1 | 30 |
| Styrene | ug/L | 50 | 48.5 | 49.2 | 97 | 98.3 | 65 - 135 | 1.43 | 30 |
| Tetrachloroethene | ug/L | 50 | 50.8 | 50.5 | 102 | 101 | 65 - 135 | .592 | 30 |
| Toluene | ug/L | 50 | 48.6 | 48.7 | 97.1 | 97.3 | 65 - 135 | .206 | 30 |
| Trichloroethene | ug/L | 50 | 49.3 | 59.1 | 98.6 | 118 | 65 - 135 | 18.1 | 30 |
| Vinyl chloride | ug/L | 50 | 48 | 55.7 | 96 | 111 | 65 - 135 | 14.9 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 574774

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| cis-1,3-Dichloropropene | ug/L | 50 | 48.8 | 58.9 | 97.5 | 118 | 65 - 135 | 18.8 | 30 |
| m,p-Xylene | ug/L | 100 | 96.4 | 98 | 96.4 | 98 | 65 - 135 | 1.65 | 30 |
| o-Xylene | ug/L | 50 | 48 | 49.1 | 96 | 98.3 | 65 - 135 | 2.27 | 30 |
| tert-Butyl methyl ether (MTBE) | ug/L | 50 | 50.1 | 59.3 | 100 | 119 | 65 - 135 | 16.8 | 30 |
| trans-1,2-Dichloroethene | ug/L | 50 | 48.8 | 58.5 | 97.7 | 117 | 65 - 135 | 18.1 | 30 |
| trans-1,3-Dichloropropene | ug/L | 50 | 48.8 | 48.9 | 97.6 | 97.8 | 65 - 135 | .205 | 30 |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 49.1 | 63.1 | 98.1 | 126 | 65 - 135 | 25 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 100 | 95.2 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 97.4 | 98 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 102 | 97.3 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 100 | 83.5 | 70 - 130 | | |

MATRIX SPIKE SAMPLE: 574777 ORIGINAL: Q1547925001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|---------------------------------|-------|-----------------|-------------|-----------|----------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/L | 0 | 50 | 52.1 | 104 | 65 - 135 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 0 | 50 | 50.7 | 101 | 65 - 135 | |
| 1,1,2-Trichloroethane | ug/L | 0 | 50 | 51.5 | 103 | 65 - 135 | |
| 1,1-Dichloroethane | ug/L | 0 | 50 | 52.8 | 106 | 65 - 135 | |
| 1,1-Dichloroethene | ug/L | 0 | 50 | 53 | 106 | 65 - 135 | |
| 1,2-Dibromoethane | ug/L | 0 | 50 | 52.7 | 105 | 65 - 135 | |
| 1,2-Dichloroethane | ug/L | 0 | 50 | 52.6 | 105 | 65 - 135 | |
| 1,2-Dichloropropane | ug/L | 0 | 50 | 54 | 108 | 65 - 135 | |
| 2-Butanone | ug/L | 0 | 50 | 56.4 | 113 | 65 - 135 | |
| 2-Chloroethylvinyl ether | ug/L | 0 | 50 | 0 | 0 | 65 - 135 | |
| Acrylonitrile | ug/L | 0 | 50 | 60.5 | 121 | 65 - 135 | |
| Benzene | ug/L | 0 | 50 | 53.3 | 107 | 65 - 135 | |
| Bromodichloromethane | ug/L | 0 | 50 | 52.9 | 106 | 65 - 135 | |
| Bromoform | ug/L | 0 | 50 | 51.7 | 103 | 65 - 135 | |
| Bromomethane | ug/L | 0 | 50 | 52.2 | 104 | 65 - 135 | |
| Carbon tetrachloride | ug/L | 0 | 50 | 52.7 | 105 | 65 - 135 | |
| Chlorobenzene | ug/L | 0 | 50 | 50.4 | 101 | 65 - 135 | |
| Chloroethane | ug/L | 0 | 50 | 52.8 | 106 | 65 - 135 | |
| Chloroform | ug/L | 0 | 50 | 53.1 | 106 | 65 - 135 | |
| Chloromethane | ug/L | 0 | 50 | 52.2 | 104 | 65 - 135 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE SAMPLE: 574777 ORIGINAL: Q1547925001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Dibromochloromethane | ug/L | 0 | 50 | 52 | 104 | 65 - 135 | |
| Ethyl Benzene | ug/L | 0 | 50 | 50.6 | 101 | 65 - 135 | |
| Methylene chloride | ug/L | 0 | 50 | 53.4 | 107 | 65 - 135 | |
| Styrene | ug/L | 0 | 50 | 50.5 | 101 | 65 - 135 | |
| Tetrachloroethene | ug/L | 0 | 50 | 49.9 | 99.8 | 65 - 135 | |
| Toluene | ug/L | 0 | 50 | 50.4 | 101 | 65 - 135 | |
| Trichloroethene | ug/L | 0 | 50 | 53.2 | 106 | 65 - 135 | |
| Vinyl chloride | ug/L | 0 | 50 | 54.2 | 108 | 65 - 135 | |
| cis-1,3-Dichloropropene | ug/L | 0 | 50 | 53.1 | 106 | 65 - 135 | |
| m,p-Xylene | ug/L | 0 | 100 | 101 | 101 | 65 - 135 | |
| o-Xylene | ug/L | 0 | 50 | 50.2 | 100 | 65 - 135 | |
| tert-Butyl methyl ether (MTBE) | ug/L | 0 | 50 | 56.1 | 112 | 65 - 135 | |
| trans-1,2-Dichloroethene | ug/L | 0 | 50 | 52.6 | 105 | 65 - 135 | |
| trans-1,3-Dichloropropene | ug/L | 0 | 50 | 51.5 | 103 | 65 - 135 | |
| trans-1,4-Dichloro-2-butene | ug/L | 0 | 50 | 49.5 | 99 | 65 - 135 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | | | | | 70 - 130 | |
| Dibromofluoromethane (S) | % | | | | | 70 - 130 | |
| Toluene d8 (S) | % | | | | | 70 - 130 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 575098

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|------------------------|-------|-------------|------------|-----------|-------------|------------|
| ortho-Phosphate (as P) | mg/L | 1 | 1 | 99.9 | 90 - 110 | |

METHOD BLANK: 575100

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| ortho-Phosphate (as P) | mg/L | <0.0100 | 0.0100 | |

MATRIX SPIKE: 575106 DUPLICATE: 575107 ORIGINAL: Q1548037004

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|-----------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Chloride | mg/L | 42.9 | 20 | 60.1 | 61.8 | 86.2 | 94.5 | 80 - 120 | 2.79 | 20 | |
| Fluoride | mg/L | .13 | 1 | 1.07 | 1.09 | 93.8 | 96.4 | 80 - 120 | 1.85 | 20 | |
| Sulfate | mg/L | 21.7 | 20 | 41.9 | 43.9 | 101 | 111 | 80 - 120 | 4.66 | 20 | |

LABORATORY CONTROL SAMPLE: 575108

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|-----------|-------|-------------|------------|-----------|-------------|------------|
| Chloride | mg/L | 30 | 29.7 | 99 | 90 - 110 | |
| Fluoride | mg/L | 1 | .99 | 99.3 | 90 - 110 | |
| Sulfate | mg/L | 30 | 29.9 | 99.5 | 90 - 110 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 575110

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| Chloride | mg/L | <1.00 | 1.00 | |
| Fluoride | mg/L | <0.0100 | 0.0100 | |
| Sulfate | mg/L | <1.00 | 1.00 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: OEXT/3974 Analysis Method: SW-846 8270C

QC Batch Method: SW3520C, Liquid/Liquid Extract

Associated Lab Samples: Q1547925001

METHOD BLANK: 575269

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| 1&2-Chloronaphthalene | ug/L | <10.0 | 10.0 | |
| 1,2-Diphenylhydrazine | ug/L | <5.00 | 5.00 | |
| 1,2,4,5-Tetrachlorobenzene | ug/L | <10.0 | 10.0 | |
| 1,2,4-Trichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,2-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,3-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,4-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1-Naphthylamine | ug/L | <10.0 | 10.0 | |
| 2,3,4,6-Tetrachlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4,5-Trichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4,6-Trichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dimethylphenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dinitrophenol | ug/L | <50.0 | 50.0 | |
| 2,4-Dinitrotoluene | ug/L | <10.0 | 10.0 | |
| 2,6-Dichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,6-Dinitrotoluene | ug/L | <5.00 | 5.00 | |
| 2-Chlorophenol | ug/L | <5.00 | 5.00 | |
| 2-Methylnaphthalene | ug/L | <5.00 | 5.00 | |
| 2-Methylphenol (o-Cresol) | ug/L | <5.00 | 5.00 | |
| 2-Naphthylamine | ug/L | <5.00 | 5.00 | |
| 2-Nitroaniline | ug/L | <5.00 | 5.00 | |
| 2-Nitrophenol | ug/L | <5.00 | 5.00 | |
| 2-Picoline | ug/L | <5.00 | 5.00 | |
| 3,3'-Dichlorobenzidine | ug/L | <5.00 | 5.00 | |
| 3-Methylcholanthrene | ug/L | <5.00 | 5.00 | |
| 3-Nitroaniline | ug/L | <5.00 | 5.00 | |
| 4,6-Dinitro-2-methylphenol | ug/L | <50.0 | 50.0 | |
| 4-Aminobiphenyl | ug/L | <5.00 | 5.00 | |
| 4-Bromophenyl phenyl ether | ug/L | <5.00 | 5.00 | |
| 4-Chloro-3-methylphenol | ug/L | <5.00 | 5.00 | |
| 4-Chloroaniline | ug/L | <5.00 | 5.00 | |
| 4-Chlorophenyl phenyl ether | ug/L | <5.00 | 5.00 | |
| 4-Nitroaniline | ug/L | <10.0 | 10.0 | |
| 4-Nitrophenol | ug/L | <10.0 | 10.0 | |

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 575269

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------------|-------|--------------|-----------------|------------|
| 7,12-Dimethylbenz[a]anthracene | ug/L | <5.00 | 5.00 | |
| Acenaphthene | ug/L | <5.00 | 5.00 | |
| Acenaphthylene | ug/L | <5.00 | 5.00 | |
| Acetophenone | ug/L | <5.00 | 5.00 | |
| Aniline | ug/L | <5.00 | 5.00 | |
| Anthracene | ug/L | <5.00 | 5.00 | |
| Atrazine | ug/L | <5.00 | 5.00 | |
| Benzidine | ug/L | <5.00 | 5.00 | |
| Benzo(a)anthracene | ug/L | <5.00 | 5.00 | |
| Benzo(a)pyrene | ug/L | <5.00 | 5.00 | |
| Benzo(b)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzo(g,h,i)perylene | ug/L | <5.00 | 5.00 | |
| Benzo(k)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzoic acid | ug/L | <50.0 | 50.0 | |
| Benzyl alcohol | ug/L | <10.0 | 10.0 | |
| Bis(2-Chloroethoxy)methane | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroethyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroisopropyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | <5.00 | 5.00 | |
| Butyl benzyl phthalate | ug/L | <5.00 | 5.00 | |
| Carbaryl (Sevin) | ug/L | <5.00 | 5.00 | |
| Carbazole | ug/L | <5.00 | 5.00 | |
| Chrysene | ug/L | <5.00 | 5.00 | |
| Cresols | ug/L | <15.0 | 15.0 | |
| Di-n-butyl phthalate | ug/L | <5.00 | 5.00 | |
| Di-n-octyl phthalate | ug/L | <5.00 | 5.00 | |
| Dibenz(a,h)anthracene | ug/L | <5.00 | 5.00 | |
| Dibenz(a,j)acridine | ug/L | <5.00 | 5.00 | |
| Dibenzofuran | ug/L | <5.00 | 5.00 | |
| Diethyl phthalate | ug/L | <5.00 | 5.00 | |
| Dimethyl phthalate | ug/L | <5.00 | 5.00 | |
| Ethyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Fluoranthene | ug/L | <5.00 | 5.00 | |
| Fluorene | ug/L | <5.00 | 5.00 | |
| Hexachlorobenzene | ug/L | <5.00 | 5.00 | |
| Hexachlorobutadiene | ug/L | <5.00 | 5.00 | |
| Hexachlorocyclopentadiene | ug/L | <10.0 | 10.0 | |
| Hexachloroethane | ug/L | <5.00 | 5.00 | |
| Indeno(1,2,3-cd)pyrene | ug/L | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 575269

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Isophorone | ug/L | <5.00 | 5.00 | |
| Methyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Naphthalene | ug/L | <5.00 | 5.00 | |
| Nitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorobenzene | ug/L | <5.00 | 5.00 | |
| Pentachloronitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorophenol | ug/L | <5.00 | 5.00 | |
| Phenacetin | ug/L | <5.00 | 5.00 | |
| Phenanthrene | ug/L | <5.00 | 5.00 | |
| Phenol | ug/L | <5.00 | 5.00 | |
| Pronamide | ug/L | <5.00 | 5.00 | |
| Pyrene | ug/L | <5.00 | 5.00 | |
| Pyridine | ug/L | <5.00 | 5.00 | |
| m,p-Cresol | ug/L | <10.0 | 10.0 | |
| n-Nitrosodi-n-butylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodi-n-propylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiethylamine | ug/L | <20.0 | 20.0 | |
| n-Nitrosodimethylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiphenylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosopiperidine | ug/L | <5.00 | 5.00 | |
| p-(Dimethylamino)azobenzene | ug/L | <10.0 | 10.0 | |
| 2,4,6-Tribromophenol (S) | % | 48.1 | 0 - 149 | |
| 2-Fluorobiphenyl (S) | % | 43.4 | 28 - 155 | |
| 2-Fluorophenol (S) | % | 26.8 | 0 - 116 | |
| Nitrobenzene-d5 (S) | % | 42.7 | 29.5 - 145 | |
| Phenol-d5 (S) | % | 35.8 | 0 - 110 | |
| Terphenyl-d14 (S) | % | 43.4 | 30.5 - 164 | |

LABORATORY CONTROL SAMPLE: 575270

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1&2-Chloronaphthalene | ug/L | | 10 | | 62.4 | | | 7.48 | |
| 1,2 Diphenylhydrazine | ug/L | | 5 | | 55.5 | | | 8.84 | |
| 1,2,4-Trichlorobenzene | ug/L | 100 | 58.3 | 53.6 | 58.3 | 53.6 | 11.2 - 126 | 8.4 | 30 |
| 1,2-Dichlorobenzene | ug/L | 100 | 55.7 | 51 | 55.7 | 51 | 9.22 - 123 | 8.81 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 575270

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|
| 1,3-Dichlorobenzene | ug/L | 100 | 59 | 54.2 | 59 | 54.2 | 9.52 - 123 | 8.48 | |
| 1,4-Dichlorobenzene | ug/L | 100 | 57.4 | 54 | 57.4 | 54 | 9.5 - 121 | 6.1 | 30 |
| 2,3,4,6-Tetrachlorophenol | ug/L | 100 | 57.7 | 51.3 | 57.7 | 51.3 | 2.8 - 116 | 11.7 | |
| 2,4,5-Trichlorophenol | ug/L | 100 | 55.3 | 47.3 | 55.3 | 47.3 | 0 - 121 | 15.6 | |
| 2,4,6-Trichlorophenol | ug/L | 100 | 50.7 | 39.6 | 50.7 | 39.6 | 0 - 118 | 24.6 | |
| 2,4-Dichlorophenol | ug/L | 100 | 52.5 | 43.9 | 52.5 | 43.9 | 0 - 126 | 17.8 | |
| 2,4-Dimethylphenol | ug/L | 100 | 47.8 | 47.3 | 47.8 | 47.3 | 0 - 119 | 1.05 | |
| 2,4-Dinitrophenol | ug/L | 100 | 12.3 | 46 | 12.3 | 46 | 0 - 125 | 116 | |
| 2,4-Dinitrotoluene | ug/L | 100 | 63.2 | 60.3 | 63.2 | 60.3 | 13 - 161 | 4.7 | 30 |
| 2,6-Dinitrotoluene | ug/L | 100 | 62 | 60.4 | 62 | 60.4 | 16 - 135 | 2.61 | |
| 2-Chlorophenol | ug/L | 100 | 47.2 | 36.8 | 47.2 | 36.8 | 0 - 115 | 24.8 | 30 |
| 2-Methylnaphthalene | ug/L | 100 | 58.5 | 55.9 | 58.5 | 55.9 | 12.8 - 137 | 4.55 | |
| 2-Methylphenol (o-Cresol) | ug/L | 100 | 53.4 | 47.1 | 53.4 | 47.1 | 0 - 123 | 12.5 | |
| 2-Nitroaniline | ug/L | 100 | 64.3 | 61.2 | 64.3 | 61.2 | 13.3 - 135 | 4.94 | |
| 2-Nitrophenol | ug/L | 100 | 25.8 | 43.6 | 25.8 | 43.6 | 0 - 125 | 51.3 | |
| 3-Nitroaniline | ug/L | 100 | 62.1 | 59.3 | 62.1 | 59.3 | 6.09 - 142 | 4.61 | |
| 4,6-Dinitro-2-methylphenol | ug/L | 100 | 18.7 | 60.1 | 18.7 | 60.1 | 0 - 147 | 105 | |
| 4-Bromophenyl phenyl ether | ug/L | 100 | 63.2 | 58.3 | 63.2 | 58.3 | 10.7 - 134 | 8.07 | |
| 4-Chloro-3-methylphenol | ug/L | 100 | 54.8 | 52 | 54.8 | 52 | 0 - 130 | 5.24 | 30 |
| 4-Chloroaniline | ug/L | 100 | 67.7 | 63.8 | 67.7 | 63.8 | 3.37 - 153 | 5.93 | |
| 4-Chlorophenyl phenyl ether | ug/L | 100 | 55.6 | 54.2 | 55.6 | 54.2 | 11.8 - 131 | 2.55 | |
| 4-Nitroaniline | ug/L | 100 | 57.7 | 57.4 | 57.7 | 57.4 | 0 - 148 | 5.21 | |
| 4-Nitrophenol | ug/L | 100 | 19.3 | 48.7 | 19.3 | 48.7 | 0 - 126 | 86.5 | 30 |
| Acenaphthene | ug/L | 100 | 55.3 | 52.6 | 55.3 | 52.6 | 12.3 - 125 | 5 | 30 |
| Acenaphthylene | ug/L | 100 | 56.4 | 52.9 | 56.4 | 52.9 | 16 - 119 | 6.4 | 30 |
| Aniline | ug/L | 100 | 60.4 | 56.1 | 60.4 | 56.1 | 50.7 - 117 | 7.38 | |
| Anthracene | ug/L | 100 | 57.9 | 54.1 | 57.9 | 54.1 | 2.47 - 147 | 6.79 | 30 |
| Benzo(a)anthracene | ug/L | 100 | 67.4 | 62.2 | 67.4 | 62.2 | 65 - 135 | 8.02 | 30 |
| Benzo(a)pyrene | ug/L | 100 | 64.7 | 58.1 | 64.7 | 58.1 | 65 - 135 | 10.7 | |
| Benzo(b)fluoranthene | ug/L | 100 | 68.2 | 65 | 68.2 | 65 | 65 - 135 | 4.8 | |
| Benzo(g,h,i)perylene | ug/L | 100 | 68.9 | 62.1 | 68.9 | 62.1 | 65 - 135 | 10.4 | |
| Benzo(k)fluoranthene | ug/L | 100 | 56 | 49.8 | 56 | 49.8 | 65 - 135 | 11.7 | |
| Benzyl alcohol | ug/L | 100 | 58.3 | 53.3 | 58.3 | 53.3 | 65 - 135 | 8.96 | |
| Bis(2-Chloroethoxy)methane | ug/L | 100 | 59.5 | 55.5 | 59.5 | 55.5 | 65 - 135 | 6.96 | |
| Bis(2-Chloroethyl)ether | ug/L | 100 | 60.6 | 55 | 60.6 | 55 | 65 - 135 | 9.69 | |
| Bis(2-Chloroisopropyl)ether | ug/L | 100 | 68.6 | 62 | 68.6 | 62 | 65 - 135 | 10.1 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | 100 | 67.6 | 66.7 | 67.6 | 66.7 | 65 - 135 | 1.34 | |
| Butyl benzyl phthalate | ug/L | 100 | 61.5 | 61.4 | 61.5 | 61.4 | 65 - 135 | 1.63 | |

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 575270

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------------------|-------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|
| <i>Carbazole</i> | ug/L | 100 | 60.7 | 56.8 | 60.7 | 56.8 | 65 - 135 | 6.64 | |
| <i>Chrysene</i> | ug/L | 100 | 57.5 | 50.8 | 57.5 | 50.8 | 65 - 135 | 12.4 | 30 |
| Cresols | ug/L | | 15 | | 115 | | | 13 | |
| <i>Di-n-butyl phthalate</i> | ug/L | 100 | 58.6 | 59.1 | 58.6 | 59.1 | 65 - 135 | .85 | |
| <i>Di-n-octyl phthalate</i> | ug/L | 100 | 61.7 | 58.7 | 61.7 | 58.7 | 65 - 135 | 4.98 | |
| Dibenz(a,h)anthracene | ug/L | 100 | 71.5 | 66.3 | 71.5 | 66.3 | 65 - 135 | 7.55 | |
| <i>Dibenzofuran</i> | ug/L | 100 | 55.3 | 51.1 | 55.3 | 51.1 | 65 - 135 | 7.89 | |
| <i>Diethyl phthalate</i> | ug/L | 100 | 60 | 58 | 60 | 58 | 65 - 135 | 3.39 | |
| <i>Dimethyl phthalate</i> | ug/L | 100 | 54.1 | 48.4 | 54.1 | 48.4 | 65 - 135 | 11.1 | |
| <i>Fluoranthene</i> | ug/L | 100 | 58.5 | 56.9 | 58.5 | 56.9 | 65 - 135 | 2.77 | |
| <i>Fluorene</i> | ug/L | 100 | 56.5 | 53.1 | 56.5 | 53.1 | 65 - 135 | 6.2 | |
| Hexachlorobenzene | ug/L | 100 | 65.1 | 61.8 | 65.1 | 61.8 | 6.43 - 152 | 5.2 | |
| Hexachlorobutadiene | ug/L | 100 | 56.4 | 53.4 | 56.4 | 53.4 | 7.19 - 140 | 5.46 | |
| <i>Hexachlorocyclopentadiene</i> | ug/L | 100 | 30 | 35.4 | 30 | 35.4 | 65 - 135 | 16.5 | |
| Hexachloroethane | ug/L | 100 | 60.5 | 55.7 | 60.5 | 55.7 | 9.5 - 131 | 8.26 | |
| Indeno(1,2,3-cd)pyrene | ug/L | 100 | 77.4 | 66.1 | 77.4 | 66.1 | 65 - 135 | 15.7 | |
| <i>Isophorone</i> | ug/L | 100 | 59.8 | 55.6 | 59.8 | 55.6 | 65 - 135 | 7.28 | |
| <i>Naphthalene</i> | ug/L | 100 | 55.2 | 52.2 | 55.2 | 52.2 | 65 - 135 | 5.59 | |
| Nitrobenzene | ug/L | 100 | 59.6 | 55 | 59.6 | 55 | 6.57 - 138 | 8.03 | |
| Pentachlorophenol | ug/L | 100 | 54.6 | 60.5 | 54.6 | 60.5 | 0 - 137 | 10.3 | 30 |
| <i>Phenanthrene</i> | ug/L | 100 | 58.5 | 54.3 | 58.5 | 54.3 | 65 - 135 | 7.45 | 30 |
| <i>Phenol</i> | ug/L | 100 | 47.8 | 40.4 | 47.8 | 40.4 | 65 - 135 | 16.8 | 30 |
| <i>Pyrene</i> | ug/L | 100 | 59.3 | 55.6 | 59.3 | 55.6 | 65 - 135 | 6.44 | 30 |
| Pyridine | ug/L | 100 | 86.4 | 78.5 | 86.4 | 78.5 | 0 - 150 | 9.58 | |
| m,p-Cresol | ug/L | | 10 | | 61.9 | | | 14 | |
| n-Nitrosodi-n-propylamine | ug/L | 100 | 69.6 | 65.4 | 69.6 | 65.4 | 65 - 135 | 6.22 | 30 |
| <i>n-Nitrosodimethylamine</i> | ug/L | 100 | 60.8 | 55.1 | 60.8 | 55.1 | 65 - 135 | 9.84 | |
| n-Nitrosodiphenylamine | ug/L | | 5 | | 35 | | | 9.9 | |
| 2,4,6-Tribromophenol (S) | % | | | | 61.1 | | 0 - 149 | | |
| 2-Fluorobiphenyl (S) | % | | | | 54 | | 28 - 155 | | |
| 2-Fluorophenol (S) | % | | | | 31.5 | | 0 - 89 | | |
| Nitrobenzene-d5 (S) | % | | | | 58.3 | | 29.5 - 145 | | |
| Phenol-d5 (S) | % | | | | 40.3 | | 0 - 110 | | |
| Terphenyl-d14 (S) | % | | | | 61.4 | | 30.5 - 164 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE: 575346 DUPLICATE: 575347 ORIGINAL: Q1547925001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Calcium Total | ug/L | 25900 | 10000 | 35500 | 35500 | 95.6 | 95.7 | 70 - 130 | 0 | 20 | |
| Iron Total | ug/L | 44.7 | 1000 | 1160 | 1150 | 116 | 115 | 70 - 130 | .866 | 20 | |
| Magnesium Total | ug/L | 6620 | 10000 | 16800 | 17000 | 102 | 104 | 70 - 130 | 1.18 | 20 | |
| Potassium Total | ug/L | 3420 | 10000 | 13100 | 12900 | 96.5 | 95.3 | 70 - 130 | 1.54 | 20 | |
| Sodium Total | ug/L | 18700 | 10000 | 28500 | 28400 | 98.1 | 97.3 | 70 - 130 | .351 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: OEXT/3980 Analysis Method: SW-846 8270C
QC Batch Method: SW3540, Soxhlet Extraction
Associated Lab Samples: Q1547925003

METHOD BLANK: 575349

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| 1&2-Chloronaphthalene | ug/Kg | <1000 | 1000 | |
| 1,2,4-Trichlorobenzene | ug/Kg | <500 | 500 | |
| 1,2-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,3-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,4-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 2,4,5-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4,6-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dimethylphenol | ug/Kg | <500 | 500 | |
| 2,4-Dinitrophenol | ug/Kg | <2000 | 2000 | |
| 2,4-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2,6-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2-Chlorophenol | ug/Kg | <500 | 500 | |
| 2-Methylnaphthalene | ug/Kg | <500 | 500 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | <500 | 500 | |
| 2-Nitrophenol | ug/Kg | <500 | 500 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | <500 | 500 | |
| 4-Bromophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Chloro-3-methylphenol | ug/Kg | <500 | 500 | |
| 4-Chlorophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Nitrophenol | ug/Kg | <500 | 500 | |
| Acenaphthene | ug/Kg | <500 | 500 | |
| Acenaphthylene | ug/Kg | <500 | 500 | |
| Anthracene | ug/Kg | <500 | 500 | |
| Benzo(a)anthracene | ug/Kg | <500 | 500 | |
| Benzo(a)pyrene | ug/Kg | <500 | 500 | |
| Benzo(b)fluoranthene | ug/Kg | <500 | 500 | |
| Benzo(g,h,i)perylene | ug/Kg | <500 | 500 | |
| Benzo(k)fluoranthene | ug/Kg | <500 | 500 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | <500 | 500 | |
| Bis(2-Chloroethyl)ether | ug/Kg | <500 | 500 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | <500 | 500 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | <500 | 500 | |
| Butyl benzyl phthalate | ug/Kg | <500 | 500 | |

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 575349

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Chrysene | ug/Kg | <500 | 500 | |
| Cresols | ug/Kg | <500 | 500 | |
| Di-n-butyl phthalate | ug/Kg | <500 | 500 | |
| Di-n-octyl phthalate | ug/Kg | <500 | 500 | |
| Dibenz(a,h)anthracene | ug/Kg | <500 | 500 | |
| Diethyl phthalate | ug/Kg | <500 | 500 | |
| Dimethyl phthalate | ug/Kg | <500 | 500 | |
| Fluoranthene | ug/Kg | <500 | 500 | |
| Fluorene | ug/Kg | <500 | 500 | |
| Hexachlorobutadiene | ug/Kg | <500 | 500 | |
| Hexachlorocyclopentadiene | ug/Kg | <500 | 500 | |
| Hexachloroethane | ug/Kg | <500 | 500 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | <500 | 500 | |
| Isophorone | ug/Kg | <500 | 500 | |
| Naphthalene | ug/Kg | <500 | 500 | |
| Nitrobenzene | ug/Kg | <500 | 500 | |
| Phenanthrene | ug/Kg | <500 | 500 | |
| Phenol | ug/Kg | <500 | 500 | |
| Pyrene | ug/Kg | <500 | 500 | |
| Pyridine | ug/Kg | <500 | 500 | |
| m,p-Cresol | ug/Kg | <500 | 500 | |
| n-Nitrosodi-n-propylamine | ug/Kg | <500 | 500 | |
| n-Nitrosodimethylamine | ug/Kg | <500 | 500 | |
| 2,4,6-Tribromophenol (S) | % | 45.5 | 26.4 - 139 | |
| 2-Fluorobiphenyl (S) | % | 47.7 | 11 - 126 | |
| 2-Fluorophenol (S) | % | 46.2 | 1.27 - 100 | |
| Nitrobenzene-d5 (S) | % | 53.3 | 7.94 - 113 | |
| Phenol-d5 (S) | % | 50.2 | 6.69 - 106 | |
| Terphenyl-d14 (S) | % | 45.8 | 21.5 - 146 | |

LABORATORY CONTROL SAMPLE: 575350

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| 1&2-Chloronaphthalene | ug/Kg | | 1000 | | 5700 | | | 3.03 | | |
| 1,2,4-Trichlorobenzene | ug/Kg | 10000 | 5180 | 4950 | 51.8 | 49.5 | 40 - 160 | 4.54 | 30 | |
| 1,2-Dichlorobenzene | ug/Kg | 10000 | 5000 | 5010 | 50 | 50.1 | 40 - 160 | .2 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 575350

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|
| 1,3-Dichlorobenzene | ug/Kg | 10000 | 5200 | 5280 | 52 | 52.8 | 40 - 160 | 1.53 | |
| 1,4-Dichlorobenzene | ug/Kg | 10000 | 5140 | 5050 | 51.4 | 50.5 | 40 - 160 | 1.77 | 30 |
| 2,4,5-Trichlorophenol | ug/Kg | 10000 | 5490 | 5650 | 54.9 | 56.5 | 40 - 160 | 2.87 | |
| 2,4,6-Trichlorophenol | ug/Kg | 10000 | 5020 | 4720 | 50.2 | 47.2 | 40 - 160 | 6.16 | |
| 2,4-Dichlorophenol | ug/Kg | 10000 | 5660 | 5440 | 56.6 | 54.4 | 40 - 160 | 3.96 | |
| 2,4-Dimethylphenol | ug/Kg | 10000 | 5470 | 5250 | 54.7 | 52.5 | 40 - 160 | 4.1 | |
| 2,4-Dinitrophenol | ug/Kg | 10000 | 0 | 0 | 0 | 0 | 40 - 160 | 0 | |
| 2,4-Dinitrotoluene | ug/Kg | 10000 | 6160 | 6770 | 61.6 | 67.7 | 40 - 160 | 9.44 | 30 |
| 2,6-Dinitrotoluene | ug/Kg | 10000 | 6020 | 6020 | 60.2 | 60.2 | 40 - 160 | 0 | |
| 2-Chlorophenol | ug/Kg | 10000 | 5280 | 5190 | 52.8 | 51.9 | 40 - 160 | 1.72 | 30 |
| 2-Methylnaphthalene | ug/Kg | 10000 | 5350 | 5320 | 53.5 | 53.2 | 40 - 160 | .562 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 10000 | 5170 | 5190 | 51.7 | 51.9 | 40 - 160 | .386 | |
| 2-Nitrophenol | ug/Kg | 10000 | 5750 | 5270 | 57.5 | 52.7 | 40 - 160 | 8.71 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 10000 | 0 | 0 | 0 | 0 | 40 - 160 | 0 | |
| 4-Bromophenyl phenyl ether | ug/Kg | 10000 | 5930 | 5320 | 59.3 | 53.2 | 40 - 160 | 10.8 | |
| 4-Chloro-3-methylphenol | ug/Kg | 10000 | 5550 | 5500 | 55.5 | 55 | 40 - 160 | .905 | 30 |
| 4-Chlorophenyl phenyl ether | ug/Kg | 10000 | 5270 | 5210 | 52.7 | 52.1 | 40 - 160 | 1.15 | |
| 4-Nitrophenol | ug/Kg | 10000 | 3970 | 3790 | 39.7 | 37.9 | 40 - 160 | 4.64 | 30 |
| Acenaphthene | ug/Kg | 10000 | 5300 | 5170 | 53 | 51.7 | 40 - 160 | 2.48 | 30 |
| Acenaphthylene | ug/Kg | 10000 | 5300 | 5190 | 53 | 51.9 | 40 - 160 | 2.1 | 30 |
| Anthracene | ug/Kg | 10000 | 5540 | 5310 | 55.4 | 53.1 | 40 - 160 | 4.24 | 30 |
| Benzo(a)anthracene | ug/Kg | 10000 | 6620 | 6590 | 66.2 | 65.9 | 40 - 160 | .454 | 30 |
| Benzo(a)pyrene | ug/Kg | 10000 | 6220 | 6060 | 62.2 | 60.6 | 40 - 160 | 2.61 | |
| Benzo(b)fluoranthene | ug/Kg | 10000 | 6650 | 6730 | 66.5 | 67.3 | 40 - 160 | 1.2 | |
| Benzo(g,h,i)perylene | ug/Kg | 10000 | 7360 | 6730 | 73.6 | 67.3 | 40 - 160 | 8.94 | |
| Benzo(k)fluoranthene | ug/Kg | 10000 | 5080 | 5080 | 50.8 | 50.8 | 40 - 160 | 0 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 10000 | 5460 | 5170 | 54.6 | 51.7 | 40 - 160 | 5.46 | |
| Bis(2-Chloroethyl)ether | ug/Kg | 10000 | 5430 | 5280 | 54.3 | 52.8 | 40 - 160 | 2.8 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 10000 | 5960 | 5860 | 59.6 | 58.6 | 40 - 160 | 1.69 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 10000 | 6230 | 7020 | 62.3 | 70.2 | 40 - 160 | 11.9 | |
| Butyl benzyl phthalate | ug/Kg | 10000 | 5930 | 6490 | 59.3 | 64.9 | 40 - 160 | 9.02 | |
| Chrysene | ug/Kg | 10000 | 5250 | 5130 | 52.5 | 51.3 | 40 - 160 | 2.31 | 30 |
| Cresols | ug/Kg | | 500 | | 11200 | | | .889 | |
| Di-n-butyl phthalate | ug/Kg | 10000 | 6010 | 6300 | 60.1 | 63 | 40 - 160 | 4.71 | |
| Di-n-octyl phthalate | ug/Kg | 10000 | 5360 | 5900 | 53.6 | 59 | 40 - 160 | 9.59 | |
| Dibenz(a,h)anthracene | ug/Kg | 10000 | 7320 | 7070 | 73.2 | 70.7 | 40 - 160 | 3.47 | |
| Diethyl phthalate | ug/Kg | 10000 | 5900 | 6170 | 59 | 61.7 | 40 - 160 | 4.47 | |
| Dimethyl phthalate | ug/Kg | 10000 | 5390 | 5360 | 53.9 | 53.6 | 40 - 160 | .558 | |

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 575350

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Fluoranthene | ug/Kg | 10000 | 6290 | 6530 | 62.9 | 65.3 | 40 - 160 | 3.74 | |
| Fluorene | ug/Kg | 10000 | 5350 | 5390 | 53.5 | 53.9 | 40 - 160 | .745 | |
| Hexachlorobutadiene | ug/Kg | 10000 | 5110 | 4810 | 51.1 | 48.1 | 40 - 160 | 6.05 | |
| Hexachlorocyclopentadiene | ug/Kg | 10000 | 5790 | 5330 | 57.9 | 53.3 | 40 - 160 | 8.27 | |
| Hexachloroethane | ug/Kg | 10000 | 5490 | 5300 | 54.9 | 53 | 40 - 160 | 3.52 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 10000 | 8120 | 7660 | 81.2 | 76.6 | 40 - 160 | 5.83 | |
| Isophorone | ug/Kg | 10000 | 5520 | 5330 | 55.2 | 53.3 | 40 - 160 | 3.5 | |
| Naphthalene | ug/Kg | 10000 | 4940 | 4760 | 49.4 | 47.6 | 40 - 160 | 3.71 | |
| Nitrobenzene | ug/Kg | 10000 | 5410 | 5010 | 54.1 | 50.1 | 40 - 160 | 7.68 | |
| Phenanthrene | ug/Kg | 10000 | 5600 | 5300 | 56 | 53 | 40 - 160 | 5.5 | 30 |
| Phenol | ug/Kg | 10000 | 5100 | 5090 | 51 | 50.9 | 40 - 160 | .196 | 30 |
| Pyrene | ug/Kg | 10000 | 5080 | 5540 | 50.8 | 55.4 | 40 - 160 | 8.66 | 30 |
| Pyridine | ug/Kg | 10000 | 8190 | 7900 | 81.9 | 79 | 40 - 160 | 3.6 | |
| m,p-Cresol | ug/Kg | 500 | 500 | 6050 | | | | 1.48 | |
| n-Nitrosodi-n-propylamine | ug/Kg | 10000 | 6430 | 6310 | 64.3 | 63.1 | 40 - 160 | 1.88 | 30 |
| n-Nitrosodimethylamine | ug/Kg | 10000 | 5500 | 5150 | 55 | 51.5 | 40 - 160 | 6.57 | |
| 2,4,6-Tribromophenol (S) | % | | | | 49.9 | 46 | 25.9 - 135 | | |
| 2-Fluorobiphenyl (S) | % | | | | 50.5 | 48.3 | 36.5 - 120 | | |
| 2-Fluorophenol (S) | % | | | | 44.3 | 44.4 | 17.5 - 118 | | |
| Nitrobenzene-d5 (S) | % | | | | 52.3 | 49.6 | 29.3 - 123 | | |
| Phenol-d5 (S) | % | | | | 44.5 | 45.4 | 17.2 - 122 | | |
| Terphenyl-d14 (S) | % | | | | 53.2 | 57.3 | 29.4 - 130 | | |

MATRIX SPIKE: 575353 DUPLICATE: 575354 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|--------------------------|--------------|-----------------|-------------|------------|------------|-----------|-------------|-----------------|-------------|--------------------|
| 1,2,4-Trichlorobenzene | ug/Kg | 0 | 3330 | 1500 | 1590 | 44.9 | 47.7 | 40 - 160 | 5.83 | 71.6 |
| 1,2-Dichlorobenzene | ug/Kg | 0 | 3330 | 1500 | 1520 | 45.1 | 45.8 | 40 - 160 | 1.32 | |
| 1,3-Dichlorobenzene | ug/Kg | 0 | 3330 | 1540 | 1550 | 46.3 | 46.5 | 40 - 160 | .647 | |
| 1,4-Dichlorobenzene | ug/Kg | 0 | 3330 | 1530 | 1520 | 45.9 | 45.7 | 40 - 160 | .656 | 75.5 |
| 2,4,5-Trichlorophenol | ug/Kg | 0 | 3330 | 1900 | 1910 | 57.2 | 57.5 | 40 - 160 | .525 | |
| 2,4,6-Trichlorophenol | ug/Kg | 0 | 3330 | 1640 | 1610 | 49.3 | 48.5 | 40 - 160 | 1.85 | |
| 2,4-Dichlorophenol | ug/Kg | 0 | 3330 | 1690 | 1740 | 50.9 | 52.3 | 40 - 160 | 2.92 | |
| 2,4-Dimethylphenol | ug/Kg | 0 | 3330 | 1750 | 1810 | 52.4 | 54.4 | 40 - 160 | 3.37 | |
| 2,4-Dinitrophenol | ug/Kg | 0 | 3330 | 400 | 936 | 12 | 28.1 | 40 - 160 | 80.2 | |
| 2,4-Dinitrotoluene | ug/Kg | 0 | 3330 | 2120 | 2180 | 63.7 | 65.6 | 40 - 160 | 2.79 | 17.9 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE: 575353 DUPLICATE: 575354 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------------------|--------------|-----------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|--------------------|
| 2,6-Dinitrotoluene | ug/Kg | 0 | 3330 | 1960 | 1970 | 58.8 | 59.2 | 40 - 160 | .509 | |
| 2-Chlorophenol | ug/Kg | 0 | 3330 | 1540 | 1580 | 46.3 | 47.5 | 40 - 160 | 2.56 | 65.5 |
| 2-Methylnaphthalene | ug/Kg | 0 | 3330 | 1600 | 1680 | 48.1 | 50.5 | 40 - 160 | 4.88 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 0 | 3330 | 1580 | 1630 | 47.5 | 48.9 | 40 - 160 | 3.12 | |
| 2-Nitrophenol | ug/Kg | 0 | 3330 | 1640 | 1720 | 49.3 | 51.6 | 40 - 160 | 4.76 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 0 | 3330 | 1260 | 1690 | 37.9 | 50.7 | 40 - 160 | 29.2 | |
| 4-Bromophenyl phenyl ether | ug/Kg | 0 | 3330 | 1810 | 1790 | 54.4 | 53.8 | 40 - 160 | 1.11 | |
| 4-Chloro-3-methylphenol | ug/Kg | 0 | 3330 | 1750 | 1840 | 52.6 | 55.4 | 40 - 160 | 5.01 | 26.1 |
| 4-Chlorophenyl phenyl ether | ug/Kg | 0 | 3330 | 1680 | 1700 | 50.4 | 51.1 | 40 - 160 | 1.18 | |
| 4-Nitrophenol | ug/Kg | 0 | 3330 | 1790 | 1900 | 53.7 | 57.1 | 40 - 160 | 5.96 | 38.8 |
| Acenaphthene | ug/Kg | 0 | 3330 | 1670 | 1690 | 50.2 | 50.9 | 40 - 160 | 1.19 | 52.2 |
| Acenaphthylene | ug/Kg | 0 | 3330 | 1660 | 1700 | 49.8 | 51.2 | 40 - 160 | 2.38 | 30 |
| Anthracene | ug/Kg | 0 | 3330 | 1760 | 1750 | 52.9 | 52.6 | 40 - 160 | .57 | 30 |
| Benzo(a)anthracene | ug/Kg | 0 | 3330 | 2090 | 2140 | 62.8 | 64.4 | 40 - 160 | 2.36 | 30 |
| Benzo(a)pyrene | ug/Kg | 0 | 3330 | 2040 | 1980 | 61.4 | 59.4 | 40 - 160 | 2.99 | |
| Benzo(b)fluoranthene | ug/Kg | 0 | 3330 | 2210 | 2110 | 66.3 | 63.6 | 40 - 160 | 4.63 | |
| Benzo(g,h,i)perylene | ug/Kg | 0 | 3330 | 2330 | 2080 | 70 | 62.6 | 40 - 160 | 11.3 | |
| Benzo(k)fluoranthene | ug/Kg | 0 | 3330 | 1620 | 1700 | 48.8 | 51.1 | 40 - 160 | 4.82 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 0 | 3330 | 1570 | 1680 | 47.3 | 50.6 | 40 - 160 | 6.77 | |
| Bis(2-Chloroethyl)ether | ug/Kg | 0 | 3330 | 1560 | 1640 | 47 | 49.4 | 40 - 160 | 5 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 0 | 3330 | 1780 | 1840 | 53.4 | 55.4 | 40 - 160 | 3.31 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 0 | 3330 | 1980 | 2160 | 59.5 | 65 | 40 - 160 | 8.7 | |
| Butyl benzyl phthalate | ug/Kg | 0 | 3330 | 1920 | 2020 | 57.6 | 60.7 | 40 - 160 | 5.08 | |
| Chrysene | ug/Kg | 0 | 3330 | 1650 | 1720 | 49.7 | 51.8 | 40 - 160 | 4.15 | 30 |
| Di-n-butyl phthalate | ug/Kg | 0 | 3330 | 1850 | 1930 | 55.5 | 58 | 40 - 160 | 4.23 | |
| Di-n-octyl phthalate | ug/Kg | 0 | 3330 | 1760 | 1810 | 52.7 | 54.4 | 40 - 160 | 2.8 | |
| Dibenz(a,h)anthracene | ug/Kg | 0 | 3330 | 2290 | 2140 | 68.8 | 64.2 | 40 - 160 | 6.77 | |
| Diethyl phthalate | ug/Kg | 0 | 3330 | 1910 | 2010 | 57.5 | 60.5 | 40 - 160 | 5.1 | |
| Dimethyl phthalate | ug/Kg | 0 | 3330 | 1710 | 1520 | 51.4 | 45.6 | 40 - 160 | 11.8 | |
| Fluoranthene | ug/Kg | 0 | 3330 | 1870 | 1970 | 56 | 59.2 | 40 - 160 | 5.21 | |
| Fluorene | ug/Kg | 0 | 3330 | 1710 | 1740 | 51.4 | 52.4 | 40 - 160 | 1.74 | |
| Hexachlorobutadiene | ug/Kg | 0 | 3330 | 1500 | 1520 | 45.1 | 45.7 | 40 - 160 | 1.32 | |
| Hexachlorocyclopentadiene | ug/Kg | 0 | 3330 | 1200 | 1000 | 36.1 | 30.2 | 40 - 160 | 18.2 | |
| Hexachloroethane | ug/Kg | 0 | 3330 | 1580 | 1580 | 47.6 | 47.6 | 40 - 160 | 0 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 0 | 3330 | 2590 | 2420 | 77.7 | 72.6 | 40 - 160 | 6.79 | |
| Isophorone | ug/Kg | 0 | 3330 | 1620 | 1740 | 48.6 | 52.2 | 40 - 160 | 7.14 | |
| Naphthalene | ug/Kg | 0 | 3330 | 1460 | 1530 | 44 | 46 | 40 - 160 | 4.68 | |

QUALITY CONTROL DATA

Workorder: Q1547925

| MATRIX SPIKE: 575353 DUPLICATE: 575354 ORIGINAL: Q1547925003 | | | | | | | | | | |
|--|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
| Nitrobenzene | ug/Kg | 0 | 3330 | 1560 | 1620 | 46.9 | 48.7 | 40 - 160 | 3.77 | |
| Phenanthrene | ug/Kg | 0 | 3330 | 1740 | 1740 | 52.4 | 52.4 | 40 - 160 | 0 | 30 |
| Phenol | ug/Kg | 0 | 3330 | 1570 | 1570 | 47.1 | 47.2 | 40 - 160 | 0 | 58.9 |
| Pyrene | ug/Kg | 0 | 3330 | 1730 | 1720 | 52 | 51.8 | 40 - 160 | .58 | 18.6 |
| Pyridine | ug/Kg | 0 | 3330 | 2440 | 2380 | 73.4 | 71.4 | 40 - 160 | 2.49 | |
| n-Nitrosodi-n-propylamine | ug/Kg | 0 | 3330 | 1930 | 1980 | 58 | 59.4 | 40 - 160 | 2.56 | 53.2 |
| n-Nitrosodimethylamine | ug/Kg | 0 | 3330 | 1520 | 1530 | 45.8 | 45.9 | 40 - 160 | .656 | |
| 2,4,6-Tribromophenol (S) | % | | | | | 55.9 | 55.7 | 25.9 - 135 | | |
| 2-Fluorobiphenyl (S) | % | | | | | 44.8 | 43.7 | 36.5 - 120 | | |
| 2-Fluorophenol (S) | % | | | | | 40.2 | 40.1 | 17.5 - 118 | | |
| Nitrobenzene-d5 (S) | % | | | | | 43.8 | 46.1 | 29.3 - 123 | | |
| Phenol-d5 (S) | % | | | | | 41.5 | 41.9 | 17.2 - 122 | | |
| Terphenyl-d14 (S) | % | | | | | 52 | 50.3 | 29.4 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE: 575366 DUPLICATE: 575367 ORIGINAL: Q1547925001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Aluminum Total | ug/L | 53.2 | 50 | 107 | 118 | 108 | 130 | 70 - 130 | 9.78 | 20 |
| Arsenic Total | ug/L | 2.26 | 50 | 49.4 | 49.1 | 94.2 | 93.6 | 70 - 130 | .609 | 20 |
| Cadmium Total | ug/L | 0 | 50 | 50 | 49.8 | 99.9 | 99.6 | 70 - 130 | .401 | 20 |
| Chromium Total | ug/L | 1.33 | 50 | 52.5 | 53.2 | 105 | 106 | 70 - 130 | 1.32 | 20 |
| Copper Total | ug/L | 1.19 | 50 | 51.7 | 51.1 | 103 | 102 | 70 - 130 | 1.17 | 20 |
| Lead Total | ug/L | .14 | 50 | 53.2 | 52.4 | 106 | 105 | 70 - 130 | 1.52 | 20 |
| Manganese Total | ug/L | 11.2 | 50 | 60.9 | 60.5 | 99.5 | 98.7 | 70 - 130 | .659 | 20 |
| Nickel Total | ug/L | 3.48 | 50 | 54.3 | 53.8 | 102 | 101 | 70 - 130 | .925 | 20 |
| Selenium Total | ug/L | 0 | 250 | 250 | 248 | 100 | 99.3 | 70 - 130 | .803 | 20 |
| Silver Total | ug/L | 0 | 50 | 50.6 | 49.6 | 101 | 99.2 | 70 - 130 | 2 | 20 |
| Zinc Total | ug/L | 40.1 | 50 | 87 | 86.9 | 93.8 | 93.5 | 70 - 130 | .115 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9266 Analysis Method: SM2540D, TSS
QC Batch Method: SM2540D, TSS
Associated Lab Samples: Q1547925001

METHOD BLANK: 577042

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Total Suspended Solids | mg/L | <1.00 | 1.00 | |

LABORATORY CONTROL SAMPLE: 577043

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Suspended Solids | mg/L | 100 | 92 | 98 | 92 | 98 | 80 - 120 | 6.32 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9267 Analysis Method: E160.4 Ignition at 550C
QC Batch Method: E160.4 Ignition at 550C
Associated Lab Samples: Q1547925001

METHOD BLANK: 577046

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Volatile Suspended Solids | mg/L | <1.00 | 1.00 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: MEP/5043 **Analysis Method:** SW6010B ICP-AES
QC Batch Method: SW3050B, Metals Prep
Associated Lab Samples: Q1547925003

LABORATORY CONTROL SAMPLE: 577375

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Iron Total | mg/kg | 49.5 | 52.1 | 53.2 | 105 | 106 | 80 - 120 | 2.09 | 20 |

METHOD BLANK: 577377

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------|-------|--------------|-----------------|------------|
| Iron Total | mg/kg | <4.41 | 4.41 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.



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QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: MEP/5044 Analysis Method: SW6020 ICP-MS

QC Batch Method: SW3050B, Metals Prep

Associated Lab Samples: Q1547925003

LABORATORY CONTROL SAMPLE: 577384

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Silver Total | mg/kg | 2.5 | 2.71 | 2.66 | 108 | 108 | 85 - 115 | 1.86 | 20 |

METHOD BLANK: 577386

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------|-------|--------------|-----------------|------------|
| Silver Total | mg/kg | <0.0490 | 0.0490 | |

MATRIX SPIKE: 577387 DUPLICATE: 577388 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|--------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Silver Total | mg/kg | .02 | 2.5 | 2.58 | 2.4 | 103 | 101 | 70 - 130 | 7.23 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

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QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE: 577393 DUPLICATE: 577394 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|-----------------------|--------------|-----------------|-------------|-------------|-------------|------------|-------------|-----------------|-------------|-----------|------------|
| Arsenic Total | mg/kg | .81 | 2.53 | 3.52 | 2.96 | 107 | 86 | 70 - 130 | 17.3 | 20 | |
| Cadmium Total | mg/kg | .04 | 2.53 | 2.45 | 2.31 | 97.2 | 92.4 | 70 - 130 | 5.88 | 20 | |
| Chromium Total | mg/kg | 2.02 | 2.53 | 4.89 | 3.93 | 114 | 76.2 | 70 - 130 | 21.8 | 20 | |
| Copper Total | mg/kg | 1.73 | 2.53 | 4.36 | 3.6 | 104 | 75.1 | 70 - 130 | 19.1 | 20 | |
| Lead Total | mg/kg | 3.27 | 2.53 | 5.6 | 5.2 | 92.1 | 77.1 | 70 - 130 | 7.41 | 20 | |
| Nickel Total | mg/kg | 1.5 | 2.53 | 3.86 | 3.43 | 93.5 | 76.9 | 70 - 130 | 11.8 | 20 | |
| Selenium Total | mg/kg | .92 | 12.6 | 12.1 | 11.3 | 95.6 | 90.6 | 70 - 130 | 6.84 | 20 | |
| Zinc Total | mg/kg | 4.86 | 2.53 | 7.98 | 6.13 | 316 | 245 | 70 - 130 | 26.2 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9313 Analysis Method: SM4500-NO3-H, Nitrate/Nitrite
QC Batch Method: SM4500-NO3-H, Nitrate/Nitrite
Associated Lab Samples: Q1547925001

METHOD BLANK: 579130

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579135 ORIGINAL: Q1547931003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrate/Nitrite | mg/L | 1.04 | 1 | 1.93 | 88.8 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579136

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrate/Nitrite | mg/L | 1 | .93 | 1.06 | 93.4 | 106 | 90 - 110 | 12.6 | 20 |

METHOD BLANK: 579138

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WETP/2493 Analysis Method: E410.4 COD by SemiAuto Col

QC Batch Method: E410.4 COD by SemiAuto Col

Associated Lab Samples: Q1547925001

METHOD BLANK: 579158

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| COD | mg/L | <7.00 | 7.00 | |

MATRIX SPIKE SAMPLE: 579162 ORIGINAL: Q1547925001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| COD | mg/L | 22.6 | 50 | 70.2 | 95.2 | 90 - 110 | |

LABORATORY CONTROL SAMPLE: 579163

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| COD | mg/L | 50 | 52.4 | 51.8 | 105 | 104 | 90 - 110 | 1.15 | 20 |

METHOD BLANK: 579165

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| COD | mg/L | <7.00 | 7.00 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WETP/2494 Analysis Method: E351.2 TKN by SemiAuto Col
QC Batch Method: E365.4 / E351.2 Water Prep
Associated Lab Samples: Q1547925001

METHOD BLANK: 579249

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579256 ORIGINAL: Q1547499001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .08 | 1 | 1.06 | 98 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579257

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.03 | 1.01 | 103 | 101 | 90 - 110 | 1.96 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | .99 | 1.02 | 98.6 | 102 | 90 - 110 | 3.39 | 20 |

METHOD BLANK: 579259

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE SAMPLE: 579260 ORIGINAL: Q1547499002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .09 | 1 | 1.09 | 100 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579261

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.02 | 1.04 | 102 | 104 | 90 - 110 | 1.94 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | .99 | 1.01 | 98.9 | 101 | 90 - 110 | 2.1 | 20 |

METHOD BLANK: 579263

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579264 ORIGINAL: Q1547499003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .09 | 1 | 1.09 | 100 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579265

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | .94 | 1.01 | 93.5 | 101 | 90 - 110 | 7.71 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 579265

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|-----|-------------|
| Phosphorus, Total (As P) | mg/L | 1 | .99 | 1.01 | 98.9 | 101 | 90 - 110 | 2.1 | 20 |

METHOD BLANK: 579267

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579268 ORIGINAL: Q1547499004

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .05 | 1 | 1.03 | 97.5 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579269

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.05 | 1.07 | 105 | 107 | 90 - 110 | 1.89 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1.02 | 100 | 102 | 90 - 110 | 1.98 | 20 |

METHOD BLANK: 579271

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 579271

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------|-------|--------------|-----------------|------------|
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579272 ORIGINAL: Q1547499005

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .06 | 1 | 1.04 | 98.6 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579273

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | .99 | .99 | 99 | 99.2 | 90 - 110 | .202 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1.02 | 99.7 | 102 | 90 - 110 | 2.28 | 20 |

METHOD BLANK: 579275

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579276 ORIGINAL: Q1547499006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .05 | 1 | 1.04 | 98.8 | 80 - 120 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 579277

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | .98 | .99 | 98 | 99.4 | 90 - 110 | 1.42 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1.03 | 99.6 | 103 | 90 - 110 | 3.36 | 20 |

METHOD BLANK: 579279

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579280 ORIGINAL: Q1547525001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .04 | 1 | 1.01 | 97.3 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579281

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1 | 1.03 | 99.7 | 103 | 90 - 110 | 3.26 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1.02 | 100 | 102 | 90 - 110 | 1.98 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 579283

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 579284 ORIGINAL: Q1547525002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .24 | 1 | 1.22 | 98.1 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 579285

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | .97 | 1.02 | 96.9 | 102 | 90 - 110 | 5.13 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | .98 | 1.01 | 98.4 | 101 | 90 - 110 | 2.61 | 20 |

METHOD BLANK: 579287

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 582564

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9363 Analysis Method: SM2320B, Alkalinity
QC Batch Method: SM2320B, Alkalinity
Associated Lab Samples: Q1547925001

METHOD BLANK: 581016

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

SAMPLE DUPLICATE: 581019 ORIGINAL: Q1547861001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------|-------|-----------------|------------|------|---------|------------|
| Total Alkalinity | mg/L | 158 | 160 | 1.26 | 10 | |

MATRIX SPIKE SAMPLE: 581020 ORIGINAL: Q1547861001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Alkalinity | mg/L | 158 | 91 | 256 | 107 | 70 - 130 | |

METHOD BLANK: 581022

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: OVOL/2418 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 8260B
Associated Lab Samples: Q1547925003

METHOD BLANK: 581320

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2,2-Tetrachloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dibromoethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloropropane | ug/Kg | <5.00 | 5.00 | |
| 2-Hexanone | ug/Kg | <5.00 | 5.00 | |
| 4-Methyl-2-pentanone | ug/Kg | <5.00 | 5.00 | |
| Acetone | ug/Kg | <5.00 | 5.00 | |
| Acrylonitrile | ug/Kg | <5.00 | 5.00 | |
| Benzene | ug/Kg | <5.00 | 5.00 | |
| Bromodichloromethane | ug/Kg | <5.00 | 5.00 | |
| Bromoform | ug/Kg | <5.00 | 5.00 | |
| Carbon disulfide | ug/Kg | <5.00 | 5.00 | |
| Carbon tetrachloride | ug/Kg | <5.00 | 5.00 | |
| Chlorobenzene | ug/Kg | <5.00 | 5.00 | |
| Chloroethane | ug/Kg | <5.00 | 5.00 | |
| Chloroform | ug/Kg | <5.00 | 5.00 | |
| Chloromethane | ug/Kg | <5.00 | 5.00 | |
| Dibromochloromethane | ug/Kg | <5.00 | 5.00 | |
| Dichlorodifluoromethane | ug/Kg | <5.00 | 5.00 | |
| Ethyl Benzene | ug/Kg | <5.00 | 5.00 | |
| Methylene chloride | ug/Kg | <5.00 | 5.00 | |
| Styrene | ug/Kg | <5.00 | 5.00 | |
| Tetrachloroethene | ug/Kg | <5.00 | 5.00 | |
| Toluene | ug/Kg | <5.00 | 5.00 | |
| Trichloroethene | ug/Kg | <5.00 | 5.00 | |
| Vinyl chloride | ug/Kg | <5.00 | 5.00 | |
| Xylene (total) | ug/Kg | <5.00 | 5.00 | |
| cis-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |
| m,p-Xylene | ug/Kg | <10.0 | 10.0 | |
| o-Xylene | ug/Kg | <5.00 | 5.00 | |
| trans-1,2-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| trans-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1547925

METHOD BLANK: 581320

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,2-Dichloroethane-d4 (S) | % | 109 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 95.5 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 105 | 70 - 130 | |
| Toluene d8 (S) | % | 97.2 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 581321

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1,1,1-Trichloroethane | ug/Kg | 50 | 47.7 | 47.2 | 95.4 | 94.3 | 40 - 160 | 1.05 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 50 | 50.4 | 46.7 | 101 | 93.3 | 40 - 160 | 7.62 | 30 |
| 1,1,2-Trichloroethane | ug/Kg | 50 | 49.8 | 47.7 | 99.7 | 95.3 | 40 - 160 | 4.31 | 30 |
| 1,1-Dichloroethane | ug/Kg | 50 | 48.6 | 48.1 | 97.1 | 96.2 | 40 - 160 | 1.03 | 30 |
| 1,1-Dichloroethane | ug/Kg | 50 | 47.2 | 46.6 | 94.3 | 93.1 | 40 - 160 | 1.28 | 30 |
| 1,2-Dibromoethane | ug/Kg | 50 | 51.1 | 48.1 | 102 | 96.3 | 40 - 160 | 6.05 | 30 |
| 1,2-Dichloroethane | ug/Kg | 50 | 50.9 | 48.8 | 102 | 97.7 | 40 - 160 | 4.21 | 30 |
| 1,2-Dichloropropane | ug/Kg | 50 | 49.3 | 48.7 | 98.6 | 97.5 | 40 - 160 | 1.22 | 30 |
| 2-Hexanone | ug/Kg | 50 | 50.1 | 41.9 | 100 | 83.8 | 40 - 160 | 17.8 | 30 |
| 4-Methyl-2-pentanone | ug/Kg | 50 | 50.8 | 42.7 | 102 | 85.5 | 40 - 160 | 17.3 | 30 |
| Acetone | ug/Kg | 50 | 52.6 | 42.6 | 105 | 85.1 | 40 - 160 | 21 | 30 |
| Acrylonitrile | ug/Kg | 50 | 53.9 | 47.2 | 108 | 94.4 | 40 - 160 | 13.3 | 30 |
| Benzene | ug/Kg | 50 | 48.6 | 47.8 | 97.1 | 95.5 | 40 - 160 | 1.66 | 30 |
| Bromodichloromethane | ug/Kg | 50 | 49.7 | 48.3 | 99.5 | 96.6 | 40 - 160 | 2.86 | 30 |
| Bromoform | ug/Kg | 50 | 50.7 | 47.6 | 101 | 95.3 | 40 - 160 | 6.31 | 30 |
| Carbon disulfide | ug/Kg | 50 | 47.2 | 46.4 | 94.3 | 92.7 | 40 - 160 | 1.71 | 30 |
| Carbon tetrachloride | ug/Kg | 50 | 46.9 | 46.7 | 93.7 | 93.3 | 40 - 160 | .427 | 30 |
| Chlorobenzene | ug/Kg | 50 | 48 | 48.4 | 96 | 96.8 | 40 - 160 | .83 | 30 |
| Chloroethane | ug/Kg | 50 | 46.6 | 46.5 | 93.2 | 93 | 40 - 160 | .215 | 30 |
| Chloroform | ug/Kg | 50 | 49.2 | 48.4 | 98.4 | 96.7 | 40 - 160 | 1.64 | 30 |
| Chloromethane | ug/Kg | 50 | 44.4 | 44.6 | 88.8 | 89.1 | 40 - 160 | .449 | 30 |
| Dibromochloromethane | ug/Kg | 50 | 50.1 | 48.3 | 100 | 96.6 | 40 - 160 | 3.66 | 30 |
| Dichlorodifluoromethane | ug/Kg | 50 | 45.2 | 44.5 | 90.4 | 89.1 | 40 - 160 | 1.56 | 30 |
| Ethyl Benzene | ug/Kg | 50 | 47 | 47.3 | 94 | 94.6 | 40 - 160 | .636 | 30 |
| Methylene chloride | ug/Kg | 50 | 48.9 | 48.1 | 97.8 | 96.1 | 40 - 160 | 1.65 | 30 |
| Styrene | ug/Kg | 50 | 48.3 | 48.2 | 96.7 | 96.4 | 40 - 160 | .207 | 30 |
| Tetrachloroethene | ug/Kg | 50 | 46.4 | 46 | 92.8 | 92 | 40 - 160 | .866 | 30 |
| Toluene | ug/Kg | 50 | 47.2 | 47.6 | 94.4 | 95.2 | 40 - 160 | .844 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

LABORATORY CONTROL SAMPLE: 581321

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Trichloroethene | ug/Kg | 50 | 47.6 | 47 | 95.1 | 94 | 40 - 160 | 1.27 | 30 |
| Vinyl chloride | ug/Kg | 50 | 46.2 | 45.7 | 92.5 | 91.5 | 40 - 160 | 1.09 | 30 |
| Xylene (total) | ug/Kg | | 5 | | 142 | | | .702 | |
| cis-1,3-Dichloropropene | ug/Kg | 50 | 49.8 | 48.9 | 99.7 | 97.7 | 40 - 160 | 1.82 | 30 |
| m,p-Xylene | ug/Kg | 100 | 94.6 | 94.7 | 94.6 | 94.7 | 40 - 160 | .106 | 30 |
| o-Xylene | ug/Kg | 50 | 47.6 | 47.8 | 95.1 | 95.5 | 40 - 160 | .419 | 30 |
| trans-1,2-Dichloroethene | ug/Kg | 50 | 47.3 | 46.7 | 94.5 | 93.5 | 40 - 160 | 1.28 | 30 |
| trans-1,3-Dichloropropene | ug/Kg | 50 | 49.9 | 48.2 | 99.8 | 96.4 | 40 - 160 | 3.47 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 103 | | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 98.2 | | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 101 | 101 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 100 | 101 | 70 - 130 | | |

MATRIX SPIKE: 581323 DUPLICATE: 581324 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| 1,1,1-Trichloroethane | ug/Kg | 0 | 49.6 | 41.7 | 44.1 | 84 | 88.3 | 40 - 160 | 5.59 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 0 | 49.6 | 33.6 | 34.9 | 67.8 | 70 | 40 - 160 | 3.8 | 30 |
| 1,1,2-Trichloroethane | ug/Kg | 0 | 49.6 | 37.4 | 38.9 | 75.5 | 78 | 40 - 160 | 3.93 | 30 |
| 1,1-Dichloroethane | ug/Kg | 0 | 49.6 | 42.8 | 45.3 | 86.3 | 90.7 | 40 - 160 | 5.68 | 30 |
| 1,1-Dichloroethene | ug/Kg | 0 | 49.6 | 41.9 | 44.3 | 84.4 | 88.8 | 40 - 160 | 5.57 | 30 |
| 1,2-Dibromoethane | ug/Kg | 0 | 49.6 | 36.4 | 37.2 | 73.4 | 74.6 | 40 - 160 | 2.17 | 30 |
| 1,2-Dichloroethane | ug/Kg | 0 | 49.6 | 39.1 | 40.2 | 78.8 | 80.6 | 40 - 160 | 2.77 | 30 |
| 1,2-Dichloropropane | ug/Kg | 0 | 49.6 | 42.1 | 44.2 | 84.9 | 88.6 | 40 - 160 | 4.87 | 30 |
| 2-Hexanone | ug/Kg | 0 | 49.6 | 34 | 36.7 | 68.6 | 73.6 | 40 - 160 | 7.64 | 30 |
| 4-Methyl-2-pentanone | ug/Kg | 0 | 49.6 | 37.2 | 39.3 | 75 | 78.8 | 40 - 160 | 5.49 | 30 |
| Acetone | ug/Kg | 0 | 49.6 | 32.3 | 31.5 | 65.2 | 63.2 | 40 - 160 | 2.51 | 30 |
| Acrylonitrile | ug/Kg | 0 | 49.6 | 32.1 | 32.3 | 64.6 | 64.6 | 40 - 160 | .621 | 30 |
| Benzene | ug/Kg | 0 | 49.6 | 42.3 | 44.5 | 85.3 | 89.2 | 40 - 160 | 5.07 | 30 |
| Bromodichloromethane | ug/Kg | 0 | 49.6 | 40.4 | 42 | 81.4 | 84.2 | 40 - 160 | 3.88 | 30 |
| Bromoform | ug/Kg | 0 | 49.6 | 33.7 | 34.3 | 68 | 68.8 | 40 - 160 | 1.76 | 30 |
| Carbon disulfide | ug/Kg | 0 | 49.6 | 36.3 | 39.8 | 73.1 | 79.8 | 40 - 160 | 9.2 | 30 |
| Carbon tetrachloride | ug/Kg | 0 | 49.6 | 40 | 41.2 | 80.6 | 82.6 | 40 - 160 | 2.96 | 30 |
| Chlorobenzene | ug/Kg | 0 | 49.6 | 39.4 | 41.6 | 79.4 | 83.4 | 40 - 160 | 5.43 | 30 |
| Chloroethane | ug/Kg | 0 | 49.6 | 41.6 | 43.9 | 83.8 | 87.9 | 40 - 160 | 5.38 | 30 |
| Chloroform | ug/Kg | 0 | 49.6 | 42.6 | 45 | 85.9 | 90.2 | 40 - 160 | 5.48 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

MATRIX SPIKE: 581323 DUPLICATE: 581324 ORIGINAL: Q1547925003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Chloromethane | ug/Kg | 0 | 49.6 | 38.7 | 40.8 | 78.1 | 81.9 | 40 - 160 | 5.28 | 30 |
| Dibromochloromethane | ug/Kg | 0 | 49.6 | 37.6 | 39.3 | 75.7 | 78.8 | 40 - 160 | 4.42 | 30 |
| Dichlorodifluoromethane | ug/Kg | 0 | 49.6 | 39.3 | 41 | 79.3 | 82.1 | 40 - 160 | 4.23 | 30 |
| Ethyl Benzene | ug/Kg | 0 | 49.6 | 38 | 39.6 | 76.7 | 79.4 | 40 - 160 | 4.12 | 30 |
| Methylene chloride | ug/Kg | 0 | 49.6 | 41.3 | 43.1 | 83.3 | 86.3 | 40 - 160 | 4.27 | 30 |
| Styrene | ug/Kg | 0 | 49.6 | 37 | 38.9 | 74.6 | 78 | 40 - 160 | 5.01 | 30 |
| Tetrachloroethene | ug/Kg | 0 | 49.6 | 37.5 | 39.2 | 75.7 | 78.6 | 40 - 160 | 4.43 | 30 |
| Toluene | ug/Kg | 0 | 49.6 | 41.4 | 43.1 | 83.5 | 86.3 | 40 - 160 | 4.02 | 30 |
| Trichloroethene | ug/Kg | 0 | 49.6 | 41 | 43.5 | 82.6 | 87.1 | 40 - 160 | 5.92 | 30 |
| Vinyl chloride | ug/Kg | 0 | 49.6 | 40.4 | 42.4 | 81.5 | 85 | 40 - 160 | 4.83 | 30 |
| cis-1,3-Dichloropropene | ug/Kg | 0 | 49.6 | 39.3 | 41.1 | 79.2 | 82.4 | 40 - 160 | 4.48 | 30 |
| m,p-Xylene | ug/Kg | 0 | 99.2 | 75 | 79 | 75.6 | 79.2 | 40 - 160 | 5.19 | 30 |
| o-Xylene | ug/Kg | 0 | 49.6 | 38.1 | 40.2 | 76.8 | 80.5 | 40 - 160 | 5.36 | 30 |
| trans-1,2-Dichloroethene | ug/Kg | 0 | 49.6 | 41.6 | 43.9 | 83.8 | 87.9 | 40 - 160 | 5.38 | 30 |
| trans-1,3-Dichloropropene | ug/Kg | 0 | 49.6 | 38.1 | 39.8 | 76.8 | 79.7 | 40 - 160 | 4.36 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | | 87.4 | 85.3 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | | 100 | 99.7 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | | 96.9 | 96.8 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | | 102 | 103 | 70 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9377 Analysis Method: E350.1 NH3-N by SemiAuto Col
QC Batch Method: E350.1 NH3-N by SemiAuto Col
Associated Lab Samples: Q1547925001

MATRIX SPIKE SAMPLE: 581817 ORIGINAL: Q1547866005

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrogen, Ammonia (as N) | mg/L | .06 | 1 | .95 | 89.1 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 581818

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Ammonia (as N) | mg/L | 1 | .95 | .99 | 94.6 | 98.7 | 90 - 110 | 4.24 | 20 |

METHOD BLANK: 581820

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Ammonia (as N) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9378 Analysis Method: SM5310D, Total Organic Carbon
QC Batch Method: SM5310D, Total Organic Carbon
Associated Lab Samples: Q1547925001

METHOD BLANK: 581456

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

MATRIX SPIKE SAMPLE: 581669 ORIGINAL: Q1547931002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Organic Carbon | mg/L | 5.28 | 5 | 10.1 | 97.3 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 581670

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Organic Carbon | mg/L | 5 | 4.89 | 4.78 | 97.8 | 95.6 | 80 - 120 | 2.28 | 20 |

METHOD BLANK: 581672

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1547925

QC Batch: WET/9430 Analysis Method: SW9060A Total Organic Carbon
QC Batch Method: SW9060A Total Organic Carbon
Associated Lab Samples: Q1547925003

MATRIX SPIKE: 583205 DUPLICATE: 583206 ORIGINAL: Q1549128006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Total Organic Carbon | mg/kg | 4640 | 30000 | 49600 | 36900 | 150 | 108 | 70 - 130 | 29.4 | 20 |

LABORATORY CONTROL SAMPLE: 583207

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Organic Carbon | mg/kg | 15000 | 16200 | 16000 | 108 | 107 | 70 - 130 | 1.24 | 20 |

METHOD BLANK: 583209

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/kg | <1500 | 1500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1547925

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|------------|--------------------------------|------------|--------------------------------|----------------|
| Q1547925001 | LAKE | | | E1664A, Gravimetric | ORG/4421 |
| Q1547925001 | LAKE | | | SM9223, IDEXX | MIC/2831 |
| Q1547925002 | WETLANDS | | | SM9223, IDEXX | MIC/2831 |
| Q1547925001 | LAKE | pH Check | SM/12149 | SM5310D, Total Organic Carbon | WET/9378 |
| Q1547925003 | LAKE | | | SM2540G, Percent Solids | WET/9210 |
| Q1547925001 | LAKE | | | SW-846 8260B | OVOL/2400 |
| Q1547925005 | TRIP BLANK | | | SW-846 8260B | OVOL/2400 |
| Q1547925001 | LAKE | | | SM5210B | WET/9217 |
| Q1547925001 | LAKE | | | E300.0, Anions | WET/9219 |
| Q1547925001 | LAKE | SW3520C, Liquid/Liquid Extract | OEXT/3974 | SW-846 8270C | ORG/4462 |
| Q1547925001 | LAKE | E200.7 Prep | MEP/5027 | E200.7 Metals, Trace Elements | MET/4019 |
| Q1547925003 | LAKE | SW3540, Soxhlet Extraction | OEXT/3980 | SW-846 8270C | ORG/4462 |
| Q1547925001 | LAKE | E200.8, ICP-MS Prep | MEP/5029 | E200.8, ICP-MS | MET/4015 |
| Q1547925001 | LAKE | E335.4 CN, SemiAuto Col | WETP/2481 | E335.4 CN, SemiAuto Col | WET/9257 |
| Q1547925003 | LAKE | SW7471A Hg in Solid, Semisolid | MEP/5035 | SW7471A Hg in Solid, Semisolid | MET/4017 |
| Q1547925001 | LAKE | E245.1 Mercury Water | MEP/5036 | E245.1 Mercury Water | MET/4020 |

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1547925

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|----------------------------|------------|-------------------------------|----------------|
| Q1547925001 | LAKE | | | SM2540C, TDS | WET/9259 |
| Q1547925001 | LAKE | | | SM2540D, TSS | WET/9266 |
| Q1547925001 | LAKE | | | E160.4 Ignition at 550C | WET/9267 |
| Q1547925003 | LAKE | SW3050B, Metals Prep | MEP/5043 | SW6010B ICP-AES | MET/4034 |
| Q1547925003 | LAKE | SW3050B, Metals Prep | MEP/5044 | SW6020 ICP-MS | MET/4031 |
| Q1547925003 | LAKE | SW3050B, Metals Prep | MEP/5045 | SW6020 ICP-MS | MET/4028 |
| Q1547925003 | LAKE | | | 600/2-78-54 | WET/9293 |
| Q1547925003 | LAKE | | | 600/2-78-54 | WET/9294 |
| Q1547925001 | LAKE | | | SM4500-NO3-H, Nitrate/Nitrite | WET/9313 |
| Q1547925001 | LAKE | E410.4 COD by SemiAuto Col | WETP/2493 | E410.4 COD by SemiAuto Col | WET/9314 |
| Q1547925001 | LAKE | E365.4 / E351.2 Water Prep | WETP/2494 | E351.2 TKN by SemiAuto Col | WET/9333 |
| Q1547925001 | LAKE | E365.4 / E351.2 Water Prep | WETP/2494 | E365.4 Phosphorus, Total | WET/9339 |
| Q1547925001 | LAKE | | | SM2320B, Alkalinity | WET/9363 |
| Q1547925003 | LAKE | | | SW-846 8260B | OVOL/2418 |
| Q1547925001 | LAKE | | | E350.1 NH3-N by SemiAuto Col | WET/9377 |

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1547925

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|-------------|------------|------------------------------|----------------|
| Q1547925003 | LAKE | | | SW9060A Total Organic Carbon | WET/9430 |



LCRA Environmental Laboratory Services
3505 Montopolis Drive
Austin, TX 78744
Phone: (512)356-6022
Fax: (512)356-6021

January 20, 2016

GERARDO ARRAMBIDE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY
P.O. Box 13087, MC-165
Austin, TX 78711-3087

RE: Final Analytical Report
ELS Workorder Q1550371

Attn: GERARDO ARRAMBIDE

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Authorized for release by:

Ariana Dean
Project Manager
ariana.dean@lcra.org

Enclosures



T104704218

Report ID: 187437 - 2184855

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SAMPLE SUMMARY

Workorder: Q1550371

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------|---------|------------------|------------------|
| Q1550371001 | WETLANDS | Aqueous | 12/30/2015 14:15 | 12/31/2015 11:15 |
| Q1550371002 | WETLANDS | Aqueous | 12/30/2015 14:15 | 12/31/2015 11:15 |
| Q1550371003 | WETLANDS | Solid | 12/30/2015 14:15 | 12/31/2015 11:15 |
| Q1550371004 | WETLANDS | Aqueous | 12/30/2015 14:15 | 12/31/2015 11:15 |

Report Definitions

| | |
|------|----------------------------------|
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| ML | Maximum Limit - Client Specified |
| DF | Dilution Factor |
| Qual | Qualifiers |

PROJECT SUMMARY

Workorder: Q1550371

Sample Analysis Comments

Lab ID: Q1550371004

Sample ID: WETLANDS

Analyte: Acrylonitrile

Improperly Preserved

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371001 | Date Received: 12/31/2015 | Matrix: Aqueous |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

Volatil Suspended Solids

| | | |
|--|---|--|
| Analysis Desc: E160.4 Ignition at 550C | Preparation Method: E160.4 Ignition at 550C | |
| | Analytical Method: E160.4 Ignition at 550C | |

| | | | | | | | | |
|--------------------------|-----------|------|------|------|----------------|----|----------------|----|
| Volatil Suspended Solids | 3.94 mg/L | 1.23 | 1.23 | 1.23 | 01/05/16 13:31 | JM | 01/05/16 13:31 | JM |
|--------------------------|-----------|------|------|------|----------------|----|----------------|----|

INORGANICS

| | | |
|-------------------------------|------------------------------------|--|
| Analysis Desc: E300.0, Anions | Preparation Method: E300.0, Anions | |
| | Analytical Method: E300.0, Anions | |

| | | | | | | | | |
|------------------------|-------------|---------|--------|---|----------------|----|----------------|----|
| Chloride | 31.6 mg/L | 0.400 | 1.00 | 1 | 12/31/15 15:12 | WR | 12/31/15 15:12 | WR |
| Fluoride | 0.133 mg/L | 0.00400 | 0.0100 | 1 | 12/31/15 15:12 | WR | 12/31/15 15:12 | WR |
| ortho-Phosphate (as P) | 0.0243 mg/L | 0.00400 | 0.0100 | 1 | 12/31/15 15:12 | WR | 12/31/15 15:12 | WR |
| Sulfate | 1.01 mg/L | 0.400 | 1.00 | 1 | 12/31/15 15:12 | WR | 12/31/15 15:12 | WR |

CYANIDE, TOTAL

| | | |
|--|---|--|
| Analysis Desc: E335.4 CN, SemiAuto Col | Preparation Method: E335.4 CN, SemiAuto Col | |
| | Analytical Method: E335.4 CN, SemiAuto Col | |

| | | | | | | | | |
|----------------|--------------|---------|--------|---|----------------|----|----------|----|
| Cyanide, Total | <0.0200 mg/L | 0.00500 | 0.0200 | 1 | 01/05/16 14:54 | KW | 01/07/16 | CM |
|----------------|--------------|---------|--------|---|----------------|----|----------|----|

AMMONIA AS N

| | | |
|---|--|--|
| Analysis Desc: E350.1 NH3-N by SemiAuto Col | Preparation Method: E350.1 NH3-N by SemiAuto Col | |
| | Analytical Method: E350.1 NH3-N by SemiAuto Col | |

| | | | | | | | | |
|--------------------------|--------------|---------|--------|---|----------|----|----------|----|
| Nitrogen, Ammonia (as N) | <0.0200 mg/L | 0.00800 | 0.0200 | 1 | 01/05/16 | CM | 01/05/16 | CM |
|--------------------------|--------------|---------|--------|---|----------|----|----------|----|

TOTAL KJELDAHL NITROGEN

| | | |
|---|--|--|
| Analysis Desc: E351.2 TKN by SemiAuto Col | Preparation Method: E365.4 / E351.2 Water Prep | |
| | Analytical Method: E351.2 TKN by SemiAuto Col | |

| | | | | | | | | |
|---------------------------|------------|--------|-------|---|----------------|----|----------|----|
| Nitrogen, Kjeldahl, Total | 0.868 mg/L | 0.0400 | 0.100 | 1 | 01/06/16 12:55 | MM | 01/07/16 | ML |
|---------------------------|------------|--------|-------|---|----------------|----|----------|----|

TOTAL PHOSPHATE AS P

| | | |
|---|--|--|
| Analysis Desc: E365.4 Phosphorus, Total | Preparation Method: E365.4 / E351.2 Water Prep | |
| | Analytical Method: E365.4 Phosphorus, Total | |

| | | | | | | | | |
|--------------------------|-------------|---------|--------|---|----------------|----|----------|----|
| Phosphorus, Total (As P) | 0.0475 mg/L | 0.00800 | 0.0200 | 1 | 01/06/16 12:55 | MM | 01/07/16 | CM |
|--------------------------|-------------|---------|--------|---|----------------|----|----------|----|

CHEMICAL OXYGEN DEMAND

ANALYTICAL RESULTS

Workorder: Q1550371

| | | | | | |
|-------------|---------------------|-----------------|------------|--------------|---------|
| Lab ID: | Q1550371001 | Date Received: | 12/31/2015 | Matrix: | Aqueous |
| Sample ID: | WETLANDS | Date Collected: | 12/30/2015 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|--|--------|----|------|----------------|----|----------------|----|------|
| Analysis Desc: E410.4 COD by SemiAuto Col | | Preparation Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| COD | 47.0 mg/L | 3.50 | 7.00 | | 1 | 01/06/16 08:57 | ML | 01/06/16 | | ML |
| TOTAL DISSOLVED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540C, TDS | | Preparation Method: SM2540C, TDS | | | | | | | | |
| | | Analytical Method: SM2540C, TDS | | | | | | | | |
| Total Dissolved Solids(TDS) | 146 mg/L | 25.0 | 25.0 | | 10 | 01/06/16 14:31 | JM | 01/06/16 14:31 | | JM |
| TOTAL SUSPENDED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540D, TSS | | Preparation Method: SM2320B, Alkalinity | | | | | | | | |
| | | Analytical Method: SM2540D, TSS | | | | | | | | |
| Total Suspended Solids | 20.3 mg/L | 1.23 | 1.23 | | 1.23 | 01/05/16 | ML | 01/05/16 13:31 | | JM |
| ALKALINITY | | | | | | | | | | |
| Analysis Desc: SM2320B, Alkalinity | | Preparation Method: SM2540D, TSS | | | | | | | | |
| | | Analytical Method: SM2320B, Alkalinity | | | | | | | | |
| Total Alkalinity | 52.8 mg/L | 20.0 | 20.0 | | 1 | 01/05/16 13:31 | JM | 01/05/16 | | ML |
| OIL and GREASE | | | | | | | | | | |
| Analysis Desc: E1664A, Gravimetric | | Preparation Method: E1664A, Gravimetric | | | | | | | | |
| | | Analytical Method: E1664A, Gravimetric | | | | | | | | |
| Oil and Grease | <2.50 mg/L | 2.50 | 2.50 | | | 01/07/16 09:40 | KW | 01/07/16 09:40 | | KW |
| NITRATE AND NITRITE | | | | | | | | | | |
| Analysis Desc: SM4500-NO3-H, Nitrate/Nitrite | | Preparation Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | |
| | | Analytical Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | |
| Nitrate/Nitrite | <0.0200 mg/L | 0.00800 | 0.0200 | | 1 | 01/05/16 | ML | 01/05/16 | | ML |
| BOD, 5 DAY, 20°C | | | | | | | | | | |
| Analysis Desc: SM5210B | | Preparation Method: SM5210B | | | | | | | | |
| | | Analytical Method: SM5210B | | | | | | | | |
| Biochemical Oxygen Demand | 4.87 mg/L | 2.00 | 2.00 | | 2 | 12/31/15 14:00 | CM | 12/31/15 14:00 | | CM |
| ORGANIC CARBON, TOTAL | | | | | | | | | | |

Report ID: 187437 - 2184855

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ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371001 | Date Received: 12/31/2015 | Matrix: Aqueous |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|------|----|----|----------|----|----------|----|------|
| Analysis Desc: SM5310D, Total Organic Carbon | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: SM5310D, Total Organic Carbon | | | | | | | | |
| Total Organic Carbon | 11.0 mg/L | 0.400 | 1.00 | 2 | | 01/05/16 | FM | 01/07/16 | | CM |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371002 | Date Received: 12/31/2015 | Matrix: Aqueous |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|-------|----|----|----------------|----|----------------|----|------|
| INORGANICS | | | | | | | | | | |
| Analysis Desc: E200.7 Metals, Trace Elements | | Preparation Method: E200.7 Prep | | | | | | | | |
| | | Analytical Method: E200.7 Metals, Trace Elements | | | | | | | | |
| Calcium Total | 12400 ug/L | 70.0 | 200 | | 1 | 01/11/16 | FM | 01/12/16 11:53 | | MV |
| Iron Total | 325 ug/L | 20.0 | 50.0 | | 1 | 01/11/16 | FM | 01/12/16 11:53 | | MV |
| Magnesium Total | 3810 ug/L | 70.0 | 200 | | 1 | 01/11/16 | FM | 01/12/16 11:53 | | MV |
| Potassium Total | 5730 ug/L | 70.0 | 200 | | 1 | 01/11/16 | FM | 01/12/16 11:53 | | MV |
| Sodium Total | 20500 ug/L | 200 | 600 | | 1 | 01/11/16 | FM | 01/12/16 11:53 | | MV |
| Analysis Desc: E200.8, ICP-MS | | Preparation Method: E200.8, ICP-MS Prep | | | | | | | | |
| | | Analytical Method: E200.8, ICP-MS | | | | | | | | |
| Aluminum Total | 378 ug/L | 4.00 | 10.0 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Arsenic Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Cadmium Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Chromium Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Copper Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Lead Total | 1.09 ug/L | 0.400 | 1.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Manganese Total | 21.6 ug/L | 0.400 | 1.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Nickel Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Selenium Total | <4.00 ug/L | 1.50 | 4.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Silver Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| Zinc Total | 11.2 ug/L | 1.70 | 5.00 | | 1 | 01/11/16 | FM | 01/12/16 13:44 | | SLW |
| HEAVY METALS | | | | | | | | | | |
| Analysis Desc: E245.1 Mercury Water | | Preparation Method: E245.1 Mercury Water | | | | | | | | |
| | | Analytical Method: E245.1 Mercury Water | | | | | | | | |
| Mercury Total | <0.0700 ug/L | 0.0700 | 0.200 | | 1 | 01/07/16 08:44 | FM | 01/07/16 13:07 | | FM |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|---------------------|
| Lab ID: Q1550371003 | Date Received: 12/31/2015 | Matrix: Solid |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

INORGANICS

Analysis Desc: SW6020 ICP-MS Preparation Method: SW3050B, Metals Prep
Analytical Method: SW6020 ICP-MS

| | | | | | | | | | |
|-----------------|--------------|-------|-------|-----|----------|----------|----|----------------|-----|
| Aluminum Total | 6010 mg/kg | 182 | 455 | 500 | 01/05/16 | 01/05/16 | FM | 01/06/16 15:57 | SLW |
| Arsenic Total | 0.785 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/07/16 15:37 | SLW |
| Antimony Total | <0.464 mg/kg | 0.186 | 0.464 | 5 | 01/05/16 | 01/05/16 | FM | 01/13/16 13:31 | FO |
| Barium Total | 99.4 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Cadmium Total | <0.455 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Chromium Total | 4.80 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Copper Total | 5.06 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Lead Total | 10.5 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Manganese Total | 168 mg/kg | 0.182 | 0.455 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Nickel Total | 2.67 mg/kg | 0.364 | 0.910 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |
| Selenium Total | <1.82 mg/kg | 0.637 | 1.82 | 5 | 01/05/16 | 01/05/16 | FM | 01/07/16 15:37 | SLW |
| Silver Total | <0.464 mg/kg | 0.186 | 0.464 | 5 | 01/05/16 | 01/05/16 | FM | 01/13/16 13:31 | FO |
| Zinc Total | 15.0 mg/kg | 3.64 | 9.10 | 5 | 01/05/16 | 01/05/16 | FM | 01/06/16 16:19 | SLW |

Volatiles

Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B
Analytical Method: SW-846 8260B

| | | | | | | | | | |
|--------------------------|-------------|------|------|---|----------------|----------------|----|----------------|----|
| Dichlorodifluoromethane | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Chloromethane | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Vinyl chloride | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Chloroethane | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| 1,1-Dichloroethene | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Acetone | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Carbon disulfide | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Methylene chloride | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| trans-1,2-Dichloroethene | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Acrylonitrile | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| 1,1-Dichloroethane | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Chloroform | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| 1,1,1-Trichloroethane | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |
| Carbon tetrachloride | <9.46 ug/Kg | 3.79 | 9.46 | 1 | 01/12/16 19:20 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371003 | Date Received: 12/31/2015 | Matrix: Solid |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------|---------------|------|----------|----|----|----------------|----|----------------|----|------|
| 1,2-Dichloroethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Benzene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Trichloroethene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 1,2-Dichloropropane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Bromodichloromethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| cis-1,3-Dichloropropene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 4-Methyl-2-pentanone | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Toluene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| trans-1,3-Dichloropropene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 1,1,2-Trichloroethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Tetrachloroethene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 2-Hexanone | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Dibromochloromethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 1,2-Dibromoethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Chlorobenzene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Ethyl Benzene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| m,p-Xylene | <18.9 ug/Kg | 7.57 | 18.9 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| o-Xylene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Styrene | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Bromoform | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 1,1,2,2-Tetrachloroethane | <9.46 ug/Kg | 3.79 | 9.46 | | 1 | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Xylene (total) | <9.56 ug/Kg | 9.56 | 9.56 | | | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 1,2-Dichloroethane-d4 (S) | 88.4 % | | 70 - 130 | | | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| 4-Bromofluorobenzene (S) | 100 % | | 70 - 130 | | | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Dibromofluoromethane (S) | 96.4 % | | 70 - 130 | | | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |
| Toluene d8 (S) | 101 % | | 70 - 130 | | | 01/12/16 19:20 | CO | 01/12/16 19:20 | CO | |

Semivolatiles

Analysis Desc: SW-846 8270C

Preparation Method: SW3540, Soxhlet Extraction

Analytical Method: SW-846 8270C

| | | | | | | | | | |
|-------------------------|------------|-----|-----|--|---|----------------|----|----------|----|
| Pyridine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO |
| n-Nitrosodimethylamine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO |
| 2-Picoline | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO |
| Methyl methanesulfonate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|---------------------|
| Lab ID: Q1550371003 | Date Received: 12/31/2015 | Matrix: Solid |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|-----|------|----|----|----------------|----|----------|----|------|
| n-Nitrosodiethylamine | <1270 ug/Kg | 510 | 1270 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Ethyl methanesulfonate | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Aniline | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Phenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Chlorophenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Bis(2-Chloroethyl)ether | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,3-Dichlorobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,4-Dichlorobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,2-Dichlorobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Benzyl alcohol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Methylphenol (o-Cresol) | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Bis(2-Chloroisopropyl)ether | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Acetophenone | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Hexachloroethane | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| n-Nitrosodi-n-propylamine | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| m,p-Cresol | <319 ug/Kg | 255 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Nitrobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| n-Nitrosopiperidine | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Isophorone | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Nitrophenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,4-Dimethylphenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Benzoic acid | <1270 ug/Kg | 510 | 1270 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Bis(2-Chloroethoxy)methane | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,4-Dichlorophenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,2,4-Trichlorobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Naphthalene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,6-Dichlorophenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Chloroaniline | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Hexachlorobutadiene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| n-Nitrosodi-n-butylamine | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Chloro-3-methylphenol | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Methylnaphthalene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,2,4,5-Tetrachlorobenzene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Hexachlorocyclopentadiene | <319 ug/Kg | 127 | 319 | 1 | | 01/05/16 11:15 | MF | 01/15/16 | | CO |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371003 | Date Received: 12/31/2015 | Matrix: Solid |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|-----|------|----|----|----------------|----|----------|----|------|
| 2,4,6-Trichlorophenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,4,5-Trichlorophenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1&2-Chloronaphthalene | <637 ug/Kg | 255 | 637 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Nitroaniline | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Acenaphthylene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Dimethyl phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,6-Dinitrotoluene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 3-Nitroaniline | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Acenaphthene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,4-Dinitrophenol | <1270 ug/Kg | 510 | 1270 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Dibenzofuran | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Nitrophenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Pentachlorobenzene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,4-Dinitrotoluene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1-Naphthylamine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2-Naphthylamine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 2,3,4,6-Tetrachlorophenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Fluorene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Diethyl phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Chlorophenyl phenyl ether | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Nitroaniline | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4,6-Dinitro-2-methylphenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| n-Nitrosodiphenylamine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 1,2 Diphenylhydrazine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Hexachlorobenzene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Bromophenyl phenyl ether | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Atrazine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO N |
| Phenacetin | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| 4-Aminobiphenyl | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Pentachlorophenol | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Pentachloronitrobenzene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Phenanthrene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Pronamide | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |
| Anthracene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | | CO |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371003 | Date Received: 12/31/2015 | Matrix: Solid |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|-----|------------|----|----|----------------|----|----------|----|------|
| Carbazole | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Carbaryl (Sevin) | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Di-n-butyl phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Fluoranthene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzidine | <1270 ug/Kg | 510 | 1270 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Pyrene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| p-(Dimethylamino)azobenzene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | N |
| Butyl benzyl phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzo(a)anthracene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Chrysene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 3,3'-Dichlorobenzidine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Bis(2-Ethylhexyl)phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Di-n-octyl phthalate | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzo(b)fluoranthene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzo(k)fluoranthene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 7,12-Dimethylbenz[a]anthracene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzo(a)pyrene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 3-Methylcholanthrene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Indeno(1,2,3-cd)pyrene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Dibenz(a,j)acridine | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Dibenz(a,h)anthracene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Benzo(g,h,i)perylene | <319 ug/Kg | 127 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Cresols | <319 ug/Kg | 319 | 319 | | 1 | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 2,4,6-Tribromophenol (S) | 47.1 % | | 26.4 - 139 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 2-Fluorobiphenyl (S) | 32.9 % | | 11 - 126 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| 2-Fluorophenol (S) | 40.6 % | | 1.27 - 100 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Nitrobenzene-d5 (S) | 42 % | | 7.94 - 113 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Phenol-d5 (S) | 41.9 % | | 6.69 - 106 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |
| Terphenyl-d14 (S) | 47.1 % | | 21.5 - 146 | | | 01/05/16 11:15 | MF | 01/15/16 | CO | |

ORGANIC CARBON, TOTAL

| | |
|---|---|
| Analysis Desc: SW9060A Total Organic Carbon | Preparation Method: SW9060A Total Organic Carbon |
| | Analytical Method: SW9060A Total Organic Carbon |
| Total Organic Carbon | 21200 mg/kg 956 2870 1 01/15/16 10:19 CM 01/15/16 10:19 CM |

ANALYTICAL RESULTS

Workorder: Q1550371

Lab ID: **Q1550371003** Date Received: 12/31/2015 Matrix: Solid
Sample ID: **WETLANDS** Date Collected: 12/30/2015 Sample Type: **SAMPLE**
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|--|-------|----|----|----------|-----|----------------|-----|------|
| Wet Chemistry | | | | | | | | | | |
| Analysis Desc: SM2540G, Percent Solids | | Preparation Method: SM2540G, Percent Solids | | | | | | | | |
| | | Analytical Method: SM2540G, Percent Solids | | | | | | | | |
| Percent Total Solids | 52.3 % | | | | | 01/05/16 | FM | 01/05/16 | FM | |
| INORGANICS | | | | | | | | | | |
| Analysis Desc: SW7471A Hg in Solid, Semisolid | | Preparation Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| | | Analytical Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| Mercury Total | <0.0558 mg/kg | 0.0558 | 0.159 | | 1 | 01/06/16 | FM | 01/06/16 11:21 | FM | |
| Analysis Desc: SW6010B ICP-AES | | Preparation Method: SW3050B, Metals Prep | | | | | | | | |
| | | Analytical Method: SW6010B ICP-AES | | | | | | | | |
| Iron Total | 4020 mg/kg | 56.2 | 169 | | 20 | 01/05/16 | FM | 01/08/16 11:28 | MV | |
| Wet Chemistry | | | | | | | | | | |
| Analysis Desc: 600/2-78-54 | | Preparation Method: 600/2-78-54 | | | | | | | | |
| | | Analytical Method: 600/2-78-54 | | | | | | | | |
| Texture, Clay <0.002mm | 34.4 % | | | | | 01/13/16 | ADG | 01/13/16 | ADG | N |
| Texture, Gravel >2.0mm | 0.386 % | | | | | 01/13/16 | ADG | 01/13/16 | ADG | N |
| Texture, Sand 0.05-2.0mm | 34.5 % | | | | | 01/13/16 | ADG | 01/13/16 | ADG | N |
| Texture, Silt 0.002-0.05mm | 30.7 % | | | | | 01/13/16 | ADG | 01/13/16 | ADG | N |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | |
|--|----------------------------|----------------------------|
| Lab ID: Q1550371004 | Date Received: 12/31/2015 | Matrix: Aqueous |
| Sample ID: WETLANDS | Date Collected: 12/30/2015 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------|---------------|----------------------------------|------|----|----|----------------|----|----------------|----|------|
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 2-Butanone | <20.0 ug/L | 5.00 | 20.0 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |

ANALYTICAL RESULTS

Workorder: Q1550371

Lab ID: **Q1550371004** Date Received: 12/31/2015 Matrix: Aqueous
Sample ID: **WETLANDS** Date Collected: 12/30/2015 Sample Type: **SAMPLE**
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------------|---------------|----------------------------------|----------|----|----|----------------|----|----------------|----|------|
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | I |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 99.8 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 4-Bromofluorobenzene (S) | 93.2 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Dibromofluoromethane (S) | 98.9 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Toluene d8 (S) | 100 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 99.8 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 4-Bromofluorobenzene (S) | 93.2 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Dibromofluoromethane (S) | 98.9 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Toluene d8 (S) | 100 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 99.8 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| 4-Bromofluorobenzene (S) | 93.2 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |

ANALYTICAL RESULTS

Workorder: Q1550371

Lab ID: **Q1550371004** Date Received: 12/31/2015 Matrix: Aqueous
Sample ID: **WETLANDS** Date Collected: 12/30/2015 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------|---------------|-----|----------|----|----|----------------|----|----------------|----|------|
| Dibromofluoromethane (S) | 98.9 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |
| Toluene d8 (S) | 100 % | | 70 - 130 | | | 01/06/16 20:26 | CO | 01/06/16 20:26 | CO | |

Semivolatiles

Analysis Desc: SW-846 8270C Preparation Method: SW3520C, Liquid/Liquid Extract
Analytical Method: SW-846 8270C

| | | | | | | | | | | |
|-----------------------------|------------|------|------|---|--|----------------|----|----------------|----|--|
| Pyridine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosodimethylamine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Picoline | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Methyl methanesulfonate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosodiethylamine | <20.8 ug/L | 4.16 | 20.8 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Ethyl methanesulfonate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Aniline | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Phenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Chlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Bis(2-Chloroethyl)ether | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1,3-Dichlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1,4-Dichlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1,2-Dichlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzyl alcohol | <10.4 ug/L | 5.20 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Methylphenol (o-Cresol) | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Bis(2-Chloroisopropyl)ether | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Acetophenone | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Hexachloroethane | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosodi-n-propylamine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| m,p-Cresol | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Nitrobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosopiperidine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Isophorone | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Nitrophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4-Dimethylphenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzoic acid | <52.0 ug/L | 20.8 | 52.0 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Bis(2-Chloroethoxy)methane | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4-Dichlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |

ANALYTICAL RESULTS

Workorder: Q1550371

Lab ID: **Q1550371004** Date Received: 12/31/2015 Matrix: **Aqueous**
 Sample ID: **WETLANDS** Date Collected: 12/30/2015 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| 1,2,4-Trichlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Naphthalene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,6-Dichlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Chloroaniline | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Hexachlorobutadiene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosodi-n-butylamine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Chloro-3-methylphenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Methylnaphthalene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1,2,4,5-Tetrachlorobenzene | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Hexachlorocyclopentadiene | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4,6-Trichlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4,5-Trichlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1&2-Chloronaphthalene | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2-Nitroaniline | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Acenaphthylene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Dimethyl phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,6-Dinitrotoluene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 3-Nitroaniline | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Acenaphthene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4-Dinitrophenol | <52.0 ug/L | 20.8 | 52.0 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Dibenzofuran | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Nitrophenol | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Pentachlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,4-Dinitrotoluene | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1-Naphthylamine | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | N |
| 2-Naphthylamine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 2,3,4,6-Tetrachlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Fluorene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Diethyl phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Chlorophenyl phenyl ether | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Nitroaniline | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4,6-Dinitro-2-methylphenol | <52.0 ug/L | 20.8 | 52.0 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| n-Nitrosodiphenylamine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 1,2 Diphenylhydrazine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |

ANALYTICAL RESULTS

Workorder: Q1550371

Lab ID: **Q1550371004** Date Received: 12/31/2015 Matrix: Aqueous
Sample ID: **WETLANDS** Date Collected: 12/30/2015 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|---------|----|----|----------------|----|----------------|----|------|
| Hexachlorobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Bromophenyl phenyl ether | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Atrazine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | N |
| Phenacetin | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 4-Aminobiphenyl | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Pentachlorophenol | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Pentachloronitrobenzene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Phenanthrene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Pronamide | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Anthracene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Carbazole | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Carbaryl (Sevin) | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Di-n-butyl phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Fluoranthene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzidine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Pyrene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| p-(Dimethylamino)azobenzene | <10.4 ug/L | 4.16 | 10.4 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | N |
| Butyl benzyl phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzo(a)anthracene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Chrysene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 3,3'-Dichlorobenzidine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Bis(2-Ethylhexyl)phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Di-n-octyl phthalate | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzo(b)fluoranthene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzo(k)fluoranthene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 7,12-Dimethylbenz[a]anthracene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzo(a)pyrene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| 3-Methylcholanthrene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Indeno(1,2,3-cd)pyrene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Dibenz(a,j)acridine | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Dibenz(a,h)anthracene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Benzo(g,h,i)perylene | <5.20 ug/L | 2.08 | 5.20 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |
| Cresols | <15.6 ug/L | 4.16 | 15.6 | 1 | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | N |
| 2,4,6-Tribromophenol (S) | 40.4 % | | 0 - 146 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | CO | |

ANALYTICAL RESULTS

Workorder: Q1550371

| | | | | | |
|-------------|---------------------|-----------------|------------|--------------|---------|
| Lab ID: | Q1550371004 | Date Received: | 12/31/2015 | Matrix: | Aqueous |
| Sample ID: | WETLANDS | Date Collected: | 12/30/2015 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|----------------------|---------------|-----|------------|----|----|----------------|----|----------------|----|------|
| 2-Fluorobiphenyl (S) | 36.3 % | | 29.8 - 157 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | | CO |
| 2-Fluorophenol (S) | 27.5 % | | 0 - 89 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | | CO |
| Nitrobenzene-d5 (S) | 38.5 % | | 15.1 - 165 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | | CO |
| Phenol-d5 (S) | 31.7 % | | 0 - 105 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | | CO |
| Terphenyl-d14 (S) | 19 % | | 14.6 - 174 | | | 01/04/16 13:30 | MH | 01/13/16 02:22 | | CO |

ANALYTICAL RESULTS QUALIFIERS

Workorder: Q1550371

PARAMETER QUALIFIERS

Lab ID: Q1550371003

N Not Accredited

Lab ID: Q1550371004

I Improperly Preserved

N Not Accredited

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 584669

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------------|-------|--------------|-----------------|------------|
| 7,12-Dimethylbenz[a]anthracene | ug/L | <5.00 | 5.00 | |
| Acenaphthene | ug/L | <5.00 | 5.00 | |
| Acenaphthylene | ug/L | <5.00 | 5.00 | |
| Acetophenone | ug/L | <5.00 | 5.00 | |
| Aniline | ug/L | <5.00 | 5.00 | |
| Anthracene | ug/L | <5.00 | 5.00 | |
| Atrazine | ug/L | <5.00 | 5.00 | |
| Benzidine | ug/L | <5.00 | 5.00 | |
| Benzo(a)anthracene | ug/L | <5.00 | 5.00 | |
| Benzo(a)pyrene | ug/L | <5.00 | 5.00 | |
| Benzo(b)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzo(g,h,i)perylene | ug/L | <5.00 | 5.00 | |
| Benzo(k)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzoic acid | ug/L | <50.0 | 50.0 | |
| Benzyl alcohol | ug/L | <10.0 | 10.0 | |
| Bis(2-Chloroethoxy)methane | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroethyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroisopropyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | <5.00 | 5.00 | |
| Butyl benzyl phthalate | ug/L | <5.00 | 5.00 | |
| Carbaryl (Sevin) | ug/L | <5.00 | 5.00 | |
| Carbazole | ug/L | <5.00 | 5.00 | |
| Chrysene | ug/L | <5.00 | 5.00 | |
| Cresols | ug/L | <15.0 | 15.0 | |
| Di-n-butyl phthalate | ug/L | <5.00 | 5.00 | |
| Di-n-octyl phthalate | ug/L | <5.00 | 5.00 | |
| Dibenz(a,h)anthracene | ug/L | <5.00 | 5.00 | |
| Dibenz(a,j)acridine | ug/L | <5.00 | 5.00 | |
| Dibenzofuran | ug/L | <5.00 | 5.00 | |
| Diethyl phthalate | ug/L | <5.00 | 5.00 | |
| Dimethyl phthalate | ug/L | <5.00 | 5.00 | |
| Ethyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Fluoranthene | ug/L | <5.00 | 5.00 | |
| Fluorene | ug/L | <5.00 | 5.00 | |
| Hexachlorobenzene | ug/L | <5.00 | 5.00 | |
| Hexachlorobutadiene | ug/L | <5.00 | 5.00 | |
| Hexachlorocyclopentadiene | ug/L | <10.0 | 10.0 | |
| Hexachloroethane | ug/L | <5.00 | 5.00 | |
| Indeno(1,2,3-cd)pyrene | ug/L | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 584669

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Isophorone | ug/L | <5.00 | 5.00 | |
| Methyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Naphthalene | ug/L | <5.00 | 5.00 | |
| Nitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorobenzene | ug/L | <5.00 | 5.00 | |
| Pentachloronitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorophenol | ug/L | <5.00 | 5.00 | |
| Phenacetin | ug/L | <5.00 | 5.00 | |
| Phenanthrene | ug/L | <5.00 | 5.00 | |
| Phenol | ug/L | <5.00 | 5.00 | |
| Pronamide | ug/L | <5.00 | 5.00 | |
| Pyrene | ug/L | <5.00 | 5.00 | |
| Pyridine | ug/L | <5.00 | 5.00 | |
| m,p-Cresol | ug/L | <10.0 | 10.0 | |
| n-Nitrosodi-n-butylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodi-n-propylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiethylamine | ug/L | <20.0 | 20.0 | |
| n-Nitrosodimethylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiphenylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosopiperidine | ug/L | <5.00 | 5.00 | |
| p-(Dimethylamino)azobenzene | ug/L | <10.0 | 10.0 | |
| 2,4,6-Tribromophenol (S) | % | 54.6 | 0 - 149 | |
| 2-Fluorobiphenyl (S) | % | 47.4 | 28 - 155 | |
| 2-Fluorophenol (S) | % | 38 | 0 - 116 | |
| Nitrobenzene-d5 (S) | % | 46.1 | 29.5 - 145 | |
| Phenol-d5 (S) | % | 41.1 | 0 - 110 | |
| Terphenyl-d14 (S) | % | 50.7 | 30.5 - 164 | |

LABORATORY CONTROL SAMPLE: 584670

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1&2-Chloronaphthalene | ug/L | | 10 | | 53.5 | | | 4 | |
| 1,2 Diphenyhydrazine | ug/L | | 5 | | 49.8 | | | 5.79 | |
| 1,2,4-Trichlorobenzene | ug/L | 100 | 48 | 45.3 | 48 | 45.3 | 11.2 - 126 | 5.79 | 30 |
| 1,2-Dichlorobenzene | ug/L | 100 | 49.7 | 48.1 | 49.7 | 48.1 | 9.22 - 123 | 3.27 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 584670

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------|------------|-------------|
| 1,3-Dichlorobenzene | ug/L | 100 | 48.2 | 46.6 | 48.2 | 46.6 | 9.52 - 123 | 3.38 | |
| 1,4-Dichlorobenzene | ug/L | 100 | 48.3 | 45.9 | 48.3 | 45.9 | 9.5 - 121 | 5.1 | 30 |
| 2,3,4,6-Tetrachlorophenol | ug/L | 100 | 59.3 | 52.1 | 59.3 | 52.1 | 2.8 - 116 | 12.9 | |
| 2,4,5-Trichlorophenol | ug/L | 100 | 53.8 | 51.8 | 53.8 | 51.8 | 0 - 121 | 3.79 | |
| 2,4,6-Trichlorophenol | ug/L | 100 | 46.7 | 44.9 | 46.7 | 44.9 | 0 - 118 | 3.93 | |
| 2,4-Dichlorophenol | ug/L | 100 | 50.8 | 45.9 | 50.8 | 45.9 | 0 - 126 | 10.1 | |
| 2,4-Dimethylphenol | ug/L | 100 | 44.7 | 41.4 | 44.7 | 41.4 | 0 - 119 | 7.67 | |
| 2,4-Dinitrophenol | ug/L | 100 | 57.4 | 48.6 | 57.4 | 48.6 | 0 - 125 | 16.6 | |
| 2,4-Dinitrotoluene | ug/L | 100 | 63 | 53.3 | 63 | 53.3 | 13 - 161 | 16.7 | 30 |
| 2,6-Dinitrotoluene | ug/L | 100 | 57.4 | 52.8 | 57.4 | 52.8 | 16 - 135 | 8.35 | |
| 2-Chlorophenol | ug/L | 100 | 48.3 | 45.6 | 48.3 | 45.6 | 0 - 115 | 5.75 | 30 |
| 2-Methylnaphthalene | ug/L | 100 | 52 | 48.7 | 52 | 48.7 | 12.8 - 137 | 6.55 | |
| 2-Methylphenol (o-Cresol) | ug/L | 100 | 48.4 | 45.3 | 48.4 | 45.3 | 0 - 123 | 6.62 | |
| 2-Nitroaniline | ug/L | 100 | 57.4 | 53 | 57.4 | 53 | 13.3 - 135 | 7.97 | |
| 2-Nitrophenol | ug/L | 100 | 52.6 | 49.8 | 52.6 | 49.8 | 0 - 125 | 5.47 | |
| 3-Nitroaniline | ug/L | 100 | 59 | 50.4 | 59 | 50.4 | 6.09 - 142 | 15.7 | |
| 4,6-Dinitro-2-methylphenol | ug/L | 100 | 55.3 | 51.2 | 55.3 | 51.2 | 0 - 147 | 7.7 | |
| 4-Bromophenyl phenyl ether | ug/L | 100 | 50.2 | 52.3 | 50.2 | 52.3 | 10.7 - 134 | 4.1 | |
| 4-Chloro-3-methylphenol | ug/L | 100 | 53.2 | 48.1 | 53.2 | 48.1 | 0 - 130 | 10.1 | 30 |
| 4-Chloroaniline | ug/L | 100 | 63.4 | 59.5 | 63.4 | 59.5 | 3.37 - 153 | 6.35 | |
| 4-Chlorophenyl phenyl ether | ug/L | 100 | 54.2 | 50.8 | 54.2 | 50.8 | 11.8 - 131 | 6.48 | |
| 4-Nitroaniline | ug/L | 100 | 48.8 | 39 | 48.8 | 39 | 0 - 148 | 22.3 | |
| 4-Nitrophenol | ug/L | 100 | 60 | 47.2 | 60 | 47.2 | 0 - 126 | 23.9 | 30 |
| Acenaphthene | ug/L | 100 | 56.1 | 52.1 | 56.1 | 52.1 | 12.3 - 125 | 7.39 | 30 |
| Acenaphthylene | ug/L | 100 | 52.6 | 50 | 52.6 | 50 | 16 - 119 | 5.07 | 30 |
| Aniline | ug/L | 100 | 46.5 | 44.1 | 46.5 | 44.1 | 50.7 - 117 | 5.3 | |
| Anthracene | ug/L | 100 | 49.8 | 47.6 | 49.8 | 47.6 | 2.47 - 147 | 4.52 | 30 |
| Benzo(a)anthracene | ug/L | 100 | 55.6 | 50.6 | 55.6 | 50.6 | 40.3 - 135 | 9.42 | 30 |
| Benzo(a)pyrene | ug/L | 100 | 56.2 | 52.7 | 56.2 | 52.7 | | 6.43 | |
| Benzo(b)fluoranthene | ug/L | 100 | 63.5 | 54.4 | 63.5 | 54.4 | | 15.4 | |
| Benzo(g,h,i)perylene | ug/L | 100 | 46.8 | 55.1 | 46.8 | 55.1 | | 16.3 | |
| Benzo(k)fluoranthene | ug/L | 100 | 60 | 52.7 | 60 | 52.7 | | 13 | |
| Benzyl alcohol | ug/L | 100 | 46.4 | 44.8 | 46.4 | 44.8 | | 3.51 | |
| Bis(2-Chloroethoxy)methane | ug/L | 100 | 49.7 | 47.3 | 49.7 | 47.3 | | 4.95 | |
| Bis(2-Chloroethyl)ether | ug/L | 100 | 50.2 | 47.1 | 50.2 | 47.1 | | 6.37 | |
| Bis(2-Chloroisopropyl)ether | ug/L | 100 | 54.8 | 53.7 | 54.8 | 53.7 | | 2.03 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | 100 | 61.4 | 56.9 | 61.4 | 56.9 | | 7.61 | |
| Butyl benzyl phthalate | ug/L | 100 | 57.9 | 54.5 | 57.9 | 54.5 | | 6.05 | |

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 584670

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Carbazole | ug/L | 100 | 57.9 | 48 | 57.9 | 48 | | 18.7 | |
| Chrysene | ug/L | 100 | 48.6 | 47.3 | 48.6 | 47.3 | 44.1 - 144 | 2.71 | 30 |
| Cresols | ug/L | | 15 | | 102 | | | 7.42 | |
| Di-n-butyl phthalate | ug/L | 100 | 56.4 | 46.5 | 56.4 | 46.5 | | 19.2 | |
| Di-n-octyl phthalate | ug/L | 100 | 65.8 | 55.1 | 65.8 | 55.1 | | 17.7 | |
| Dibenz(a,h)anthracene | ug/L | 100 | 52.6 | 59.2 | 52.6 | 59.2 | | 11.8 | |
| Dibenzofuran | ug/L | 100 | 52 | 50 | 52 | 50 | | 3.92 | |
| Diethyl phthalate | ug/L | 100 | 59.3 | 51.8 | 59.3 | 51.8 | | 13.5 | |
| Dimethyl phthalate | ug/L | 100 | 51.1 | 46 | 51.1 | 46 | | 10.5 | |
| Fluoranthene | ug/L | 100 | 60.4 | 43.4 | 60.4 | 43.4 | | 32.8 | |
| Fluorene | ug/L | 100 | 57.2 | 51 | 57.2 | 51 | | 11.5 | |
| Hexachlorobenzene | ug/L | 100 | 57.6 | 55.3 | 57.6 | 55.3 | 6.43 - 152 | 4.07 | |
| Hexachlorobutadiene | ug/L | 100 | 47.1 | 46 | 47.1 | 46 | 7.19 - 140 | 2.36 | |
| Hexachlorocyclopentadiene | ug/L | 100 | 28 | 31.1 | 28 | 31.1 | | 10.5 | |
| Hexachloroethane | ug/L | 100 | 45.4 | 44.9 | 45.4 | 44.9 | 9.5 - 131 | 1.11 | |
| Indeno(1,2,3-cd)pyrene | ug/L | 100 | 47.7 | 51.7 | 47.7 | 51.7 | | 8.05 | |
| Isophorone | ug/L | 100 | 49.8 | 47.4 | 49.8 | 47.4 | | 4.94 | |
| Naphthalene | ug/L | 100 | 48 | 45.1 | 48 | 45.1 | | 6.23 | |
| Nitrobenzene | ug/L | 100 | 49.6 | 47.4 | 49.6 | 47.4 | 6.57 - 138 | 4.54 | |
| Pentachlorophenol | ug/L | 100 | 66.4 | 57.7 | 66.4 | 57.7 | 0 - 137 | 14 | 30 |
| Phenanthrene | ug/L | 100 | 51.6 | 48.2 | 51.6 | 48.2 | 39.9 - 122 | 6.81 | 30 |
| Phenol | ug/L | 100 | 42.4 | 38.6 | 42.4 | 38.6 | 13 - 108 | 9.38 | 30 |
| Pyrene | ug/L | 100 | 45.6 | 53.5 | 45.6 | 53.5 | 37 - 120 | 15.9 | 30 |
| Pyridine | ug/L | 100 | 75.8 | 69.8 | 75.8 | 69.8 | 0 - 150 | 8.24 | |
| m,p-Cresol | ug/L | | 10 | | 53.9 | | | 8.71 | |
| n-Nitrosodi-n-propylamine | ug/L | 100 | 58.8 | 55.2 | 58.8 | 55.2 | 32 - 100 | 6.32 | 30 |
| n-Nitrosodimethylamine | ug/L | 100 | 49.1 | 47.3 | 49.1 | 47.3 | | 3.73 | |
| n-Nitrosodiphenylamine | ug/L | | 5 | | 27.8 | | | 5.25 | |
| 2,4,6-Tribromophenol (S) | % | | | | 52.6 | 53.3 | 0 - 149 | | |
| 2-Fluorobiphenyl (S) | % | | | | 49.8 | 48.7 | 28 - 155 | | |
| 2-Fluorophenol (S) | % | | | | 40.7 | 35 | 0 - 89 | | |
| Nitrobenzene-d5 (S) | % | | | | 48.8 | 46.6 | 29.5 - 145 | | |
| Phenol-d5 (S) | % | | | | 41.3 | 37.7 | 0 - 110 | | |
| Terphenyl-d14 (S) | % | | | | 48.4 | 57.7 | 30.5 - 164 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

SAMPLE DUPLICATE: 584673 ORIGINAL: Q1550219001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|------------|-----|---------|------------|
| 2,4,5-Trichlorophenol | ug/L | 0 | 0 | 0 | | |
| 2,4,6-Trichlorophenol | ug/L | 0 | 0 | 0 | | |
| 2,4-Dinitrotoluene | ug/L | 0 | 0 | 0 | | |
| 2-Methylphenol (o-Cresol) | ug/L | 0 | 0 | 0 | | |
| Cresols | ug/L | 0 | 0 | 0 | | |
| Hexachlorobenzene | ug/L | 0 | 0 | 0 | | |
| Hexachlorobutadiene | ug/L | 0 | 0 | 0 | | |
| Hexachloroethane | ug/L | 0 | 0 | 0 | | |
| Nitrobenzene | ug/L | 0 | 0 | 0 | | |
| Pentachlorophenol | ug/L | 0 | 0 | 0 | | |
| Pyridine | ug/L | 0 | 0 | 0 | | |
| m,p-Cresol | ug/L | 0 | 0 | 0 | | |
| 2,4,6-Tribromophenol (S) | % | 1.1 | 1.06 | | | |
| 2,4,6-Tribromophenol (S) | % | | 1.06 | | 139 | |
| 2-Fluorobiphenyl (S) | % | .4 | .43 | | | |
| 2-Fluorobiphenyl (S) | % | | .43 | | 126 | |
| 2-Fluorophenol (S) | % | | .69 | | 100 | |
| 2-Fluorophenol (S) | % | .6 | .69 | | | |
| Nitrobenzene-d5 (S) | % | | .46 | | 113 | |
| Nitrobenzene-d5 (S) | % | .5 | .46 | | | |
| Phenol-d5 (S) | % | | .81 | | 106 | |
| Phenol-d5 (S) | % | .8 | .81 | | | |
| Terphenyl-d14 (S) | % | | .53 | | 146 | |
| Terphenyl-d14 (S) | % | .5 | .53 | | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5119 Analysis Method: SW6020 ICP-MS

QC Batch Method: SW3050B, Metals Prep

Associated Lab Samples: Q1550371003

LABORATORY CONTROL SAMPLE: 584758

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Antimony Total | mg/kg | 2.48 | 2.74 | 2.81 | 111 | 111 | 85 - 115 | 2.52 | 20 |
| Silver Total | mg/kg | 2.48 | 2.69 | 2.77 | 109 | 110 | 85 - 115 | 2.93 | 20 |

METHOD BLANK: 584760

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------|-------|--------------|-----------------|------------|
| Antimony Total | mg/kg | <0.0495 | 0.0495 | |
| Silver Total | mg/kg | <0.0495 | 0.0495 | |

MATRIX SPIKE: 584761 DUPLICATE: 584762 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Antimony Total | mg/kg | .02 | 2.5 | .47 | .41 | 18.9 | 16.2 | 70 - 130 | 15.2 | 20 |
| Silver Total | mg/kg | .04 | 2.5 | 2.35 | 2.39 | 94 | 95.6 | 70 - 130 | 1.69 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: OEXT/4036 Analysis Method: SW-846 8270C
QC Batch Method: SW3540, Soxhlet Extraction
Associated Lab Samples: Q1550371003

METHOD BLANK: 584770

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| 1&2-Chloronaphthalene | ug/Kg | <1000 | 1000 | |
| 1,2-Diphenylhydrazine | ug/Kg | <500 | 500 | |
| 1,2,4,5-Tetrachlorobenzene | ug/Kg | <500 | 500 | |
| 1,2,4-Trichlorobenzene | ug/Kg | <500 | 500 | |
| 1,2-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,3-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,4-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1-Naphthylamine | ug/Kg | <500 | 500 | |
| 2,3,4,6-Tetrachlorophenol | ug/Kg | <500 | 500 | |
| 2,4,5-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4,6-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dimethylphenol | ug/Kg | <500 | 500 | |
| 2,4-Dinitrophenol | ug/Kg | <2000 | 2000 | |
| 2,4-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2,6-Dichlorophenol | ug/Kg | <500 | 500 | |
| 2,6-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2-Chlorophenol | ug/Kg | <500 | 500 | |
| 2-Methylnaphthalene | ug/Kg | <500 | 500 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | <500 | 500 | |
| 2-Naphthylamine | ug/Kg | <500 | 500 | |
| 2-Nitroaniline | ug/Kg | <500 | 500 | |
| 2-Nitrophenol | ug/Kg | <500 | 500 | |
| 2-Picoline | ug/Kg | <500 | 500 | |
| 3,3'-Dichlorobenzidine | ug/Kg | <500 | 500 | |
| 3-Methylcholanthrene | ug/Kg | <500 | 500 | |
| 3-Nitroaniline | ug/Kg | <500 | 500 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | <500 | 500 | |
| 4-Aminobiphenyl | ug/Kg | <500 | 500 | |
| 4-Bromophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Chloro-3-methylphenol | ug/Kg | <500 | 500 | |
| 4-Chloroaniline | ug/Kg | <500 | 500 | |
| 4-Chlorophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Nitroaniline | ug/Kg | <500 | 500 | |
| 4-Nitrophenol | ug/Kg | <500 | 500 | |

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 584770

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------------|-------|--------------|-----------------|------------|
| 7,12-Dimethylbenz[a]anthracene | ug/Kg | <500 | 500 | |
| Acenaphthene | ug/Kg | <500 | 500 | |
| Acenaphthylene | ug/Kg | <500 | 500 | |
| Acetophenone | ug/Kg | <500 | 500 | |
| Aniline | ug/Kg | <500 | 500 | |
| Anthracene | ug/Kg | <500 | 500 | |
| Atrazine | ug/Kg | <500 | 500 | |
| Benzidine | ug/Kg | <2000 | 2000 | |
| Benzo(a)anthracene | ug/Kg | <500 | 500 | |
| Benzo(a)pyrene | ug/Kg | <500 | 500 | |
| Benzo(b)fluoranthene | ug/Kg | <500 | 500 | |
| Benzo(g,h,i)perylene | ug/Kg | <500 | 500 | |
| Benzo(k)fluoranthene | ug/Kg | <500 | 500 | |
| Benzoic acid | ug/Kg | <2000 | 2000 | |
| Benzyl alcohol | ug/Kg | <500 | 500 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | <500 | 500 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | <500 | 500 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | <500 | 500 | |
| Butyl benzyl phthalate | ug/Kg | <500 | 500 | |
| Carbaryl (Sevin) | ug/Kg | <500 | 500 | |
| Carbazole | ug/Kg | <500 | 500 | |
| Chrysene | ug/Kg | <500 | 500 | |
| Cresols | ug/Kg | <500 | 500 | |
| Di-n-butyl phthalate | ug/Kg | <500 | 500 | |
| Di-n-octyl phthalate | ug/Kg | <500 | 500 | |
| Dibenz(a,h)anthracene | ug/Kg | <500 | 500 | |
| Dibenz(a,j)acridine | ug/Kg | <500 | 500 | |
| Dibenzofuran | ug/Kg | <500 | 500 | |
| Diethyl phthalate | ug/Kg | <500 | 500 | |
| Dimethyl phthalate | ug/Kg | <500 | 500 | |
| Ethyl methanesulfonate | ug/Kg | <500 | 500 | |
| Fluoranthene | ug/Kg | <500 | 500 | |
| Fluorene | ug/Kg | <500 | 500 | |
| Hexachlorobenzene | ug/Kg | <500 | 500 | |
| Hexachlorobutadiene | ug/Kg | <500 | 500 | |
| Hexachlorocyclopentadiene | ug/Kg | <500 | 500 | |
| Hexachloroethane | ug/Kg | <500 | 500 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | <500 | 500 | |

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 584770

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Isophorone | ug/Kg | <500 | 500 | |
| Methyl methanesulfonate | ug/Kg | <500 | 500 | |
| Naphthalene | ug/Kg | <500 | 500 | |
| Nitrobenzene | ug/Kg | <500 | 500 | |
| Pentachlorobenzene | ug/Kg | <500 | 500 | |
| Pentachloronitrobenzene | ug/Kg | <500 | 500 | |
| Pentachlorophenol | ug/Kg | <500 | 500 | |
| Phenacetin | ug/Kg | <500 | 500 | |
| Phenanthrene | ug/Kg | <500 | 500 | |
| Phenol | ug/Kg | <500 | 500 | |
| Pronamide | ug/Kg | <500 | 500 | |
| Pyrene | ug/Kg | <500 | 500 | |
| Pyridine | ug/Kg | <500 | 500 | |
| m,p-Cresol | ug/Kg | <500 | 500 | |
| n-Nitrosodi-n-butylamine | ug/Kg | <500 | 500 | |
| n-Nitrosodi-n-propylamine | ug/Kg | <500 | 500 | |
| n-Nitrosodiethylamine | ug/Kg | <2000 | 2000 | |
| n-Nitrosodimethylamine | ug/Kg | <500 | 500 | |
| n-Nitrosodiphenylamine | ug/Kg | <500 | 500 | |
| n-Nitrosopiperidine | ug/Kg | <500 | 500 | |
| p-(Dimethylamino)azobenzene | ug/Kg | <500 | 500 | |
| 2,4,6-Tribromophenol (S) | % | 47 | 26.4 - 139 | |
| 2-Fluorobiphenyl (S) | % | 33.8 | 11 - 126 | |
| 2-Fluorophenol (S) | % | 32.9 | 1.27 - 100 | |
| Nitrobenzene-d5 (S) | % | 35.5 | 7.94 - 113 | |
| Phenol-d5 (S) | % | 32.9 | 6.69 - 106 | |
| Terphenyl-d14 (S) | % | 48.1 | 21.5 - 146 | |

LABORATORY CONTROL SAMPLE: 584771

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1&2-Chloronaphthalene | ug/Kg | | 1000 | | 4870 | | | 5.78 | |
| 1,2 Diphenylhydrazine | ug/Kg | | 500 | | 5100 | | | 6.45 | |
| 1,2,4-Trichlorobenzene | ug/Kg | 10000 | 4310 | 4550 | 43.1 | 45.5 | 38.6 - 111 | 5.42 | 30 |
| 1,2-Dichlorobenzene | ug/Kg | 10000 | 4250 | 4330 | 42.5 | 43.3 | | 1.86 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 584771

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------------|-------------|-------------|
| 1,3-Dichlorobenzene | ug/Kg | 10000 | 4350 | 4500 | 43.5 | 45 | | 3.39 | |
| 1,4-Dichlorobenzene | ug/Kg | 10000 | 4290 | 4420 | 42.9 | 44.2 | 28.8 - 106 | 2.99 | 30 |
| 2,3,4,6-Tetrachlorophenol | ug/Kg | 10000 | 4830 | 5380 | 48.3 | 53.8 | | 10.8 | |
| 2,4,5-Trichlorophenol | ug/Kg | 10000 | 4980 | 5340 | 49.8 | 53.4 | | 6.98 | |
| 2,4,6-Trichlorophenol | ug/Kg | 10000 | 4460 | 4780 | 44.6 | 47.8 | | 6.93 | |
| 2,4-Dichlorophenol | ug/Kg | 10000 | 4600 | 5020 | 46 | 50.2 | | 8.73 | |
| 2,4-Dimethylphenol | ug/Kg | 10000 | 3820 | 4020 | 38.2 | 40.2 | | 5.1 | |
| 2,4-Dinitrophenol | ug/Kg | 10000 | 0 | 0 | 0 | 0 | | 0 | |
| 2,4-Dinitrotoluene | ug/Kg | 10000 | 5480 | 5920 | 54.8 | 59.2 | 47.8 - 121 | 7.72 | 30 |
| 2,6-Dinitrotoluene | ug/Kg | 10000 | 5150 | 5530 | 51.5 | 55.3 | | 7.12 | |
| 2-Chlorophenol | ug/Kg | 10000 | 4250 | 4520 | 42.5 | 45.2 | 30.9 - 114 | 6.16 | 30 |
| 2-Methylnaphthalene | ug/Kg | 10000 | 4430 | 4740 | 44.3 | 47.4 | | 6.76 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 10000 | 4210 | 4520 | 42.1 | 45.2 | | 7.1 | |
| 2-Nitroaniline | ug/Kg | 10000 | 5060 | 5650 | 50.6 | 56.5 | | 11 | |
| 2-Nitrophenol | ug/Kg | 10000 | 4670 | 4910 | 46.7 | 49.1 | | 5.01 | |
| 3-Nitroaniline | ug/Kg | 10000 | 5100 | 5850 | 51 | 58.5 | | 13.7 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 10000 | 1020 | 1030 | 10.2 | 10.3 | | .976 | |
| 4-Bromophenyl phenyl ether | ug/Kg | 10000 | 5250 | 5510 | 52.5 | 55.1 | | 4.83 | |
| 4-Chloro-3-methylphenol | ug/Kg | 10000 | 4750 | 5010 | 47.5 | 50.1 | 47.8 - 111 | 5.33 | 30 |
| 4-Chloroaniline | ug/Kg | 10000 | 5000 | 5620 | 50 | 56.2 | | 11.7 | |
| 4-Chlorophenyl phenyl ether | ug/Kg | 10000 | 4630 | 4810 | 46.3 | 48.1 | | 3.81 | |
| 4-Nitroaniline | ug/Kg | 10000 | 4420 | 4850 | 44.2 | 48.5 | | 9.28 | |
| 4-Nitrophenol | ug/Kg | 10000 | 4260 | 4790 | 42.6 | 47.9 | 42.7 - 114 | 11.7 | 30 |
| Acenaphthene | ug/Kg | 10000 | 4520 | 4810 | 45.2 | 48.1 | 45.4 - 120 | 6.22 | 30 |
| Acenaphthylene | ug/Kg | 10000 | 4560 | 4800 | 45.6 | 48 | 35.1 - 125 | 5.13 | 30 |
| Aniline | ug/Kg | 10000 | 4300 | 4450 | 43 | 44.5 | | 3.43 | |
| Anthracene | ug/Kg | 10000 | 4680 | 4910 | 46.8 | 49.1 | 34.7 - 144 | 4.8 | 30 |
| Benzo(a)anthracene | ug/Kg | 10000 | 5180 | 5810 | 51.8 | 58.1 | 35 - 153 | 11.5 | 30 |
| Benzo(a)pyrene | ug/Kg | 10000 | 5220 | 5360 | 52.2 | 53.6 | | 2.65 | |
| Benzo(b)fluoranthene | ug/Kg | 10000 | 5340 | 5760 | 53.4 | 57.6 | | 7.57 | |
| Benzo(g,h,i)perylene | ug/Kg | 10000 | 5450 | 5920 | 54.5 | 59.2 | | 8.27 | |
| Benzo(k)fluoranthene | ug/Kg | 10000 | 5520 | 5150 | 55.2 | 51.5 | | 6.94 | |
| Benzyl alcohol | ug/Kg | 10000 | 4200 | 4350 | 42 | 43.5 | | 3.51 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 10000 | 4310 | 4580 | 43.1 | 45.8 | | 6.07 | |
| Bis(2-Chloroethyl)ether | ug/Kg | 10000 | 4190 | 4350 | 41.9 | 43.5 | | 3.75 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 10000 | 4770 | 4830 | 47.7 | 48.3 | | 1.25 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 10000 | 5590 | 5840 | 55.9 | 58.4 | | 4.37 | |
| Butyl benzyl phthalate | ug/Kg | 10000 | 5410 | 5630 | 54.1 | 56.3 | | 3.99 | |

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 584771

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Carbazole | ug/Kg | 10000 | 4850 | 5350 | 48.5 | 53.5 | | 9.8 | |
| Chrysene | ug/Kg | 10000 | 4790 | 5090 | 47.9 | 50.9 | 31.4 - 153 | 6.07 | 30 |
| Cresols | ug/Kg | | 500 | | 9050 | | | 5.38 | |
| Di-n-butyl phthalate | ug/Kg | 10000 | 4920 | 5240 | 49.2 | 52.4 | | 6.3 | |
| Di-n-octyl phthalate | ug/Kg | 10000 | 5550 | 5370 | 55.5 | 53.7 | | 3.3 | |
| Dibenz(a,h)anthracene | ug/Kg | 10000 | 5570 | 6180 | 55.7 | 61.8 | | 10.4 | |
| Dibenzofuran | ug/Kg | 10000 | 4510 | 4860 | 45.1 | 48.6 | | 7.47 | |
| Diethyl phthalate | ug/Kg | 10000 | 5000 | 5430 | 50 | 54.3 | | 8.25 | |
| Dimethyl phthalate | ug/Kg | 10000 | 4590 | 4890 | 45.9 | 48.9 | | 6.33 | |
| Fluoranthene | ug/Kg | 10000 | 4670 | 5010 | 46.7 | 50.1 | | 7.02 | |
| Fluorene | ug/Kg | 10000 | 4650 | 4890 | 46.5 | 48.9 | | 5.03 | |
| Hexachlorobenzene | ug/Kg | 10000 | 5420 | 5660 | 54.2 | 56.6 | | 4.33 | |
| Hexachlorobutadiene | ug/Kg | 10000 | 4340 | 4400 | 43.4 | 44 | | 1.37 | |
| Hexachlorocyclopentadiene | ug/Kg | 10000 | 2410 | 2620 | 24.1 | 26.2 | | 8.35 | |
| Hexachloroethane | ug/Kg | 10000 | 4620 | 4740 | 46.2 | 47.4 | | 2.56 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 10000 | 5420 | 6130 | 54.2 | 61.3 | | 12.3 | |
| Isophorone | ug/Kg | 10000 | 4480 | 4750 | 44.8 | 47.5 | | 5.85 | |
| Naphthalene | ug/Kg | 10000 | 4080 | 4290 | 40.8 | 42.9 | | 5.02 | |
| Nitrobenzene | ug/Kg | 10000 | 4370 | 4450 | 43.7 | 44.5 | | 1.81 | |
| Pentachlorophenol | ug/Kg | 10000 | 3340 | 3750 | 33.4 | 37.5 | 0 - 117 | 11.6 | 30 |
| Phenanthrene | ug/Kg | 10000 | 4590 | 5140 | 45.9 | 51.4 | 31.5 - 138 | 11.3 | 30 |
| Phenol | ug/Kg | 10000 | 4060 | 4250 | 40.6 | 42.5 | 31.9 - 104 | 4.57 | 30 |
| Pyrene | ug/Kg | 10000 | 5150 | 5280 | 51.5 | 52.8 | 30.1 - 129 | 2.49 | 30 |
| Pyridine | ug/Kg | 10000 | 6780 | 6560 | 67.8 | 65.6 | | 3.3 | |
| m,p-Cresol | ug/Kg | | 500 | | 4840 | | | 4.05 | |
| n-Nitrosodi-n-propylamine | ug/Kg | 10000 | 4870 | 5290 | 48.7 | 52.9 | 47 - 110 | 8.27 | 30 |
| n-Nitrosodimethylamine | ug/Kg | 10000 | 4260 | 4310 | 42.6 | 43.1 | | 1.17 | |
| n-Nitrosodiphenylamine | ug/Kg | | 500 | | 2860 | | | 7.41 | |
| 2,4,6-Tribromophenol (S) | % | | | | 51.5 | 57.6 | 25.9 - 135 | | |
| 2-Fluorobiphenyl (S) | % | | | | 42.7 | 45.6 | 36.5 - 120 | | |
| 2-Fluorophenol (S) | % | | | | 38.1 | 38.2 | 17.5 - 118 | | |
| Nitrobenzene-d5 (S) | % | | | | 42.9 | 44.2 | 29.3 - 123 | | |
| Phenol-d5 (S) | % | | | | 38.3 | 39.5 | 17.2 - 122 | | |
| Terphenyl-d 14 (S) | % | | | | 53.1 | 55.6 | 29.4 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE: 584774 DUPLICATE: 584775 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|--------------------------------|--------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------------|-------------|-------------|------------|
| 1,2,4-Trichlorobenzene | ug/Kg | 0 | 3330 | 1370 | 1430 | 41.2 | 43.1 | 38.6 - 111 | 4.29 | 71.6 | |
| 1,2-Dichlorobenzene | ug/Kg | 0 | 3330 | 1240 | 1400 | 37.2 | 42.1 | | 12.1 | | |
| 1,3-Dichlorobenzene | ug/Kg | 0 | 3330 | 1260 | 1470 | 37.7 | 44.4 | | 15.4 | | |
| 1,4-Dichlorobenzene | ug/Kg | 0 | 3330 | 1230 | 1420 | 36.8 | 42.9 | 28.8 - 106 | 14.3 | 75.5 | |
| 2,3,4,6-Tetrachlorophenol | ug/Kg | 0 | 3330 | 1750 | 1790 | 52.4 | 53.9 | | 2.26 | | |
| 2,4,5-Trichlorophenol | ug/Kg | 0 | 3330 | 1630 | 1640 | 48.9 | 49.4 | | .612 | | |
| 2,4,6-Trichlorophenol | ug/Kg | 0 | 3330 | 1450 | 1450 | 43.6 | 43.6 | | 0 | | |
| 2,4-Dichlorophenol | ug/Kg | 0 | 3330 | 1490 | 1580 | 44.7 | 47.5 | | 5.86 | | |
| 2,4-Dimethylphenol | ug/Kg | 0 | 3330 | 1540 | 1610 | 46.1 | 48.4 | | 4.44 | | |
| 2,4-Dinitrophenol | ug/Kg | 0 | 3330 | 1100 | 895 | 32.9 | 27 | | 20.6 | | |
| 2,4-Dinitrotoluene | ug/Kg | 0 | 3330 | 1850 | 1800 | 55.4 | 54.4 | 47.8 - 121 | 2.74 | 17.9 | |
| 2,6-Dinitrotoluene | ug/Kg | 0 | 3330 | 1710 | 1710 | 51.4 | 51.4 | | 0 | | |
| 2-Chlorophenol | ug/Kg | 0 | 3330 | 1300 | 1440 | 38.9 | 43.4 | 30.9 - 114 | 10.2 | 65.5 | |
| 2-Methylnaphthalene | ug/Kg | 0 | 3330 | 1470 | 1490 | 44 | 45 | | 1.35 | | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 0 | 3330 | 1370 | 1450 | 41.1 | 43.7 | | 5.67 | | |
| 2-Nitroaniline | ug/Kg | 0 | 3330 | 1700 | 1770 | 51 | 53.2 | | 4.03 | | |
| 2-Nitrophenol | ug/Kg | 0 | 3330 | 1460 | 1510 | 43.7 | 45.4 | | 3.37 | | |
| 3-Nitroaniline | ug/Kg | 0 | 3330 | 1650 | 1670 | 49.5 | 50.3 | | 1.2 | | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 0 | 3330 | 1910 | 1840 | 57.3 | 55.6 | | 3.73 | | |
| 4-Bromophenyl phenyl ether | ug/Kg | 0 | 3330 | 1720 | 1710 | 51.5 | 51.5 | | .583 | | |
| 4-Chloro-3-methylphenol | ug/Kg | 0 | 3330 | 1590 | 1580 | 47.6 | 47.5 | 47.8 - 111 | .631 | 26.1 | |
| 4-Chloroaniline | ug/Kg | 0 | 3330 | 1690 | 1700 | 50.8 | 51.2 | | .59 | | |
| 4-Chlorophenyl phenyl ether | ug/Kg | 0 | 3330 | 1520 | 1480 | 45.5 | 44.5 | | 2.67 | | |
| 4-Nitroaniline | ug/Kg | 0 | 3330 | 1300 | 1520 | 38.9 | 45.8 | | 15.6 | | |
| 4-Nitrophenol | ug/Kg | 0 | 3330 | 1610 | 1640 | 48.3 | 49.5 | 42.7 - 114 | 1.85 | 38.8 | |
| Acenaphthene | ug/Kg | 0 | 3330 | 1470 | 1480 | 44.2 | 44.5 | 45.4 - 120 | .678 | 52.2 | |
| Acenaphthylene | ug/Kg | 0 | 3330 | 1480 | 1490 | 44.4 | 44.9 | 35.1 - 125 | .673 | 30 | |
| Aniline | ug/Kg | 0 | 3330 | 1300 | 1410 | 38.9 | 42.4 | | 8.12 | | |
| Anthracene | ug/Kg | 0 | 3330 | 1530 | 1490 | 45.9 | 44.7 | 34.7 - 144 | 2.65 | 30 | |
| Benzo(a)anthracene | ug/Kg | 0 | 3330 | 1710 | 1710 | 51.2 | 51.6 | 35 - 153 | 0 | 30 | |
| Benzo(a)pyrene | ug/Kg | 0 | 3330 | 1760 | 1620 | 52.7 | 48.8 | | 8.28 | | |
| Benzo(b)fluoranthene | ug/Kg | 0 | 3330 | 1840 | 1840 | 55.2 | 55.3 | | 0 | | |
| Benzo(g,h,i)perylene | ug/Kg | 0 | 3330 | 1820 | 1870 | 54.7 | 56.3 | | 2.71 | | |
| Benzo(k)fluoranthene | ug/Kg | 0 | 3330 | 1630 | 1390 | 48.8 | 41.9 | | 15.9 | | |
| Benzyl alcohol | ug/Kg | 0 | 3330 | 1310 | 1410 | 39.4 | 42.3 | | 7.35 | | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 0 | 3330 | 1400 | 1440 | 42.1 | 43.5 | | 2.82 | | |
| Bis(2-Chloroethyl)ether | ug/Kg | 0 | 3330 | 1270 | 1400 | 38 | 42 | | 9.74 | | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 0 | 3330 | 1450 | 1600 | 43.6 | 48.2 | | 9.84 | | |

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE: 584774 DUPLICATE: 584775 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------------|-------|-----------------|-------------|-----------|------------|-------------|-------------|-------------------|------|--------------------|
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 0 | 3330 | 1850 | 1750 | 55.5 | 52.6 | | 5.56 | |
| Butyl benzyl phthalate | ug/Kg | 0 | 3330 | 1780 | 1670 | 53.4 | 50.4 | | 6.38 | |
| Carbazole | ug/Kg | 0 | 3330 | 1510 | 1530 | 45.4 | 46.2 | | 1.32 | |
| Chrysene | ug/Kg | 0 | 3330 | 1550 | 1530 | 46.6 | 46.2 | 31.4 - 153 | 1.3 | 30 |
| Di-n-butyl phthalate | ug/Kg | 0 | 3330 | 1600 | 1570 | 48 | 47.4 | | 1.89 | |
| Di-n-octyl phthalate | ug/Kg | 0 | 3330 | 1820 | 1580 | 54.5 | 47.6 | | 14.1 | |
| Dibenz(a,h)anthracene | ug/Kg | 0 | 3330 | 1770 | 2020 | 53 | 60.8 | | 13.2 | |
| Dibenzofuran | ug/Kg | 0 | 3330 | 1470 | 1450 | 44 | 43.8 | | 1.37 | |
| Diethyl phthalate | ug/Kg | 0 | 3330 | 1680 | 1670 | 50.3 | 50.4 | | .597 | |
| Dimethyl phthalate | ug/Kg | 0 | 3330 | 1520 | 1520 | 45.7 | 45.8 | | 0 | |
| Fluoranthene | ug/Kg | 0 | 3330 | 1530 | 1510 | 45.9 | 45.5 | | 1.32 | |
| Fluorene | ug/Kg | 0 | 3330 | 1550 | 1520 | 46.6 | 45.6 | | 1.95 | |
| Hexachlorobenzene | ug/Kg | 0 | 3330 | 1730 | 1820 | 51.9 | 54.9 | | 5.07 | |
| Hexachlorobutadiene | ug/Kg | 0 | 3330 | 1350 | 1410 | 40.6 | 42.6 | | 4.35 | |
| Hexachlorocyclopentadiene | ug/Kg | 0 | 3330 | 675 | 756 | 20.3 | 22.8 | | 11.3 | |
| Hexachloroethane | ug/Kg | 0 | 3330 | 1270 | 1530 | 38.2 | 46.1 | | 18.6 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 0 | 3330 | 1930 | 2100 | 57.9 | 63.2 | | 8.44 | |
| Isophorone | ug/Kg | 0 | 3330 | 1440 | 1480 | 43.1 | 44.6 | | 2.74 | |
| Naphthalene | ug/Kg | 0 | 3330 | 1290 | 1340 | 38.8 | 40.4 | | 3.8 | |
| Nitrobenzene | ug/Kg | 0 | 3330 | 1340 | 1450 | 40.3 | 43.6 | | 7.89 | |
| Pentachlorophenol | ug/Kg | 0 | 3330 | 1760 | 1810 | 52.7 | 54.4 | 0 - 117 | 2.8 | 68.8 |
| Phenanthrene | ug/Kg | 0 | 3330 | 1550 | 1530 | 46.4 | 46.2 | 31.5 - 138 | 1.3 | 30 |
| Phenol | ug/Kg | 0 | 3330 | 1280 | 1370 | 38.3 | 41.3 | 31.9 - 104 | 6.79 | 58.9 |
| Pyrene | ug/Kg | 0 | 3330 | 1640 | 1520 | 49.3 | 45.6 | 30.1 - 129 | 7.59 | 18.6 |
| Pyridine | ug/Kg | 0 | 3330 | 1980 | 2250 | 59.3 | 67.6 | | 12.8 | |
| n-Nitrosodi-n-propylamine | ug/Kg | 0 | 3330 | 1600 | 1740 | 48.1 | 52.3 | 47 - 110 | 8.38 | 53.2 |
| n-Nitrosodimethylamine | ug/Kg | 0 | 3330 | 1280 | 1420 | 38.3 | 42.8 | | 10.4 | |
| 2,4,6-Tribromophenol (S) | % | | | | | 49.3 | 53.2 | 25.9 - 135 | | |
| 2-Fluorobiphenyl (S) | % | | | | | 35.3 | 38.2 | 36.5 - 120 | | |
| 2-Fluorophenol (S) | % | | | | | 33.2 | 38.4 | 17.5 - 118 | | |
| Nitrobenzene-d5 (S) | % | | | | | 39 | 41.2 | 29.3 - 123 | | |
| Phenol-d5 (S) | % | | | | | 35.8 | 38.6 | 17.2 - 122 | | |
| Terphenyl-d14 (S) | % | | | | | 46.2 | 45.6 | 29.4 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5120 Analysis Method: SW6020 ICP-MS

QC Batch Method: SW3050B, Metals Prep

Associated Lab Samples: Q1550371003

LABORATORY CONTROL SAMPLE: 584776

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Aluminum Total | mg/kg | 2.53 | 2.31 | 2.62 | 91.5 | 104 | 85 - 115 | 12.6 | 20 |
| Arsenic Total | mg/kg | 2.53 | 2.29 | 2.51 | 90.8 | 99.4 | 85 - 115 | 9.17 | 20 |
| Barium Total | mg/kg | 2.53 | 2.39 | 2.61 | 94.8 | 104 | 85 - 115 | 8.8 | 20 |
| Cadmium Total | mg/kg | 2.53 | 2.42 | 2.64 | 95.8 | 104 | 85 - 115 | 8.7 | 20 |
| Chromium Total | mg/kg | 2.53 | 2.28 | 2.52 | 90.2 | 99.8 | 85 - 115 | 10 | 20 |
| Copper Total | mg/kg | 2.53 | 2.4 | 2.62 | 95 | 104 | 85 - 115 | 8.76 | 20 |
| Lead Total | mg/kg | 2.53 | 2.38 | 2.61 | 94.3 | 103 | 85 - 115 | 9.22 | 20 |
| Manganese Total | mg/kg | 2.53 | 2.42 | 2.64 | 95.7 | 105 | 85 - 115 | 8.7 | 20 |
| Nickel Total | mg/kg | 2.53 | 2.36 | 2.61 | 93.5 | 103 | 85 - 115 | 10.1 | 20 |
| Selenium Total | mg/kg | 12.6 | 11.3 | 12.7 | 89.8 | 100 | 85 - 115 | 11.7 | 20 |
| Zinc Total | mg/kg | 2.53 | 2.36 | 2.64 | 93.5 | 104 | 85 - 115 | 11.2 | 20 |

METHOD BLANK: 584778

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Selenium Total | mg/kg | <0.198 | 0.198 | |
| Aluminum Total | mg/kg | <0.495 | 0.495 | |
| Arsenic Total | mg/kg | <0.0495 | 0.0495 | |
| Barium Total | mg/kg | <0.0495 | 0.0495 | |
| Cadmium Total | mg/kg | <0.0495 | 0.0495 | |
| Chromium Total | mg/kg | <0.0495 | 0.0495 | |
| Copper Total | mg/kg | <0.0495 | 0.0495 | |
| Lead Total | mg/kg | <0.0495 | 0.0495 | |
| Manganese Total | mg/kg | <0.0495 | 0.0495 | |
| Nickel Total | mg/kg | <0.0990 | 0.0990 | |
| Zinc Total | mg/kg | <0.990 | 0.990 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE: 584779 DUPLICATE: 584780 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------|-------|-----------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|--------------------|
| Arsenic Total | mg/kg | .41 | 2.38 | 2.07 | 1.92 | 69.6 | 61.6 | 70 - 130 | 7.52 | 20 |
| Selenium Total | mg/kg | 0 | 11.9 | 7.88 | 7.47 | 66.2 | 60.9 | 70 - 130 | 5.34 | 20 |
| Cadmium Total | mg/kg | .05 | 2.38 | 2.3 | 2.37 | 96.4 | 96.5 | 70 - 130 | 3 | 20 |
| Chromium Total | mg/kg | 2.51 | 2.38 | 4.81 | 4.68 | 96.5 | 88.6 | 70 - 130 | 2.74 | 20 |
| Copper Total | mg/kg | 2.64 | 2.38 | 4.95 | 4.8 | 97 | 88.1 | 70 - 130 | 3.08 | 20 |
| Lead Total | mg/kg | 5.51 | 2.38 | 8.33 | 7.87 | 118 | 96.3 | 70 - 130 | 5.68 | 20 |
| Nickel Total | mg/kg | 1.4 | 2.38 | 3.7 | 3.6 | 97 | 89.8 | 70 - 130 | 2.74 | 20 |
| Zinc Total | mg/kg | 7.86 | 2.38 | 10.5 | 10.2 | 112 | 94.9 | 70 - 130 | 2.9 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9513 Analysis Method: E300.0, Anions
QC Batch Method: E300.0, Anions
Associated Lab Samples: Q1550371001

METHOD BLANK: 584783

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Chloride | mg/L | <1.00 | 1.00 | |
| Fluoride | mg/L | <0.0100 | 0.0100 | |
| Sulfate | mg/L | <1.00 | 1.00 | |
| ortho-Phosphate (as P) | mg/L | <0.0100 | 0.0100 | |

MATRIX SPIKE: 584810 DUPLICATE: 584811 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Chloride | mg/L | 31.6 | 500 | 531 | 531 | 99.9 | 99.9 | 80 - 120 | 0 | 20 | |
| Fluoride | mg/L | .13 | 25 | 25.7 | 25.7 | 102 | 102 | 80 - 120 | 0 | 20 | |
| Sulfate | mg/L | 1.01 | 500 | 498 | 498 | 99.5 | 99.4 | 80 - 120 | 0 | 20 | |
| ortho-Phosphate (as P) | mg/L | .02 | 25 | 23.8 | 23.7 | 95.2 | 94.6 | 80 - 120 | .421 | 20 | |

LABORATORY CONTROL SAMPLE: 584812

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|------------------------|-------|-------------|------------|-----------|-------------|------------|
| Chloride | mg/L | 30 | 30.7 | 102 | 90 - 110 | |
| Fluoride | mg/L | 1 | 1.03 | 103 | 90 - 110 | |
| Sulfate | mg/L | 30 | 30.6 | 102 | 90 - 110 | |
| ortho-Phosphate (as P) | mg/L | 1 | .95 | 94.8 | 90 - 110 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 584814

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Chloride | mg/L | <1.00 | 1.00 | |
| Fluoride | mg/L | <0.0100 | 0.0100 | |
| Sulfate | mg/L | <1.00 | 1.00 | |
| ortho-Phosphate (as P) | mg/L | <0.0100 | 0.0100 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9514 **Analysis Method:** SM4500-NO3-H, Nitrate/Nitrite
QC Batch Method: SM4500-NO3-H, Nitrate/Nitrite
Associated Lab Samples: Q1550371001

LABORATORY CONTROL SAMPLE: 584803

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrate/Nitrite | mg/L | 1 | 1.01 | 1.09 | 101 | 109 | 90 - 110 | 7.62 | 20 |

METHOD BLANK: 584805

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

LABORATORY CONTROL SAMPLE: 584807

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrate/Nitrite | mg/L | 1 | .96 | 1 | 96 | 100 | 90 - 110 | 4.08 | 20 |

METHOD BLANK: 584809

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE SAMPLE: 584798 ORIGINAL: Q1550103003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrate/Nitrite | mg/L | .18 | 1 | 1.15 | 96.8 | 80 - 120 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9518 Analysis Method: SM2540D, TSS

QC Batch Method: SM2540D, TSS

Associated Lab Samples: Q1550371001

METHOD BLANK: 584902

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Total Suspended Solids | mg/L | <1.00 | 1.00 | |

LABORATORY CONTROL SAMPLE: 584903

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Suspended Solids | mg/L | 100 | 98 | 116 | 98 | 116 | 80 - 120 | 16.8 | 20 |

SAMPLE DUPLICATE: 584905 ORIGINAL: Q1550350003

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|-----------------|------------|------|---------|------------|
| Total Suspended Solids | mg/L | 8760 | 8500 | 3.01 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9520 Analysis Method: SM2320B, Alkalinity
QC Batch Method: SM2320B, Alkalinity
Associated Lab Samples: Q1550371001

METHOD BLANK: 584957

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

SAMPLE DUPLICATE: 584960 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------|-------|-----------------|------------|-----|---------|------------|
| Total Alkalinity | mg/L | 52.8 | 53.6 | 1.5 | 10 | |

MATRIX SPIKE SAMPLE: 584961 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Alkalinity | mg/L | 52.8 | 91 | 131 | 86.2 | 70 - 130 | |

METHOD BLANK: 584963

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WETP/2531 Analysis Method: E335.4 CN, SemiAuto Col

QC Batch Method: E335.4 CN, SemiAuto Col

Associated Lab Samples: Q1550371001

METHOD BLANK: 584993

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------|-------|--------------|-----------------|------------|
| Cyanide, Total | mg/L | <0.0200 | 0.0200 | |

LABORATORY CONTROL SAMPLE: 584994

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-------------|------------|-----------|-------------|------------|
| Cyanide, Total | mg/L | .4 | .36 | 90.6 | 90 - 110 | |

SAMPLE DUPLICATE: 584995 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------|-------|-----------------|------------|-----|---------|------------|
| Cyanide, Total | mg/L | 0 | 0 | 0 | 20 | |

MATRIX SPIKE SAMPLE: 584996 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Cyanide, Total | mg/L | 0 | .4 | .37 | 92 | 80 - 120 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9521 Analysis Method: E350.1 NH3-N by SemiAuto Col
QC Batch Method: E350.1 NH3-N by SemiAuto Col
Associated Lab Samples: Q1550371001

MATRIX SPIKE SAMPLE: 585026 ORIGINAL: Q1550322002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrogen, Ammonia (as N) | mg/L | .03 | 1 | .94 | 91 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 585027

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|--------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| Nitrogen, Ammonia (as N) | mg/L | 1 | .92 | .93 | 91.7 | 93.2 | 90 - 110 | 1.62 | 20 | |

METHOD BLANK: 585029

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Ammonia (as N) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5123 Analysis Method: SW7471A Hg in Solid, Semisolid
QC Batch Method: SW7471A Hg in Solid, Semisolid
Associated Lab Samples: Q1550371003

METHOD BLANK: 585184

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------|-------|--------------|-----------------|------------|
| Mercury Total | mg/kg | <0.0368 | 0.105 | |

LABORATORY CONTROL SAMPLE: 585185

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Mercury Total | mg/kg | 1 | 1.04 | 1.02 | 104 | 107 | 85 - 115 | 1.94 | 20 |

MATRIX SPIKE: 585187 DUPLICATE: 585188 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Mercury Total | mg/kg | .01 | .909 | .95 | .87 | 104 | 100 | 70 - 130 | 7.81 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: OVOL/2435 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 8260B
Associated Lab Samples: Q1550371004

METHOD BLANK: 585245

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 2-Chloroethylvinyl ether | ug/L | <5.00 | 5.00 | |
| Acrylonitrile | ug/L | <5.00 | 5.00 | |
| Styrene | ug/L | <5.00 | 5.00 | |
| Vinyl chloride | ug/L | <5.00 | 5.00 | |
| 1,2-Dichloroethane-d4 (S) | % | 101 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 92.8 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 101 | 70 - 130 | |
| Toluene d8 (S) | % | 99.3 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 585246

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| 1,1,1-Trichloroethane | ug/L | 50 | 52.9 | 53.1 | 106 | 106 | 65 - 135 | .377 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 53.4 | 53.3 | 107 | 107 | 65 - 135 | .187 | 30 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 53.3 | 54.1 | 107 | 108 | 65 - 135 | 1.49 | 30 | |
| 1,1-Dichloroethane | ug/L | 50 | 53 | 53.2 | 106 | 106 | 65 - 135 | .377 | 30 | |
| 1,1-Dichloroethene | ug/L | 50 | 52.3 | 52.5 | 105 | 105 | 65 - 135 | .382 | 30 | |
| 1,2-Dibromoethane | ug/L | 50 | 54.5 | 54.5 | 109 | 109 | 65 - 135 | 0 | 30 | |
| 1,2-Dichloroethane | ug/L | 50 | 52.4 | 52.8 | 105 | 106 | 65 - 135 | .76 | 30 | |
| 1,2-Dichloropropane | ug/L | 50 | 53 | 52.9 | 106 | 106 | 65 - 135 | .189 | 30 | |
| 2-Butanone | ug/L | 50 | 52.3 | 41.6 | 105 | 83.1 | 65 - 135 | 22.8 | 30 | |
| 2-Chloroethylvinyl ether | ug/L | 50 | 54.2 | 56.5 | 108 | 113 | 65 - 135 | 4.16 | 30 | |
| Acrylonitrile | ug/L | 50 | 50.4 | 55.3 | 101 | 111 | 65 - 135 | 9.27 | 30 | |
| Benzene | ug/L | 50 | 53.3 | 53.4 | 107 | 107 | 65 - 135 | .187 | 30 | |
| Bromodichloromethane | ug/L | 50 | 52.7 | 53 | 105 | 106 | 65 - 135 | .568 | 30 | |
| Bromoform | ug/L | 50 | 54.6 | 55.1 | 109 | 110 | 65 - 135 | .912 | 30 | |
| Bromomethane | ug/L | 50 | 51.8 | 52.5 | 104 | 105 | 65 - 135 | 1.34 | 30 | |
| Carbon tetrachloride | ug/L | 50 | 53.1 | 52.9 | 106 | 106 | 65 - 135 | .377 | 30 | |
| Chlorobenzene | ug/L | 50 | 53.3 | 53.4 | 107 | 107 | 65 - 135 | .187 | 30 | |
| Chloroethane | ug/L | 50 | 51.7 | 52.5 | 103 | 105 | 65 - 135 | 1.54 | 30 | |
| Chloroform | ug/L | 50 | 53.4 | 53.9 | 107 | 108 | 65 - 135 | .932 | 30 | |
| Chloromethane | ug/L | 50 | 50 | 49.5 | 100 | 98.9 | 65 - 135 | 1.01 | 30 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 585246

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Dibromochloromethane | ug/L | 50 | 53.6 | 53.8 | 107 | 108 | 65 - 135 | .372 | 30 |
| Ethyl Benzene | ug/L | 50 | 53.1 | 53 | 106 | 106 | 65 - 135 | .189 | 30 |
| Methylene chloride | ug/L | 50 | 52.8 | 52.9 | 106 | 106 | 65 - 135 | .189 | 30 |
| Styrene | ug/L | 50 | 54.3 | 54.4 | 109 | 109 | 65 - 135 | .184 | 30 |
| Tetrachloroethene | ug/L | 50 | 52.1 | 51.9 | 104 | 104 | 65 - 135 | .385 | 30 |
| Toluene | ug/L | 50 | 54.1 | 53 | 108 | 106 | 65 - 135 | 2.05 | 30 |
| Trichloroethene | ug/L | 50 | 51.9 | 52.2 | 104 | 104 | 65 - 135 | .576 | 30 |
| Vinyl chloride | ug/L | 50 | 50.1 | 51.3 | 100 | 103 | 65 - 135 | 2.37 | 30 |
| cis-1,3-Dichloropropene | ug/L | 50 | 52.8 | 52.6 | 106 | 105 | 65 - 135 | .38 | 30 |
| m,p-Xylene | ug/L | 100 | 108 | 107 | 108 | 107 | 65 - 135 | .93 | 30 |
| o-Xylene | ug/L | 50 | 54.3 | 54.3 | 109 | 109 | 65 - 135 | 0 | 30 |
| tert-Butyl methyl ether (MTBE) | ug/L | 50 | 53.2 | 53.2 | 106 | 106 | 65 - 135 | 0 | 30 |
| trans-1,2-Dichloroethene | ug/L | 50 | 52.5 | 53.1 | 105 | 106 | 65 - 135 | 1.14 | 30 |
| trans-1,3-Dichloropropene | ug/L | 50 | 52.8 | 53.4 | 106 | 107 | 65 - 135 | 1.13 | 30 |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 51.7 | 49.4 | 103 | 98.7 | 65 - 135 | 4.55 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 99.5 | 99.1 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 97.1 | 96.1 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 100 | 101 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 101 | 102 | 70 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WETP/2532 Analysis Method: E351.2 TKN by SemiAuto Col
QC Batch Method: E365.4 / E351.2 Water Prep
Associated Lab Samples: Q1550371001

METHOD BLANK: 585301

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 585308 ORIGINAL: Q1600051001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | .55 | 1 | 1.49 | 94.3 | 80 - 120 | |
| Phosphorus, Total (As P) | mg/L | .05 | 1 | 1.07 | 102 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 585309

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.02 | .98 | 102 | 97.6 | 90 - 110 | 4.41 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1.01 | 99.5 | 101 | 90 - 110 | 1.5 | 20 |

METHOD BLANK: 585311

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE SAMPLE: 585312 ORIGINAL: Q1600051002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | .7 | 1 | 1.62 | 92.1 | 80 - 120 | |
| Phosphorus, Total (As P) | mg/L | .03 | 1 | 1.04 | 101 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 585313

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.02 | .98 | 102 | 98.4 | 90 - 110 | 3.59 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | 1 | 1 | 99.9 | 100 | 90 - 110 | .1 | 20 |

METHOD BLANK: 585315

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9532 Analysis Method: SM2540C, TDS
QC Batch Method: SM2540C, TDS
Associated Lab Samples: Q1550371001

METHOD BLANK: 585478

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Total Dissolved Solids(TDS) | mg/L | <25.0 | 25.0 | |

LABORATORY CONTROL SAMPLE: 585479

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Dissolved Solids(TDS) | mg/L | 400 | 393 | 403 | 98.2 | 101 | 80 - 120 | 2.51 | 20 |

MATRIX SPIKE SAMPLE: 585481 ORIGINAL: Q1550371001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Dissolved Solids(TDS) | mg/L | 146 | 400 | 544 | 99.5 | 70 - 130 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5126 Analysis Method: E245.1 Mercury Water
QC Batch Method: E245.1 Mercury Water
Associated Lab Samples: Q1550371002

METHOD BLANK: 585776

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------|-------|--------------|-----------------|------------|
| Mercury Total | ug/L | <0.0700 | 0.200 | |

LABORATORY CONTROL SAMPLE: 585777

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Mercury Total | ug/L | 2 | 2 | 2.05 | 100 | 103 | 85 - 115 | 2.47 | 20 |

MATRIX SPIKE: 585779 DUPLICATE: 585780 ORIGINAL: Q1550371002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Mercury Total | ug/L | 0 | 2 | 2 | 1.97 | 100 | 98.4 | 70 - 130 | 1.51 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: ORG/4493 Analysis Method: E1664A, Gravimetric

QC Batch Method: E1664A, Gravimetric

Associated Lab Samples: Q1550371001

METHOD BLANK: 585865

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------|-------|--------------|-----------------|------------|
| Oil and Grease | mg/L | <2.50 | 2.50 | |

LABORATORY CONTROL SAMPLE: 585866

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Oil and Grease | mg/L | 40 | 38.4 | 37.8 | 96 | 94.5 | 78 - 114 | 1.57 | 18 |

MATRIX SPIKE SAMPLE: 585869 ORIGINAL: Q1600096002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Oil and Grease | mg/L | 1.57 | 43.7 | 38.7 | 88.5 | 78 - 114 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9547 Analysis Method: SM5310D, Total Organic Carbon
 QC Batch Method: SM5310D, Total Organic Carbon
 Associated Lab Samples: Q1550371001

METHOD BLANK: 586087

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

MATRIX SPIKE SAMPLE: 586091 ORIGINAL: Q1600051001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Organic Carbon | mg/L | 11.2 | 5 | 16.3 | 102 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 586092

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|-----|-----|---------|
| Total Organic Carbon | mg/L | 5 | 5.37 | 5.29 | 107 | 106 | 80 - 120 | 1.5 | 20 | |

METHOD BLANK: 586094

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5135 Analysis Method: E200.7 Metals, Trace Elements

QC Batch Method: E200.7 Prep

Associated Lab Samples: Q1550371002

LABORATORY CONTROL SAMPLE: 586782

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Calcium Total | ug/L | 10000 | 9850 | 9790 | 98.5 | 97.9 | 85 - 115 | .611 | 20 |
| Iron Total | ug/L | 1000 | 1050 | 1050 | 105 | 105 | 85 - 115 | 0 | 20 |
| Magnesium Total | ug/L | 10000 | 9700 | 9580 | 97 | 95.8 | 85 - 115 | 1.24 | 20 |
| Potassium Total | ug/L | 10000 | 9550 | 9410 | 95.5 | 94.1 | 85 - 115 | 1.48 | 20 |
| Sodium Total | ug/L | 10000 | 9930 | 9860 | 99.3 | 98.6 | 85 - 115 | .707 | 20 |

METHOD BLANK: 586784

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Calcium Total | ug/L | <200 | 200 | |
| Iron Total | ug/L | <50.0 | 50.0 | |
| Magnesium Total | ug/L | <200 | 200 | |
| Potassium Total | ug/L | <200 | 200 | |
| Sodium Total | ug/L | <600 | 600 | |

MATRIX SPIKE: 586785 DUPLICATE: 586786 ORIGINAL: Q1550371002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Calcium Total | ug/L | 12400 | 10000 | 22500 | 22800 | 101 | 104 | 70 - 130 | 1.32 | 20 |
| Iron Total | ug/L | 325 | 1000 | 1570 | 1790 | 125 | 146 | 70 - 130 | 13.1 | 20 |
| Magnesium Total | ug/L | 3810 | 10000 | 13800 | 13900 | 100 | 101 | 70 - 130 | .722 | 20 |
| Potassium Total | ug/L | 5730 | 10000 | 15300 | 15600 | 95.7 | 98.4 | 70 - 130 | 1.94 | 20 |
| Sodium Total | ug/L | 20500 | 10000 | 30300 | 31100 | 97.9 | 106 | 70 - 130 | 2.61 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: MEP/5136 Analysis Method: E200.8, ICP-MS
 QC Batch Method: E200.8, ICP-MS Prep
 Associated Lab Samples: Q1550371002

METHOD BLANK: 586791

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Aluminum Total | ug/L | <10.0 | 10.0 | |
| Arsenic Total | ug/L | <2.00 | 2.00 | |
| Cadmium Total | ug/L | <1.00 | 1.00 | |
| Chromium Total | ug/L | <2.00 | 2.00 | |
| Copper Total | ug/L | <2.00 | 2.00 | |
| Lead Total | ug/L | <1.00 | 1.00 | |
| Manganese Total | ug/L | <1.00 | 1.00 | |
| Nickel Total | ug/L | <2.00 | 2.00 | |
| Selenium Total | ug/L | <4.00 | 4.00 | |
| Silver Total | ug/L | <1.00 | 1.00 | |
| Zinc Total | ug/L | <5.00 | 5.00 | |

LABORATORY CONTROL SAMPLE: 586792

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Aluminum Total | ug/L | 50 | 55.8 | 51.8 | 112 | 104 | 85 - 115 | 7.43 | 20 |
| Arsenic Total | ug/L | 50 | 53.8 | 50 | 108 | 99.9 | 85 - 115 | 7.32 | 20 |
| Cadmium Total | ug/L | 50 | 51.7 | 50.2 | 103 | 100 | 85 - 115 | 2.94 | 20 |
| Chromium Total | ug/L | 50 | 53.1 | 49.8 | 106 | 99.7 | 85 - 115 | 6.41 | 20 |
| Copper Total | ug/L | 50 | 53.4 | 49.7 | 107 | 99.3 | 85 - 115 | 7.18 | 20 |
| Lead Total | ug/L | 50 | 52.7 | 51 | 105 | 102 | 85 - 115 | 3.28 | 20 |
| Manganese Total | ug/L | 50 | 53.9 | 50.5 | 108 | 101 | 85 - 115 | 6.51 | 20 |
| Nickel Total | ug/L | 50 | 53.2 | 49.2 | 106 | 98.3 | 85 - 115 | 7.81 | 20 |
| Selenium Total | ug/L | 250 | 260 | 240 | 104 | 96 | 85 - 115 | 8 | 20 |
| Silver Total | ug/L | 50 | 53.5 | 51.7 | 107 | 103 | 85 - 115 | 3.42 | 20 |
| Zinc Total | ug/L | 50 | 54.4 | 50.2 | 109 | 100 | 85 - 115 | 8.03 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

| MATRIX SPIKE: 586794 DUPLICATE: 586795 ORIGINAL: Q1550371002 | | | | | | | | | | |
|--|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
| Arsenic Total | ug/L | 1.63 | 50 | 53.6 | 54 | 107 | 108 | 70 - 130 | .743 | 20 |
| Cadmium Total | ug/L | 0 | 50 | 51.9 | 51.7 | 104 | 103 | 70 - 130 | .386 | 20 |
| Chromium Total | ug/L | .44 | 50 | 52.2 | 51 | 104 | 102 | 70 - 130 | 2.33 | 20 |
| Copper Total | ug/L | 1.67 | 50 | 53.3 | 53 | 107 | 106 | 70 - 130 | .564 | 20 |
| Lead Total | ug/L | 1.09 | 50 | 54.6 | 54.8 | 107 | 107 | 70 - 130 | .366 | 20 |
| Manganese Total | ug/L | 21.6 | 50 | 72.1 | 73.8 | 101 | 104 | 70 - 130 | 2.33 | 20 |
| Nickel Total | ug/L | 1.13 | 50 | 52.3 | 52.1 | 105 | 104 | 70 - 130 | .383 | 20 |
| Selenium Total | ug/L | .2 | 250 | 252 | 253 | 101 | 101 | 70 - 130 | .396 | 20 |
| Silver Total | ug/L | 0 | 50 | 52.9 | 52.6 | 106 | 105 | 70 - 130 | .569 | 20 |
| Zinc Total | ug/L | 11.2 | 50 | 62.8 | 63.4 | 103 | 104 | 70 - 130 | .951 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: OVOL/2440 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 8260B
Associated Lab Samples: Q1550371003

METHOD BLANK: 586874

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2,2-Tetrachloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dibromoethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloropropane | ug/Kg | <5.00 | 5.00 | |
| 2-Hexanone | ug/Kg | <5.00 | 5.00 | |
| 4-Methyl-2-pentanone | ug/Kg | <5.00 | 5.00 | |
| Acetone | ug/Kg | <5.00 | 5.00 | |
| Acrylonitrile | ug/Kg | <5.00 | 5.00 | |
| Benzene | ug/Kg | <5.00 | 5.00 | |
| Bromodichloromethane | ug/Kg | <5.00 | 5.00 | |
| Bromoform | ug/Kg | <5.00 | 5.00 | |
| Carbon disulfide | ug/Kg | <5.00 | 5.00 | |
| Carbon tetrachloride | ug/Kg | <5.00 | 5.00 | |
| Chlorobenzene | ug/Kg | <5.00 | 5.00 | |
| Chloroethane | ug/Kg | <5.00 | 5.00 | |
| Chloroform | ug/Kg | <5.00 | 5.00 | |
| Chloromethane | ug/Kg | <5.00 | 5.00 | |
| Dibromochloromethane | ug/Kg | <5.00 | 5.00 | |
| Dichlorodifluoromethane | ug/Kg | <5.00 | 5.00 | |
| Ethyl Benzene | ug/Kg | <5.00 | 5.00 | |
| Methylene chloride | ug/Kg | <5.00 | 5.00 | |
| Styrene | ug/Kg | <5.00 | 5.00 | |
| Tetrachloroethene | ug/Kg | <5.00 | 5.00 | |
| Toluene | ug/Kg | <5.00 | 5.00 | |
| Trichloroethene | ug/Kg | <5.00 | 5.00 | |
| Vinyl chloride | ug/Kg | <5.00 | 5.00 | |
| Xylene (total) | ug/Kg | <5.00 | 5.00 | |
| cis-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |
| m,p-Xylene | ug/Kg | <10.0 | 10.0 | |
| o-Xylene | ug/Kg | <5.00 | 5.00 | |
| trans-1,2-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| trans-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1550371

METHOD BLANK: 586874

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,2-Dichloroethane-d4 (S) | % | 103 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 98.6 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 102 | 70 - 130 | |
| Toluene d8 (S) | % | 99.3 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 586875

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| 1,1,1-Trichloroethane | ug/Kg | 50 | 48.1 | 50.1 | 96.2 | 100 | 40 - 160 | 4.07 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 50 | 49.4 | 51.3 | 98.8 | 103 | 40 - 160 | 3.77 | 30 | |
| 1,1,2-Trichloroethane | ug/Kg | 50 | 50.6 | 51.3 | 101 | 103 | 40 - 160 | 1.37 | 30 | |
| 1,1-Dichloroethane | ug/Kg | 50 | 48.4 | 50.1 | 96.9 | 100 | 40 - 160 | 3.45 | 30 | |
| 1,1-Dichloroethene | ug/Kg | 50 | 47.4 | 49.6 | 94.7 | 99.3 | 40 - 160 | 4.54 | 30 | |
| 1,2-Dibromoethane | ug/Kg | 50 | 50.3 | 52.4 | 101 | 105 | 40 - 160 | 4.09 | 30 | |
| 1,2-Dichloroethane | ug/Kg | 50 | 49.4 | 51.7 | 98.8 | 103 | 40 - 160 | 4.55 | 30 | |
| 1,2-Dichloropropane | ug/Kg | 50 | 48.5 | 50.6 | 97 | 101 | 40 - 160 | 4.24 | 30 | |
| 2-Hexanone | ug/Kg | 50 | 41.6 | 52.9 | 83.1 | 106 | 40 - 160 | 23.9 | 30 | |
| 4-Methyl-2-pentanone | ug/Kg | 50 | 47.5 | 51.5 | 94.9 | 103 | 40 - 160 | 8.08 | 30 | |
| Acetone | ug/Kg | 50 | 41.1 | 55.5 | 82.2 | 111 | 40 - 160 | 29.8 | 30 | |
| Acrylonitrile | ug/Kg | 50 | 50.2 | 53.6 | 100 | 107 | 40 - 160 | 6.55 | 30 | |
| Benzene | ug/Kg | 50 | 48.5 | 50 | 96.9 | 100 | 40 - 160 | 3.05 | 30 | |
| Bromodichloromethane | ug/Kg | 50 | 49.1 | 51.1 | 98.2 | 102 | 40 - 160 | 3.99 | 30 | |
| Bromoform | ug/Kg | 50 | 50.2 | 52.1 | 100 | 104 | 40 - 160 | 3.71 | 30 | |
| Carbon disulfide | ug/Kg | 50 | 47.4 | 49.5 | 94.8 | 99 | 40 - 160 | 4.33 | 30 | |
| Carbon tetrachloride | ug/Kg | 50 | 47.7 | 49.8 | 95.5 | 99.6 | 40 - 160 | 4.31 | 30 | |
| Chlorobenzene | ug/Kg | 50 | 48.2 | 49.8 | 96.4 | 99.6 | 40 - 160 | 3.27 | 30 | |
| Chloroethane | ug/Kg | 50 | 48.2 | 49.5 | 96.5 | 99.1 | 40 - 160 | 2.66 | 30 | |
| Chloroform | ug/Kg | 50 | 48.5 | 50.1 | 96.9 | 100 | 40 - 160 | 3.25 | 30 | |
| Chloromethane | ug/Kg | 50 | 46.5 | 48.2 | 92.9 | 96.4 | 40 - 160 | 3.59 | 30 | |
| Dibromochloromethane | ug/Kg | 50 | 50.2 | 52 | 100 | 104 | 40 - 160 | 3.52 | 30 | |
| Dichlorodifluoromethane | ug/Kg | 50 | 46.5 | 47.1 | 93 | 94.2 | 40 - 160 | 1.28 | 30 | |
| Ethyl Benzene | ug/Kg | 50 | 47.1 | 49.1 | 94.3 | 98.2 | 40 - 160 | 4.16 | 30 | |
| Methylene chloride | ug/Kg | 50 | 47.1 | 48.7 | 94.2 | 97.4 | 40 - 160 | 3.34 | 30 | |
| Styrene | ug/Kg | 50 | 48.4 | 50.6 | 96.9 | 101 | 40 - 160 | 4.44 | 30 | |
| Tetrachloroethene | ug/Kg | 50 | 47.1 | 49.4 | 94.1 | 98.9 | 40 - 160 | 4.77 | 30 | |
| Toluene | ug/Kg | 50 | 47.8 | 49.8 | 95.7 | 99.6 | 40 - 160 | 4.1 | 30 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

LABORATORY CONTROL SAMPLE: 586875

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Trichloroethene | ug/Kg | 50 | 48.4 | 50.4 | 96.9 | 101 | 40 - 160 | 4.05 | 30 |
| Vinyl chloride | ug/Kg | 50 | 44.7 | 46.3 | 89.5 | 92.7 | 40 - 160 | 3.52 | 30 |
| Xylene (total) | ug/Kg | | 5 | | 144 | | | 4.08 | |
| cis-1,3-Dichloropropene | ug/Kg | 50 | 48.6 | 50.2 | 97.2 | 100 | 40 - 160 | 3.24 | 30 |
| m,p-Xylene | ug/Kg | 100 | 95.4 | 99.3 | 95.4 | 99.3 | 40 - 160 | 4.01 | 30 |
| o-Xylene | ug/Kg | 50 | 48.1 | 50.5 | 96.2 | 101 | 40 - 160 | 4.87 | 30 |
| trans-1,2-Dichloroethene | ug/Kg | 50 | 47.8 | 50.2 | 95.5 | 100 | 40 - 160 | 4.9 | 30 |
| trans-1,3-Dichloropropene | ug/Kg | 50 | 48 | 49.9 | 95.9 | 99.8 | 40 - 160 | 3.88 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 104 | 102 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 98.8 | 97.3 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 102 | 103 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 100 | 100 | 70 - 130 | | |

MATRIX SPIKE: 586877 DUPLICATE: 586878 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| 1,1,1-Trichloroethane | ug/Kg | 0 | 49.6 | 44 | 44.9 | 88.7 | 90 | 40 - 160 | 2.02 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 0 | 49.6 | 35.5 | 35.9 | 71.6 | 71.9 | 40 - 160 | 1.12 | 30 |
| 1,1,2-Trichloroethane | ug/Kg | 0 | 49.6 | 39 | 39.4 | 78.7 | 78.9 | 40 - 160 | 1.02 | 30 |
| 1,1-Dichloroethane | ug/Kg | 0 | 49.6 | 45.3 | 45.5 | 91.4 | 91.3 | 40 - 160 | .441 | 30 |
| 1,1-Dichloroethene | ug/Kg | 0 | 49.6 | 45.4 | 44.8 | 91.5 | 89.8 | 40 - 160 | 1.33 | 30 |
| 1,2-Dibromoethane | ug/Kg | 0 | 49.6 | 36.8 | 37.6 | 74.1 | 75.4 | 40 - 160 | 2.15 | 30 |
| 1,2-Dichloroethane | ug/Kg | 0 | 49.6 | 40.2 | 40.4 | 81.1 | 81.1 | 40 - 160 | .496 | 30 |
| 1,2-Dichloropropane | ug/Kg | 0 | 49.6 | 41.9 | 42.9 | 84.5 | 86 | 40 - 160 | 2.36 | 30 |
| 2-Hexanone | ug/Kg | 0 | 49.6 | 21.1 | 21.5 | 42.6 | 43.1 | 40 - 160 | 1.88 | 30 |
| 4-Methyl-2-pentanone | ug/Kg | 0 | 49.6 | 31.4 | 31.2 | 63.2 | 62.5 | 40 - 160 | .639 | 30 |
| Acetone | ug/Kg | 0 | 49.6 | 24.6 | 23.3 | 49.5 | 46.7 | 40 - 160 | 5.43 | 30 |
| Acrylonitrile | ug/Kg | 0 | 49.6 | 33.3 | 32.7 | 67.1 | 65.6 | 40 - 160 | 1.82 | 30 |
| Benzene | ug/Kg | 0 | 49.6 | 44.1 | 44.4 | 89 | 88.9 | 40 - 160 | .678 | 30 |
| Bromodichloromethane | ug/Kg | 0 | 49.6 | 38.7 | 39 | 78 | 78.1 | 40 - 160 | .772 | 30 |
| Bromoform | ug/Kg | 0 | 49.6 | 31.7 | 32.6 | 64 | 65.4 | 40 - 160 | 2.8 | 30 |
| Carbon disulfide | ug/Kg | 0 | 49.6 | 37.4 | 37.2 | 75.4 | 74.5 | 40 - 160 | .536 | 30 |
| Carbon tetrachloride | ug/Kg | 0 | 49.6 | 38.3 | 38.1 | 77.2 | 76.4 | 40 - 160 | .524 | 30 |
| Chlorobenzene | ug/Kg | 0 | 49.6 | 39.8 | 42.5 | 80.3 | 85.1 | 40 - 160 | 6.56 | 30 |
| Chloroethane | ug/Kg | 0 | 49.6 | 46 | 45.8 | 92.8 | 91.9 | 40 - 160 | .436 | 30 |
| Chloroform | ug/Kg | 0 | 49.6 | 44.4 | 44.9 | 89.5 | 90.1 | 40 - 160 | 1.12 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

MATRIX SPIKE: 586877 DUPLICATE: 586878 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Chloromethane | ug/Kg | 0 | 49.6 | 41.9 | 39.9 | 84.5 | 80 | 40 - 160 | 4.89 | 30 |
| Dibromochloromethane | ug/Kg | 0 | 49.6 | 35.5 | 36.7 | 71.5 | 73.5 | 40 - 160 | 3.32 | 30 |
| Dichlorodifluoromethane | ug/Kg | 0 | 49.6 | 43.9 | 42 | 88.6 | 84.3 | 40 - 160 | 4.42 | 30 |
| Ethyl Benzene | ug/Kg | 0 | 49.6 | 38.7 | 42.2 | 78 | 84.7 | 40 - 160 | 8.65 | 30 |
| Methylene chloride | ug/Kg | 0 | 49.6 | 42.5 | 43 | 85.6 | 86.1 | 40 - 160 | 1.17 | 30 |
| Styrene | ug/Kg | 0 | 49.6 | 35.3 | 39 | 71.3 | 78.2 | 40 - 160 | 9.96 | 30 |
| Tetrachloroethene | ug/Kg | 0 | 49.6 | 40.1 | 42 | 80.9 | 84.1 | 40 - 160 | 4.63 | 30 |
| Toluene | ug/Kg | 0 | 49.6 | 42.9 | 44.5 | 86.4 | 89.1 | 40 - 160 | 3.66 | 30 |
| Trichloroethene | ug/Kg | 0 | 49.6 | 42.4 | 44 | 85.5 | 88.2 | 40 - 160 | 3.7 | 30 |
| Vinyl chloride | ug/Kg | 0 | 49.6 | 43.6 | 44.1 | 87.9 | 88.4 | 40 - 160 | 1.14 | 30 |
| cis-1,3-Dichloropropene | ug/Kg | 0 | 49.6 | 38.4 | 39.2 | 77.5 | 78.5 | 40 - 160 | 2.06 | 30 |
| m,p-Xylene | ug/Kg | 0 | 99.2 | 76.2 | 84.3 | 76.8 | 84.5 | 40 - 160 | 10.1 | 30 |
| o-Xylene | ug/Kg | 0 | 49.6 | 38.4 | 42.2 | 77.3 | 84.6 | 40 - 160 | 9.43 | 30 |
| trans-1,2-Dichloroethene | ug/Kg | 0 | 49.6 | 44.4 | 45.3 | 89.5 | 90.8 | 40 - 160 | 2.01 | 30 |
| trans-1,3-Dichloropropene | ug/Kg | 0 | 49.6 | 37.6 | 38.9 | 75.8 | 78 | 40 - 160 | 3.4 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | | 87.1 | 87.9 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | | 101 | 101 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | | 97.7 | 97.2 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | | 103 | 102 | 70 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9591 Analysis Method: 600/2-78-54
QC Batch Method: 600/2-78-54
Associated Lab Samples: Q1550371003

SAMPLE DUPLICATE: 588293 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|-----------------|------------|------|---------|------------|
| Texture, Gravel >2.0mm | % | .39 | .24 | 47.8 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.



QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9592 Analysis Method: 600/2-78-54
 QC Batch Method: 600/2-78-54
 Associated Lab Samples: Q1550371003

SAMPLE DUPLICATE: 588295 ORIGINAL: Q1550371003

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-----------------|------------|------|---------|------------|
| Texture, Clay <0.002mm | % | 34.4 | 35.5 | 3.15 | | |
| Texture, Sand 0.05-2.0mm | % | 34.5 | 36.9 | 6.72 | | |
| Texture, Silt 0.002-0.05mm | % | 30.7 | 27.4 | 11.4 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1550371

QC Batch: WET/9633 Analysis Method: SW9060A Total Organic Carbon
QC Batch Method: SW9060A Total Organic Carbon
Associated Lab Samples: Q1550371003

MATRIX SPIKE: 590336 DUPLICATE: 590337 ORIGINAL: Q1600637002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Total Organic Carbon | mg/kg | 18700 | 30000 | 40300 | 54800 | 72.1 | 120 | 70 - 130 | 30.5 | 20 |

LABORATORY CONTROL SAMPLE: 590338

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Organic Carbon | mg/kg | 15000 | 16000 | 16400 | 107 | 109 | 70 - 130 | 2.47 | 20 |

METHOD BLANK: 590340

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/kg | <1500 | 1500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1550371

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|--------------------------------|------------|-------------------------------|----------------|
| Q1550371001 | WETLANDS | | | SM5210B | WET/9501 |
| Q1550371004 | WETLANDS | SW3520C, Liquid/Liquid Extract | OEXT/4035 | SW-846 8270C | ORG/4501 |
| Q1550371003 | WETLANDS | SW3050B, Metals Prep | MEP/5118 | SW6010B ICP-AES | MET/4092 |
| Q1550371003 | WETLANDS | SW3050B, Metals Prep | MEP/5119 | SW6020 ICP-MS | MET/4097 |
| Q1550371003 | WETLANDS | SW3540, Soxhlet Extraction | OEXT/4036 | SW-846 8270C | ORG/4505 |
| Q1550371003 | WETLANDS | SW3050B, Metals Prep | MEP/5120 | SW6020 ICP-MS | MET/4086 |
| Q1550371003 | WETLANDS | SW3050B, Metals Prep | MEP/5120 | SW6020 ICP-MS | MET/4090 |
| Q1550371001 | WETLANDS | | | E300.0, Anions | WET/9513 |
| Q1550371001 | WETLANDS | | | SM4500-NO3-H, Nitrate/Nitrite | WET/9514 |
| Q1550371003 | WETLANDS | | | SM2540G, Percent Solids | WET/9516 |
| Q1550371001 | WETLANDS | SM2540D, TSS | WET/9518 | SM2320B, Alkalinity | WET/9520 |
| Q1550371001 | WETLANDS | | | E160.4 Ignition at 550C | WET/9519 |
| Q1550371001 | WETLANDS | pH Check | SM/12395 | SM5310D, Total Organic Carbon | WET/9547 |
| Q1550371001 | WETLANDS | SM2320B, Alkalinity | WET/9520 | SM2540D, TSS | WET/9518 |
| Q1550371001 | WETLANDS | E335.4 CN, SemiAuto Col | WETP/2531 | E335.4 CN, SemiAuto Col | WET/9534 |

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1550371

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|--------------------------------|------------|--------------------------------|----------------|
| Q1550371001 | WETLANDS | | | E350.1 NH3-N by SemiAuto Col | WET/9521 |
| Q1550371003 | WETLANDS | SW7471A Hg in Solid, Semisolid | MEP/5123 | SW7471A Hg in Solid, Semisolid | MET/4085 |
| Q1550371004 | WETLANDS | | | SW-846 8260B | OVOL/2435 |
| Q1550371001 | WETLANDS | E365.4 / E351.2 Water Prep | WETP/2532 | E365.4 Phosphorus, Total | WET/9536 |
| Q1550371001 | WETLANDS | E365.4 / E351.2 Water Prep | WETP/2532 | E351.2 TKN by SemiAuto Col | WET/9538 |
| Q1550371001 | WETLANDS | E410.4 COD by SemiAuto Col | WETP/2533 | E410.4 COD by SemiAuto Col | WET/9531 |
| Q1550371001 | WETLANDS | | | SM2540C, TDS | WET/9532 |
| Q1550371002 | WETLANDS | E245.1 Mercury Water | MEP/5126 | E245.1 Mercury Water | MET/4089 |
| Q1550371001 | WETLANDS | | | E1664A, Gravimetric | ORG/4493 |
| Q1550371002 | WETLANDS | E200.7 Prep | MEP/5135 | E200.7 Metals, Trace Elements | MET/4099 |
| Q1550371002 | WETLANDS | E200.8, ICP-MS Prep | MEP/5136 | E200.8, ICP-MS | MET/4100 |
| Q1550371003 | WETLANDS | | | SW-846 8260B | OVOL/2440 |
| Q1550371003 | WETLANDS | | | 600/2-78-54 | WET/9591 |
| Q1550371003 | WETLANDS | | | 600/2-78-54 | WET/9592 |
| Q1550371003 | WETLANDS | | | SW9060A Total Organic Carbon | WET/9633 |

NOT FOR SWQMIS
Texas Commission on Environmental Quality

GA
~~1515998~~
RFA TAG #

SURFACE WATER QUALITY MONITORING PROGRAM

REQUEST FOR ANALYSIS (RFA)

Q1550371001-002
~~Q1550370001~~

Region 14 Generator's e-mail ID garrambi@tceq.state.tx.us LAB# 004

LAB LCRA ELS PCA _____

Station ID ~~14726~~ Segment ID ~~2451~~ Collector GARRAMBI

Description POWDERHORN LAKE

| | | | |
|---|--------------------------------|-------------------|---|
| Identify the type of sample using the the submitting and collecting entity, and monitoring type codes provided at right. WC _____ Submitting Entity FO _____ Collecting Entity RT _____ Monitoring Type | Collecting Entity | ST Standards Team | List RFA numbers and Program Codes of all associated samples. Tag ID _____ PC _____ Tag ID _____ PC _____ |
| | FO Field Operations | TM TMDL CO Team | |
| | SQ SWQM CO Team | GW Groundwater | |
| | AS Assessment CO Team | | |
| | Monitoring Type - Sample Codes | | |
| | BE Biased Event | | |
| | BF Biased Flow | | |
| | BS Biased Season | | |
| | RT Routine / Baseline | | |
| | Monitoring Type - QC Codes | | |
| | FS Field Split | FB Field Blank | |
| | EB Equipment Blank | TB Trip Blank | |

| | |
|---|---|
| GRAB SAMPLE: Date <u>12/30/2015</u> End Time <u>~14:15</u> End Depth <u>0.3</u> meters | COMPOSITE SAMPLE: for water, sediment and tissue composite samples Start Date <u>12/30/2015</u> Start Time <u>14:25</u> hrs; Start Depth <u>0.9</u> meters End Date <u>12/30/2015</u> End Time <u>14:40</u> hrs; End Depth <u>0.9</u> meters Composite Category: <u>B</u> T=Time; S=Space; B=Both; F=Flow Weight Composite Type ("#" number of grabs): <u>3</u> <i>to make composite sample</i> |
|---|---|

LAB INFORMATION: Specific Conductance 206 Field pH 7.78 No. containers 3 Bacteria Bottle Lot # _____

HAZARDS OR SPECIAL INSTRUCTIONS

REQUEST WATER, SEDIMENT, & TISSUE ON SEPARATE FORMS (Run only tests circled)
NOTE: IF USING OTHER THAN TCEQ LAB, CONSULT WITH LAB FOR VOLUME AND CONTAINER REQUIREMENTS

| CHEMICALS IN WATER | |
|---|---|
| ROUTINE CHEMICAL: | MISCELLANEOUS CHEMICAL: |
| <ul style="list-style-type: none"> 1 L, iced - Total Alkalinity Chloride TSS VSS Nitrate + Nitrite Sulfate Fluoride -1 L, iced Chlorophyll a -600 mL, H₂SO₄, < pH 2, iced - Ammonia Total Phosphorus TOC TKN | <ul style="list-style-type: none"> -100 mL, iced (must be in a separate container) - Fecal Coliform E.Coli <u>N/A</u> Dilution (Check one): None ___ 10 mL ___ 1 mL ___ Enterococci -4 L, iced - BOD -110 mL, H₂SO₄, iced - COD - may be analysed from routine preserved sample |
| | <ul style="list-style-type: none"> -1 L, NaOH > pH 12, 0.2g ascorbic acid, iced (alert lab) - Cyanide -1 L, glass, HCl pH < 2, iced - Oil and Grease -200 mL, iced - TDS (lab measurement) -50 mL, field filtered - Orthophosphate - P |



RECEIVED BY LAB: initials _____ Date 12/31/15 Time 11:55 Cooler Temp: 0.3°C pH checked? yes/no 0.3°C CT

Notes: _____

*See Attached TTT

Chain of Custody Record

W 002/06



Send to: Houston Laboratory
 Phone: 281-457-5229
 LGRA-EIS

Region: 14 Organization #: _____ PCA Code: _____ Program: Water
 Sampler Name: Gerardo Arambide Sampler Signature: Gerardo Arambide
 Sampler phone number: 361-825-3111 (phn) E-Mail ID: gerardo.arambide@tea.texas.gov

| LAB USE ONLY | Sample ID | Sampling | | Comp | Grab | Matrix L = Liquid S = Solid | No. of Containers | Containers* | | Analyses Requested | BOD | TSS | E. Coli | Orthophosphate | O & G Routine Chemical | Remarks |
|--------------|-----------|----------|-------|------|------|-----------------------------------|-------------------|-----------------|-----------------|--------------------|-----|-----|---------|----------------|---------------------------|---------|
| | | Date | Time | | | | | Preservatives** | Preservatives** | | | | | | | |
| | -01 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -02 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -03 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -04 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -05 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -06 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -07 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |
| | -08 | 12/30/15 | 14:10 | | | L | | | | X | | | | | | 1 liter |

RELINQUISHED BY: Gerardo Arambide DATE: 12/30/15 TIME: 16:00

RECEIVED BY: Gerardo Arambide DATE: 12/30/15 TIME: 14:10

Shipper Name: Feed-Ex

Shipper Number: NaOH

*Containers: P = Plastic G = Clear Glass A = Amber Glass V = VOA Vials O = Other
 **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl 4 = HNO₃ 5 = Na₂S₂O₃ 6 = Other

FOR LAB USE ONLY
 Received on ice: Y N
 Temperature: 0.3 °C 0.3 °C
 Preserved: Y N
 COC Seal: Y N
 Seals Intact: Y N

* See Attachment M1

Chain of Custody Record

W 002701



Send to:
 Houston Laboratory
 Phone: 281-457-5229
 OCRA-ETS

Region: 44
 Organization #: Bernardo Arambide
 Sampler Name: Bernardo Arambide
 Sampler phone number: 361-825-3111

PCA Code: _____
 Program: Water
 Sampler Signature: Bernardo Arambide
 E-Mail ID: bernardo.arambide@tea.texas.gov

| LAB USE ONLY | Sample ID | Sampling | | Comp | Grab | Matrix <small>L = Liquid S = Solid</small> | No. of Containers | Containers* <small>Preservatives**</small> | | Analyses Requested | NH ₃ -N | E. Coli | VOCs | Trip Blank | Semi-volatiles | * Total Metals | Remarks |
|--------------|-----------|----------|-------|------|------|---|-------------------|---|---|--|--------------------|---------|------|------------|----------------|----------------|---------|
| | | Date | Time | | | | | 1 | 2 | | | | | | | | |
| | -01 | 12/30/15 | 14:40 | ✓ | ✓ | S | 1 | 6 | 6 | Metals, BOD, Sediment | | | | | | | Jar |
| | -02 | 12/30/15 | 14:40 | ✓ | ✓ | S | 1 | 6 | 6 | EBOD, Concentrants, Organics, Sediment | | | | | | | Jar |
| | -03 | 12/30/15 | 14:40 | ✓ | ✓ | S | 1 | 6 | 6 | | | | | | | | Jar |
| | -04 | 12/30/15 | 14:15 | ✓ | ✓ | L | 3 | 6 | 6 | | | | | | | | Jar |
| | -05 | 12/30/15 | 14:15 | ✓ | ✓ | L | 1 | 6 | 6 | | | | | | | | Jar |
| | -06 | 12/30/15 | 14:15 | ✓ | ✓ | L | 1 | 6 | 6 | | | | | | | | Jar |
| | -07 | 12/30/15 | 14:12 | ✓ | ✓ | L | 1 | 6 | 6 | | | | | | | | Jar |
| | -08 | | | | | | | | | | | | | | | | |

RELINQUISHED BY

Bernardo Arambide

DATE TIME

12/30/15 16:00

RECEIVED BY

Fed-Ex

DATE TIME

12/31/15 11:15

Shipper Name: Fed-Ex

Shipper Number: _____

- *Containers: P = Plastic G = Clear Glass A = Amber Glass V = VOA Vials O = Other
- **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl 4 = HNO₃ 5 = Na₂S₂O₃ 6 = Other

FOR LAB USE ONLY

Received on ice: Y N
 Temperature: 0.3 °C 00.3 °C
 Preserved: Y N
 COC Seal: Y N
 Seals Intact: Y N

* Acidifying in the lab

Reprints
 Wetlands

October 29, 2015

GERARDO ARRAMBIDE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY
PO BOX 13087, MC-174
AUSTIN, TX 78711

RE: Final Analytical Report
ELS Workorder Q1538683

Attn: ALLISON TRAVERS

Enclosed are the analytical results for sample(s) received by LCRA Environmental Laboratory Services. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report. This final report provides results related only to the sample(s) as received for the above referenced work order.

Thank you for selecting ELS for your analytical needs. If you have any questions regarding this report, please contact us at (512) 356-6022. We look forward to assisting you again.

Authorized for release by:



Ariana Dean
Project Manager
ariana.dean@lcra.org

Enclosures



T104704218

SAMPLE SUMMARY

Workorder: Q1538683

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------------|---------|-----------------|-----------------|
| Q1538683001 | AC UPPER | Aqueous | 10/1/2015 11:40 | 10/2/2015 11:15 |
| Q1538683002 | AC LOWER | Aqueous | 10/1/2015 09:50 | 10/2/2015 11:15 |
| Q1538683003 | AC UPPER TRIP BLANK | Aqueous | 10/1/2015 06:30 | 10/2/2015 11:15 |
| Q1538683004 | AC LOWER TRIP BLANK | Aqueous | 10/1/2015 11:40 | 10/2/2015 11:15 |
| Q1538683005 | AC UPPER | Solid | 10/1/2015 11:40 | 10/2/2015 11:15 |
| Q1538683006 | AC LOWER | Solid | 10/1/2015 09:50 | 10/2/2015 11:15 |

Report Definitions

| | |
|------|----------------------------------|
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| ML | Maximum Limit - Client Specified |
| DF | Dilution Factor |
| Qual | Qualifiers |

* SEE APPROVED KTH - * USE THE BUREAU PRINTED

H 002677

Chain of Custody Record

Send to:
 Houston Laboratory
 Phone: 281-457-5229
 LORA

Region: AA Organization #: PCA Code: Water 0538083
 Sampler Name: Gerardo Arambold Sampler Signature: Gerardo Arambold
 Sampler phone number: 361-825-3111 E-Mail ID: gerardo.arambold@tea.texas.gov

| LAB USE ONLY | Sample ID | Sampling | | Comp | Grab | Matrix | No. of Containers | Analyses Requested | | | | | | | | Remarks |
|--------------|-----------|----------|-------|------|------|--------|-------------------|--------------------|-------|---------|-----|-------------------|---------|-------------------|----------------|----------------------|
| | | Date | Time | | | | | BOD | MSBOD | Cyanide | TDS | Reactive Chemical | E. Coli | Reactive Chloride | Orthophosphate | |
| 001 | -01 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | | | X | | | AC. Upper 1 liter |
| | -02 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | X | | | | | | 1 liter |
| | -03 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | X | | | | | 1 liter + liter |
| | -04 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | X | | | | | 1 liter |
| | -05 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | X | | | | | | | 1 liter |
| | -06 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | | | X | | | 50 ml |
| | -07 | 10/1/15 | 11:40 | ✓ | ✓ | L | 2 | | | | | | | X | | 1 liter |
| | -08 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | X | | | | | 100 ml |

RELINQUISHED BY: Gerardo Arambold DATE: 10/1/15 TIME: 14:15 RECEIVED BY: Fed Ex DATE: 10/1/15 TIME: 11:15

FOR LAB USE ONLY
 Received on Ice: Y N
 Temperature: 0.7 °C
 Preserved: Y N
 COC Seal: Y N
 Seals Intact: Y N

Shipper Name: Fed Ex
 *Containers: P = Plastic G = Clear Glass A = Amber Glass
 **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl

Other: NADA 9
Aspic

Barcode: 01538083 175749

White (Original) - Lab
 TCEQ-20649 (Rev. 6/13) Pink - Collector Copy

see attachment USE SWY M suites W 002679

Chain of Custody Record

Region: 14 Organization #: Water PCA Code: Water Program: Water
 Sampler Name: Gerardo Aramboldi (print) Sampler Signature: Gerardo Aramboldi
 Sampler phone number: 361-825-3111 E-Mail ID: Gerardo.Aramboldi@tceq.texas.gov


 Send to:
 Houston Laboratory
 Phone: 281-457-5229
LARA

| LAB USE ONLY | Sample ID | Sampling | | Comp | Grab | Matrix L = Liquid S = Solid | No. of Containers | Containers* Preservatives** | | | | | | Remarks | | |
|--------------|-----------|----------|-------|------|------|-----------------------------------|-------------------|-----------------------------|-----|---------|--------------------|---------|--------|---------|-----------------|--|
| | | Date | Time | | | | | Metals in Seawater | SPM | Ammonia | NH ₃ -N | E. Coll | Triphk | | Dist. Volatiles | Tot. Metals |
| | -01 | 10/1/15 | 11:40 | - | - | L | 3 | Metals in Seawater | SPM | Ammonia | | | | | | A.C. Upper 6A VOCs + Triphk |
| | -02 | 10/1/15 | 11:40 | - | - | L | 1 | | | | | X | | | | Triphk vid |
| | -03 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | | | X | | | Semivolatiles Metals in Sediment Conventional |
| | -04 | 10/1/15 | 11:40 | ✓ | ✓ | S | 1 | | | | X | | | | | Metals in Sediment Conventional |
| | -05 | 10/1/15 | 11:40 | ✓ | ✓ | S | 1 | | | | X | | | | | Organics in Sediment |
| | -06 | 10/1/15 | 11:40 | ✓ | ✓ | S | 1 | | | | | X | | | | Total Metals Acidified for Cu, Pb, Zn, Cd, Ni, Cr, Mn, Fe |
| | -07 | 10/1/15 | 11:40 | ✓ | ✓ | L | 1 | | | | | | | X | | |
| | -08 | | | | | | | | | | | | | | | |

RELINQUISHED BY: Gerardo Aramboldi DATE: 10/15/14 TIME: 14:15 RECEIVED BY: _____ DATE: _____ TIME: _____
 Shipper Name: Fed Ex Shipper Number: _____
 *Containers: P = Plastic G = Clear Glass A = Amber Glass V = VOA Vials O = Other _____
 **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl 4 = HNO₃ 5 = Na₂S₂O₈ 6 = Other _____
 Received on Ice: Y N
 Temperature: _____ °C
 Preserved: Y N
 COC Seal: Y N
 Seals Intact: Y N

NOT FOR SWQMS
Texas Commission on Environmental Quality
SURFACE WATER QUALITY MONITORING PROGRAM

GA
 1515998
 RFA TAG #

REQUEST FOR ANALYSIS (RFA)

Region 14 Generator's e-mail ID garrambi@tceq.state.tx.us LAB# _____

LAB LCRA ELS PCA _____

Station ID GA 14726 Segment ID GA 245+ Collector GARRAMBI

Description POWDERHORN LAKE

| Identify the type of sample using the submitting and collecting entity, and monitoring type codes provided at right. WC _____ Submitting Entity FO _____ Collecting Entity RT _____ Monitoring Type | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Collecting Entity</th> </tr> <tr> <td>FO Field Operations</td> <td>ST Standards Team</td> </tr> <tr> <td>SQ SWQM CO Team</td> <td>TM TMDL CO Team</td> </tr> <tr> <td>AS Assessment CO Team</td> <td>GW Groundwater</td> </tr> <tr> <th colspan="2">Monitoring Type - Sample Codes</th> </tr> <tr> <td>BE Biased Event</td> <td></td> </tr> <tr> <td>BF Biased Flow</td> <td></td> </tr> <tr> <td>BS Biased Season</td> <td></td> </tr> <tr> <td>RT Routine / Baseline</td> <td></td> </tr> <tr> <th colspan="2">Monitoring Type - QC Codes</th> </tr> <tr> <td>FS Field Split</td> <td>FB Field Blank</td> </tr> <tr> <td>EB Equipment Blank</td> <td>TB Trip Blank</td> </tr> </table> | Collecting Entity | | FO Field Operations | ST Standards Team | SQ SWQM CO Team | TM TMDL CO Team | AS Assessment CO Team | GW Groundwater | Monitoring Type - Sample Codes | | BE Biased Event | | BF Biased Flow | | BS Biased Season | | RT Routine / Baseline | | Monitoring Type - QC Codes | | FS Field Split | FB Field Blank | EB Equipment Blank | TB Trip Blank | List RFA numbers and Program Codes of all associated samples. Tag ID _____ PC _____ Tag ID _____ PC _____ |
|--|--|-------------------|--|---------------------|-------------------|-----------------|-----------------|-----------------------|----------------|--------------------------------|--|-----------------|--|----------------|--|------------------|--|-----------------------|--|----------------------------|--|----------------|----------------|--------------------|---------------|---|
| Collecting Entity | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FO Field Operations | ST Standards Team | | | | | | | | | | | | | | | | | | | | | | | | | |
| SQ SWQM CO Team | TM TMDL CO Team | | | | | | | | | | | | | | | | | | | | | | | | | |
| AS Assessment CO Team | GW Groundwater | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring Type - Sample Codes | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BE Biased Event | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BF Biased Flow | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BS Biased Season | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RT Routine / Baseline | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring Type - QC Codes | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FS Field Split | FB Field Blank | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB Equipment Blank | TB Trip Blank | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|--|
| GRAB SAMPLE: Date <u>mm / dd / 20 yy</u> End Time <u>hh mm</u> End Depth _____ meters | COMPOSITE SAMPLE: for water, sediment and tissue composite samples Start Date <u>mm / dd / 20 yy</u> Start Time _____ hrs; Start Depth _____ meters End Date <u>mm / dd / 20 yy</u> End Time _____ hrs; End Depth _____ meters Composite Category: _____ T=Time; S=Space; B=Both; F=Flow Weight Composite Type (#* number of grabs) _____ |
|---|--|

LAB INFORMATION: Specific Conductance _____ Field pH _____ No. containers 3 GA Bacteria Bottle Lot # _____

HAZARDS OR SPECIAL INSTRUCTIONS _____

REQUEST WATER, SEDIMENT, & TISSUE ON SEPARATE FORMS (Run only tests circled)

NOTE: IF USING OTHER THAN TCEQ LAB, CONSULT WITH LAB FOR VOLUME AND CONTAINER REQUIREMENTS

CHEMICALS IN WATER

ROUTINE CHEMICAL:

- 1 L, iced - Total Alkalinity
- Chloride
- TSS
- VSS
- Nitrate + Nitrite
- Sulfate
- Fluoride
- 1 L, iced - Chlorophyll a *N/A*
- 600 mL, H₂SO₄, < pH 2, iced - Ammonia
- Total Phosphorus
- TOC
- TKN

MISCELLANEOUS CHEMICAL:

- 100 mL, iced (must be in a separate container) - Fecal Coliform
- E. Coli
- Dilution (Check one): None _____ 10 mL _____ 1 mL _____
- Enterococci
- 4 L, iced - BOD
- 110 mL, H₂SO₄, iced - COD - may be analysed from routine preserved sample

- 1 L, NaOH > pH 12, 0.2g ascorbic acid, iced (alert lab) - Cyanide
- 1 L, glass, HCL pH < 2, iced - Oil and Grease
- 200 mL, iced - TDS (lab measurement)
- 50 mL, field filtered - Orthophosphate - P

needs to be added

RECEIVED BY LAB: initials _____ Date _____ Time _____ Cooler Temp: _____ pH checked? yes / no

Notes: _____

METALS IN WATER

**ROUTINE METALS:
Dissolved**

SDM bottle (unacidified)

- | | |
|----------|-----------|
| Aluminum | Magnesium |
| Arsenic | Manganese |
| Cadmium | Nickel |
| Calcium | Potassium |
| Chromium | Silver |
| Copper | Sodium |
| Iron | Zinc |
| Lead | |

Mercury - Total
(low level) SHG bottle (unacidified)

Selenium - Total
STM bottle (unacidified)

TOTAL METALS:

- Aluminum
- Arsenic
- Cadmium
- Calcium
- Chromium
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Nickel
- Potassium
- Silver
- Sodium
- Zinc

MISCELLANEOUS METALS:

Total or Dissolved

- | | |
|--------------------|------------|
| Antimony | Molybdenum |
| Barium | Strontium |
| Beryllium | Titanium |
| Cobalt | Thallium |
| Dissolved Mercury | Tin |
| Dissolved Selenium | Vanadium |

Hardness (CaCO3)

Chromium hex (dissolved) - 500mL, iced
(must be in a separate container)
Notify all labs in advance

SEDIMENT

TOTAL METALS:

- 500g, iced -
(1-pint glass or plastic, w/Teflon-lined lid)

- | | |
|----------|-----------|
| Aluminum | Lead |
| Arsenic | Manganese |
| Barium | Mercury |
| Cadmium | Nickel |
| Chromium | Selenium |
| Copper | Silver |
| Iron | Zinc |

CONVENTIONALS FOR METALS

- 500g, iced -
(1-pint glass or plastic, w/Teflon-lined lid)

- Percent Total Solids
- Total Organic Carbon
- Sediment Grain Size

VOLATILE ORGANICS:

- 500g, no headspace, iced -
(1-pint glass w/Teflon-lined lid)

~~Pesticides~~ N/A

Semivolatiles, low level

Conventionals for Organics

- 500g, iced -
(1-pint glass or plastic, w/Teflon-lined lid)

- Percent Total Solids
- Total Organic Carbon
- Sediment Grain Size

OTHER

ORGANICS IN WATER

**Organophosphorus
Pesticides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Organochlorine
Pesticides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Chlorinated
Herbicides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Volatiles, Low level:
including MTBE**

- Three VOA vials, iced -
(add 2 - 4 drops HCl)
no headspace

Semivolatiles, Low level:

- 1 L, iced -
(glass solvent rinsed
w/Teflon lined lid)

TISSUE

Whole fish or fillet

Species

EPA Species Code

of individuals

METALS:

- 300g, preferably fresh, stored on ice, freeze if
holding more than four days

- | | |
|----------|----------|
| Arsenic | Lead |
| Cadmium | Mercury |
| Chromium | Selenium |
| Copper | |

PESTICIDES:

Low level and Percent Lipids
- Same 300g sample -

SEMIVOLATILE ORGANICS:

Low level
- Same 300g sample -

* See Attached KPI Use the jump suited

Chain of Custody Record

Heulab

002676

Region: 14 Organization #: PCA Code: Water
 Sampler Name: Gerardo Arrambide Sampler Signature: Gerardo Arrambide
 Sampler phone number: 361-825-3111 E-Mail ID: gerardo.arambide@tea.texas.gov

Send to:
 Houston Laboratory
 Phone: 281-457-5229
 TERA

| Sample ID | Sampling | | Comp | Grab | Matrix L = Liquid S = Solid | No. of Containers | Containers* | | | | | | Preservatives** | Analyses Requested | Remarks |
|-----------|----------|------|------|------|-----------------------------------|----------------------|-------------|----|-------------------|------------------------------|---------|---------------------|-----------------|--------------------|-----------------------|
| | Date | Time | | | | | BOD | TS | Residual Chlorine | Residual Chlorine + Chlorine | E. coli | Pathogenic Chemical | | | |
| -01 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | | | | | | X | A.C. lower 1 liter |
| -02 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | X | | | | | | 1 liter |
| -03 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | | | | | | | 1 liter |
| -04 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | X | | | | | | 1 liter |
| -05 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | | X | | | | | 1 liter |
| -06 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | | | | | X | | 50mls |
| -07 | 10/1/15 | 9:50 | ✓ | ✓ | L | 2 | | | | | | | | X | 1 liter |
| -08 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | | | | X | | | | | 100 mL |

RELINQUISHED BY: Gerardo Arrambide DATE: 10/1/15 TIME: 14:15 RECEIVED BY: Fed Ex DATE: _____ TIME: _____

Shipper Name: Fed Ex Shipper Number: _____

*Containers: P = Plastic G = Clear Glass A = Amber Glass V = VOA Vials O = Other
 **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl 4 = HNO₃ 5 = Na₂S₂O₅ 6 = Other

FOR LAB USE ONLY
 Received on Ice: Y N
 Temperature: _____ °C
 Preserved: Y N
 COC Seal: Y N
 Seals Intact: Y N

see Attached KHH USE DWPM suites
Chain of Custody Record

W 002678

if you lab

Send to: Houston Laboratory Phone: 281-457-5229
 LERA
 Region: 14 Organization #: PCA Code: water Program: water
 Sampler Name: Gerardo Ananbide Sampler Signature: Gerardo Ananbide
 Sampler phone number: 261-825-3111 E-Mail ID: gerardo.ananbide@ted.texas.gov

| LAB USE ONLY | Sample ID | Sampling | | Comp | Grab | Matrix L = Liquid S = Solid | No. of Containers | Preservatives* | | | | | | Remarks | | | |
|--------------|-----------|----------|------|------|------|-----------------------------------|-------------------|-------------------------------|--------|----------|------|---------|------|---------|------------|---------------|---------------------------------------|
| | | Date | Time | | | | | H ₂ O ₂ | Formal | Ascorbic | NaOH | E. Coll | YDCs | | Trip Blank | Semivolatiles | Total Metals |
| 002 | -01 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | A.C. Lower VOCs # vials |
| 002 | -02 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Trip Blank vial |
| 006 | -03 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Semivolatiles 162 |
| 006 | -04 | 10/1/15 | 9:50 | ✓ | ✓ | S | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Metals in sediment for |
| 006 | -05 | 10/1/15 | 9:50 | ✓ | ✓ | S | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Concentrations for |
| 002 | -06 | 10/1/15 | 9:50 | ✓ | ✓ | S | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Organics in sediment for |
| 002 | -07 | 10/1/15 | 9:50 | ✓ | ✓ | L | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Total Metals by Acidify in 3 liter |
| | -08 | | | | | | | | | | | | | | | | |

RELINQUISHED BY: Gerardo Ananbide DATE TIME: 10/1/15 14:15 RECEIVED BY: Fed Ex
 Shipper Name: Fed EX Shipper Number: _____
 *Containers: P = Plastic G = Clear Glass A = Amber Glass V = VOA Vials O = Other
 **Preservatives: 1 = Ice 2 = H₂SO₄ 3 = HCl 4 = HNO₃ 5 = Na₂S₂O₅ 6 = Other

NOT FOR SWQOMIS
Texas Commission on Environmental Quality
SURFACE WATER QUALITY MONITORING PROGRAM

6A
 1515998
 RFA TAG #

REQUEST FOR ANALYSIS (RFA)

Region 14 Generator's e-mail ID garrambi@tceq.state.tx.us LAB# _____

LAB LCRA ELS PCA _____

Station ID 6A 14726 Segment ID 6A 2457 Collector GARRAMBI

Description 6A POWDERHORN LAKE

| | | |
|--|--|---|
| Identify the type of sample using the the submitting and collecting entity, and monitoring type codes provided at right. WC _____ Submitting Entity FO _____ Collecting Entity RT _____ Monitoring Type | Collecting Entity FO Field Operations ST Standards Team SQ SWQM CO Team TM TMDL CO Team AS Assessment CO Team GW Groundwater Monitoring Type - Sample Codes BE Biased Event BF Biased Flow BS Biased Season RT Routine / Baseline Monitoring Type - QC Codes FS Field Split FB Field Blank EB Equipment Blank TB Trip Blank | List RFA numbers and Program Codes of all associated samples. Tag ID _____ PC _____ Tag ID _____ PC _____ |
|--|--|---|

| | |
|---|--|
| GRAB SAMPLE: Date <u> </u> / <u> </u> / <u>20</u> mm dd yy End Time _____ hh mm End Depth _____ meters | COMPOSITE SAMPLE: for water, sediment and tissue composite samples Start Date <u> </u> / <u> </u> / <u>20</u> Start Time _____ hrs; Start Depth _____ meters mm dd yy End Date <u> </u> / <u> </u> / <u>20</u> End Time _____ hrs; End Depth _____ meters mm dd yy Composite Category: _____ T=Time; S=Space; B=Both; F=Flow Weight Composite Type ("n" number of grabs) _____ |
|---|--|

LAB INFORMATION: Specific Conductance _____ Field pH _____ No. containers 3 ^{6A} Bacteria Bottle Lot # _____

HAZARDS OR SPECIAL INSTRUCTIONS _____

REQUEST WATER, SEDIMENT, & TISSUE ON SEPARATE FORMS (Run only tests circled)

NOTE: IF USING OTHER THAN TCEQ LAB, CONSULT WITH LAB FOR VOLUME AND CONTAINER REQUIREMENTS

CHEMICALS IN WATER

ROUTINE CHEMICAL:

- 1 L, iced -
- Total Alkalinity
- Chloride
- TSS
- VSS
- Nitrate + Nitrite
- Sulfate
- Fluoride
- ~~- 1 L, iced -~~ N/A
Chlorophyll-a
- 600 mL, H₂SO₄, < pH 2, iced -
- Ammonia
- Total Phosphorus
- TOC
- TKN

MISCELLANEOUS CHEMICAL:

- 100 mL, iced (must be in a separate container) -
- Fecal Coliform
- E. Coli
- Dilution (check one): None _____ 10 mL _____ 1 mL _____
- Enterococci
- 4 L, iced -
BOD
- 110 mL, H₂SO₄, iced -
COD - may be analysed from routine preserved sample
- 1 L, NaOH > pH 12, 0.2g ascorbic acid, iced (alert lab) -
Cyanide
- 1 L, glass; HCL pH < 2, iced -
Oil and Grease
- 200 mL, iced -
TDS (lab measurement)
- 50 mL, field filtered -
Orthophosphate - P

RECEIVED BY LAB: initials _____ Date _____ Time _____ Cooler Temp: _____ pH checked? yes / no

Notes: _____

METALS IN WATER

**ROUTINE METALS:
Dissolved**

SDM bottle (unacidified)

| | |
|----------|-----------|
| Aluminum | Magnesium |
| Arsenic | Manganese |
| Cadmium | Nickel |
| Calcium | Potassium |
| Chromium | Silver |
| Copper | Sodium |
| Iron | Zinc |
| Lead | |

Mercury - Total
(low level) SHG bottle (unacidified)

Selenium - Total
STM bottle (unacidified)

TOTAL METALS:

Aluminum
Arsenic
Cadmium
Calcium
Chromium
Copper
Iron
Lead
Magnesium
Manganese
Nickel
Potassium
Silver
Sodium
Zinc

MISCELLANEOUS METALS:

Total or Dissolved

| | |
|--------------------|------------|
| Antimony | Molybdenum |
| Barium | Strontium |
| Beryllium | Titanium |
| Cobalt | Thallium |
| Dissolved Mercury | Tin |
| Dissolved Selenium | Vanadium |

Hardness (CaCO3)

Chromium hex (dissolved) - 500mL, iced
(must be in a separate container)

Notify all labs in advance

SEDIMENT

TOTAL METALS:

- 500g, iced -
(1-pint glass or plastic, w/Teflon-lined lid)

| | |
|----------|-----------|
| Aluminum | Lead |
| Arsenic | Manganese |
| Barium | Mercury |
| Cadmium | Nickel |
| Chromium | Selenium |
| Copper | Silver |
| Iron | Zinc |

CONVENTIONALS FOR METALS

- 500g, iced -

(1-pint glass or plastic, w/Teflon-lined lid)

Percent Total Solids
Total Organic Carbon
Sediment Grain Size

VOLATILE ORGANICS:

- 500g, no headspace, iced -
(1-pint glass w/Teflon-lined lid)

~~Pesticides~~ N/A

Semivolatiles, low level

Conventionals for Organics

- 500g, iced -

(1-pint glass or plastic, w/Teflon-lined lid)

Percent Total Solids
Total Organic Carbon
Sediment Grain Size

OTHER

ORGANICS IN WATER

**Organophosphorus
Pesticides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Organochlorine
Pesticides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Chlorinated
Herbicides, Low level:**

- 1 L, iced -
(solvent rinsed glass
w/Teflon lined lid)

**Volatiles, Low level:
including MTBE**

- Three VOA vials, iced -
(add 2 - 4 drops HCl)
no headspace

Semivolatiles, Low level:

- 1 L, iced -
(glass solvent rinsed
w/Teflon lined lid)

TISSUE

Whole fish or fillet

Species _____

EPA Species Code _____

of individuals _____

METALS:

- 300g, preferably fresh, stored on ice, freeze if
holding more than four days

| | |
|----------|----------|
| Arsenic | Lead |
| Cadmium | Mercury |
| Chromium | Selenium |
| Copper | |

PESTICIDES:

Low level and Percent Lipids
- Same 300g sample -

SEMIVOLATILE ORGANICS:

Low level
- Same 300g sample -

11

100
FedEx Express **US Airbill**

FedEx Tracking Number

8723 9313 6938

1 From This provider can be tracked for recipient's response.

Date: 11/11/03
FedEx Tracking Number: 872393136938

Sender's Name: *Cyber World* Phone: *214 325 2111*

Company: *ICEO REGION 14*
Address: *5300 OCEAN DR STE 1200*
City: *CORPUS CHRISTI* State: *TX* ZIP: *78412-9503*

2 Your Internal Billing Reference

3 To Recipient's Name: *Laura-Elis* Phone: *512 356 4022*

Community: *LORA-ELIS*
Address: *5505 MONTPELIER DR*
Address: _____
Use this line for the HOLD location address or for continuation of your shipping address.

HOLD Weekday
FedEx Home Delivery service.
EOD (EOD) NOT available for FedEx Home Delivery.
HOLD Saturday
FedEx Home Delivery service.
EOD (EOD) NOT available for FedEx Home Delivery.

City: *AUSTIN* State: *TX* ZIP: *78744*

0000076416



8723 9313 6938

Form No. **0215**
Recipient's Copy

4a Express Package Service **Packages up to 150 lbs.**
 FedEx Priority Overnight **FedEx Standard Overnight**
 FedEx 2Day **FedEx Express Saver**
 Express Freight Service **Packages over 150 lbs.**

5 Packaging ***Declared value limit \$500.**
 FedEx Envelope* **FedEx Box** **FedEx Tube** **Old or**
 FedEx 1Day Freight **FedEx 2Day Freight**
 FedEx 2Day Freight **FedEx 2Day Freight**

6 Special Handling and Delivery Signature Options
 SATURDAY Delivery
 Direct Signature **Indirect Signature**
 Non-Signature Required **Direct Signature** **Indirect Signature**
 Does this shipment contain dangerous goods? **Yes** **No**

7 Payment Bill to:
 Sender **Recipient** **Credit Card** **Cash/Check**
Total Packages: _____ Total Weight: _____
605

41 TERMS, CONDITIONS AND RESTRICTIONS FOR POSTAGE AND FEES GOVERN

872393136949

FedEx
Tracking Number

Sender's
Title

Phone

Company

ICES REGION LA

Address 4300 OCEAN DR STE 1200

Dept./Division

CLIPPUS CHRISTI

State

TX

ZIP

78415-5201

or Internal Billing Reference

PROJECT SUMMARY

Workorder: Q1538683

Sample Analysis Comments

| | | |
|--|-----------------------------------|------------------------|
| Lab ID: Q1538683001 Improperly Preserved | Sample ID: AC UPPER | Analyte: Acrylonitrile |
| Lab ID: Q1538683002 Improperly Preserved | Sample ID: AC LOWER | Analyte: Acrylonitrile |
| Lab ID: Q1538683003 Value Above Calibration Range | Sample ID: AC UPPER TRIP BLANK | Analyte: 2-Butanone |
| Lab ID: Q1538683003 Improperly Preserved | Sample ID: AC UPPER TRIP BLANK | Analyte: Acrylonitrile |
| Lab ID: Q1538683004 Improperly Preserved | Sample ID: AC LOWER TRIP BLANK | Analyte: Acrylonitrile |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683001 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

Volatile Suspended Solids

| | | | | | | | | | | |
|--|---|------|------|------|--|----------------|----|----------------|----|--|
| Analysis Desc: E160.4 Ignition at 550C | Preparation Method: E160.4 Ignition at 550C | | | | | | | | | |
| | Analytical Method: E160.4 Ignition at 550C | | | | | | | | | |
| Volatile Suspended Solids | 4.29 mg/L | 1.43 | 1.43 | 1.43 | | 10/06/15 10:53 | JM | 10/06/15 10:53 | JM | |

INORGANICS

| | | | | | | | | | | |
|--|--|------|------|--|---|----------|----|----------------|----|--|
| Analysis Desc: E200.7 Metals, Trace Elements | Preparation Method: E200.7 Prep | | | | | | | | | |
| | Analytical Method: E200.7 Metals, Trace Elements | | | | | | | | | |
| Calcium Total | 47500 ug/L | 70.0 | 200 | | 1 | 10/06/15 | FM | 10/08/15 13:58 | MV | |
| Iron Total | 254 ug/L | 20.0 | 50.0 | | 1 | 10/06/15 | FM | 10/08/15 13:58 | MV | |
| Magnesium Total | 14700 ug/L | 70.0 | 200 | | 1 | 10/06/15 | FM | 10/08/15 13:58 | MV | |
| Potassium Total | 5490 ug/L | 70.0 | 200 | | 1 | 10/06/15 | FM | 10/08/15 13:58 | MV | |
| Sodium Total | 149000 ug/L | 200 | 600 | | 1 | 10/06/15 | FM | 10/08/15 13:58 | MV | |

| | | | | | | | | | | |
|-------------------------------|---|-------|------|--|---|----------|----|----------------|-----|--|
| Analysis Desc: E200.8, ICP-MS | Preparation Method: E200.8, ICP-MS Prep | | | | | | | | | |
| | Analytical Method: E200.8, ICP-MS | | | | | | | | | |
| Aluminum Total | 197 ug/L | 4.00 | 10.0 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Arsenic Total | 3.93 ug/L | 0.700 | 2.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Cadmium Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Chromium Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Copper Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Lead Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Manganese Total | 105 ug/L | 0.400 | 1.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Nickel Total | <2.00 ug/L | 0.700 | 2.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Selenium Total | <4.00 ug/L | 1.50 | 4.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Silver Total | <1.00 ug/L | 0.400 | 1.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |
| Zinc Total | <5.00 ug/L | 1.70 | 5.00 | | 1 | 10/06/15 | FM | 10/07/15 11:22 | SLW | |

ANIONS by ION CHROMATOGRAPHY

| | | | | | | | | | | |
|-------------------------------|------------------------------------|------|------|--|---|----------------|----|----------------|----|--|
| Analysis Desc: E300.0, Anions | Preparation Method: E300.0, Anions | | | | | | | | | |
| | Analytical Method: E300.0, Anions | | | | | | | | | |
| Chloride | 166 mg/L | 2.00 | 5.00 | | 5 | 10/09/15 13:44 | ML | 10/09/15 13:44 | ML | |

INORGANICS

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683001 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous |
| Sample ID: AC UPPER | Date Collected: 10/1/2015 11:40 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|---|--------|----|----|----------------|---------|----------------|----|------|
| Analysis Desc: E300.0, Anions | | Preparation Method: E300.0, Anions | | | | | | | | |
| | | Analytical Method: E300.0, Anions | | | | | | | | |
| Fluoride | 0.377 mg/L | 0.00400 | 0.0100 | | 1 | 10/02/15 15:30 | WR | 10/02/15 15:30 | WR | |
| ortho-Phosphate (as P) | 0.129 mg/L | 0.00400 | 0.0100 | | 1 | 10/02/15 15:30 | WR | 10/02/15 15:30 | WR | |
| Sulfate | 16.4 mg/L | 0.400 | 1.00 | | 1 | 10/02/15 15:30 | WR | 10/02/15 15:30 | WR | |
| CYANIDE, TOTAL | | | | | | | | | | |
| Analysis Desc: E335.4 CN, SemiAuto Col | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: E335.4 CN, SemiAuto Col | | | | | | | | |
| Cyanide, Total | <0.0200 mg/L | 0.00500 | 0.0200 | | 1 | 10/05/15 14:59 | CA M | 10/09/15 | | CM |
| AMMONIA AS N | | | | | | | | | | |
| Analysis Desc: E350.1 NH3-N by SemiAuto Col | | Preparation Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| Nitrogen, Ammonia (as N) | 0.0500 mg/L | 0.00800 | 0.0200 | | 1 | 10/15/15 | CM | 10/15/15 | | CM |
| TOTAL KJELDAHL NITROGEN | | | | | | | | | | |
| Analysis Desc: E351.2 TKN by SemiAuto Col | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E351.2 TKN by SemiAuto Col | | | | | | | | |
| Nitrogen, Kjeldahl, Total | 1.42 mg/L | 0.0400 | 0.100 | | 1 | 10/13/15 15:42 | MM | 10/19/15 | | ML |
| TOTAL PHOSPHATE AS P | | | | | | | | | | |
| Analysis Desc: E365.4 Phosphorus, Total | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E365.4 Phosphorus, Total | | | | | | | | |
| Phosphorus, Total (As P) | 0.174 mg/L | 0.00800 | 0.0200 | | 1 | 10/13/15 15:42 | MM | 10/14/15 | | CM |
| CHEMICAL OXYGEN DEMAND | | | | | | | | | | |
| Analysis Desc: E410.4 COD by SemiAuto Col | | Preparation Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| COD | 30.5 mg/L | 3.50 | 7.00 | | 1 | 10/14/15 10:24 | ML | 10/16/15 | | ML |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |

ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683001** Date Received: 10/2/2015 11:15 Matrix: Aqueous
Sample ID: **AC UPPER** Date Collected: 10/1/2015 11:40 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 2-Butanone | <20.0 ug/L | 5.00 | 20.0 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |

Acrolein and Acrylonitrile

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683001 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous |
| Sample ID: AC UPPER | Date Collected: 10/1/2015 11:40 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------------|---------------|----------------------------------|----------|----|----|----------------|----|----------------|----|------|
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | I |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Toluene d8 (S) | 97.6 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Toluene d8 (S) | 97.6 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |
| Toluene d8 (S) | 97.6 % | | 70 - 130 | | | 10/06/15 16:14 | CO | 10/06/15 16:14 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683001 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------|---------------|--|------|----|----|----------------|----|----------------|----|------|
| Semivolatiles | | | | | | | | | | |
| Analysis Desc: SW-846 8270C | | Preparation Method: SW3520C, Liquid/Liquid Extract | | | | | | | | |
| Analytical Method: SW-846 8270C | | | | | | | | | | |
| Pyridine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| n-Nitrosodimethylamine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2-Picoline | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Methyl methanesulfonate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| n-Nitrosodiethylamine | <20.1 ug/L | 4.02 | 20.1 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Ethyl methanesulfonate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Aniline | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Phenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2-Chlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Bis(2-Chloroethyl)ether | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 1,3-Dichlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 1,4-Dichlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 1,2-Dichlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Benzyl alcohol | <10.0 ug/L | 5.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2-Methylphenol (o-Cresol) | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Bis(2-Chloroisopropyl)ether | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Acetophenone | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Hexachloroethane | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| n-Nitrosodi-n-propylamine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| m,p-Cresol | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Nitrobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| n-Nitrosopiperidine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Isophorone | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2-Nitrophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2,4-Dimethylphenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Benzoic acid | 53.5 ug/L | 20.1 | 50.2 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Bis(2-Chloroethoxy)methane | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2,4-Dichlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 1,2,4-Trichlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| Naphthalene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |
| 2,6-Dichlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | | CO |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683001 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| 4-Chloroaniline | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Hexachlorobutadiene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| n-Nitrosodi-n-butylamine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Chloro-3-methylphenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2-Methylnaphthalene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 1,2,4,5-Tetrachlorobenzene | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Hexachlorocyclopentadiene | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,4,6-Trichlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,4,5-Trichlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 1&2-Chloronaphthalene | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2-Nitroaniline | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Acenaphthylene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Dimethyl phthalate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,6-Dinitrotoluene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 3-Nitroaniline | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Acenaphthene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,4-Dinitrophenol | <50.2 ug/L | 20.1 | 50.2 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Dibenzofuran | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Nitrophenol | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Pentachlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,4-Dinitrotoluene | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 1-Naphthylamine | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | N |
| 2-Naphthylamine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2,3,4,6-Tetrachlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Fluorene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Diethyl phthalate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Chlorophenyl phenyl ether | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Nitroaniline | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4,6-Dinitro-2-methylphenol | <50.2 ug/L | 20.1 | 50.2 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| n-Nitrosodiphenylamine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 1,2 Diphenylhydrazine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Hexachlorobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Bromophenyl phenyl ether | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Atrazine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | N |

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ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683001 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|------------|----|----|----------------|----|----------------|----|------|
| Phenacetin | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 4-Aminobiphenyl | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Pentachlorophenol | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Pentachloronitrobenzene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Phenanthrene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Pronamide | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Anthracene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Carbazole | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Carbaryl (Sevin) | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Di-n-butyl phthalate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Fluoranthene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzidine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Pyrene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| p-(Dimethylamino)azobenzene | <10.0 ug/L | 4.02 | 10.0 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | N |
| Butyl benzyl phthalate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzo(a)anthracene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Chrysene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 3,3'-Dichlorobenzidine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Bis(2-Ethylhexyl)phthalate | 17.7 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Di-n-octyl phthalate | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzo(b)fluoranthene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzo(k)fluoranthene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 7,12-Dimethylbenz[a]anthracene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzo(a)pyrene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 3-Methylcholanthrene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Indeno(1,2,3-cd)pyrene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Dibenz(a,j)acridine | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Dibenz(a,h)anthracene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Benzo(g,h,i)perylene | <5.02 ug/L | 2.01 | 5.02 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Cresols | <15.1 ug/L | 4.02 | 15.1 | | 1 | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | N |
| 2,4,6-Tribromophenol (S) | 41.1 % | | 0 - 146 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2-Fluorobiphenyl (S) | 40.8 % | | 29.8 - 157 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| 2-Fluorophenol (S) | 32.8 % | | 0 - 89 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Nitrobenzene-d5 (S) | 44.8 % | | 15.1 - 165 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | |
|--|---------------------------------|----------------------------|--|
| Lab ID: Q1538683001 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous | |
| Sample ID: AC UPPER | Date Collected: 10/1/2015 11:40 | Sample Type: SAMPLE | |
| Project ID: FOD-LIKE SWQM TESTS | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|---------|------------|----|------|----------------|----|----------------|-----|------|
| Phenol-d5 (S) | 38.3 % | | 0 - 105 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| Terphenyl-d14 (S) | 22.6 % | | 14.6 - 174 | | | 10/07/15 13:00 | MH | 10/10/15 04:43 | CO | |
| TOTAL DISSOLVED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540C, TDS | | | | | | | | | | |
| Preparation Method: SM2540C, TDS | | | | | | | | | | |
| Analytical Method: SM2540C, TDS | | | | | | | | | | |
| Total Dissolved Solids(TDS) | 575 mg/L | 25.0 | 25.0 | | 10 | 10/08/15 11:16 | JM | 10/08/15 11:16 | JM | |
| TOTAL SUSPENDED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540D, TSS | | | | | | | | | | |
| Preparation Method: SM2540D, TSS | | | | | | | | | | |
| Analytical Method: SM2540D, TSS | | | | | | | | | | |
| Total Suspended Solids | 32.7 mg/L | 1.43 | 1.43 | | 1.43 | 10/06/15 10:53 | JM | 10/06/15 10:53 | JM | |
| ALKALINITY | | | | | | | | | | |
| Analysis Desc: SM2320B, Alkalinity | | | | | | | | | | |
| Preparation Method: E410.4 COD by SemiAuto Col | | | | | | | | | | |
| Analytical Method: SM2320B, Alkalinity | | | | | | | | | | |
| Total Alkalinity | 241 mg/L | 20.0 | 20.0 | | 1 | 10/14/15 10:24 | ML | 10/13/15 | ADG | |
| OIL and GREASE | | | | | | | | | | |
| Analysis Desc: E1664A, Gravimetric | | | | | | | | | | |
| Preparation Method: E1664A, Gravimetric | | | | | | | | | | |
| Analytical Method: E1664A, Gravimetric | | | | | | | | | | |
| Oil and Grease | <2.50 mg/L | 2.50 | 2.50 | | | 10/08/15 09:00 | MF | 10/08/15 09:00 | MF | |
| E-COLI by IDEXX | | | | | | | | | | |
| Analysis Desc: SM9223, IDEXX | | | | | | | | | | |
| Preparation Method: SM9223, IDEXX | | | | | | | | | | |
| Analytical Method: SM9223, IDEXX | | | | | | | | | | |
| Ecoli | 365 MPN/100mL | 1.00 | 1.00 | | 1 | 10/02/15 14:40 | CM | 10/02/15 14:40 | CM | |
| NITRATE AND NITRITE | | | | | | | | | | |
| Analysis Desc: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | | | |
| Preparation Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | | | |
| Analytical Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | | | |
| Nitrate/Nitrite | <0.0200 mg/L | 0.00800 | 0.0200 | | 1 | 10/13/15 | ML | 10/13/15 | ML | |
| BOD, 5 DAY, 20°C | | | | | | | | | | |

ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683001** Date Received: 10/2/2015 11:15 Matrix: Aqueous
Sample ID: **AC UPPER** Date Collected: 10/1/2015 11:40 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|-------|----|----|----------------|----|----------------|----|------|
| Analysis Desc: SM5210B | | Preparation Method: SM5210B | | | | | | | | |
| | | Analytical Method: SM5210B | | | | | | | | |
| Biochemical Oxygen Demand | <3.00 mg/L | 3.00 | 3.00 | | 3 | 10/02/15 13:00 | ML | 10/02/15 13:00 | ML | |
| ORGANIC CARBON, TOTAL | | | | | | | | | | |
| Analysis Desc: SM5310D, Total Organic Carbon | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: SM5310D, Total Organic Carbon | | | | | | | | |
| Total Organic Carbon | 8.19 mg/L | 0.200 | 0.500 | | 1 | 10/05/15 | KJ | 10/16/15 | FM | |
| HEAVY METALS | | | | | | | | | | |
| Analysis Desc: E245.1 Mercury Water | | Preparation Method: E245.1 Mercury Water | | | | | | | | |
| | | Analytical Method: E245.1 Mercury Water | | | | | | | | |
| Mercury Total | <0.0700 ug/L | 0.0700 | 0.200 | | 1 | 10/06/15 | FM | 10/07/15 10:32 | FM | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683002 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|------|-----|----|----------------|----|----------------|-----|------|
| Volatile Suspended Solids | | | | | | | | | | |
| Analysis Desc: E160.4 Ignition at 550C | | Preparation Method: E160.4 Ignition at 550C | | | | | | | | |
| | | Analytical Method: E160.4 Ignition at 550C | | | | | | | | |
| Volatile Suspended Solids | 4.25 mg/L | 2.50 | 2.50 | 2.5 | | 10/06/15 10:53 | JM | 10/06/15 10:53 | JM | |
| INORGANICS | | | | | | | | | | |
| Analysis Desc: E200.7 Metals, Trace Elements | | Preparation Method: E200.7 Prep | | | | | | | | |
| | | Analytical Method: E200.7 Metals, Trace Elements | | | | | | | | |
| Calcium Total | 37400 ug/L | 70.0 | 200 | 1 | | 10/06/15 | FM | 10/08/15 14:03 | MV | |
| Iron Total | 397 ug/L | 20.0 | 50.0 | 1 | | 10/06/15 | FM | 10/08/15 14:03 | MV | |
| Magnesium Total | 12000 ug/L | 70.0 | 200 | 1 | | 10/06/15 | FM | 10/08/15 14:03 | MV | |
| Potassium Total | 7310 ug/L | 70.0 | 200 | 1 | | 10/06/15 | FM | 10/08/15 14:03 | MV | |
| Sodium Total | 99100 ug/L | 200 | 600 | 1 | | 10/06/15 | FM | 10/08/15 14:03 | MV | |
| Analysis Desc: E200.8, ICP-MS | | Preparation Method: E200.8, ICP-MS Prep | | | | | | | | |
| | | Analytical Method: E200.8, ICP-MS | | | | | | | | |
| Aluminum Total | 260 ug/L | 4.00 | 10.0 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Arsenic Total | 4.74 ug/L | 0.700 | 2.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Cadmium Total | <1.00 ug/L | 0.400 | 1.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Chromium Total | <2.00 ug/L | 0.700 | 2.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Copper Total | <2.00 ug/L | 0.700 | 2.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Lead Total | <1.00 ug/L | 0.400 | 1.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Manganese Total | 98.1 ug/L | 0.400 | 1.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Nickel Total | <2.00 ug/L | 0.700 | 2.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Selenium Total | <4.00 ug/L | 1.50 | 4.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Silver Total | <1.00 ug/L | 0.400 | 1.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| Zinc Total | <5.00 ug/L | 1.70 | 5.00 | 1 | | 10/06/15 | FM | 10/07/15 11:24 | SLW | |
| ANIONS by ION CHROMATOGRAPHY | | | | | | | | | | |
| Analysis Desc: E300.0, Anions | | Preparation Method: E300.0, Anions | | | | | | | | |
| | | Analytical Method: E300.0, Anions | | | | | | | | |
| Chloride | 109 mg/L | 2.00 | 5.00 | 5 | | 10/09/15 14:00 | ML | 10/09/15 14:00 | ML | |

INORGANICS

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683002 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|---|--------|----|----|----------------|---------|----------------|----|------|
| Analysis Desc: E300.0, Anions | | Preparation Method: E300.0, Anions | | | | | | | | |
| | | Analytical Method: E300.0, Anions | | | | | | | | |
| Fluoride | 0.259 mg/L | 0.00400 | 0.0100 | | 1 | 10/02/15 15:48 | WR | 10/02/15 15:48 | | WR |
| ortho-Phosphate (as P) | 0.147 mg/L | 0.00400 | 0.0100 | | 1 | 10/02/15 15:48 | WR | 10/02/15 15:48 | | WR |
| Sulfate | 4.29 mg/L | 0.400 | 1.00 | | 1 | 10/02/15 15:48 | WR | 10/02/15 15:48 | | WR |
| CYANIDE, TOTAL | | | | | | | | | | |
| Analysis Desc: E335.4 CN, SemiAuto Col | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: E335.4 CN, SemiAuto Col | | | | | | | | |
| Cyanide, Total | <0.0200 mg/L | 0.00500 | 0.0200 | | 1 | 10/05/15 14:59 | CA M | 10/09/15 | | CM |
| AMMONIA AS N | | | | | | | | | | |
| Analysis Desc: E350.1 NH3-N by SemiAuto Col | | Preparation Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E350.1 NH3-N by SemiAuto Col | | | | | | | | |
| Nitrogen, Ammonia (as N) | 0.0377 mg/L | 0.00800 | 0.0200 | | 1 | 10/15/15 | CM | 10/15/15 | | CM |
| TOTAL KJELDAHL NITROGEN | | | | | | | | | | |
| Analysis Desc: E351.2 TKN by SemiAuto Col | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E351.2 TKN by SemiAuto Col | | | | | | | | |
| Nitrogen, Kjeldahl, Total | 1.12 mg/L | 0.0400 | 0.100 | | 1 | 10/13/15 15:42 | MM | 10/19/15 | | ML |
| TOTAL PHOSPHATE AS P | | | | | | | | | | |
| Analysis Desc: E365.4 Phosphorus, Total | | Preparation Method: E365.4 / E351.2 Water Prep | | | | | | | | |
| | | Analytical Method: E365.4 Phosphorus, Total | | | | | | | | |
| Phosphorus, Total (As P) | 0.201 mg/L | 0.00800 | 0.0200 | | 1 | 10/13/15 15:42 | MM | 10/14/15 | | CM |
| CHEMICAL OXYGEN DEMAND | | | | | | | | | | |
| Analysis Desc: E410.4 COD by SemiAuto Col | | Preparation Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| | | Analytical Method: E410.4 COD by SemiAuto Col | | | | | | | | |
| COD | 36.1 mg/L | 3.50 | 7.00 | | 1 | 10/14/15 10:24 | ML | 10/16/15 | | ML |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683002 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 2-Butanone | <20.0 ug/L | 5.00 | 20.0 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |

Acrolein and Acrylonitrile

Report ID: 175749 - 2045882

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ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683002 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------------|---------------|---|----------|----|----|----------------|----|----------------|----|------|
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | I |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Toluene d8 (S) | 96.5 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Toluene d8 (S) | 96.5 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| 4-Bromofluorobenzene (S) | 92.2 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |
| Toluene d8 (S) | 96.5 % | | 70 - 130 | | | 10/06/15 16:39 | CO | 10/06/15 16:39 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683002 | Date Received: 10/2/2015 11:15 | Matrix: Aqueous |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|--|------|----|----|----------------|----|----------------|----|------|
| Semivolatiles | | | | | | | | | | |
| Analysis Desc: SW-846 8270C | | Preparation Method: SW3520C, Liquid/Liquid Extract | | | | | | | | |
| | | Analytical Method SW-846 8270C | | | | | | | | |
| Pyridine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosodimethylamine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Picoline | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Methyl methanesulfonate | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosodiethylamine | <20.1 ug/L | 4.03 | 20.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Ethyl methanesulfonate | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Aniline | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Phenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Chlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Bis(2-Chloroethyl)ether | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,3-Dichlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,4-Dichlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,2-Dichlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzyl alcohol | <10.1 ug/L | 5.04 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Methylphenol (o-Cresol) | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Bis(2-Chloroisopropyl)ether | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Acetophenone | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Hexachloroethane | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosodi-n-propylamine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| m,p-Cresol | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Nitrobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosopiperidine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Isophorone | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Nitrophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4-Dimethylphenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzoic acid | <50.4 ug/L | 20.1 | 50.4 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Bis(2-Chloroethoxy)methane | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4-Dichlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,2,4-Trichlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Naphthalene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,6-Dichlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |

Report ID: 175749 - 2045882

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ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683002** Date Received: 10/2/2015 11:15 Matrix: Aqueous
Sample ID: **AC LOWER** Date Collected: 10/1/2015 09:50 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|------|----|----|----------------|----|----------------|----|------|
| 4-Chloroaniline | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Hexachlorobutadiene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosodi-n-butylamine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Chloro-3-methylphenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Methylnaphthalene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,2,4,5-Tetrachlorobenzene | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Hexachlorocyclopentadiene | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4,6-Trichlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4,5-Trichlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1&2-Chloronaphthalene | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Nitroaniline | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Acenaphthylene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Dimethyl phthalate | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,6-Dinitrotoluene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 3-Nitroaniline | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Acenaphthene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4-Dinitrophenol | <50.4 ug/L | 20.1 | 50.4 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Dibenzofuran | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Nitrophenol | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Pentachlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,4-Dinitrotoluene | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1-Naphthylamine | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | N |
| 2-Naphthylamine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2,3,4,6-Tetrachlorophenol | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Fluorene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Diethyl phthalate | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Chlorophenyl phenyl ether | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Nitroaniline | <10.1 ug/L | 4.03 | 10.1 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4,6-Dinitro-2-methylphenol | <50.4 ug/L | 20.1 | 50.4 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| n-Nitrosodiphenylamine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 1,2 Diphenylhydrazine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Hexachlorobenzene | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Bromophenyl phenyl ether | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Atrazine | <5.04 ug/L | 2.01 | 5.04 | 1 | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | N |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683002 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|------|------------|----|----|----------------|----|----------------|----|------|
| Phenacetin | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 4-Aminobiphenyl | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Pentachlorophenol | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Pentachloronitrobenzene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Phenanthrene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Pronamide | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Anthracene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Carbazole | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Carbaryl (Sevin) | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Di-n-butyl phthalate | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Fluoranthene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzdine | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Pyrene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| p-(Dimethylamino)azobenzene | <10.1 ug/L | 4.03 | 10.1 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | N |
| Butyl benzyl phthalate | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzo(a)anthracene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Chrysene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 3,3'-Dichlorobenzidine | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Bis(2-Ethylhexyl)phthalate | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Di-n-octyl phthalate | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzo(b)fluoranthene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzo(k)fluoranthene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 7,12-Dimethylbenz[a]anthracene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzo(a)pyrene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 3-Methylcholanthrene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Indeno(1,2,3-cd)pyrene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Dibenz(a,j)acridine | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Dibenz(a,h)anthracene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Benzo(g,h,i)perylene | <5.04 ug/L | 2.01 | 5.04 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Cresols | <15.1 ug/L | 4.03 | 15.1 | | 1 | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | N |
| 2,4,6-Tribromophenol (S) | 35.4 % | | 0 - 146 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Fluorobiphenyl (S) | 38.6 % | | 29.8 - 157 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| 2-Fluorophenol (S) | 24.6 % | | 0 - 89 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Nitrobenzene-d5 (S) | 41.2 % | | 15.1 - 165 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |

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ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683002 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|---------|------------|-----|----|----------------|-----|----------------|-----|------|
| Phenol-d5 (S) | 31 % | | 0 - 105 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| Terphenyl-d14 (S) | 14.4 % | | 14.6 - 174 | | | 10/07/15 13:00 | MH | 10/10/15 05:17 | CO | |
| TOTAL DISSOLVED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540C, TDS Preparation Method: SM2540C, TDS | | | | | | | | | | |
| Analytical Method: SM2540C, TDS | | | | | | | | | | |
| Total Dissolved Solids(TDS) | 421 mg/L | 25.0 | 25.0 | 10 | | 10/08/15 11:16 | JM | 10/08/15 11:16 | JM | |
| TOTAL SUSPENDED SOLIDS | | | | | | | | | | |
| Analysis Desc: SM2540D, TSS Preparation Method: SM2320B, Alkalinity | | | | | | | | | | |
| Analytical Method: SM2540D, TSS | | | | | | | | | | |
| Total Suspended Solids | 26.0 mg/L | 2.50 | 2.50 | 2.5 | | 10/13/15 | ADG | 10/06/15 10:53 | JM | |
| ALKALINITY | | | | | | | | | | |
| Analysis Desc: SM2320B, Alkalinity Preparation Method: SM2540D, TSS | | | | | | | | | | |
| Analytical Method: SM2320B, Alkalinity | | | | | | | | | | |
| Total Alkalinity | 173 mg/L | 20.0 | 20.0 | 1 | | 10/06/15 10:53 | JM | 10/13/15 | ADG | |
| OIL and GREASE | | | | | | | | | | |
| Analysis Desc: E1664A, Gravimetric Preparation Method: E1664A, Gravimetric | | | | | | | | | | |
| Analytical Method: E1664A, Gravimetric | | | | | | | | | | |
| Oil and Grease | <2.50 mg/L | 2.50 | 2.50 | | | 10/08/15 09:00 | MF | 10/08/15 09:00 | MF | |
| E-COLI by IDEXX | | | | | | | | | | |
| Analysis Desc: SM9223, IDEXX Preparation Method: SM9223, IDEXX | | | | | | | | | | |
| Analytical Method: SM9223, IDEXX | | | | | | | | | | |
| Ecoli | 407 MPN/100mL | 2.00 | 2.00 | 2 | | 10/02/15 14:40 | CM | 10/02/15 14:40 | CM | |
| NITRATE AND NITRITE | | | | | | | | | | |
| Analysis Desc: SM4500-NO3-H, Nitrate/Nitrite Preparation Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | | | |
| Analytical Method: SM4500-NO3-H, Nitrate/Nitrite | | | | | | | | | | |
| Nitrate/Nitrite | <0.0200 mg/L | 0.00800 | 0.0200 | 1 | | 10/13/15 | ML | 10/13/15 | ML | |
| BOD, 5 DAY, 20°C | | | | | | | | | | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683002 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|--|-------|----|----|----------------|----|----------------|----|------|
| Analysis Desc: SM5210B | | Preparation Method: SM5210B | | | | | | | | |
| | | Analytical Method: SM5210B | | | | | | | | |
| Biochemical Oxygen Demand | <3.00 mg/L | 3.00 | 3.00 | 3 | | 10/02/15 13:00 | ML | 10/02/15 13:00 | | ML |
| ORGANIC CARBON, TOTAL | | | | | | | | | | |
| Analysis Desc: SM5310D, Total Organic Carbon | | Preparation Method: pH Check | | | | | | | | |
| | | Analytical Method: SM5310D, Total Organic Carbon | | | | | | | | |
| Total Organic Carbon | 10.5 mg/L | 0.400 | 1.00 | 2 | | 10/05/15 | KJ | 10/22/15 | | FM |
| HEAVY METALS | | | | | | | | | | |
| Analysis Desc: E245.1 Mercury Water | | Preparation Method: E245.1 Mercury Water | | | | | | | | |
| | | Analytical Method: E245.1 Mercury Water | | | | | | | | |
| Mercury Total | <0.0700 ug/L | 0.0700 | 0.200 | 1 | | 10/06/15 | FM | 10/07/15 10:34 | | FM |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683003 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER TRIP BLANK | Date Collected: | 10/1/2015 06:30 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|----------------------------------|------|----|----|----------------|----|----------------|----|------|
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 2-Butanone | 1420 ug/L | 5.00 | 20.0 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | E |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683003** Date Received: 10/2/2015 11:15 Matrix: **Aqueous**
 Sample ID: **AC UPPER TRIP BLANK** Date Collected: 10/1/2015 06:30 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------------------|---------------|----------------------------------|----------|----|----|----------------|----|----------------|----|------|
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | I |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 106 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 4-Bromofluorobenzene (S) | 92.3 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Toluene d8 (S) | 97.2 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 106 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 4-Bromofluorobenzene (S) | 92.3 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Toluene d8 (S) | 97.2 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 106 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| 4-Bromofluorobenzene (S) | 92.3 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683003 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC UPPER TRIP BLANK | Date Collected: | 10/1/2015 06:30 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------|---------------|-----|----------|----|----|----------------|----|----------------|----|------|
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |
| Toluene d8 (S) | 97.2 % | | 70 - 130 | | | 10/06/15 17:04 | CO | 10/06/15 17:04 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|---------|
| Lab ID: | Q1538683004 | Date Received: | 10/2/2015 11:15 | Matrix: | Aqueous |
| Sample ID: | AC LOWER TRIP BLANK | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------------|---------------|----------------------------------|------|----|----|----------------|----|----------------|----|------|
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Chloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Bromomethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Chloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,1-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Methylene chloride | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| tert-Butyl methyl ether (MTBE) | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| trans-1,2-Dichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,1-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 2-Butanone | 31.3 ug/L | 5.00 | 20.0 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Chloroform | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,1,1-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Carbon tetrachloride | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,2-Dichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Benzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Trichloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,2-Dichloropropane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Bromodichloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| cis-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Toluene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| trans-1,3-Dichloropropene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,1,2-Trichloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Tetrachloroethene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Dibromochloromethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,2-Dibromoethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Chlorobenzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Ethyl Benzene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| m,p-Xylene | <10.0 ug/L | 4.00 | 10.0 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| o-Xylene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Bromoform | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| trans-1,4-Dichloro-2-butene | <5.00 ug/L | 2.00 | 5.00 | 1 | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |

Report ID: 175749 - 2045882

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ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683004** Date Received: 10/2/2015 11:15 Matrix: Aqueous
Sample ID: **AC LOWER TRIP BLANK** Date Collected: 10/1/2015 11:40 Sample Type: **SAMPLE**
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--|---------------|------|----------|----|----|----------------|----|----------------|----|------|
| Xylene (total) | <5.00 ug/L | 5.00 | 5.00 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B | | | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| Acrylonitrile | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | I |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B | | | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| Styrene | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Vinyl chloride | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 2-Chloroethylvinyl ether | <5.00 ug/L | 2.00 | 5.00 | | 1 | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Acrolein and Acrylonitrile | | | | | | | | | | |
| Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B | | | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 4-Bromofluorobenzene (S) | 90.8 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Toluene d8 (S) | 96.6 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Purgeable Aromatic Hydrocarbon | | | | | | | | | | |
| Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B | | | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 4-Bromofluorobenzene (S) | 90.8 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Toluene d8 (S) | 96.6 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Purgeable Halocarbons | | | | | | | | | | |
| Analysis Desc: SW-846 8260B Preparation Method: SW-846 8260B | | | | | | | | | | |
| Analytical Method: SW-846 8260B | | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| 4-Bromofluorobenzene (S) | 90.8 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683004** Date Received: 10/2/2015 11:15 Matrix: **Aqueous**
 Sample ID: **AC LOWER TRIP BLANK** Date Collected: 10/1/2015 11:40 Sample Type: **SAMPLE**
 Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|--------------------------|---------------|-----|----------|----|----|----------------|----|----------------|----|------|
| Dibromofluoromethane (S) | 104 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |
| Toluene d8 (S) | 96.6 % | | 70 - 130 | | | 10/06/15 17:29 | CO | 10/06/15 17:29 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|--------|
| Lab ID: | Q1538683005 | Date Received: | 10/2/2015 11:15 | Matrix: | Solid |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|
|------------|---------------|-----|-----|----|----|----------|----|----------|----|------|

INORGANICS

Analysis Desc: SW6020 ICP-MS

Preparation Method: SW3050B, Metals Prep

Analytical Method: SW6020 ICP-MS

| | | | | | | | | | |
|-----------------|--------------|-------|-------|----|--|----------|----|----------------|-----|
| Aluminum Total | 266 mg/kg | 11.8 | 29.5 | 50 | | 10/05/15 | FM | 10/06/15 14:34 | SLW |
| Arsenic Total | 0.452 mg/kg | 0.118 | 0.295 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Barium Total | 11.6 mg/kg | 0.118 | 0.295 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Cadmium Total | <0.295 mg/kg | 0.118 | 0.295 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Chromium Total | 0.787 mg/kg | 0.118 | 0.295 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Copper Total | <0.295 mg/kg | 0.118 | 0.295 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Lead Total | 0.818 mg/kg | 0.116 | 0.289 | 5 | | 10/14/15 | FM | 10/15/15 17:09 | SLW |
| Manganese Total | 46.7 mg/kg | 1.18 | 2.95 | 50 | | 10/05/15 | FM | 10/06/15 14:34 | SLW |
| Nickel Total | <0.590 mg/kg | 0.236 | 0.590 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Selenium Total | <1.18 mg/kg | 0.413 | 1.18 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |
| Silver Total | <0.289 mg/kg | 0.116 | 0.289 | 5 | | 10/05/15 | FM | 10/06/15 16:16 | SLW |
| Zinc Total | <5.90 mg/kg | 2.36 | 5.90 | 5 | | 10/05/15 | FM | 10/06/15 14:46 | SLW |

Volatiles

Analysis Desc: SW-846 8260B

Preparation Method: SW-846 8260B

Analytical Method: SW-846 8260B

| | | | | | | | | | |
|--------------------------|-------------|------|------|---|--|----------------|----|----------------|----|
| Dichlorodifluoromethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Chloromethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Vinyl chloride | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Chloroethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| 1,1-Dichloroethene | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Acetone | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Carbon disulfide | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Methylene chloride | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| trans-1,2-Dichloroethene | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Acrylonitrile | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| 1,1-Dichloroethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Chloroform | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| 1,1,1-Trichloroethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| Carbon tetrachloride | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |
| 1,2-Dichloroethane | <5.96 ug/Kg | 2.38 | 5.96 | 1 | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|--------|
| Lab ID: | Q1538683005 | Date Received: | 10/2/2015 11:15 | Matrix: | Solid |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------|---------------|------|----------|----|----|----------------|----|----------------|----|------|
| Benzene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Trichloroethene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 1,2-Dichloropropane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Bromodichloromethane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| cis-1,3-Dichloropropene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 4-Methyl-2-pentanone | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Toluene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| trans-1,3-Dichloropropene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 1,1,2-Trichloroethane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Tetrachloroethene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 2-Hexanone | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Dibromochloromethane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 1,2-Dibromoethane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Chlorobenzene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Ethyl Benzene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| m,p-Xylene | <11.9 ug/Kg | 4.77 | 11.9 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| o-Xylene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Styrene | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Bromoform | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.96 ug/Kg | 2.38 | 5.96 | | 1 | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Xylene (total) | <6.02 ug/Kg | 6.02 | 6.02 | | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 1,2-Dichloroethane-d4 (S) | 88.5 % | | 70 - 130 | | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| 4-Bromofluorobenzene (S) | 97.5 % | | 70 - 130 | | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Dibromofluoromethane (S) | 95.2 % | | 70 - 130 | | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |
| Toluene d8 (S) | 108 % | | 70 - 130 | | | 10/14/15 18:32 | CO | 10/14/15 18:32 | CO | |

Semivolatiles

Analysis Desc: SW-846 8270C

Preparation Method: SW3540, Soxhlet Extraction

Analytical Method: SW-846 8270C

| | | | | | | | | | | |
|-------------------------|------------|------|-----|--|---|----------------|----|----------------|----|--|
| Pyridine | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| n-Nitrosodimethylamine | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Phenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Chlorophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Bis(2-Chloroethyl)ether | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|--------|
| Lab ID: | Q1538683005 | Date Received: | 10/2/2015 11:15 | Matrix: | Solid |
| Sample ID: | AC UPPER | Date Collected: | 10/1/2015 11:40 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|-----|----|----|----------------|----|----------------|----|------|
| 1,3-Dichlorobenzene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 1,4-Dichlorobenzene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 1,2-Dichlorobenzene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Methylphenol (o-Cresol) | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Bis(2-Chloroisopropyl)ether | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Hexachloroethane | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| n-Nitrosodi-n-propylamine | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| m,p-Cresol | <200 ug/Kg | 160 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Nitrobenzene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Isophorone | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Nitrophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4-Dimethylphenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Bis(2-Chloroethoxy)methane | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4-Dichlorophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 1,2,4-Trichlorobenzene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Naphthalene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Hexachlorobutadiene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 4-Chloro-3-methylphenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Methylnaphthalene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Hexachlorocyclopentadiene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4,6-Trichlorophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4,5-Trichlorophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 1&2-Chloronaphthalene | <400 ug/Kg | 160 | 400 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Acenaphthylene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Dimethyl phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,6-Dinitrotoluene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Acenaphthene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4-Dinitrophenol | <800 ug/Kg | 320 | 800 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 4-Nitrophenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4-Dinitrotoluene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Fluorene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Diethyl phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 4-Chlorophenyl phenyl ether | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 4,6-Dinitro-2-methylphenol | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|----------------------------|
| Lab ID: Q1538683005 | Date Received: 10/2/2015 11:15 | Matrix: Solid |
| Sample ID: AC UPPER | Date Collected: 10/1/2015 11:40 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|----------------------------|---------------|------|------------|----|----|----------------|----|----------------|----|------|
| 4-Bromophenyl phenyl ether | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Phenanthrene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Anthracene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Di-n-butyl phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Fluoranthene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Pyrene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Butyl benzyl phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Benzo(a)anthracene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Chrysene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Bis(2-Ethylhexyl)phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Di-n-octyl phthalate | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Benzo(b)fluoranthene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Benzo(k)fluoranthene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Benzo(a)pyrene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Indeno(1,2,3-cd)pyrene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Dibenz(a,h)anthracene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Benzo(g,h,i)perylene | <200 ug/Kg | 80.0 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Cresols | <200 ug/Kg | 200 | 200 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2,4,6-Tribromophenol (S) | 36 % | | 26.4 - 139 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Fluorobiphenyl (S) | 35 % | | 11 - 126 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| 2-Fluorophenol (S) | 37.6 % | | 1.27 - 100 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Nitrobenzene-d5 (S) | 38.2 % | | 7.94 - 113 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Phenol-d5 (S) | 37.6 % | | 6.69 - 106 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |
| Terphenyl-d14 (S) | 45.4 % | | 21.5 - 146 | | | 10/07/15 17:00 | JC | 10/10/15 08:06 | CO | |

ORGANIC CARBON, TOTAL

Analysis Desc: SW9060A Total Organic Carbon Preparation Method: SW9060A Total Organic Carbon

Analytical Method: SW9060A Total Organic Carbon

| | | | | | | | |
|----------------------|-------------|-------------|---|----------------|----|----------------|----|
| Total Organic Carbon | <1810 mg/kg | 602 1810 | 1 | 10/20/15 11:44 | CM | 10/20/15 11:44 | CM |
|----------------------|-------------|-------------|---|----------------|----|----------------|----|

Wet Chemistry

Analysis Desc: SM2540G, Percent Solids Preparation Method: SM2540G, Percent Solids

Analytical Method: SM2540G, Percent Solids

| | | | | | | | |
|----------------------|--------|--|--|----------|----|----------|----|
| Percent Total Solids | 83.1 % | | | 10/06/15 | FM | 10/06/15 | FM |
|----------------------|--------|--|--|----------|----|----------|----|

ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683005** Date Received: 10/2/2015 11:15 Matrix: Solid
Sample ID: **AC UPPER** Date Collected: 10/1/2015 11:40 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|--|-------|----|----|----------|----|----------------|----|------|
| INORGANICS | | | | | | | | | | |
| Analysis Desc: SW7471A Hg in Solid, Semisolid | | Preparation Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| | | Analytical Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| Mercury Total | <0.0401 mg/kg | 0.0401 | 0.115 | 1 | | 10/08/15 | FM | 10/13/15 09:58 | FM | |
| Analysis Desc: SW6010B ICP-AES | | Preparation Method: SW3050B, Metals Prep | | | | | | | | |
| | | Analytical Method: SW6010B ICP-AES | | | | | | | | |
| Iron Total | 533 mg/kg | 18.1 | 54.2 | 10 | | 10/05/15 | FM | 10/07/15 14:40 | MV | |
| Wet Chemistry | | | | | | | | | | |
| Analysis Desc: 600/2-78-54 | | Preparation Method: 600/2-78-54 | | | | | | | | |
| | | Analytical Method: 600/2-78-54 | | | | | | | | |
| Texture, Clay <0.002mm | 0.00 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Gravel >2.0mm | 18.5 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Sand 0.05-2.0mm | 81.5 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Silt 0.002-0.05mm | 0.00 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | |
|--|---------------------------------|----------------------------|--|
| Lab ID: Q1538683006 | Date Received: 10/2/2015 11:15 | Matrix: Solid | |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE | |
| Project ID: FOD-LIKE SWQM TESTS | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|------------------------------|---------------|--|-------|----|----|----------------|----|----------------|-----|------|
| INORGANICS | | | | | | | | | | |
| Analysis Desc: SW6020 ICP-MS | | Preparation Method: SW3050B, Metals Prep | | | | | | | | |
| | | Analytical Method: SW6020 ICP-MS | | | | | | | | |
| Aluminum Total | 165 mg/kg | 11.8 | 29.6 | 50 | | 10/05/15 | FM | 10/06/15 14:35 | SLW | |
| Arsenic Total | <0.296 mg/kg | 0.118 | 0.296 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Barium Total | 3.90 mg/kg | 0.118 | 0.296 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Cadmium Total | <0.296 mg/kg | 0.118 | 0.296 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Chromium Total | 0.479 mg/kg | 0.118 | 0.296 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Copper Total | <0.296 mg/kg | 0.118 | 0.296 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Lead Total | 0.899 mg/kg | 0.115 | 0.287 | 5 | | 10/14/15 | FM | 10/15/15 17:11 | SLW | |
| Manganese Total | 8.19 mg/kg | 1.18 | 2.96 | 50 | | 10/05/15 | FM | 10/06/15 14:35 | SLW | |
| Nickel Total | <0.591 mg/kg | 0.236 | 0.591 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Selenium Total | <1.18 mg/kg | 0.414 | 1.18 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Silver Total | <0.290 mg/kg | 0.116 | 0.290 | 5 | | 10/05/15 | FM | 10/06/15 16:20 | SLW | |
| Zinc Total | <5.91 mg/kg | 2.36 | 5.91 | 5 | | 10/05/15 | FM | 10/06/15 14:48 | SLW | |
| Volatiles | | | | | | | | | | |
| Analysis Desc: SW-846 8260B | | Preparation Method: SW-846 8260B | | | | | | | | |
| | | Analytical Method: SW-846 8260B | | | | | | | | |
| Dichlorodifluoromethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Chloromethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Vinyl chloride | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Chloroethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,1-Dichloroethene | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Acetone | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Carbon disulfide | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Methylene chloride | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| trans-1,2-Dichloroethene | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Acrylonitrile | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,1-Dichloroethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Chloroform | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,1,1-Trichloroethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Carbon tetrachloride | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,2-Dichloroethane | <5.89 ug/Kg | 2.36 | 5.89 | 1 | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |

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ANALYTICAL RESULTS

Workorder: Q1538683

| | | | |
|--|---------------------------------|---------------------|--|
| Lab ID: Q1538683006 | Date Received: 10/2/2015 11:15 | Matrix: Solid | |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE | |
| Project ID: FOD-LIKE SWQM TESTS | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---------------------------|---------------|------|----------|----|----|----------------|----|----------------|----|------|
| Benzene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Trichloroethene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,2-Dichloropropane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Bromodichloromethane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| cis-1,3-Dichloropropene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 4-Methyl-2-pentanone | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Toluene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| trans-1,3-Dichloropropene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,1,2-Trichloroethane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Tetrachloroethene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 2-Hexanone | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Dibromochloromethane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,2-Dibromoethane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Chlorobenzene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Ethyl Benzene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| m,p-Xylene | <11.8 ug/Kg | 4.71 | 11.8 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| o-Xylene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Styrene | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Bromoform | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,1,2,2-Tetrachloroethane | <5.89 ug/Kg | 2.36 | 5.89 | | 1 | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Xylene (total) | <5.97 ug/Kg | 5.97 | 5.97 | | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 1,2-Dichloroethane-d4 (S) | 87.9 % | | 70 - 130 | | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| 4-Bromofluorobenzene (S) | 98.2 % | | 70 - 130 | | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Dibromofluoromethane (S) | 95.6 % | | 70 - 130 | | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |
| Toluene d8 (S) | 107 % | | 70 - 130 | | | 10/14/15 18:57 | CO | 10/14/15 18:57 | CO | |

Semivolatiles

Analysis Desc: SW-846 8270C

Preparation Method: SW3540, Soxhlet Extraction

Analytical Method: SW-846 8270C

| | | | | | | | | | | |
|-------------------------|------------|------|-----|--|---|----------------|----|----------------|----|--|
| Pyridine | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| n-Nitrosodimethylamine | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Phenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Chlorophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Bis(2-Chloroethyl)ether | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | |
|--|---------------------------------|---------------------|
| Lab ID: Q1538683006 | Date Received: 10/2/2015 11:15 | Matrix: Solid |
| Sample ID: AC LOWER | Date Collected: 10/1/2015 09:50 | Sample Type: SAMPLE |
| Project ID: FOD-LIKE SWQM TESTS | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|-----------------------------|---------------|------|-----|----|----|----------------|----|----------------|----|------|
| 1,3-Dichlorobenzene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 1,4-Dichlorobenzene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 1,2-Dichlorobenzene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Methylphenol (o-Cresol) | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Bis(2-Chloroisopropyl)ether | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Hexachloroethane | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| n-Nitrosodi-n-propylamine | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| m,p-Cresol | <198 ug/Kg | 158 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Nitrobenzene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Isophorone | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Nitrophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4-Dimethylphenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Bis(2-Chloroethoxy)methane | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4-Dichlorophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 1,2,4-Trichlorobenzene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Naphthalene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Hexachlorobutadiene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 4-Chloro-3-methylphenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Methylnaphthalene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Hexachlorocyclopentadiene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4,6-Trichlorophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4,5-Trichlorophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 1&2-Chloronaphthalene | <396 ug/Kg | 158 | 396 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Acenaphthylene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Dimethyl phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,6-Dinitrotoluene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Acenaphthene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4-Dinitrophenol | <792 ug/Kg | 317 | 792 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 4-Nitrophenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4-Dinitrotoluene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Fluorene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Diethyl phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 4-Chlorophenyl phenyl ether | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 4,6-Dinitro-2-methylphenol | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |

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ANALYTICAL RESULTS

Workorder: Q1538683

Lab ID: **Q1538683006** Date Received: 10/2/2015 11:15 Matrix: Solid
Sample ID: **AC LOWER** Date Collected: 10/1/2015 09:50 Sample Type: SAMPLE
Project ID: **FOD-LIKE SWQM TESTS**

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|----------------------------|---------------|------|------------|----|----|----------------|----|----------------|----|------|
| 4-Bromophenyl phenyl ether | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Phenanthrene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Anthracene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Di-n-butyl phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Fluoranthene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Pyrene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Butyl benzyl phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Benzo(a)anthracene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Chrysene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Bis(2-Ethylhexyl)phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Di-n-octyl phthalate | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Benzo(b)fluoranthene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Benzo(k)fluoranthene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Benzo(a)pyrene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Indeno(1,2,3-cd)pyrene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Dibenz(a,h)anthracene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Benzo(g,h,i)perylene | <198 ug/Kg | 79.2 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Cresols | <198 ug/Kg | 198 | 198 | | 1 | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2,4,6-Tribromophenol (S) | 40 % | | 26.4 - 139 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Fluorobiphenyl (S) | 41.5 % | | 11 - 126 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| 2-Fluorophenol (S) | 40.8 % | | 1.27 - 100 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Nitrobenzene-d5 (S) | 42.5 % | | 7.94 - 113 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Phenol-d5 (S) | 40.8 % | | 6.69 - 106 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |
| Terphenyl-d14 (S) | 53.3 % | | 21.5 - 146 | | | 10/07/15 17:00 | JC | 10/10/15 08:40 | CO | |

ORGANIC CARBON, TOTAL

| | | | | | | | | | | |
|---|--|-----|------|--|---|----------------|----|----------------|----|--|
| Analysis Desc: SW9060A Total Organic Carbon | Preparation Method: SW9060A Total Organic Carbon | | | | | | | | | |
| | Analytical Method: SW9060A Total Organic Carbon | | | | | | | | | |
| Total Organic Carbon | <1790 mg/kg | 597 | 1790 | | 1 | 10/20/15 12:04 | CM | 10/20/15 12:04 | CM | |

Wet Chemistry

| | | | | | | | | | | |
|--|---|--|--|--|--|----------|----|----------|----|--|
| Analysis Desc: SM2540G, Percent Solids | Preparation Method: SM2540G, Percent Solids | | | | | | | | | |
| | Analytical Method: SM2540G, Percent Solids | | | | | | | | | |
| Percent Total Solids | 83.7 % | | | | | 10/06/15 | FM | 10/06/15 | FM | |

ANALYTICAL RESULTS

Workorder: Q1538683

| | | | | | |
|-------------|---------------------|-----------------|-----------------|--------------|--------|
| Lab ID: | Q1538683006 | Date Received: | 10/2/2015 11:15 | Matrix: | Solid |
| Sample ID: | AC LOWER | Date Collected: | 10/1/2015 09:50 | Sample Type: | SAMPLE |
| Project ID: | FOD-LIKE SWQM TESTS | | | | |

| Parameters | Results Units | LOD | LOQ | ML | DF | Prepared | By | Analyzed | By | Qual |
|---|---------------|--|-------|----|----|----------|----|----------------|----|------|
| INORGANICS | | | | | | | | | | |
| Analysis Desc: SW7471A Hg in Solid, Semisolid | | Preparation Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| | | Analytical Method: SW7471A Hg in Solid, Semisolid | | | | | | | | |
| Mercury Total | <0.0363 mg/kg | 0.0363 | 0.104 | 1 | | 10/08/15 | FM | 10/13/15 10:04 | FM | |
| Analysis Desc: SW6010B ICP-AES | | Preparation Method: SW3050B, Metals Prep | | | | | | | | |
| | | Analytical Method: SW6010B ICP-AES | | | | | | | | |
| Iron Total | 869 mg/kg | 17.7 | 53.2 | 10 | | 10/05/15 | FM | 10/07/15 14:45 | MV | |
| Wet Chemistry | | | | | | | | | | |
| Analysis Desc: 600/2-78-54 | | Preparation Method: 600/2-78-54 | | | | | | | | |
| | | Analytical Method: 600/2-78-54 | | | | | | | | |
| Texture, Clay <0.002mm | 1.11 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Gravel >2.0mm | 3.29 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Sand 0.05-2.0mm | 95.6 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |
| Texture, Silt 0.002-0.05mm | 0.00 % | | | | | 10/02/15 | ML | 10/02/15 | ML | N |

ANALYTICAL RESULTS QUALIFIERS

Workorder: Q1538683

PARAMETER QUALIFIERS

Lab ID: Q1538683001

I Improperly Preserved
N Not Accredited

Lab ID: Q1538683002

I Improperly Preserved
N Not Accredited

Lab ID: Q1538683003

E Value Above Calibration Range
I Improperly Preserved

Lab ID: Q1538683004

I Improperly Preserved

Lab ID: Q1538683005

N Not Accredited

Lab ID: Q1538683006

N Not Accredited

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8593 Analysis Method: SM5210B

QC Batch Method: SM5210B

Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 545037

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Biochemical Oxygen Demand | mg/L | <1.00 | 1.00 | |

SAMPLE DUPLICATE: 545040 ORIGINAL: Q1538636001

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|------------|------|---------|------------|
| Biochemical Oxygen Demand | mg/L | 1.51 | 1.19 | 23.7 | 30.4 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MIC/2702 Analysis Method: SM9223, IDEXX

QC Batch Method: SM9223, IDEXX

Associated Lab Samples: Q1538683001, Q1538683002

SAMPLE DUPLICATE: 545163 ORIGINAL: Q1538683002

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|-----------|-----------|-----------------|------------|------|---------|------------|
| Ecoli | MPN/100mL | 407 | 523 | 24.9 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8598 **Analysis Method:** 600/2-78-54
QC Batch Method: 600/2-78-54
Associated Lab Samples: Q1538683005, Q1538683006

SAMPLE DUPLICATE: 547519 ORIGINAL: Q1538683005

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|-----------------|------------|------|---------|------------|
| Texture, Gravel >2.0mm | % | 18.5 | 8.93 | 69.8 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8599 Analysis Method: 600/2-78-54
QC Batch Method: 600/2-78-54
Associated Lab Samples: Q1538683005, Q1538683006

SAMPLE DUPLICATE: 547511 ORIGINAL: Q1538683005

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------------------|-------|-----------------|------------|------|---------|------------|
| Texture, Clay <0.002mm | % | 0 | 0 | 0 | | |
| Texture, Sand 0.05-2.0mm | % | 81.5 | 91.1 | 11.1 | | |
| Texture, Silt 0.002-0.05mm | % | 0 | 0 | 0 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4818 **Analysis Method:** SW6010B ICP-AES
QC Batch Method: SW3050B, Metals Prep
Associated Lab Samples: Q1538683005, Q1538683006

LABORATORY CONTROL SAMPLE: 545352

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualif |
|------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|------------|
| Iron Total | mg/kg | 50 | 54.8 | 53.1 | 110 | 107 | 80 - 120 | 3.15 | 20 |

METHOD BLANK: 545354

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------|-------|--------------|-----------------|------------|
| Iron Total | mg/kg | <4.50 | 4.50 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4819 **Analysis Method:** SW6020 ICP-MS
QC Batch Method: SW3050B, Metals Prep
Associated Lab Samples: Q1538683005, Q1538683006

LABORATORY CONTROL SAMPLE: 545361

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|--------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| Silver Total | mg/kg | 2.45 | 2.61 | 2.52 | 106 | 103 | 85 - 115 | 3.51 | 20 | |

METHOD BLANK: 545363

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------|-------|--------------|-----------------|------------|
| Silver Total | mg/kg | <0.0500 | 0.0500 | |

MATRIX SPIKE: 545364 DUPLICATE: 545365 ORIGINAL: Q1538683005

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|--------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Silver Total | mg/kg | .01 | 2.43 | 2.47 | 2.4 | 102 | 99.6 | 70 - 130 | 2.87 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4820 Analysis Method: SW6020 ICP-MS
QC Batch Method: SW3050B, Metals Prep
Associated Lab Samples: Q1538683005, Q1538683006

LABORATORY CONTROL SAMPLE 545367

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Aluminum Total | mg/kg | 2.45 | 2.67 | 2.49 | 109 | 99.8 | 85 - 115 | 6.98 | 20 |
| Arsenic Total | mg/kg | 2.45 | 2.31 | 2.49 | 94.4 | 99.5 | 85 - 115 | 7.5 | 20 |
| Barium Total | mg/kg | 2.45 | 2.43 | 2.56 | 99.2 | 103 | 85 - 115 | 5.21 | 20 |
| Cadmium Total | mg/kg | 2.45 | 2.47 | 2.54 | 101 | 102 | 85 - 115 | 2.79 | 20 |
| Chromium Total | mg/kg | 2.45 | 2.39 | 2.45 | 97.4 | 97.9 | 85 - 115 | 2.48 | 20 |
| Copper Total | mg/kg | 2.45 | 2.41 | 2.58 | 98.5 | 103 | 85 - 115 | 6.81 | 20 |
| Manganese Total | mg/kg | 2.45 | 2.39 | 2.54 | 97.7 | 101 | 85 - 115 | 6.09 | 20 |
| Nickel Total | mg/kg | 2.45 | 2.41 | 2.59 | 98.4 | 104 | 85 - 115 | 7.2 | 20 |
| Selenium Total | mg/kg | 12.3 | 11.3 | 12.5 | 92.3 | 100 | 85 - 115 | 10.1 | 20 |
| Zinc Total | mg/kg | 2.45 | 2.39 | 2.57 | 97.7 | 103 | 85 - 115 | 7.26 | 20 |

METHOD BLANK: 545369

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Aluminum Total | mg/kg | <0.485 | 0.485 | |
| Arsenic Total | mg/kg | <0.0485 | 0.0485 | |
| Barium Total | mg/kg | <0.0485 | 0.0485 | |
| Cadmium Total | mg/kg | <0.0485 | 0.0485 | |
| Chromium Total | mg/kg | <0.0485 | 0.0485 | |
| Copper Total | mg/kg | <0.0485 | 0.0485 | |
| Manganese Total | mg/kg | <0.0485 | 0.0485 | |
| Nickel Total | mg/kg | <0.0971 | 0.0971 | |
| Selenium Total | mg/kg | <0.194 | 0.194 | |
| Zinc Total | mg/kg | <0.971 | 0.971 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

MATRIX SPIKE: 545370 DUPLICATE: 545371 ORIGINAL: Q1538379001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Arsenic Total | mg/kg | 1.22 | 2.53 | 3.73 | 3.46 | 99.2 | 90.5 | 70 - 130 | 7.51 | 20 | |
| Cadmium Total | mg/kg | .19 | 2.53 | 2.43 | 2.5 | 96.3 | 101 | 70 - 130 | 2.84 | 20 | |
| Chromium Total | mg/kg | 3.15 | 2.53 | 5.79 | 6.54 | 105 | 137 | 70 - 130 | 12.2 | 20 | |
| Nickel Total | mg/kg | 3.95 | 2.53 | 6.21 | 6.62 | 89.4 | 108 | 70 - 130 | 6.39 | 20 | |
| Selenium Total | mg/kg | .31 | 12.6 | 10.2 | 10.8 | 80.8 | 87.2 | 70 - 130 | 5.71 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8607 Analysis Method: E300.0, Anions
QC Batch Method: E300.0, Anions
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 545436

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Fluoride | mg/L | <0.0100 | 0.0100 | |
| Sulfate | mg/L | <1.00 | 1.00 | |
| ortho-Phosphate (as P) | mg/L | <0.0100 | 0.0100 | |

MATRIX SPIKE: 545445 DUPLICATE: 545446 ORIGINAL: Q1538674014

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|-----------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Fluoride | mg/L | 1.71 | 5 | 6.68 | 6.61 | 99.4 | 98.1 | 80 - 120 | 1.05 | 20 | |
| Sulfate | mg/L | 10.6 | 100 | 106 | 106 | 95.6 | 95.1 | 80 - 120 | 0 | 20 | |

LABORATORY CONTROL SAMPLE: 545447

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|------------------------|-------|-------------|------------|-----------|-------------|------------|
| Fluoride | mg/L | 1 | 1 | 99.8 | 90 - 110 | |
| Sulfate | mg/L | 30 | 32 | 107 | 90 - 110 | |
| ortho-Phosphate (as P) | mg/L | 1 | .94 | 94.2 | 90 - 110 | |

METHOD BLANK: 545449

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Fluoride | mg/L | <0.0100 | 0.0100 | |
| Sulfate | mg/L | <1.00 | 1.00 | |
| ortho-Phosphate (as P) | mg/L | <0.0100 | 0.0100 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WETP/2341 **Analysis Method:** E335.4 CN, SemiAuto Col
QC Batch Method: E335.4 CN, SemiAuto Col
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 545647

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------|-------|--------------|-----------------|------------|
| Cyanide, Total | mg/L | <0.0200 | 0.0200 | |

LABORATORY CONTROL SAMPLE: 545648

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-------------|------------|-----------|-------------|------------|
| Cyanide, Total | mg/L | .4 | .38 | 94.7 | 90 - 110 | |

SAMPLE DUPLICATE: 545649 ORIGINAL: Q1538103005

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------|-------|-----------------|------------|------|---------|------------|
| Cyanide, Total | mg/L | 0 | 0 | 3.31 | 20 | |

MATRIX SPIKE SAMPLE: 545650 ORIGINAL: Q1538103005

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Cyanide, Total | mg/L | 0 | .4 | .37 | 92.7 | 80 - 120 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: OVOL/2298 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 8260B
Associated Lab Samples: Q1538683001, Q1538683002, Q1538683003, Q1538683004

METHOD BLANK: 546029

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------------|-------|--------------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1,2,2-Tetrachloroethane | ug/L | <5.00 | 5.00 | |
| 1,1,2-Trichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1-Dichloroethane | ug/L | <5.00 | 5.00 | |
| 1,1-Dichloroethene | ug/L | <5.00 | 5.00 | |
| 1,2-Dibromoethane | ug/L | <5.00 | 5.00 | |
| 1,2-Dichloroethane | ug/L | <5.00 | 5.00 | |
| 1,2-Dichloropropane | ug/L | <5.00 | 5.00 | |
| 2-Butanone | ug/L | <20.0 | 20.0 | |
| 2-Chloroethylvinyl ether | ug/L | <5.00 | 5.00 | |
| Acrylonitrile | ug/L | <5.00 | 5.00 | |
| Benzene | ug/L | <5.00 | 5.00 | |
| Bromodichloromethane | ug/L | <5.00 | 5.00 | |
| Bromoform | ug/L | <5.00 | 5.00 | |
| Bromomethane | ug/L | <5.00 | 5.00 | |
| Carbon tetrachloride | ug/L | <5.00 | 5.00 | |
| Chlorobenzene | ug/L | <5.00 | 5.00 | |
| Chloroethane | ug/L | <5.00 | 5.00 | |
| Chloroform | ug/L | <5.00 | 5.00 | |
| Chloromethane | ug/L | <5.00 | 5.00 | |
| Dibromochloromethane | ug/L | <5.00 | 5.00 | |
| Ethyl Benzene | ug/L | <5.00 | 5.00 | |
| Methylene chloride | ug/L | <5.00 | 5.00 | |
| Styrene | ug/L | <5.00 | 5.00 | |
| Tetrachloroethene | ug/L | <5.00 | 5.00 | |
| Toluene | ug/L | <5.00 | 5.00 | |
| Trichloroethene | ug/L | <5.00 | 5.00 | |
| Vinyl chloride | ug/L | <5.00 | 5.00 | |
| cis-1,3-Dichloropropene | ug/L | <5.00 | 5.00 | |
| m,p-Xylene | ug/L | <10.0 | 10.0 | |
| o-Xylene | ug/L | <5.00 | 5.00 | |
| tert-Butyl methyl ether (MTBE) | ug/L | <5.00 | 5.00 | |
| trans-1,2-Dichloroethene | ug/L | <5.00 | 5.00 | |
| trans-1,3-Dichloropropene | ug/L | <5.00 | 5.00 | |
| trans-1,4-Dichloro-2-butene | ug/L | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1538683

METHOD BLANK: 546029

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,2-Dichloroethane-d4 (S) | % | 107 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 90.8 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 104 | 70 - 130 | |
| Toluene d8 (S) | % | 96.9 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 546030

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1,1,1-Trichloroethane | ug/L | 50 | 58 | 57.1 | 116 | 114 | 65 - 135 | 1.56 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 51.3 | 50.3 | 103 | 101 | 65 - 135 | 1.97 | 30 |
| 1,1,2-Trichloroethane | ug/L | 50 | 54.2 | 53.1 | 108 | 106 | 65 - 135 | 2.05 | 30 |
| 1,1-Dichloroethane | ug/L | 50 | 55 | 54.5 | 110 | 109 | 65 - 135 | .913 | 30 |
| 1,1-Dichloroethene | ug/L | 50 | 55.2 | 54.9 | 110 | 110 | 65 - 135 | .545 | 30 |
| 1,2-Dibromoethane | ug/L | 50 | 54.5 | 53.4 | 109 | 107 | 65 - 135 | 2.04 | 30 |
| 1,2-Dichloroethane | ug/L | 50 | 58.3 | 56.2 | 117 | 112 | 65 - 135 | 3.67 | 30 |
| 1,2-Dichloropropane | ug/L | 50 | 53.8 | 52.8 | 108 | 106 | 65 - 135 | 1.88 | 30 |
| 2-Butanone | ug/L | 50 | 53.9 | 52.5 | 108 | 105 | 65 - 135 | 2.63 | 30 |
| 2-Chloroethylvinyl ether | ug/L | 50 | 52.8 | 54.5 | 106 | 109 | 65 - 135 | 3.17 | 30 |
| Acrylonitrile | ug/L | 50 | 59.9 | 58.7 | 120 | 117 | 65 - 135 | 2.02 | 30 |
| Benzene | ug/L | 50 | 55.1 | 54.5 | 110 | 109 | 65 - 135 | 1.09 | 30 |
| Bromodichloromethane | ug/L | 50 | 57 | 56.4 | 114 | 113 | 65 - 135 | 1.06 | 30 |
| Bromoform | ug/L | 50 | 55.7 | 55.6 | 111 | 111 | 65 - 135 | .18 | 30 |
| Bromomethane | ug/L | 50 | 56.9 | 56.1 | 114 | 112 | 65 - 135 | 1.42 | 30 |
| Carbon tetrachloride | ug/L | 50 | 58.3 | 58.1 | 117 | 116 | 65 - 135 | .344 | 30 |
| Chlorobenzene | ug/L | 50 | 54.2 | 53.5 | 108 | 107 | 65 - 135 | 1.3 | 30 |
| Chloroethane | ug/L | 50 | 53.4 | 54.7 | 107 | 109 | 65 - 135 | 2.41 | 30 |
| Chloroform | ug/L | 50 | 57.3 | 56.5 | 115 | 113 | 65 - 135 | 1.41 | 30 |
| Chloromethane | ug/L | 50 | 54.9 | 54.5 | 110 | 109 | 65 - 135 | .731 | 30 |
| Dibromochloromethane | ug/L | 50 | 55 | 53.7 | 110 | 107 | 65 - 135 | 2.39 | 30 |
| Ethyl Benzene | ug/L | 50 | 53.6 | 53.9 | 107 | 108 | 65 - 135 | .558 | 30 |
| Methylene chloride | ug/L | 50 | 56.2 | 52.8 | 112 | 106 | 65 - 135 | 6.24 | 30 |
| Styrene | ug/L | 50 | 54.9 | 54.6 | 110 | 109 | 65 - 135 | .548 | 30 |
| Tetrachloroethene | ug/L | 50 | 55 | 55.1 | 110 | 110 | 65 - 135 | .182 | 30 |
| Toluene | ug/L | 50 | 53.8 | 53.8 | 108 | 108 | 65 - 135 | 0 | 30 |
| Trichloroethene | ug/L | 50 | 55.5 | 54.9 | 111 | 110 | 65 - 135 | 1.09 | 30 |
| Vinyl chloride | ug/L | 50 | 55 | 54.5 | 110 | 109 | 65 - 135 | .913 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 546030

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|--------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| cis-1,3-Dichloropropene | ug/L | 50 | 53.7 | 53.9 | 107 | 108 | 65 - 135 | .372 | 30 |
| m,p-Xylene | ug/L | 100 | 109 | 109 | 109 | 109 | 65 - 135 | 0 | 30 |
| o-Xylene | ug/L | 50 | 54.4 | 54.6 | 109 | 109 | 65 - 135 | .367 | 30 |
| tert-Butyl methyl ether (MTBE) | ug/L | 50 | 61.8 | 63.3 | 124 | 127 | 65 - 135 | 2.4 | 30 |
| trans-1,2-Dichloroethene | ug/L | 50 | 55.7 | 55.3 | 111 | 111 | 65 - 135 | .721 | 30 |
| trans-1,3-Dichloropropene | ug/L | 50 | 52.8 | 52.5 | 106 | 105 | 65 - 135 | .57 | 30 |
| trans-1,4-Dichloro-2-butene | ug/L | 50 | 63.9 | 62.5 | 128 | 125 | 65 - 135 | 2.22 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 105 | 104 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 94.2 | 92.9 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 104 | 103 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 97.4 | 98.2 | 70 - 130 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.



QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8619 Analysis Method: SM2540D, TSS
 QC Batch Method: SM2540D, TSS
 Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 546090

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------------|-------|--------------|-----------------|------------|
| Total Suspended Solids | mg/L | <1.00 | 1.00 | |

LABORATORY CONTROL SAMPLE: 546091

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Suspended Solids | mg/L | 100 | 92 | 82 | 92 | 82 | 80 - 120 | 11.5 | 20 |

SAMPLE DUPLICATE: 546093 ORIGINAL: Q1538636002

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|-----------------|------------|------|---------|------------|
| Total Suspended Solids | mg/L | 70 | 72 | 2.82 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8620 **Analysis Method:** E160.4 Ignition at 550C
QC Batch Method: E160.4 Ignition at 550C
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 546094

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Volatile Suspended Solids | mg/L | <1.00 | 1.00 | |

SAMPLE DUPLICATE: 547462 ORIGINAL: Q1538636002

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|------------|------|---------|------------|
| Volatile Suspended Solids | mg/L | 61.4 | 63.4 | 3.21 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4829 **Analysis Method:** E245.1 Mercury Water
QC Batch Method: E245.1 Mercury Water
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 546113

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------|-------|--------------|-----------------|------------|
| Mercury Total | ug/L | <0.0700 | 0.200 | |

LABORATORY CONTROL SAMPLE: 546114

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Mercury Total | ug/L | 2 | 1.99 | 2.07 | 99.4 | 104 | 85 - 115 | 3.94 | 20 |

MATRIX SPIKE: 546120 **DUPLICATE:** 546121 **ORIGINAL:** Q1538511001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Mercury Total | ug/L | 0 | 2 | 2.12 | 2.14 | 106 | 107 | 70 - 130 | .939 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4832 **Analysis Method:** E200.7 Metals, Trace Elements
QC Batch Method: E200.7 Prep
Associated Lab Samples: Q1538683001, Q1538683002

LABORATORY CONTROL SAMPLE: 546139

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Calcium Total | ug/L | 10000 | 10400 | 10400 | 104 | 104 | 85 - 115 | 0 | 20 |
| Iron Total | ug/L | 1000 | 1020 | 1020 | 102 | 102 | 85 - 115 | 0 | 20 |
| Magnesium Total | ug/L | 10000 | 9940 | 10000 | 99.4 | 100 | 85 - 115 | .602 | 20 |
| Potassium Total | ug/L | 10000 | 9220 | 9390 | 92.2 | 93.9 | 85 - 115 | 1.83 | 20 |
| Sodium Total | ug/L | 10000 | 10000 | 10100 | 100 | 101 | 85 - 115 | .995 | 20 |

METHOD BLANK: 546141

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Calcium Total | ug/L | <200 | 200 | |
| Iron Total | ug/L | <50.0 | 50.0 | |
| Magnesium Total | ug/L | <200 | 200 | |
| Potassium Total | ug/L | <200 | 200 | |
| Sodium Total | ug/L | <600 | 600 | |

MATRIX SPIKE: 546142 DUPLICATE: 546143 ORIGINAL: Q1538468001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Calcium Total | ug/L | 1630 | 10000 | 12000 | 12300 | 103 | 107 | 70 - 130 | 2.47 | 20 |
| Iron Total | ug/L | 23.5 | 1000 | 1030 | 1070 | 101 | 105 | 70 - 130 | 3.81 | 20 |
| Magnesium Total | ug/L | 505 | 10000 | 10600 | 10900 | 101 | 104 | 70 - 130 | 2.79 | 20 |
| Potassium Total | ug/L | 524 | 10000 | 10700 | 11100 | 101 | 106 | 70 - 130 | 3.67 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4833 **Analysis Method:** E200.8, ICP-MS
QC Batch Method: E200.8, ICP-MS Prep
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 546145

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Aluminum Total | ug/L | <10.0 | 10.0 | |
| Arsenic Total | ug/L | <2.00 | 2.00 | |
| Cadmium Total | ug/L | <1.00 | 1.00 | |
| Chromium Total | ug/L | <2.00 | 2.00 | |
| Copper Total | ug/L | <2.00 | 2.00 | |
| Lead Total | ug/L | <1.00 | 1.00 | |
| Manganese Total | ug/L | <1.00 | 1.00 | |
| Nickel Total | ug/L | <2.00 | 2.00 | |
| Selenium Total | ug/L | <4.00 | 4.00 | |
| Silver Total | ug/L | <1.00 | 1.00 | |
| Zinc Total | ug/L | <5.00 | 5.00 | |

LABORATORY CONTROL SAMPLE: 546146

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| Aluminum Total | ug/L | 50 | 51.9 | 51.3 | 104 | 103 | 85 - 115 | 1.16 | 20 | |
| Arsenic Total | ug/L | 50 | 47.9 | 48.5 | 95.9 | 97 | 85 - 115 | 1.24 | 20 | |
| Cadmium Total | ug/L | 50 | 49.9 | 49.9 | 99.8 | 99.9 | 85 - 115 | 0 | 20 | |
| Chromium Total | ug/L | 50 | 51.1 | 50 | 102 | 99.9 | 85 - 115 | 2.18 | 20 | |
| Copper Total | ug/L | 50 | 50.7 | 51.2 | 101 | 102 | 85 - 115 | .981 | 20 | |
| Lead Total | ug/L | 50 | 51.8 | 51.4 | 104 | 103 | 85 - 115 | .775 | 20 | |
| Manganese Total | ug/L | 50 | 51.4 | 51.9 | 103 | 104 | 85 - 115 | .968 | 20 | |
| Nickel Total | ug/L | 50 | 50.7 | 51.4 | 101 | 103 | 85 - 115 | 1.37 | 20 | |
| Selenium Total | ug/L | 250 | 238 | 242 | 95.3 | 96.7 | 85 - 115 | 1.67 | 20 | |
| Silver Total | ug/L | 50 | 49.3 | 49 | 98.6 | 97.9 | 85 - 115 | .61 | 20 | |
| Zinc Total | ug/L | 50 | 49 | 49.5 | 97.9 | 99 | 85 - 115 | 1.02 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

MATRIX SPIKE: 546148 DUPLICATE: 546149 ORIGINAL: Q1538468001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Aluminum Total | ug/L | 4.79 | 50 | 51.6 | 53.4 | 93.6 | 97.2 | 70 - 130 | 3.43 | 20 | |
| Arsenic Total | ug/L | .61 | 50 | 48.6 | 48.2 | 97.1 | 96.4 | 70 - 130 | .826 | 20 | |
| Cadmium Total | ug/L | .06 | 50 | 49.7 | 48.8 | 99.4 | 97.5 | 70 - 130 | 1.83 | 20 | |
| Chromium Total | ug/L | 0 | 50 | 49.5 | 47.9 | 98.9 | 95.8 | 70 - 130 | 3.29 | 20 | |
| Copper Total | ug/L | .62 | 50 | 50.1 | 49.5 | 99 | 97.8 | 70 - 130 | 1.2 | 20 | |
| Lead Total | ug/L | .13 | 50 | 51.8 | 51.6 | 104 | 103 | 70 - 130 | .387 | 20 | |
| Manganese Total | ug/L | 2.06 | 50 | 54.1 | 51.2 | 104 | 98.3 | 70 - 130 | 5.51 | 20 | |
| Nickel Total | ug/L | .63 | 50 | 50 | 49.4 | 98.8 | 97.4 | 70 - 130 | 1.21 | 20 | |
| Selenium Total | ug/L | .14 | 250 | 232 | 229 | 92.6 | 91.7 | 70 - 130 | 1.3 | 20 | |
| Silver Total | ug/L | .02 | 50 | 47.7 | 46.5 | 95.4 | 93.1 | 70 - 130 | 2.55 | 20 | |
| Zinc Total | ug/L | 4.91 | 50 | 52.6 | 53.1 | 95.3 | 96.3 | 70 - 130 | .946 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8625 Analysis Method: SM2540G, Percent Solids
QC Batch Method: SM2540G, Percent Solids
Associated Lab Samples: Q1538683005, Q1538683006

SAMPLE DUPLICATE: 546303 ORIGINAL: Q1538683005

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|----------------------|-------|-----------------|------------|-----|---------|------------|
| Percent Total Solids | % | 83.1 | 84.6 | 1.8 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: OEXT/3820 **Analysis Method:** SW-846 8270C
QC Batch Method: SW3520C, Liquid/Liquid Extract
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 546563

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| 1&2-Chloronaphthalene | ug/L | <10.0 | 10.0 | |
| 1,2-Diphenylhydrazine | ug/L | <5.00 | 5.00 | |
| 1,2,4,5-Tetrachlorobenzene | ug/L | <10.0 | 10.0 | |
| 1,2,4-Trichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,2-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,3-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1,4-Dichlorobenzene | ug/L | <5.00 | 5.00 | |
| 1-Naphthylamine | ug/L | <10.0 | 10.0 | |
| 2,3,4,6-Tetrachlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4,5-Trichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4,6-Trichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dimethylphenol | ug/L | <5.00 | 5.00 | |
| 2,4-Dinitrophenol | ug/L | <50.0 | 50.0 | |
| 2,4-Dinitrotoluene | ug/L | <10.0 | 10.0 | |
| 2,6-Dichlorophenol | ug/L | <5.00 | 5.00 | |
| 2,6-Dinitrotoluene | ug/L | <5.00 | 5.00 | |
| 2-Chlorophenol | ug/L | <5.00 | 5.00 | |
| 2-Methylnaphthalene | ug/L | <5.00 | 5.00 | |
| 2-Methylphenol (o-Cresol) | ug/L | <5.00 | 5.00 | |
| 2-Naphthylamine | ug/L | <5.00 | 5.00 | |
| 2-Nitroaniline | ug/L | <5.00 | 5.00 | |
| 2-Nitrophenol | ug/L | <5.00 | 5.00 | |
| 2-Picoline | ug/L | <5.00 | 5.00 | |
| 3,3'-Dichlorobenzidine | ug/L | <5.00 | 5.00 | |
| 3-Methylcholanthrene | ug/L | <5.00 | 5.00 | |
| 3-Nitroaniline | ug/L | <5.00 | 5.00 | |
| 4,6-Dinitro-2-methylphenol | ug/L | <50.0 | 50.0 | |
| 4-Aminobiphenyl | ug/L | <5.00 | 5.00 | |
| 4-Bromophenyl phenyl ether | ug/L | <5.00 | 5.00 | |
| 4-Chloro-3-methylphenol | ug/L | <5.00 | 5.00 | |
| 4-Chloroaniline | ug/L | <5.00 | 5.00 | |
| 4-Chlorophenyl phenyl ether | ug/L | <5.00 | 5.00 | |
| 4-Nitroaniline | ug/L | <10.0 | 10.0 | |
| 4-Nitrophenol | ug/L | <10.0 | 10.0 | |

QUALITY CONTROL DATA

Workorder: Q1538683

METHOD BLANK: 546563

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------------|-------|--------------|-----------------|------------|
| 7,12-Dimethylbenz[a]anthracene | ug/L | <5.00 | 5.00 | |
| Acenaphthene | ug/L | <5.00 | 5.00 | |
| Acenaphthylene | ug/L | <5.00 | 5.00 | |
| Acetophenone | ug/L | <5.00 | 5.00 | |
| Aniline | ug/L | <5.00 | 5.00 | |
| Anthracene | ug/L | <5.00 | 5.00 | |
| Atrazine | ug/L | <5.00 | 5.00 | |
| Benzidine | ug/L | <5.00 | 5.00 | |
| Benzo(a)anthracene | ug/L | <5.00 | 5.00 | |
| Benzo(a)pyrene | ug/L | <5.00 | 5.00 | |
| Benzo(b)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzo(g,h,i)perylene | ug/L | <5.00 | 5.00 | |
| Benzo(k)fluoranthene | ug/L | <5.00 | 5.00 | |
| Benzoic acid | ug/L | <50.0 | 50.0 | |
| Benzyl alcohol | ug/L | <10.0 | 10.0 | |
| Bis(2-Chloroethoxy)methane | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroethyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Chloroisopropyl)ether | ug/L | <5.00 | 5.00 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | <5.00 | 5.00 | |
| Butyl benzyl phthalate | ug/L | <5.00 | 5.00 | |
| Carbaryl (Sevin) | ug/L | <5.00 | 5.00 | |
| Carbazole | ug/L | <5.00 | 5.00 | |
| Chrysene | ug/L | <5.00 | 5.00 | |
| Cresols | ug/L | <15.0 | 15.0 | |
| Di-n-butyl phthalate | ug/L | <5.00 | 5.00 | |
| Di-n-octyl phthalate | ug/L | <5.00 | 5.00 | |
| Dibenz(a,h)anthracene | ug/L | <5.00 | 5.00 | |
| Dibenz(a,j)acridine | ug/L | <5.00 | 5.00 | |
| Dibenzofuran | ug/L | <5.00 | 5.00 | |
| Diethyl phthalate | ug/L | <5.00 | 5.00 | |
| Dimethyl phthalate | ug/L | <5.00 | 5.00 | |
| Ethyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Fluoranthene | ug/L | <5.00 | 5.00 | |
| Fluorene | ug/L | <5.00 | 5.00 | |
| Hexachlorobenzene | ug/L | <5.00 | 5.00 | |
| Hexachlorobutadiene | ug/L | <5.00 | 5.00 | |
| Hexachlorocyclopentadiene | ug/L | <10.0 | 10.0 | |
| Hexachloroethane | ug/L | <5.00 | 5.00 | |
| Indeno(1,2,3-cd)pyrene | ug/L | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1538683

METHOD BLANK: 546563

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Isophorone | ug/L | <5.00 | 5.00 | |
| Methyl methanesulfonate | ug/L | <5.00 | 5.00 | |
| Naphthalene | ug/L | <5.00 | 5.00 | |
| Nitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorobenzene | ug/L | <5.00 | 5.00 | |
| Pentachloronitrobenzene | ug/L | <5.00 | 5.00 | |
| Pentachlorophenol | ug/L | <5.00 | 5.00 | |
| Phenacetin | ug/L | <5.00 | 5.00 | |
| Phenanthrene | ug/L | <5.00 | 5.00 | |
| Phenol | ug/L | <5.00 | 5.00 | |
| Pronamide | ug/L | <5.00 | 5.00 | |
| Pyrene | ug/L | <5.00 | 5.00 | |
| Pyridine | ug/L | <5.00 | 5.00 | |
| m,p-Cresol | ug/L | <10.0 | 10.0 | |
| n-Nitrosodi-n-butylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodi-n-propylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiethylamine | ug/L | <20.0 | 20.0 | |
| n-Nitrosodimethylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosodiphenylamine | ug/L | <5.00 | 5.00 | |
| n-Nitrosopiperidine | ug/L | <5.00 | 5.00 | |
| p-(Dimethylamino)azobenzene | ug/L | <10.0 | 10.0 | |
| 2,4,6-Tribromophenol (S) | % | 12.6 | 0 - 149 | |
| 2-Fluorobiphenyl (S) | % | 37.7 | 28 - 155 | |
| 2-Fluorophenol (S) | % | 10.2 | 0 - 116 | |
| Nitrobenzene-d5 (S) | % | 42.9 | 29.5 - 145 | |
| Phenol-d5 (S) | % | 26.8 | 0 - 110 | |
| Terphenyl-d14 (S) | % | 42.1 | 30.5 - 164 | |

LABORATORY CONTROL SAMPLE: 546564

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------------|----------|-------------|
| 1,2,4-Trichlorobenzene | ug/L | 100 | 0 | 0 | 0 | 0 | 11.2 - 126 | 0 | 30 |
| 1,2-Dichlorobenzene | ug/L | 100 | 0 | 0 | 0 | 0 | 9.22 - 123 | 0 | |
| 1,3-Dichlorobenzene | ug/L | 100 | 0 | 0 | 0 | 0 | 9.52 - 123 | 0 | |
| 1,4-Dichlorobenzene | ug/L | 100 | 0 | 0 | 0 | 0 | 9.5 - 121 | 0 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 546564

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------------|----------|-------------|
| 2,3,4,6-Tetrachlorophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 2.8 - 116 | 0 | |
| 2,4,5-Trichlorophenol | ug/L | 100 | 49.1 | 50.7 | 49.1 | 50.7 | 0 - 121 | 3.21 | |
| 2,4,6-Trichlorophenol | ug/L | 100 | 43.7 | 43.1 | 43.7 | 43.1 | 0 - 118 | 1.38 | |
| 2,4-Dichlorophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 126 | 0 | |
| 2,4-Dimethylphenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 119 | 0 | |
| 2,4-Dinitrophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 125 | 0 | |
| 2,4-Dinitrotoluene | ug/L | 100 | 53.7 | 51.9 | 53.7 | 51.9 | 13 - 161 | 3.41 | 30 |
| 2,6-Dinitrotoluene | ug/L | 100 | 0 | 0 | 0 | 0 | 16 - 135 | 0 | |
| 2-Chlorophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 115 | 0 | 30 |
| 2-Methylnaphthalene | ug/L | 100 | 0 | 0 | 0 | 0 | 12.8 - 137 | 0 | |
| 2-Methylphenol (o-Cresol) | ug/L | 100 | 44.2 | 42.9 | 44.2 | 42.9 | 0 - 123 | 2.99 | |
| 2-Nitroaniline | ug/L | 100 | 0 | 0 | 0 | 0 | 13.3 - 135 | 0 | |
| 2-Nitrophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 125 | 0 | |
| 3-Nitroaniline | ug/L | 100 | 0 | 0 | 0 | 0 | 6.09 - 142 | 0 | |
| 4,6-Dinitro-2-methylphenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 147 | 0 | |
| 4-Bromophenyl phenyl ether | ug/L | 100 | 0 | 0 | 0 | 0 | 10.7 - 134 | 0 | |
| 4-Chloro-3-methylphenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 130 | 0 | 30 |
| 4-Chloroaniline | ug/L | 100 | 0 | 0 | 0 | 0 | 3.37 - 153 | 0 | |
| 4-Chlorophenyl phenyl ether | ug/L | 100 | 0 | 0 | 0 | 0 | 11.8 - 131 | 0 | |
| 4-Nitroaniline | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 148 | 0 | |
| 4-Nitrophenol | ug/L | 100 | 0 | 0 | 0 | 0 | 0 - 126 | 0 | 30 |
| Acenaphthene | ug/L | 100 | 0 | 0 | 0 | 0 | 12.3 - 125 | 0 | 30 |
| Acenaphthylene | ug/L | 100 | 0 | 0 | 0 | 0 | 16 - 119 | 0 | 30 |
| Aniline | ug/L | 100 | 0 | 0 | 0 | 0 | 50.7 - 117 | 0 | |
| Anthracene | ug/L | 100 | 0 | 0 | 0 | 0 | 2.47 - 147 | 0 | 30 |
| Benzo(a)anthracene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |
| Benzo(a)pyrene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Benzo(b)fluoranthene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Benzo(g,h,i)perylene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Benzo(k)fluoranthene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Benzyl alcohol | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Bis(2-Chloroethoxy)methane | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Bis(2-Chloroethyl)ether | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Bis(2-Chloroisopropyl)ether | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Bis(2-Ethylhexyl)phthalate | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Butyl benzyl phthalate | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Carbazole | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Chrysene | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 546564

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Cresols | ug/L | | 15 | | 90.9 | | | 1.78 | |
| <i>Di-n-butyl phthalate</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Di-n-octyl phthalate</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Dibenz(a,h)anthracene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Dibenzofuran</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Diethyl phthalate</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Dimethyl phthalate</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Fluoranthene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Fluorene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Hexachlorobenzene | ug/L | 100 | 51.4 | 51 | 51.4 | 51 | 6.43 - 152 | .781 | |
| Hexachlorobutadiene | ug/L | 100 | 52.9 | 53.1 | 52.9 | 53.1 | 7.19 - 140 | .377 | |
| <i>Hexachlorocyclopentadiene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Hexachloroethane | ug/L | 100 | 46.5 | 47 | 46.5 | 47 | 9.5 - 131 | 1.07 | |
| <i>Indeno(1,2,3-cd)pyrene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Isophorone</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| <i>Naphthalene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| Nitrobenzene | ug/L | 100 | 48.4 | 46.1 | 48.4 | 46.1 | 6.57 - 138 | 4.87 | |
| Pentachlorophenol | ug/L | 100 | 69.8 | 68.3 | 69.8 | 68.3 | 0 - 137 | 2.17 | 30 |
| <i>Phenanthrene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |
| <i>Phenol</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |
| <i>Pyrene</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |
| Pyridine | ug/L | 100 | 63.1 | 57.4 | 63.1 | 57.4 | 0 - 150 | 9.46 | |
| m,p-Cresol | ug/L | | 10 | | 46.7 | | | .429 | |
| <i>n-Nitrosodi-n-propylamine</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | 30 |
| <i>n-Nitrosodimethylamine</i> | ug/L | 100 | 0 | 0 | 0 | 0 | 65 - 135 | 0 | |
| 2,4,6-Tribromophenol (S) | % | | | | 54.1 | 52.9 | 0 - 149 | | |
| 2-Fluorobiphenyl (S) | % | | | | 43.3 | 41.9 | 28 - 155 | | |
| 2-Fluorophenol (S) | % | | | | 32.4 | 25 | 0 - 89 | | |
| Nitrobenzene-d5 (S) | % | | | | 46.7 | 44.3 | 29.5 - 145 | | |
| Phenol-d5 (S) | % | | | | 38.1 | 34.6 | 0 - 110 | | |
| Terphenyl-d14 (S) | % | | | | 36.3 | 38.4 | 30.5 - 164 | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

SAMPLE DUPLICATE: 546566 ORIGINAL: Q1538542002

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|------------|-----|---------|------------|
| 2,4,5-Trichlorophenol | ug/L | 0 | 0 | 0 | | |
| 2,4,6-Trichlorophenol | ug/L | 0 | 0 | 0 | | |
| 2,4-Dinitrotoluene | ug/L | 0 | 0 | 0 | | |
| 2-Methylphenol (o-Cresol) | ug/L | 0 | 0 | 0 | | |
| Cresols | ug/L | 0 | 0 | 0 | | |
| Hexachlorobenzene | ug/L | 0 | 0 | 0 | | |
| Hexachlorobutadiene | ug/L | 0 | 0 | 0 | | |
| Hexachloroethane | ug/L | 0 | 0 | 0 | | |
| Nitrobenzene | ug/L | 0 | 0 | 0 | | |
| Pentachlorophenol | ug/L | 0 | 0 | 0 | | |
| Pyridine | ug/L | 0 | 0 | 0 | | |
| m,p-Cresol | ug/L | 0 | 0 | 0 | | |
| 2,4,6-Tribromophenol (S) | % | | .82 | | 139 | |
| 2,4,6-Tribromophenol (S) | % | .76 | .82 | | | |
| 2-Fluorobiphenyl (S) | % | .38 | .38 | | | |
| 2-Fluorobiphenyl (S) | % | | .38 | | 126 | |
| 2-Fluorophenol (S) | % | | .39 | | 100 | |
| 2-Fluorophenol (S) | % | .46 | .39 | | | |
| Nitrobenzene-d5 (S) | % | | .43 | | 113 | |
| Nitrobenzene-d5 (S) | % | .41 | .43 | | | |
| Phenol-d5 (S) | % | .59 | .58 | | | |
| Phenol-d5 (S) | % | | .58 | | 106 | |
| Terphenyl-d14 (S) | % | | .39 | | 146 | |
| Terphenyl-d14 (S) | % | .39 | .39 | | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: OEXT/3822 Analysis Method: SW-846 8270C

QC Batch Method: SW3540, Soxhlet Extraction

Associated Lab Samples: Q1538683005, Q1538683006

METHOD BLANK: 547255

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| 1&2-Chloronaphthalene | ug/Kg | <1000 | 1000 | |
| 1,2,4-Trichlorobenzene | ug/Kg | <500 | 500 | |
| 1,2-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,3-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 1,4-Dichlorobenzene | ug/Kg | <500 | 500 | |
| 2,4,5-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4,6-Trichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dichlorophenol | ug/Kg | <500 | 500 | |
| 2,4-Dimethylphenol | ug/Kg | <500 | 500 | |
| 2,4-Dinitrophenol | ug/Kg | <2000 | 2000 | |
| 2,4-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2,6-Dinitrotoluene | ug/Kg | <500 | 500 | |
| 2-Chlorophenol | ug/Kg | <500 | 500 | |
| 2-Methylnaphthalene | ug/Kg | <500 | 500 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | <500 | 500 | |
| 2-Nitrophenol | ug/Kg | <500 | 500 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | <500 | 500 | |
| 4-Bromophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Chloro-3-methylphenol | ug/Kg | <500 | 500 | |
| 4-Chlorophenyl phenyl ether | ug/Kg | <500 | 500 | |
| 4-Nitrophenol | ug/Kg | <500 | 500 | |
| Acenaphthene | ug/Kg | <500 | 500 | |
| Acenaphthylene | ug/Kg | <500 | 500 | |
| Anthracene | ug/Kg | <500 | 500 | |
| Benzo(a)anthracene | ug/Kg | <500 | 500 | |
| Benzo(a)pyrene | ug/Kg | <500 | 500 | |
| Benzo(b)fluoranthene | ug/Kg | <500 | 500 | |
| Benzo(g,h,i)perylene | ug/Kg | <500 | 500 | |
| Benzo(k)fluoranthene | ug/Kg | <500 | 500 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | <500 | 500 | |
| Bis(2-Chloroethyl)ether | ug/Kg | <500 | 500 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | <500 | 500 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | <500 | 500 | |
| Butyl benzyl phthalate | ug/Kg | <500 | 500 | |

QUALITY CONTROL DATA

Workorder: Q1538683

METHOD BLANK: 547255

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Chrysene | ug/Kg | <500 | 500 | |
| Cresols | ug/Kg | <500 | 500 | |
| Di-n-butyl phthalate | ug/Kg | <500 | 500 | |
| Di-n-octyl phthalate | ug/Kg | <500 | 500 | |
| Dibenz(a,h)anthracene | ug/Kg | <500 | 500 | |
| Diethyl phthalate | ug/Kg | <500 | 500 | |
| Dimethyl phthalate | ug/Kg | <500 | 500 | |
| Fluoranthene | ug/Kg | <500 | 500 | |
| Fluorene | ug/Kg | <500 | 500 | |
| Hexachlorobutadiene | ug/Kg | <500 | 500 | |
| Hexachlorocyclopentadiene | ug/Kg | <500 | 500 | |
| Hexachloroethane | ug/Kg | <500 | 500 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | <500 | 500 | |
| Isophorone | ug/Kg | <500 | 500 | |
| Naphthalene | ug/Kg | <500 | 500 | |
| Nitrobenzene | ug/Kg | <500 | 500 | |
| Phenanthrene | ug/Kg | <500 | 500 | |
| Phenol | ug/Kg | <500 | 500 | |
| Pyrene | ug/Kg | <500 | 500 | |
| Pyridine | ug/Kg | <500 | 500 | |
| m,p-Cresol | ug/Kg | <500 | 500 | |
| n-Nitrosodi-n-propylamine | ug/Kg | <500 | 500 | |
| n-Nitrosodimethylamine | ug/Kg | <500 | 500 | |
| 2,4,6-Tribromophenol (S) | % | 35 | 26.4 - 139 | |
| 2-Fluorobiphenyl (S) | % | 41.1 | 11 - 126 | |
| 2-Fluorophenol (S) | % | 43.8 | 1.27 - 100 | |
| Nitrobenzene-d5 (S) | % | 44.6 | 7.94 - 113 | |
| Phenol-d5 (S) | % | 44.2 | 6.69 - 106 | |
| Terphenyl-d14 (S) | % | 52.2 | 21.5 - 146 | |

LABORATORY CONTROL SAMPLE: 547256

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| 1&2-Chloronaphthalene | ug/Kg | | 1000 | | 4670 | | | .86 | |
| 1,2,4-Trichlorobenzene | ug/Kg | 10000 | 4770 | 4850 | 47.7 | 48.5 | 40 - 160 | 1.66 | 30 |
| 1,2-Dichlorobenzene | ug/Kg | 10000 | 4830 | 5000 | 48.3 | 50 | 40 - 160 | 3.46 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 547256

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------------|--------------|--------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|
| 1,3-Dichlorobenzene | ug/Kg | 10000 | 4800 | 4930 | 48 | 49.3 | 40 - 160 | 2.67 | |
| 1,4-Dichlorobenzene | ug/Kg | 10000 | 4770 | 4950 | 47.7 | 49.5 | 40 - 160 | 3.7 | 30 |
| 2,4,5-Trichlorophenol | ug/Kg | 10000 | 4490 | 4660 | 44.9 | 46.6 | 40 - 160 | 3.72 | |
| 2,4,6-Trichlorophenol | ug/Kg | 10000 | 4710 | 4520 | 47.1 | 45.2 | 40 - 160 | 4.12 | |
| 2,4-Dichlorophenol | ug/Kg | 10000 | 5170 | 5250 | 51.7 | 52.5 | 40 - 160 | 1.54 | |
| 2,4-Dimethylphenol | ug/Kg | 10000 | 4860 | 4980 | 48.6 | 49.8 | 40 - 160 | 2.44 | |
| 2,4-Dinitrophenol | ug/Kg | 10000 | 2340 | 1680 | 23.4 | 16.8 | 40 - 160 | 32.8 | |
| 2,4-Dinitrotoluene | ug/Kg | 10000 | 5020 | 5160 | 50.2 | 51.6 | 40 - 160 | 2.75 | 30 |
| 2,6-Dinitrotoluene | ug/Kg | 10000 | 4630 | 4820 | 46.3 | 48.2 | 40 - 160 | 4.02 | |
| 2-Chlorophenol | ug/Kg | 10000 | 4860 | 5010 | 48.6 | 50.1 | 40 - 160 | 3.04 | 30 |
| 2-Methylnaphthalene | ug/Kg | 10000 | 4950 | 5080 | 49.5 | 50.8 | 40 - 160 | 2.59 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 10000 | 5020 | 5260 | 50.2 | 52.6 | 40 - 160 | 4.67 | |
| 2-Nitrophenol | ug/Kg | 10000 | 4830 | 4940 | 48.3 | 49.4 | 40 - 160 | 2.25 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 10000 | 3650 | 2880 | 36.5 | 28.8 | 40 - 160 | 23.6 | |
| 4-Bromophenyl phenyl ether | ug/Kg | 10000 | 4660 | 4710 | 46.6 | 47.1 | 40 - 160 | 1.07 | |
| 4-Chloro-3-methylphenol | ug/Kg | 10000 | 5040 | 5190 | 50.4 | 51.9 | 40 - 160 | 2.93 | 30 |
| 4-Chlorophenyl phenyl ether | ug/Kg | 10000 | 4480 | 4600 | 44.8 | 46 | 40 - 160 | 2.64 | |
| 4-Nitrophenol | ug/Kg | 10000 | 4630 | 4350 | 46.3 | 43.5 | 40 - 160 | 6.24 | 30 |
| Acenaphthene | ug/Kg | 10000 | 4510 | 4520 | 45.1 | 45.2 | 40 - 160 | .221 | 30 |
| Acenaphthylene | ug/Kg | 10000 | 4420 | 4360 | 44.2 | 43.6 | 40 - 160 | 1.37 | 30 |
| Anthracene | ug/Kg | 10000 | 4180 | 4160 | 41.8 | 41.6 | 40 - 160 | .48 | 30 |
| Benzo(a)anthracene | ug/Kg | 10000 | 4970 | 4970 | 49.7 | 49.7 | 40 - 160 | 0 | 30 |
| Benzo(a)pyrene | ug/Kg | 10000 | 5480 | 5550 | 54.8 | 55.5 | 40 - 160 | 1.27 | |
| Benzo(b)fluoranthene | ug/Kg | 10000 | 4740 | 5020 | 47.4 | 50.2 | 40 - 160 | 5.74 | |
| Benzo(g,h,i)perylene | ug/Kg | 10000 | 6050 | 5490 | 60.5 | 54.9 | 40 - 160 | 9.71 | |
| Benzo(k)fluoranthene | ug/Kg | 10000 | 5140 | 5400 | 51.4 | 54 | 40 - 160 | 4.93 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 10000 | 4810 | 4880 | 48.1 | 48.8 | 40 - 160 | 1.44 | |
| Bis(2-Chloroethyl)ether | ug/Kg | 10000 | 4830 | 4980 | 48.3 | 49.8 | 40 - 160 | 3.06 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 10000 | 5770 | 6010 | 57.7 | 60.1 | 40 - 160 | 4.07 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 10000 | 4340 | 5040 | 43.4 | 50.4 | 40 - 160 | 14.9 | |
| Butyl benzyl phthalate | ug/Kg | 10000 | 4160 | 4860 | 41.6 | 48.6 | 40 - 160 | 15.5 | |
| Chrysene | ug/Kg | 10000 | 4390 | 4540 | 43.9 | 45.4 | 40 - 160 | 3.36 | 30 |
| Cresols | ug/Kg | | 500 | | 10100 | | | 4.83 | |
| Di-n-butyl phthalate | ug/Kg | 10000 | 3750 | 3860 | 37.5 | 38.6 | 40 - 160 | 2.89 | |
| Di-n-octyl phthalate | ug/Kg | 10000 | 4230 | 5040 | 42.3 | 50.4 | 40 - 160 | 17.5 | |
| Dibenz(a,h)anthracene | ug/Kg | 10000 | 5990 | 5540 | 59.9 | 55.4 | 40 - 160 | 7.81 | |
| Diethyl phthalate | ug/Kg | 10000 | 4530 | 4710 | 45.3 | 47.1 | 40 - 160 | 3.9 | |
| Dimethyl phthalate | ug/Kg | 10000 | 4520 | 4570 | 45.2 | 45.7 | 40 - 160 | 1.1 | |

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 547256

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Fluoranthene | ug/Kg | 10000 | 4710 | 4480 | 47.1 | 44.8 | 40 - 160 | 5.01 | |
| Fluorene | ug/Kg | 10000 | 4480 | 4570 | 44.8 | 45.7 | 40 - 160 | 1.99 | |
| Hexachlorobutadiene | ug/Kg | 10000 | 4980 | 5070 | 49.8 | 50.7 | 40 - 160 | 1.79 | |
| Hexachlorocyclopentadiene | ug/Kg | 10000 | 4610 | 4530 | 46.1 | 45.3 | 40 - 160 | 1.75 | |
| Hexachloroethane | ug/Kg | 10000 | 4890 | 5060 | 48.9 | 50.6 | 40 - 160 | 3.42 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 10000 | 6000 | 5320 | 60 | 53.2 | 40 - 160 | 12 | |
| Isophorone | ug/Kg | 10000 | 4870 | 4990 | 48.7 | 49.9 | 40 - 160 | 2.43 | |
| Naphthalene | ug/Kg | 10000 | 4400 | 4490 | 44 | 44.9 | 40 - 160 | 2.02 | |
| Nitrobenzene | ug/Kg | 10000 | 4800 | 4890 | 48 | 48.9 | 40 - 160 | 1.86 | |
| Phenanthrene | ug/Kg | 10000 | 4540 | 4490 | 45.4 | 44.9 | 40 - 160 | 1.11 | 30 |
| Phenol | ug/Kg | 10000 | 4910 | 5100 | 49.1 | 51 | 40 - 160 | 3.8 | 30 |
| Pyrene | ug/Kg | 10000 | 4400 | 5360 | 44 | 53.6 | 40 - 160 | 19.7 | 30 |
| Pyridine | ug/Kg | 10000 | 6920 | 6920 | 69.2 | 69.2 | 40 - 160 | 0 | |
| m,p-Cresol | ug/Kg | | 500 | | 5070 | | | 4.81 | |
| n-Nitrosodi-n-propylamine | ug/Kg | 10000 | 5400 | 5720 | 54 | 57.2 | 40 - 160 | 5.76 | 30 |
| n-Nitrosodimethylamine | ug/Kg | 10000 | 4870 | 4900 | 48.7 | 49 | 40 - 160 | .614 | |
| 2,4,6-Tribromophenol (S) | % | | | | 47.7 | 47.8 | 25.9 - 135 | | |
| 2-Fluorobiphenyl (S) | % | | | | 44.9 | 43.2 | 36.5 - 120 | | |
| 2-Fluorophenol (S) | % | | | | 45 | 45.2 | 17.5 - 118 | | |
| Nitrobenzene-d5 (S) | % | | | | 47.4 | 47.6 | 29.3 - 123 | | |
| Phenol-d5 (S) | % | | | | 46.3 | 47.1 | 17.2 - 122 | | |
| Terphenyl-d14 (S) | % | | | | 42.9 | 48.8 | 29.4 - 130 | | |

MATRIX SPIKE: 547259 DUPLICATE: 547260 ORIGINAL: Q1538683006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|--------------------------|-------|-----------------|-------------|-------------|------------|-------------|-------------|-----------------|------------|--------------------|
| 1,2,4-Trichlorobenzene | ug/Kg | 0 | 3270 | 1460 | 1390 | 44.5 | 43 | 40 - 160 | 4.91 | 71.6 |
| 1,2-Dichlorobenzene | ug/Kg | 0 | 3270 | 1480 | 1410 | 45.4 | 43.7 | 40 - 160 | 4.84 | |
| 1,3-Dichlorobenzene | ug/Kg | 0 | 3270 | 1450 | 1360 | 44.4 | 41.9 | 40 - 160 | 6.41 | |
| 1,4-Dichlorobenzene | ug/Kg | 0 | 3270 | 1450 | 1360 | 44.4 | 42.1 | 40 - 160 | 6.41 | 75.5 |
| 2,4,5-Trichlorophenol | ug/Kg | 0 | 3270 | 1540 | 1510 | 46.9 | 46.7 | 40 - 160 | 1.97 | |
| 2,4,6-Trichlorophenol | ug/Kg | 0 | 3270 | 1390 | 1340 | 42.6 | 41.4 | 40 - 160 | 3.66 | |
| 2,4-Dichlorophenol | ug/Kg | 0 | 3270 | 1630 | 1630 | 49.7 | 50.4 | 40 - 160 | 0 | |
| 2,4-Dimethylphenol | ug/Kg | 0 | 3270 | 1560 | 1530 | 47.8 | 47.5 | 40 - 160 | 1.94 | |
| 2,4-Dinitrophenol | ug/Kg | 0 | 3270 | 1030 | 343 | 31.4 | 10.6 | 40 - 160 | 100 | |
| 2,4-Dinitrotoluene | ug/Kg | 0 | 3270 | 1640 | 1570 | 50.2 | 48.5 | 40 - 160 | 4.36 | 17.9 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

MATRIX SPIKE: 547259 DUPLICATE: 547260 ORIGINAL: Q1538683006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|-----------------------------------|--------------|-----------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|--------------------|
| 2,6-Dinitrotoluene | ug/Kg | 0 | 3270 | 1520 | 1450 | 46.3 | 44.9 | 40 - 160 | 4.71 | |
| 2-Chlorophenol | ug/Kg | 0 | 3270 | 1510 | 1500 | 46.3 | 46.5 | 40 - 160 | .664 | 65.5 |
| 2-Methylnaphthalene | ug/Kg | 0 | 3270 | 1480 | 1480 | 45.4 | 45.7 | 40 - 160 | 0 | |
| 2-Methylphenol (o-Cresol) | ug/Kg | 0 | 3270 | 1610 | 1620 | 49.3 | 50.1 | 40 - 160 | .619 | |
| 2-Nitrophenol | ug/Kg | 0 | 3270 | 1450 | 1380 | 44.3 | 42.8 | 40 - 160 | 4.95 | |
| 4,6-Dinitro-2-methylphenol | ug/Kg | 0 | 3270 | 1250 | 1140 | 38.3 | 35.4 | 40 - 160 | 9.21 | |
| 4-Bromophenyl phenyl ether | ug/Kg | 0 | 3270 | 1530 | 1520 | 46.7 | 47 | 40 - 160 | .656 | |
| 4-Chloro-3-methylphenol | ug/Kg | 0 | 3270 | 1590 | 1600 | 48.6 | 49.6 | 40 - 160 | .627 | 26.1 |
| 4-Chlorophenyl phenyl ether | ug/Kg | 0 | 3270 | 1400 | 1380 | 42.8 | 42.6 | 40 - 160 | 1.44 | |
| 4-Nitrophenol | ug/Kg | 0 | 3270 | 1320 | 1220 | 40.3 | 37.8 | 40 - 160 | 7.87 | 38.8 |
| Acenaphthene | ug/Kg | 0 | 3270 | 1380 | 1340 | 42.2 | 41.6 | 40 - 160 | 2.94 | 52.2 |
| Acenaphthylene | ug/Kg | 0 | 3270 | 1340 | 1310 | 41.1 | 40.4 | 40 - 160 | 2.26 | 30 |
| Anthracene | ug/Kg | 0 | 3270 | 1280 | 1250 | 39.2 | 38.8 | 40 - 160 | 2.37 | 30 |
| Benzo(a)anthracene | ug/Kg | 0 | 3270 | 1510 | 1470 | 46.3 | 45.4 | 40 - 160 | 2.68 | 30 |
| Benzo(a)pyrene | ug/Kg | 0 | 3270 | 1700 | 1620 | 51.9 | 50.1 | 40 - 160 | 4.82 | |
| Benzo(b)fluoranthene | ug/Kg | 0 | 3270 | 1620 | 1570 | 49.6 | 48.6 | 40 - 160 | 3.13 | |
| Benzo(g,h,i)perylene | ug/Kg | 0 | 3270 | 1590 | 1740 | 48.6 | 53.8 | 40 - 160 | 9.01 | |
| Benzo(k)fluoranthene | ug/Kg | 0 | 3270 | 1780 | 1750 | 54.5 | 54.3 | 40 - 160 | 1.7 | |
| Bis(2-Chloroethoxy)methane | ug/Kg | 0 | 3270 | 1440 | 1380 | 44.1 | 42.8 | 40 - 160 | 4.26 | |
| Bis(2-Chloroethyl)ether | ug/Kg | 0 | 3270 | 1460 | 1400 | 44.7 | 43.5 | 40 - 160 | 4.2 | |
| Bis(2-Chloroisopropyl)ether | ug/Kg | 0 | 3270 | 1770 | 1740 | 54.3 | 54 | 40 - 160 | 1.71 | |
| Bis(2-Ethylhexyl)phthalate | ug/Kg | 0 | 3270 | 1590 | 1730 | 48.5 | 53.4 | 40 - 160 | 8.43 | |
| Butyl benzyl phthalate | ug/Kg | 0 | 3270 | 1630 | 1840 | 49.9 | 56.8 | 40 - 160 | 12.1 | |
| Chrysene | ug/Kg | 0 | 3270 | 1380 | 1340 | 42.2 | 41.4 | 40 - 160 | 2.94 | 30 |
| Di-n-butyl phthalate | ug/Kg | 48.9 | 3270 | 1260 | 1210 | 38.4 | 37.4 | 40 - 160 | 4.05 | |
| Di-n-octyl phthalate | ug/Kg | 0 | 3270 | 2050 | 2370 | 62.7 | 73.2 | 40 - 160 | 14.5 | |
| Dibenz(a,h)anthracene | ug/Kg | 0 | 3270 | 1570 | 1690 | 48.1 | 52.3 | 40 - 160 | 7.36 | |
| Diethyl phthalate | ug/Kg | 0 | 3270 | 1500 | 1440 | 45.8 | 44.6 | 40 - 160 | 4.08 | |
| Dimethyl phthalate | ug/Kg | 0 | 3270 | 1460 | 1440 | 44.6 | 44.7 | 40 - 160 | 1.38 | |
| Fluoranthene | ug/Kg | 0 | 3270 | 1170 | 1230 | 35.6 | 38.2 | 40 - 160 | 5 | |
| Fluorene | ug/Kg | 0 | 3270 | 1380 | 1330 | 42.2 | 41 | 40 - 160 | 3.69 | |
| Hexachlorobutadiene | ug/Kg | 0 | 3270 | 1550 | 1490 | 47.3 | 46.1 | 40 - 160 | 3.95 | |
| Hexachlorocyclopentadiene | ug/Kg | 0 | 3270 | 809 | 562 | 24.7 | 17.4 | 40 - 160 | 36 | |
| Hexachloroethane | ug/Kg | 0 | 3270 | 1460 | 1390 | 44.6 | 43 | 40 - 160 | 4.91 | |
| Indeno(1,2,3-cd)pyrene | ug/Kg | 0 | 3270 | 1600 | 1730 | 48.8 | 53.5 | 40 - 160 | 7.81 | |
| Isophorone | ug/Kg | 0 | 3270 | 1460 | 1420 | 44.7 | 43.8 | 40 - 160 | 2.78 | |
| Naphthalene | ug/Kg | 0 | 3270 | 1330 | 1280 | 40.8 | 39.7 | 40 - 160 | 3.83 | |

QUALITY CONTROL DATA

Workorder: Q1538683

MATRIX SPIKE: 547259 DUPLICATE: 547260 ORIGINAL: Q1538683006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Nitrobenzene | ug/Kg | 0 | 3270 | 1450 | 1380 | 44.5 | 42.8 | 40 - 160 | 4.95 | | |
| Phenanthrene | ug/Kg | 0 | 3270 | 1390 | 1340 | 42.4 | 41.6 | 40 - 160 | 3.66 | 30 | |
| Phenol | ug/Kg | 0 | 3270 | 1540 | 1520 | 47.1 | 47 | 40 - 160 | 1.31 | 58.9 | |
| Pyrene | ug/Kg | 0 | 3270 | 1840 | 2120 | 56.3 | 65.5 | 40 - 160 | 14.1 | 18.6 | |
| Pyridine | ug/Kg | 0 | 3270 | 1920 | 1660 | 58.6 | 51.4 | 40 - 160 | 14.5 | | |
| n-Nitrosodi-n-propylamine | ug/Kg | 0 | 3270 | 1670 | 1670 | 51.1 | 51.6 | 40 - 160 | 0 | 53.2 | |
| n-Nitrosodimethylamine | ug/Kg | 0 | 3270 | 1390 | 1230 | 42.6 | 38.1 | 40 - 160 | 12.2 | | |
| 2,4,6-Tribromophenol (S) | % | | | | 45.7 | 45.7 | 45.7 | 25.9 - 135 | | | |
| 2-Fluorobiphenyl (S) | % | | | | 40.8 | 40.8 | 39.6 | 36.5 - 120 | | | |
| 2-Fluorophenol (S) | % | | | | 41 | 41 | 39.7 | 17.5 - 118 | | | |
| Nitrobenzene-d5 (S) | % | | | | 43.2 | 43.2 | 41.6 | 29.3 - 123 | | | |
| Phenol-d5 (S) | % | | | | 43.9 | 43.9 | 44.5 | 17.2 - 122 | | | |
| Terphenyl-d14 (S) | % | | | | 52.3 | 52.3 | 60.9 | 29.4 - 130 | | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: ORG/4244 Analysis Method: E1664A, Gravimetric
QC Batch Method: E1664A, Gravimetric
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 547464

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------|-------|--------------|-----------------|------------|
| Oil and Grease | mg/L | <2.50 | 2.50 | |

LABORATORY CONTROL SAMPLE: 547465

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Oil and Grease | mg/L | 40 | 39.6 | 40.8 | 99 | 102 | 78 - 114 | 2.99 | 18 |

MATRIX SPIKE SAMPLE: 547467 ORIGINAL: Q1538858001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Oil and Grease | mg/L | 1.08 | 39.8 | 34 | 85.3 | 78 - 114 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8647 Analysis Method: SM2540C, TDS
QC Batch Method: SM2540C, TDS
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 547597

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------------------|-------|--------------|-----------------|------------|
| Total Dissolved Solids(TDS) | mg/L | <25.0 | 25.0 | |

LABORATORY CONTROL SAMPLE: 547598

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Dissolved Solids(TDS) | mg/L | 400 | 402 | 395 | 100 | 98.8 | 80 - 120 | 1.76 | 20 |

MATRIX SPIKE SAMPLE: 547933 ORIGINAL: Q1538683001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Dissolved Solids(TDS) | mg/L | 575 | 400 | 972 | 99.2 | 70 - 130 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4847 **Analysis Method:** SW7471A Hg in Solid, Semisolid
QC Batch Method: SW7471A Hg in Solid, Semisolid
Associated Lab Samples: Q1538683005, Q1538683006

METHOD BLANK: 547893

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------|-------|--------------|-----------------|------------|
| Mercury Total | mg/kg | <0.0368 | 0.105 | |

LABORATORY CONTROL SAMPLE: 547894

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|---------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| Mercury Total | mg/kg | 1 | 1.02 | 1.04 | 102 | 104 | 85 - 115 | 1.94 | 20 | |

MATRIX SPIKE: 547896 DUPLICATE: 547897 ORIGINAL: Q1538683005

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|-----|---------|------------|
| Mercury Total | mg/kg | 0 | 1 | 1.02 | 1.02 | 102 | 102 | 70 - 130 | 0 | 20 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8666 Analysis Method: E300.0, Anions
QC Batch Method: E300.0, Anions
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 548839

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| Chloride | mg/L | <1.00 | 1.00 | |

LABORATORY CONTROL SAMPLE: 548845

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limit | Qualifiers |
|-----------|-------|-------------|------------|-----------|-------------|------------|
| Chloride | mg/L | 30 | 30 | 100 | 90 - 110 | |

METHOD BLANK: 548847

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| Chloride | mg/L | <1.00 | 1.00 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8681 Analysis Method: SM4500-NO3-H, Nitrate/Nitrite

QC Batch Method: SM4500-NO3-H, Nitrate/Nitrite

Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 549404

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 549409 ORIGINAL: Q1538814001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrate/Nitrite | mg/L | 0 | 1 | .95 | 94.9 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 549410

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrate/Nitrite | mg/L | 1 | .93 | 1.03 | 93.2 | 103 | 90 - 110 | 9.99 | 20 |

METHOD BLANK: 549412

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------------|-------|--------------|-----------------|------------|
| Nitrate/Nitrite | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: OVOL/2310 Analysis Method: SW-846 8260B

QC Batch Method: SW-846 8260B

Associated Lab Samples: Q1538683005, Q1538683006

METHOD BLANK: 549435

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,1,1-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2,2-Tetrachloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1,2-Trichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,1-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dibromoethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloroethane | ug/Kg | <5.00 | 5.00 | |
| 1,2-Dichloropropane | ug/Kg | <5.00 | 5.00 | |
| 2-Hexanone | ug/Kg | <5.00 | 5.00 | |
| 4-Methyl-2-pentanone | ug/Kg | <5.00 | 5.00 | |
| Acetone | ug/Kg | <5.00 | 5.00 | |
| Acrylonitrile | ug/Kg | <5.00 | 5.00 | |
| Benzene | ug/Kg | <5.00 | 5.00 | |
| Bromodichloromethane | ug/Kg | <5.00 | 5.00 | |
| Bromoform | ug/Kg | <5.00 | 5.00 | |
| Carbon disulfide | ug/Kg | <5.00 | 5.00 | |
| Carbon tetrachloride | ug/Kg | <5.00 | 5.00 | |
| Chlorobenzene | ug/Kg | <5.00 | 5.00 | |
| Chloroethane | ug/Kg | <5.00 | 5.00 | |
| Chloroform | ug/Kg | <5.00 | 5.00 | |
| Chloromethane | ug/Kg | <5.00 | 5.00 | |
| Dibromochloromethane | ug/Kg | <5.00 | 5.00 | |
| Dichlorodifluoromethane | ug/Kg | <5.00 | 5.00 | |
| Ethyl Benzene | ug/Kg | <5.00 | 5.00 | |
| Methylene chloride | ug/Kg | <5.00 | 5.00 | |
| Styrene | ug/Kg | <5.00 | 5.00 | |
| Tetrachloroethene | ug/Kg | <5.00 | 5.00 | |
| Toluene | ug/Kg | <5.00 | 5.00 | |
| Trichloroethene | ug/Kg | <5.00 | 5.00 | |
| Vinyl chloride | ug/Kg | <5.00 | 5.00 | |
| Xylene (total) | ug/Kg | <5.00 | 5.00 | |
| cis-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |
| m,p-Xylene | ug/Kg | <10.0 | 10.0 | |
| o-Xylene | ug/Kg | <5.00 | 5.00 | |
| trans-1,2-Dichloroethene | ug/Kg | <5.00 | 5.00 | |
| trans-1,3-Dichloropropene | ug/Kg | <5.00 | 5.00 | |

QUALITY CONTROL DATA

Workorder: Q1538683

METHOD BLANK: 549435

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| 1,2-Dichloroethane-d4 (S) | % | 102 | 70 - 130 | |
| 4-Bromofluorobenzene (S) | % | 98.9 | 70 - 130 | |
| Dibromofluoromethane (S) | % | 99.4 | 70 - 130 | |
| Toluene d8 (S) | % | 103 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 549436

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| 1,1,1-Trichloroethane | ug/Kg | 50 | 47.6 | 49.7 | 95.1 | 99.3 | 40 - 160 | 4.32 | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 50 | 47.4 | 55.6 | 94.8 | 111 | 40 - 160 | 15.9 | 30 | |
| 1,1,2-Trichloroethane | ug/Kg | 50 | 50 | 53 | 100 | 106 | 40 - 160 | 5.83 | 30 | |
| 1,1-Dichloroethane | ug/Kg | 50 | 45.6 | 46.8 | 91.2 | 93.6 | 40 - 160 | 2.6 | 30 | |
| 1,1-Dichloroethene | ug/Kg | 50 | 45.4 | 47.8 | 90.7 | 95.5 | 40 - 160 | 5.15 | 30 | |
| 1,2-Dibromoethane | ug/Kg | 50 | 48.1 | 54 | 96.2 | 108 | 40 - 160 | 11.6 | 30 | |
| 1,2-Dichloroethane | ug/Kg | 50 | 46.4 | 49.5 | 92.8 | 99.1 | 40 - 160 | 6.47 | 30 | |
| 1,2-Dichloropropane | ug/Kg | 50 | 45.3 | 47.4 | 90.6 | 94.8 | 40 - 160 | 4.53 | 30 | |
| 2-Hexanone | ug/Kg | 50 | 46 | 60.1 | 92 | 120 | 40 - 160 | 26.6 | 30 | |
| 4-Methyl-2-pentanone | ug/Kg | 50 | 49.1 | 61.4 | 98.1 | 123 | 40 - 160 | 22.3 | 30 | |
| Acetone | ug/Kg | 50 | 41.4 | 45.5 | 82.7 | 90.9 | 40 - 160 | 9.44 | 30 | |
| Acrylonitrile | ug/Kg | 50 | 47.1 | 56.7 | 94.2 | 113 | 40 - 160 | 18.5 | 30 | |
| Benzene | ug/Kg | 50 | 46.7 | 48.4 | 93.5 | 96.7 | 40 - 160 | 3.58 | 30 | |
| Bromodichloromethane | ug/Kg | 50 | 46.4 | 48.3 | 92.8 | 96.5 | 40 - 160 | 4.01 | 30 | |
| Bromoform | ug/Kg | 50 | 48.5 | 54.1 | 96.9 | 108 | 40 - 160 | 10.9 | 30 | |
| Carbon disulfide | ug/Kg | 50 | 44.7 | 46.7 | 89.4 | 93.5 | 40 - 160 | 4.38 | 30 | |
| Carbon tetrachloride | ug/Kg | 50 | 47.6 | 49.8 | 95.2 | 99.7 | 40 - 160 | 4.52 | 30 | |
| Chlorobenzene | ug/Kg | 50 | 51.7 | 52.8 | 103 | 106 | 40 - 160 | 2.11 | 30 | |
| Chloroethane | ug/Kg | 50 | 45.6 | 48.6 | 91.3 | 97.1 | 40 - 160 | 6.37 | 30 | |
| Chloroform | ug/Kg | 50 | 47.4 | 48.8 | 94.8 | 97.5 | 40 - 160 | 2.91 | 30 | |
| Chloromethane | ug/Kg | 50 | 44.8 | 42.9 | 89.5 | 85.9 | 40 - 160 | 4.33 | 30 | |
| Dibromochloromethane | ug/Kg | 50 | 49.7 | 53.3 | 99.4 | 107 | 40 - 160 | 6.99 | 30 | |
| Dichlorodifluoromethane | ug/Kg | 50 | 43 | 45.5 | 86 | 91 | 40 - 160 | 5.65 | 30 | |
| Ethyl Benzene | ug/Kg | 50 | 52.8 | 54.1 | 106 | 108 | 40 - 160 | 2.43 | 30 | |
| Methylene chloride | ug/Kg | 50 | 46.8 | 48.7 | 93.7 | 97.3 | 40 - 160 | 3.98 | 30 | |
| Styrene | ug/Kg | 50 | 51.8 | 53.1 | 104 | 106 | 40 - 160 | 2.48 | 30 | |
| Tetrachloroethene | ug/Kg | 50 | 53.8 | 55.4 | 108 | 111 | 40 - 160 | 2.93 | 30 | |
| Toluene | ug/Kg | 50 | 52.1 | 53.6 | 104 | 107 | 40 - 160 | 2.84 | 30 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 549436

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Trichloroethene | ug/Kg | 50 | 47.1 | 49.6 | 94.2 | 99.1 | 40 - 160 | 5.17 | 30 |
| Vinyl chloride | ug/Kg | 50 | 43.6 | 45.6 | 87.1 | 91.3 | 40 - 160 | 4.48 | 30 |
| Xylene (total) | ug/Kg | | 5 | | 159 | | | 1.87 | |
| cis-1,3-Dichloropropene | ug/Kg | 50 | 45.1 | 47.4 | 90.1 | 94.9 | 40 - 160 | 4.97 | 30 |
| m,p-Xylene | ug/Kg | 100 | 106 | 109 | 106 | 109 | 40 - 160 | 2.79 | 30 |
| o-Xylene | ug/Kg | 50 | 53.4 | 53.7 | 107 | 107 | 40 - 160 | .56 | 30 |
| trans-1,2-Dichloroethene | ug/Kg | 50 | 46.4 | 47.8 | 92.7 | 95.7 | 40 - 160 | 2.97 | 30 |
| trans-1,3-Dichloropropene | ug/Kg | 50 | 48.9 | 51.6 | 97.8 | 103 | 40 - 160 | 5.37 | 30 |
| 1,2-Dichloroethane-d4 (S) | % | | | | 98.7 | 107 | 70 - 130 | | |
| 4-Bromofluorobenzene (S) | % | | | | 96 | 98 | 70 - 130 | | |
| Dibromofluoromethane (S) | % | | | | 99.8 | 101 | 70 - 130 | | |
| Toluene d8 (S) | % | | | | 106 | 104 | 70 - 130 | | |

MATRIX SPIKE: 549438 DUPLICATE: 549439 ORIGINAL: Q1538683006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| 1,1,1-Trichloroethane | ug/Kg | 0 | 49.1 | 46 | 46.9 | 93.6 | 94.9 | 40 - 160 | 1.94 | 30 |
| 1,1,2,2-Tetrachloroethane | ug/Kg | 0 | 49.1 | 39.1 | 38.2 | 79.6 | 77.4 | 40 - 160 | 2.33 | 30 |
| 1,1,2-Trichloroethane | ug/Kg | 0 | 49.1 | 42.5 | 42.1 | 86.4 | 85.2 | 40 - 160 | .946 | 30 |
| 1,1-Dichloroethane | ug/Kg | 0 | 49.1 | 43 | 43.6 | 87.6 | 88.2 | 40 - 160 | 1.39 | 30 |
| 1,1-Dichloroethene | ug/Kg | 0 | 49.1 | 44 | 45.5 | 89.6 | 92.1 | 40 - 160 | 3.35 | 30 |
| 1,2-Dibromoethane | ug/Kg | 0 | 49.1 | 40.1 | 39.2 | 81.7 | 79.4 | 40 - 160 | 2.27 | 30 |
| 1,2-Dichloroethane | ug/Kg | 0 | 49.1 | 40.1 | 38.5 | 81.6 | 78 | 40 - 160 | 4.07 | 30 |
| 1,2-Dichloropropane | ug/Kg | 0 | 49.1 | 41.6 | 42.1 | 84.7 | 85.2 | 40 - 160 | 1.19 | 30 |
| 2-Hexanone | ug/Kg | 0 | 49.1 | 34 | 32.2 | 69.3 | 65.3 | 40 - 160 | 5.44 | 30 |
| 4-Methyl-2-pentanone | ug/Kg | 0 | 49.1 | 37.1 | 36.7 | 75.6 | 74.2 | 40 - 160 | 1.08 | 30 |
| Acetone | ug/Kg | 0 | 49.1 | 33.4 | 32 | 67.9 | 64.9 | 40 - 160 | 4.28 | 30 |
| Acrylonitrile | ug/Kg | 0 | 49.1 | 35.9 | 33.8 | 73.2 | 68.4 | 40 - 160 | 6.03 | 30 |
| Benzene | ug/Kg | 0 | 49.1 | 43.9 | 44.7 | 89.4 | 90.4 | 40 - 160 | 1.81 | 30 |
| Bromodichloromethane | ug/Kg | 0 | 49.1 | 41.5 | 41.3 | 84.6 | 83.6 | 40 - 160 | .483 | 30 |
| Bromoform | ug/Kg | 0 | 49.1 | 39 | 37.8 | 79.4 | 76.5 | 40 - 160 | 3.12 | 30 |
| Carbon disulfide | ug/Kg | 0 | 49.1 | 41.1 | 41.4 | 83.7 | 83.8 | 40 - 160 | .727 | 30 |
| Carbon tetrachloride | ug/Kg | 0 | 49.1 | 45.2 | 47 | 92.1 | 95.1 | 40 - 160 | 3.9 | 30 |
| Chlorobenzene | ug/Kg | 0 | 49.1 | 48.6 | 49.3 | 98.9 | 99.7 | 40 - 160 | 1.43 | 30 |
| Chloroethane | ug/Kg | 0 | 49.1 | 44.1 | 46 | 89.9 | 93.1 | 40 - 160 | 4.22 | 30 |
| Chloroform | ug/Kg | 0 | 49.1 | 44 | 44.5 | 89.7 | 90.1 | 40 - 160 | 1.13 | 30 |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

MATRIX SPIKE: 549438 DUPLICATE: 549439 ORIGINAL: Q1538683006

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD | Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|---------|------------|
| Chloromethane | ug/Kg | 0 | 49.1 | 42.5 | 43.7 | 86.6 | 88.4 | 40 - 160 | 2.78 | 30 | |
| Dibromochloromethane | ug/Kg | 0 | 49.1 | 44 | 43.4 | 89.6 | 87.8 | 40 - 160 | 1.37 | 30 | |
| Dichlorodifluoromethane | ug/Kg | 0 | 49.1 | 41.3 | 41.3 | 84 | 83.6 | 40 - 160 | 0 | 30 | |
| Ethyl Benzene | ug/Kg | 0 | 49.1 | 50.5 | 51.5 | 103 | 104 | 40 - 160 | 1.96 | 30 | |
| Methylene chloride | ug/Kg | 0 | 49.1 | 42.9 | 42.8 | 87.4 | 86.6 | 40 - 160 | .233 | 30 | |
| Styrene | ug/Kg | 0 | 49.1 | 47.9 | 47.9 | 97.6 | 96.9 | 40 - 160 | 0 | 30 | |
| Tetrachloroethene | ug/Kg | 0 | 49.1 | 51.9 | 53.6 | 106 | 108 | 40 - 160 | 3.22 | 30 | |
| Toluene | ug/Kg | 0 | 49.1 | 50 | 51.4 | 102 | 104 | 40 - 160 | 2.76 | 30 | |
| Trichloroethene | ug/Kg | 0 | 49.1 | 45.4 | 46.8 | 92.4 | 94.6 | 40 - 160 | 3.04 | 30 | |
| Vinyl chloride | ug/Kg | 0 | 49.1 | 41.8 | 43.5 | 85.1 | 88.1 | 40 - 160 | 3.99 | 30 | |
| cis-1,3-Dichloropropene | ug/Kg | 0 | 49.1 | 39.1 | 38.9 | 79.5 | 78.7 | 40 - 160 | .513 | 30 | |
| m,p-Xylene | ug/Kg | 0 | 98.2 | 102 | 103 | 104 | 104 | 40 - 160 | .976 | 30 | |
| o-Xylene | ug/Kg | 0 | 49.1 | 50.2 | 50.7 | 102 | 103 | 40 - 160 | .991 | 30 | |
| trans-1,2-Dichloroethene | ug/Kg | 0 | 49.1 | 43.9 | 45.5 | 89.4 | 92.1 | 40 - 160 | 3.58 | 30 | |
| trans-1,3-Dichloropropene | ug/Kg | 0 | 49.1 | 41.9 | 41.8 | 85.4 | 84.6 | 40 - 160 | .239 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 87.2 | 87.2 | 85.5 | 70 - 130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | 96.3 | 96.3 | 96.1 | 70 - 130 | | | |
| Dibromofluoromethane (S) | % | | | | 95.5 | 95.5 | 94 | 70 - 130 | | | |
| Toluene d8 (S) | % | | | | 109 | 109 | 109 | 70 - 130 | | | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WETP/2356 **Analysis Method:** E365.4 Phosphorus, Total
QC Batch Method: E365.4 / E351.2 Water Prep
Associated Lab Samples: Q1538683001, Q1538683002

MATRIX SPIKE SAMPLE: 549865 ORIGINAL: Q1538535001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|--------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Phosphorus, Total (As P) | mg/L | .12 | 1 | .99 | 87.3 | 80 - 120 | |

LABORATORY CONTROL SAMPLE: 549866

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | 1.02 | 1.03 | 102 | 103 | 90 - 110 | .976 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | .94 | .95 | 93.8 | 94.6 | 90 - 110 | .849 | 20 |

METHOD BLANK: 549868

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

MATRIX SPIKE SAMPLE: 549869 ORIGINAL: Q1539227002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|---------------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | .29 | 1 | 1.48 | 119 | 80 - 120 | |
| Phosphorus, Total (As P) | mg/L | .02 | 1 | .97 | 96.9 | 80 - 120 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

LABORATORY CONTROL SAMPLE: 549870

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualif |
|---------------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | 1 | .91 | 1.02 | 91.2 | 102 | 90 - 110 | 11.2 | 20 |
| Phosphorus, Total (As P) | mg/L | 1 | .94 | .95 | 94.3 | 95.3 | 90 - 110 | 1.05 | 20 |

METHOD BLANK: 549872

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|---------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Kjeldahl, Total | mg/L | <0.100 | 0.100 | |
| Phosphorus, Total (As P) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8689 Analysis Method: SM2320B, Alkalinity
QC Batch Method: SM2320B, Alkalinity
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 549898

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

SAMPLE DUPLICATE: 549901 ORIGINAL: Q1538535002

| Parameter | Units | Original Result | DUP Result | RPD | Max RPD | Qualifiers |
|------------------|-------|-----------------|------------|------|---------|------------|
| Total Alkalinity | mg/L | 41 | 41.7 | 1.69 | 10 | |

MATRIX SPIKE SAMPLE: 549902 ORIGINAL: Q1538535002

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Alkalinity | mg/L | 41 | 91 | 131 | 99.4 | 70 - 130 | |

METHOD BLANK: 549904

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------------|-------|--------------|-----------------|------------|
| Total Alkalinity | mg/L | <20.0 | 20.0 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: MEP/4862 Analysis Method: SW6020 ICP-MS
 QC Batch Method: SW3050B, Metals Prep
 Associated Lab Samples: Q1538683005, Q1538683006

LABORATORY CONTROL SAMPLE: 550181

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Lead Total | mg/kg | 2.48 | 2.48 | 2.5 | 100 | 100 | 85 - 115 | .803 | 20 |

METHOD BLANK: 550183

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|------------|-------|--------------|-----------------|------------|
| Lead Total | mg/kg | <0.0490 | 0.0490 | |

MATRIX SPIKE: 550184 DUPLICATE: 550185 ORIGINAL: Q1539715003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Lead Total | mg/kg | 5.52 | 2.4 | 8.18 | 8 | 111 | 103 | 70 - 130 | 2.22 | 20 |

Please note a bolded Quality Control parameter indicates a result outside required limits.



QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WETP/2360 **Analysis Method:** E410.4 COD by SemiAuto Col
QC Batch Method: E410.4 COD by SemiAuto Col
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 550472

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| COD | mg/L | <7.00 | 7.00 | |

MATRIX SPIKE SAMPLE: 550476 ORIGINAL: Q1538683001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|-----------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| COD | mg/L | 30.5 | 50 | 80.2 | 99.5 | 90 - 110 | |

LABORATORY CONTROL SAMPLE: 550477

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|-----------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| COD | mg/L | 50 | 52.3 | 51.5 | 105 | 103 | 90 - 110 | 1.54 | 20 |

METHOD BLANK: 550479

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|-----------|-------|--------------|-----------------|------------|
| COD | mg/L | <7.00 | 7.00 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8716 Analysis Method: E350.1 NH3-N by SemiAuto Col
QC Batch Method: E350.1 NH3-N by SemiAuto Col
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 551175

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|--------------------------|-------|--------------|-----------------|------------|
| Nitrogen, Ammonia (as N) | mg/L | <0.0200 | 0.0200 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8720 **Analysis Method:** SM5310D, Total Organic Carbon
QC Batch Method: SM5310D, Total Organic Carbon
Associated Lab Samples: Q1538683001, Q1538683002

METHOD BLANK: 551269

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

MATRIX SPIKE SAMPLE: 551273 ORIGINAL: Q1539128001

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Organic Carbon | mg/L | 5.53 | 5 | 10.3 | 94.5 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 551274

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max | Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-----|---------|
| Total Organic Carbon | mg/L | 5 | 5.28 | 5.18 | 106 | 104 | 80 - 120 | 1.91 | 20 | |

METHOD BLANK: 551276

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8751 Analysis Method: SW9060A Total Organic Carbon
QC Batch Method: SW9060A Total Organic Carbon
Associated Lab Samples: Q1538683005, Q1538683006

MATRIX SPIKE: 552834 DUPLICATE: 552835 ORIGINAL: Q1539715003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limit | RPD | Max RPD Qualifiers |
|----------------------|-------|-----------------|-------------|-----------|------------|----------|-----------|-------------|------|--------------------|
| Total Organic Carbon | mg/kg | 6650 | 30000 | 38300 | 42900 | 106 | 121 | 70 - 130 | 11.3 | 20 |

LABORATORY CONTROL SAMPLE: 552836

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|------|-------------|
| Total Organic Carbon | mg/kg | 15000 | 16900 | 17500 | 112 | 117 | 70 - 130 | 3.49 | 20 |

METHOD BLANK: 552838

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/kg | <1500 | 1500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA

Workorder: Q1538683

QC Batch: WET/8759 Analysis Method: SM5310D, Total Organic Carbon
QC Batch Method: SM5310D, Total Organic Carbon
Associated Lab Samples: Q1538683002

METHOD BLANK: 553171

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

MATRIX SPIKE SAMPLE: 553175 ORIGINAL: Q1539263003

| Parameter | Units | Original Result | Spike Conc. | MS Result | MS % Rec | % Rec Limit | Qualifiers |
|----------------------|-------|-----------------|-------------|-----------|----------|-------------|------------|
| Total Organic Carbon | mg/L | 7.11 | 5 | 12.3 | 103 | 70 - 130 | |

LABORATORY CONTROL SAMPLE: 553176

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limit | RPD | Max Qualifi |
|----------------------|-------|-------------|------------|-------------|-----------|------------|-------------|-----|-------------|
| Total Organic Carbon | mg/L | 5 | 4.74 | 4.6 | 94.8 | 92 | 80 - 120 | 3 | 20 |

METHOD BLANK: 553178

| Parameter | Units | Blank Result | Reporting Limit | Qualifiers |
|----------------------|-------|--------------|-----------------|------------|
| Total Organic Carbon | mg/L | <0.500 | 0.500 | |

Please note a bolded Quality Control parameter indicates a result outside required limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1538683

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|----------------------|------------|-------------------------------|----------------|
| Q1538683001 | AC UPPER | | | SM5210B | WET/8593 |
| Q1538683002 | AC LOWER | | | SM5210B | WET/8593 |
| Q1538683001 | AC UPPER | | | SM9223, IDEXX | MIC/2702 |
| Q1538683002 | AC LOWER | | | SM9223, IDEXX | MIC/2702 |
| Q1538683005 | AC UPPER | | | 600/2-78-54 | WET/8598 |
| Q1538683006 | AC LOWER | | | 600/2-78-54 | WET/8598 |
| Q1538683005 | AC UPPER | | | 600/2-78-54 | WET/8599 |
| Q1538683006 | AC LOWER | | | 600/2-78-54 | WET/8599 |
| Q1538683005 | AC UPPER | SW3050B, Metals Prep | MEP/4818 | SW6010B ICP-AES | MET/3849 |
| Q1538683006 | AC LOWER | SW3050B, Metals Prep | MEP/4818 | SW6010B ICP-AES | MET/3849 |
| Q1538683005 | AC UPPER | SW3050B, Metals Prep | MEP/4819 | SW6020 ICP-MS | MET/3846 |
| Q1538683006 | AC LOWER | SW3050B, Metals Prep | MEP/4819 | SW6020 ICP-MS | MET/3846 |
| Q1538683005 | AC UPPER | SW3050B, Metals Prep | MEP/4820 | SW6020 ICP-MS | MET/3840 |
| Q1538683006 | AC LOWER | SW3050B, Metals Prep | MEP/4820 | SW6020 ICP-MS | MET/3840 |
| Q1538683001 | AC UPPER | | | E300.0, Anions | WET/8607 |
| Q1538683002 | AC LOWER | | | E300.0, Anions | WET/8607 |
| Q1538683001 | AC UPPER | pH Check | SM/11593 | E335.4 CN, SemiAuto Col | WET/8639 |
| Q1538683002 | AC LOWER | pH Check | SM/11593 | E335.4 CN, SemiAuto Col | WET/8639 |
| Q1538683001 | AC UPPER | pH Check | SM/11594 | SM5310D, Total Organic Carbon | WET/8720 |
| Q1538683002 | AC LOWER | pH Check | SM/11594 | SM5310D, Total Organic Carbon | WET/8759 |
| Q1538683001 | AC UPPER | | | SW-846 8260B | OVOL/2298 |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1538683

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|---------------------|--------------------------------|------------|-------------------------------|----------------|
| Q1538683002 | AC LOWER | | | SW-846 8260B | OVOL/2298 |
| Q1538683003 | AC UPPER TRIP BLANK | | | SW-846 8260B | OVOL/2298 |
| Q1538683004 | AC LOWER TRIP BLANK | | | SW-846 8260B | OVOL/2298 |
| Q1538683001 | AC UPPER | | | SM2540D, TSS | WET/8619 |
| Q1538683002 | AC LOWER | SM2540D, TSS | WET/8619 | SM2320B, Alkalinity | WET/8689 |
| Q1538683001 | AC UPPER | | | E160.4 Ignition at 550C | WET/8620 |
| Q1538683002 | AC LOWER | | | E160.4 Ignition at 550C | WET/8620 |
| Q1538683001 | AC UPPER | E245.1 Mercury Water | MEP/4829 | E245.1 Mercury Water | MET/3843 |
| Q1538683002 | AC LOWER | E245.1 Mercury Water | MEP/4829 | E245.1 Mercury Water | MET/3843 |
| Q1538683001 | AC UPPER | E200.7 Prep | MEP/4832 | E200.7 Metals, Trace Elements | MET/3852 |
| Q1538683002 | AC LOWER | E200.7 Prep | MEP/4832 | E200.7 Metals, Trace Elements | MET/3852 |
| Q1538683001 | AC UPPER | E200.8, ICP-MS Prep | MEP/4833 | E200.8, ICP-MS | MET/3847 |
| Q1538683002 | AC LOWER | E200.8, ICP-MS Prep | MEP/4833 | E200.8, ICP-MS | MET/3847 |
| Q1538683005 | AC UPPER | | | SM2540G, Percent Solids | WET/8625 |
| Q1538683006 | AC LOWER | | | SM2540G, Percent Solids | WET/8625 |
| Q1538683001 | AC UPPER | SW3520C, Liquid/Liquid Extract | OEXT/3820 | SW-846 8270C | ORG/4248 |
| Q1538683002 | AC LOWER | SW3520C, Liquid/Liquid Extract | OEXT/3820 | SW-846 8270C | ORG/4248 |
| Q1538683005 | AC UPPER | SW3540, Soxhlet Extraction | OEXT/3822 | SW-846 8270C | ORG/4248 |
| Q1538683006 | AC LOWER | SW3540, Soxhlet Extraction | OEXT/3822 | SW-846 8270C | ORG/4248 |
| Q1538683001 | AC UPPER | | | E1664A, Gravimetric | ORG/4244 |

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1538683

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|-----------------------------------|------------|-----------------------------------|----------------|
| Q1538683002 | AC LOWER | | | E1664A, Gravimetric | ORG/4244 |
| Q1538683001 | AC UPPER | | | SM2540C, TDS | WET/8647 |
| Q1538683002 | AC LOWER | | | SM2540C, TDS | WET/8647 |
| Q1538683005 | AC UPPER | SW7471A Hg in Solid, Semisolid | MEP/4847 | SW7471A Hg in Solid, Semisolid | MET/3855 |
| Q1538683006 | AC LOWER | SW7471A Hg in Solid, Semisolid | MEP/4847 | SW7471A Hg in Solid, Semisolid | MET/3855 |
| Q1538683001 | AC UPPER | | | E300.0, Anions | WET/8666 |
| Q1538683002 | AC LOWER | | | E300.0, Anions | WET/8666 |
| Q1538683001 | AC UPPER | | | SM4500-NO3-H, Nitrate/Nitrite | WET/8681 |
| Q1538683002 | AC LOWER | | | SM4500-NO3-H, Nitrate/Nitrite | WET/8681 |
| Q1538683005 | AC UPPER | | | SW-846 8260B | OVOL/2310 |
| Q1538683006 | AC LOWER | | | SW-846 8260B | OVOL/2310 |
| Q1538683001 | AC UPPER | E365.4 / E351.2 Water Prep | WETP/2356 | E365.4 Phosphorus, Total | WET/8692 |
| Q1538683002 | AC LOWER | E365.4 / E351.2 Water Prep | WETP/2356 | E365.4 Phosphorus, Total | WET/8692 |
| Q1538683001 | AC UPPER | E365.4 / E351.2 Water Prep | WETP/2356 | E351.2 TKN by SemiAuto Col | WET/8709 |
| Q1538683002 | AC LOWER | E365.4 / E351.2 Water Prep | WETP/2356 | E351.2 TKN by SemiAuto Col | WET/8709 |
| Q1538683002 | AC LOWER | SM2320B, Alkalinity | WET/8689 | SM2540D, TSS | WET/8619 |
| Q1538683005 | AC UPPER | SW3050B, Metals Prep | MEP/4862 | SW6020 ICP-MS | MET/3875 |
| Q1538683006 | AC LOWER | SW3050B, Metals Prep | MEP/4862 | SW6020 ICP-MS | MET/3875 |
| Q1538683001 | AC UPPER | E410.4 COD by SemiAuto Col | WETP/2360 | SM2320B, Alkalinity | WET/8689 |
| Q1538683001 | AC UPPER | E410.4 COD by SemiAuto Col | WETP/2360 | E410.4 COD by SemiAuto Col | WET/8700 |

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: Q1538683

| Lab ID | Sample ID | Prep Method | Prep Batch | Analysis Method | Analysis Batch |
|-------------|-----------|----------------------------|------------|------------------------------|----------------|
| Q1538683002 | AC LOWER | E410.4 COD by SemiAuto Col | WETP/2360 | E410.4 COD by SemiAuto Col | WET/8700 |
| Q1538683001 | AC UPPER | | | E350.1 NH3-N by SemiAuto Col | WET/8716 |
| Q1538683002 | AC LOWER | | | E350.1 NH3-N by SemiAuto Col | WET/8716 |
| Q1538683005 | AC UPPER | | | SW9060A Total Organic Carbon | WET/8751 |
| Q1538683006 | AC LOWER | | | SW9060A Total Organic Carbon | WET/8751 |

Appendix 4

Groundwater and Soil Analysis



Texas Commission on Environmental Quality

Corpus Christi Region 14 – Water Section

TCEQ Internal Memorandum

To: Gregg Easley, Manager
Water Quality Assessment Section

From: Andrew Gorton, P.G.
Water Quality Assessment Team

Date: February 10, 2016

Subject: **Review of Arenosa Creek Groundwater Data, (RE: Beneficial Land Management, Arenosa Creek Ranch, Renewal No. 4666-000, Victoria County)**

On February 9, 2016, the Water Quality Assessment Team was asked to review groundwater data from recent sampling from wells at/near the Beneficial Land Management sludge application site near Victoria, Texas.

After review, it was determined that groundwater samples were collected from five wells: Arenosa Creek Ranch (i.e., Mayfield) wells #1 and #4, the Mayfield No. 3 well, and two offsite wells.

Samples were analyzed for Total Petroleum Hydrocarbons (TPH), the volatile organic compounds (VOCs) benzene, ethylbenzene, toluene, xylenes, and methyl-tertiary butyl ether (MTBE), metals (including mercury), and "other" parameters including pH, total dissolved solids (TDS), sulfate, chloride, Total Kjeldahl Nitrogen (TKN), nitrate-nitrogen, ammonia-nitrogen, phosphorous, coliform bacteria, and E. Coli. Samples were analyzed using appropriate laboratory analytical methods. Samples were compared to primary and secondary drinking water standards and TCEQ Protective Concentration Limits (PCLs) where applicable.

TPH and VOCs were not detected in samples collected from these wells.

Barium, copper, potassium, and zinc were the only metals detected in samples collected from these wells.

Barium was detected in each well at concentrations ranging from 0.128 milligrams per liter (mg/l) in Mayfield well #4 to 1.75 mg/l in Mayfield well #3. These concentrations are below the drinking water standard of 2.0 mg/l.

Copper was detected in Mayfield well #3 at a concentration of 0.006 mg/l. This is below the secondary drinking water standard of 1.0 mg/l and the TCEQ PCL of 1.3 mg/l.

Potassium was detected in each well at concentrations ranging from 0.773 mg/l in Mayfield well #4 to 2.53 mg/l in Mayfield well #1. Potassium is not necessarily of concern from a human health standpoint. There is no drinking water standard for potassium.

TCEQ Internal Memorandum

Zinc was detected in four wells. Concentrations ranged from 0.01 mg/l to 0.214 mg/l. These concentrations are below the secondary drinking water standard of 5.0 mg/l and the TCEQ PCL of 7.3 mg/l.

In regards to the "other" parameters, ammonia, sulfate, and chloride concentrations were below secondary drinking water standards. Nitrate and phosphorous were not detected. Values of pH ranged from 6.99 standard units to 7.26 standard units. TKN concentrations ranged from 0.81 mg/l to 0.92 mg/l. TDS concentrations exceeded the secondary drinking water standard of 500 mg/l with concentrations ranging from 514 mg/l to 590 mg/l. These concentrations of TDS are below the public drinking water standard of 1,000 mg/l. The detections of "other" parameters in these wells do not appear to represent a concern to groundwater or drinking water quality.

With respect to bacteria, coliform bacteria were present in two wells. E. coli was not present in any of the wells sampled. In general, coliforms can live in soil, vegetation, surface water, and animal waste. Its presence may indicate fecal contamination, but is not definitive. It is my understanding that the sample collection outlets were not disinfected prior to collecting the coliform samples (per Regional Office communication).

Additionally, E. coli is the type of coliform bacteria that is the best indicator of fecal contamination, so it is notable that E. coli was not present in the samples collected from these wells.

Arenosa Creek Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Groundwater Residential Protective Concentration Limits (PCLs) and Secondary Maximum Concentration Limits (SMCLs).

Drinking Water Standards (30 TAC 290) for Public Water Systems Maximum Contaminant Level (MCLs) and Secondary Contaminant Level (SCLs).

| Laboratory Workorders | SMCL | PCL | SCL | MCL | M - 1 | M - 3 | M - 4 | C - 1 | C - 2 |
|------------------------|------|-------|-----|-------|------------|------------|------------|----------------------------|------------|
| Parameters | | | | | HS15120102 | HS16010183 | HS15120102 | HS15111052 & HS15120053 | HS16010183 |
| TPH 1005 | | | | | | | | | |
| TPH Total (mg/L) | --- | --- | --- | --- | ND | ND | ND | ND | ND |
| TPH, C6 - C12 (mg/L) | --- | 0.98 | --- | --- | ND | ND | ND | ND | ND |
| TPH, >C12-C28 (mg/L) | --- | 0.98 | --- | --- | ND | ND | ND | ND | ND |
| TPH, >C28 - C35 (mg/L) | --- | 0.98 | --- | --- | ND | ND | ND | ND | ND |
| Volatiles 8260C | | | | | | | | | |
| MTBE (mg/L) | --- | 0.24 | --- | --- | ND | ND | ND | ND | ND |
| Benzene (mg/L) | --- | 0.005 | --- | 0.005 | ND | ND | ND | ND | ND |
| Toluene (mg/L) | --- | 1 | --- | 1 | ND | ND | ND | ND | ND |
| Ethylbenzene (mg/L) | --- | 0.7 | --- | 0.7 | ND | ND | ND | ND | ND |
| Xylene, Total (mg/L) | --- | 10 | --- | 10 | ND | ND | ND | ND | ND |
| Metals 6020A | | | | | | | | | |
| Antimony (mg/L) | --- | 0.006 | --- | 0.006 | ND | --- | ND | ND | --- |
| Arsenic (mg/L) | --- | 0.01 | --- | 0.01 | ND | ND | ND | ND | ND |
| Barium (mg/L) | --- | 2 | --- | 2 | 1.72 | 1.75 | 0.128 | 1.39 | 0.166 |
| Beryllium (mg/L) | --- | 0.004 | --- | 0.004 | ND | --- | ND | ND | --- |
| Cadmium (mg/L) | --- | 0.005 | --- | 0.005 | ND | ND | ND | ND | ND |
| Chromium (mg/L) | --- | 0.1 | --- | 0.1 | ND | ND | ND | ND | ND |
| Copper (mg/L) | --- | 1.3 | --- | 1 | ND | 0.00626 | ND | ND | ND |
| Lead (mg/L) | --- | 0.015 | --- | --- | ND | ND | ND | ND | ND |
| Molybdenum (mg/L) | --- | 0.12 | --- | --- | ND | ND | ND | ND | ND |
| Nickel (mg/L) | --- | 0.49 | --- | --- | ND | ND | ND | ND | ND |
| Potassium (mg/L) | --- | --- | --- | --- | 2.53 | 2.4 | 0.773 | 2.49 | 1.11 |
| Selenium (mg/L) | --- | 0.05 | --- | 0.05 | ND | ND | ND | ND | ND |
| Silver (mg/L) | --- | 0.12 | --- | 0.1 | ND | --- | ND | ND | --- |

Arenosa Creek Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Groundwater Residential Protective Concentration Limits (PCLs) and Secondary Maximum Concentration Limits (SMCLs).

Drinking Water Standards (30 TAC 290) for Public Water Systems Maximum Contaminant Level (MCLs) and Secondary Contaminant Level (SCLs).

| Laboratory Workorders | SMCL | PCL | SCL | MCL | M - 1 | M - 3 | M - 4 | C - 1 | C - 2 |
|-------------------------------|-----------|-------|------|-------|--------|---------|--------|--------|---------|
| Parameters | | | | | | | | | |
| Vanadium (mg/L) | --- | 0.044 | --- | --- | ND | --- | ND | ND | --- |
| Zinc (mg/L) | --- | 7.3 | 5 | --- | 0.02 | 0.153 | 0.0101 | ND | 0.214 |
| Others | | | | | | | | | |
| pH (S.U.) | 6.5 - 8.5 | --- | >7.0 | --- | 6.99 | --- | 7.09 | 7.26 | --- |
| Total Dissolved Solids (mg/L) | 500 | --- | 1000 | --- | 590 | 514 | 574 | 576 | 574 |
| Sulfate (mg/L) | 250 | --- | 300 | --- | 1.02 | ND | 6.42 | 0.886 | 25.9 |
| Chloride (mg/L) | 250 | --- | 300 | --- | 183 | 131 | 178 | 149 | 116 |
| TKN (mg/L) | --- | --- | --- | --- | 0.85 | 0.83 | 0.81 | 0.92 | 0.86 |
| Nitrate-Nitrogen (mg/L) | --- | 10 | --- | 10 | ND | ND | ND | ND | ND |
| Ammonia-Nitrogen (mg/L) | 1.5 | --- | --- | --- | ND | 0.057 | 0.069 | ND | ND |
| Phosphorous (mg/L) | --- | --- | --- | --- | ND | ND | ND | ND | ND |
| Mercury (mg/L) | --- | 0.002 | --- | 0.002 | ND | ND | ND | ND | |
| Coliforms (mg/L) | --- | --- | --- | --- | Absent | Present | Absent | Absent | Present |
| E. Coli | --- | --- | --- | --- | Absent | Absent | Absent | Absent | Absent |

*** Detection Limits vary between samples.

SMCLs and SCLs are quantified for aesthetics and not for human health concerns.



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January 04, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15111052**

Revision: **1**

Laboratory Results for: **Groundwater Sampling**

Dear Bill,

ALS Environmental received 2 sample(s) on Nov 24, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey", with a long horizontal stroke extending to the right.

Generated By: Dane.Wacasey

Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15111052

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|-------------------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS15111052-01 | Corral (136716-01) | Liquid | | 23-Nov-2015 11:35 | 24-Nov-2015 07:00 | <input type="checkbox"/> |
| HS15111052-02 | Trip Blank (Not ALS Supplied) | Water | | 23-Nov-2015 11:35 | 24-Nov-2015 07:00 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15111052

CASE NARRATIVE**Work Order Comments**

- This report was revised January 4, 2016 in order to include MTBE results per phone call from Ms. Edwards on December 29, 2015.
- The results for analysis of total metals is contained in separate work order HS15120053.

GC Semivolatiles by Method TX1005**Batch ID: 99301**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R265526**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R265402

Sample ID: VLCSW-151124

- The LCS was recovered high and outside of criteria for Methyl tert-butyl ether. The analyte was not detected in the associated samples. Positive bias does not impact data quality.
- The CCV was recovered high and outside of criteria for Methyl tert-butyl ether. The analyte was not detected in the associated samples. Positive bias does not impact data quality.

WetChemistry by Method M2540C**Batch ID: R265484**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500 NH3-B-F**Batch ID: 99332**

Sample ID: HS15111097-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method E300**Batch ID: R265393**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3**Batch ID: 99328**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M4500 NH3 D**Batch ID: 99284**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Corral (136716-01)
 Collection Date: 23-Nov-2015 11:35

ANALYTICAL REPORT
 WorkOrder:HS15111052
 Lab ID:HS15111052-01
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|----------|------|------------------------------|-------|---|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | | Method:SW8260 | | Analyst: AKP | |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 25-Nov-2015 01:30 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 25-Nov-2015 01:30 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 25-Nov-2015 01:30 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 25-Nov-2015 01:30 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 25-Nov-2015 01:30 |
| Surr: 1,2-Dichloroethane-d4 | 103 | | 71-125 | %REC | 1 | 25-Nov-2015 01:30 |
| Surr: 4-Bromofluorobenzene | 90.2 | | 70-125 | %REC | 1 | 25-Nov-2015 01:30 |
| Surr: Dibromofluoromethane | 106 | | 74-125 | %REC | 1 | 25-Nov-2015 01:30 |
| Surr: Toluene-d8 | 99.3 | | 75-125 | %REC | 1 | 25-Nov-2015 01:30 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | | Method:TX1005 | | Prep:TX1005PR / 25-Nov-2015 Analyst: KHT | |
| nC6 to nC12 | < 0.48 | | 0.48 | mg/L | 1 | 25-Nov-2015 14:28 |
| >nC12 to nC28 | < 0.48 | | 0.48 | mg/L | 1 | 25-Nov-2015 14:28 |
| >nC28 to nC35 | < 0.48 | | 0.48 | mg/L | 1 | 25-Nov-2015 14:28 |
| Total Petroleum Hydrocarbon | < 0.48 | | 0.48 | mg/L | 1 | 25-Nov-2015 14:28 |
| Surr: 2-Fluorobiphenyl | 96.4 | | 70-130 | %REC | 1 | 25-Nov-2015 14:28 |
| Surr: Trifluoromethyl benzene | 107 | | 70-130 | %REC | 1 | 25-Nov-2015 14:28 |
| AMMONIA AS N BY SM4500 NH3-B-F | | | Method:SM4500 NH3-B-F | | Prep:M4500-NH3 B / 25-Nov-2015 Analyst: JHD | |
| Nitrogen, Ammonia (as N) | < 0.050 | | 0.050 | mg/L | 1 | 25-Nov-2015 17:05 |
| TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | | Method:M4500 NH3 D | | Prep:M4500-N C / 24-Nov-2015 Analyst: AP | |
| Nitrogen, Total Kjeldahl | 0.92 | | 0.50 | mg/L | 1 | 25-Nov-2015 13:00 |
| PHOSPHORUS BY E365.3 | | | Method:E365.3 | | Prep:E365.3 / 25-Nov-2015 Analyst: TDW | |
| Phosphorus, Total (As P) | < 0.0500 | | 0.0500 | mg/L | 1 | 25-Nov-2015 14:00 |
| TOTAL DISSOLVED SOLIDS BY SM2540C | | | Method:M2540C | | Analyst: KAH | |
| Total Dissolved Solids (Residue, Filterable) | 576 | | 10.0 | mg/L | 1 | 25-Nov-2015 15:00 |
| ANIONS BY E300.0 | | | Method:E300 | | Analyst: JBA | |
| Chloride | 149 | | 2.50 | mg/L | 5 | 24-Nov-2015 12:44 |
| Nitrogen, Nitrate (As N) | < 0.100 | | 0.100 | mg/L | 1 | 24-Nov-2015 10:57 |
| Sulfate | 0.886 | | 0.500 | mg/L | 1 | 24-Nov-2015 10:57 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Trip Blank (Not ALS Supplied)
 Collection Date: 23-Nov-2015 11:35

ANALYTICAL REPORT

WorkOrder:HS15111052
 Lab ID:HS15111052-02
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Nov-2015 11:52 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Nov-2015 11:52 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Nov-2015 11:52 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Nov-2015 11:52 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 30-Nov-2015 11:52 |
| Surr: 1,2-Dichloroethane-d4 | 81.4 | | 71-125 | %REC | 1 | 30-Nov-2015 11:52 |
| Surr: 4-Bromofluorobenzene | 99.0 | | 70-125 | %REC | 1 | 30-Nov-2015 11:52 |
| Surr: Dibromofluoromethane | 102 | | 74-125 | %REC | 1 | 30-Nov-2015 11:52 |
| Surr: Toluene-d8 | 99.7 | | 75-125 | %REC | 1 | 30-Nov-2015 11:52 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

Batch ID: 99284 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15111052-01 | 1 | 25 | 50 (mL) | 2 |

Batch ID: 99301 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15111052-01 | 1 | 31.48 | 3 (mL) | 0.0953 |

Batch ID: 99328 **Method:** PHOSPHORUS BY E365.3 **Prep:** P_TW_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15111052-01 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 99332 **Method:** AMMONIA AS N BY SM4500 NH3-B-F **Prep:** NIT_AMM_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15111052-01 | 1 | 50 | 50 (mL) | 1 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|--|-------------------|-----------------------|-------------------|-------------------|----|
| Batch ID 99284 | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 24 Nov 2015 11:00 | 25 Nov 2015 13:00 | 1 |
| Batch ID 99301 | Test Name : LOW-LEVEL TEXAS TPH BY TX1005 | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 25 Nov 2015 08:40 | 25 Nov 2015 14:28 | 1 |
| Batch ID 99328 | Test Name : PHOSPHORUS BY E365.3 | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 25 Nov 2015 10:22 | 25 Nov 2015 14:00 | 1 |
| Batch ID 99332 | Test Name : AMMONIA AS N BY SM4500 NH3-B-F | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 25 Nov 2015 10:06 | 25 Nov 2015 17:05 | 1 |
| Batch ID R265393 | Test Name : ANIONS BY E300.0 | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | | 24 Nov 2015 12:44 | 5 |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | | 24 Nov 2015 10:57 | 1 |
| Batch ID R265402 | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | | 25 Nov 2015 01:30 | 1 |
| Batch ID R265484 | Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C | | Matrix: Liquid | | | |
| HS15111052-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | | 25 Nov 2015 15:00 | 1 |
| Batch ID R265526 | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | | |
| HS15111052-02 | Trip Blank (Not ALS Supplied) | 23 Nov 2015 11:35 | | | 30 Nov 2015 11:52 | 1 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

| Batch ID: 99301 | | Instrument: FID-12 | | Method: TX1005 | | | | | | |
|--------------------------------------|-----------------------------------|-----------------------|---------|---|------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: MBLK-99301 | Units: mg/L | | Analysis Date: 25-Nov-2015 11:49 | | | | | | |
| Client ID: | Run ID: FID-12_265497 | SeqNo: 3509487 | | PrepDate: 25-Nov-2015 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 2.555 | 0 | 2.5 | 0 | 102 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.852 | 0 | 2.5 | 0 | 114 | 70 - 130 | | | | |
| LCS | Sample ID: LCS-99301 | Units: mg/L | | Analysis Date: 25-Nov-2015 12:20 | | | | | | |
| Client ID: | Run ID: FID-12_265497 | SeqNo: 3509488 | | PrepDate: 25-Nov-2015 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 22.65 | 0.50 | 25 | 0 | 90.6 | 75 - 125 | | | | |
| >nC12 to nC28 | 21.11 | 0.50 | 25 | 0 | 84.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 3.098 | 0 | 2.5 | 0 | 124 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.77 | 0 | 2.5 | 0 | 111 | 70 - 130 | | | | |
| LCSD | Sample ID: LCSD-99301 | Units: mg/L | | Analysis Date: 25-Nov-2015 12:51 | | | | | | |
| Client ID: | Run ID: FID-12_265497 | SeqNo: 3509489 | | PrepDate: 25-Nov-2015 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 23.43 | 0.50 | 25 | 0 | 93.7 | 75 - 125 | 22.65 | 3.4 | 20 | |
| >nC12 to nC28 | 21.82 | 0.50 | 25 | 0 | 87.3 | 75 - 125 | 21.11 | 3.31 | 20 | |
| Surr: 2-Fluorobiphenyl | 3.181 | 0 | 2.5 | 0 | 127 | 70 - 130 | 3.098 | 2.64 | 20 | |
| Surr: Trifluoromethyl benzene | 2.873 | 0 | 2.5 | 0 | 115 | 70 - 130 | 2.77 | 3.66 | 20 | |
| MS | Sample ID: HS15111052-01MS | Units: mg/L | | Analysis Date: 25-Nov-2015 14:59 | | | | | | |
| Client ID: Corral (136716-01) | Run ID: FID-12_265497 | SeqNo: 3509492 | | PrepDate: 25-Nov-2015 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 21.81 | 0.47 | 23.7 | 0 | 92.1 | 75 - 125 | | | | |
| >nC12 to nC28 | 22.93 | 0.47 | 23.7 | 0 | 96.7 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 3.043 | 0 | 2.37 | 0 | 128 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.741 | 0 | 2.37 | 0 | 116 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: 99301 Instrument: FID-12 Method: TX1005

| MSD | | Sample ID: HS15111052-01MSD | | | Units: mg/L | | Analysis Date: 25-Nov-2015 15:31 | | | |
|-------------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: Corral (136716-01) | | Run ID: FID-12_265497 | | | SeqNo: 3509493 | | PrepDate: 25-Nov-2015 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 23.55 | 0.48 | 24.03 | 0 | 98.0 | 75 - 125 | 21.81 | 7.67 | 20 | |
| >nC12 to nC28 | 23.28 | 0.48 | 24.03 | 0 | 96.9 | 75 - 125 | 22.93 | 1.54 | 20 | |
| Surr: 2-Fluorobiphenyl | 2.977 | 0 | 2.403 | 0 | 124 | 70 - 130 | 3.043 | 2.2 | 20 | |
| Surr: Trifluoromethyl benzene | 2.672 | 0 | 2.403 | 0 | 111 | 70 - 130 | 2.741 | 2.52 | 20 | |

The following samples were analyzed in this batch: HS15111052-01

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265402 **Instrument:** VOA4 **Method:** SW8260

| MBLK | | Sample ID: VBLKW-151124 | | Units: ug/L | | Analysis Date: 24-Nov-2015 23:50 | | | | |
|------------------------------------|--------|-------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA4_265402 | | SeqNo: 3507093 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 50.07 | 1.0 | 50 | 0 | 100 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 44.75 | 1.0 | 50 | 0 | 89.5 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 51.37 | 1.0 | 50 | 0 | 103 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 48.87 | 1.0 | 50 | 0 | 97.7 | 75 - 125 | | | | |

| LCS | | Sample ID: VLCSW-151124 | | Units: ug/L | | Analysis Date: 24-Nov-2015 23:00 | | | | |
|------------------------------------|--------|-------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA4_265402 | | SeqNo: 3507092 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 51.81 | 1.0 | 50 | 0 | 104 | 80 - 120 | | | | |
| Ethylbenzene | 49.59 | 1.0 | 50 | 0 | 99.2 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 66.18 | 1.0 | 50 | 0 | 132 | 70 - 130 | | | | S |
| Toluene | 48.82 | 1.0 | 50 | 0 | 97.6 | 75 - 121 | | | | |
| Xylenes, Total | 154 | 3.0 | 150 | 0 | 103 | 79 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 52.06 | 1.0 | 50 | 0 | 104 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.56 | 1.0 | 50 | 0 | 99.1 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 54.42 | 1.0 | 50 | 0 | 109 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 48.73 | 1.0 | 50 | 0 | 97.5 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265402 Instrument: VOA4 Method: SW8260

| MS | Sample ID: HS15110885-12MS | Units: ug/L | | | Analysis Date: 25-Nov-2015 02:46 | | | | | |
|------------------------------------|----------------------------|----------------|-------------|---------------|----------------------------------|-----------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA4_265402 | SeqNo: 3507100 | PrepDate: | DF: 100 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 16540 | 100 | 5000 | 11740 | 95.9 | 80 - 120 | | | | |
| Ethylbenzene | 4683 | 100 | 5000 | 52.5 | 92.6 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 5547 | 100 | 5000 | 0 | 111 | 70 - 130 | | | | |
| Toluene | 4650 | 100 | 5000 | 0 | 93.0 | 75 - 121 | | | | |
| Xylenes, Total | 14440 | 300 | 15000 | 223.7 | 94.8 | 80 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>5141</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>103</i> | <i>71 - 125</i> | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>4938</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>98.8</i> | <i>70 - 125</i> | | | | |
| <i>Surr: Dibromofluoromethane</i> | <i>5336</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>107</i> | <i>74 - 125</i> | | | | |
| <i>Surr: Toluene-d8</i> | <i>4856</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>97.1</i> | <i>75 - 125</i> | | | | |

| MSD | Sample ID: HS15110885-12MSD | Units: ug/L | | | Analysis Date: 25-Nov-2015 03:11 | | | | | |
|------------------------------------|-----------------------------|----------------|-------------|---------------|----------------------------------|-----------------|---------------|--------------|-----------|------|
| Client ID: | Run ID: VOA4_265402 | SeqNo: 3507101 | PrepDate: | DF: 100 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 16470 | 100 | 5000 | 11740 | 94.6 | 80 - 120 | 16540 | 0.394 | 20 | |
| Ethylbenzene | 4835 | 100 | 5000 | 52.5 | 95.6 | 80 - 120 | 4683 | 3.19 | 20 | |
| Methyl tert-butyl ether | 5927 | 100 | 5000 | 0 | 119 | 70 - 130 | 5547 | 6.62 | 20 | |
| Toluene | 4686 | 100 | 5000 | 0 | 93.7 | 75 - 121 | 4650 | 0.765 | 20 | |
| Xylenes, Total | 14670 | 300 | 15000 | 223.7 | 96.3 | 80 - 124 | 14440 | 1.56 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>5315</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>106</i> | <i>71 - 125</i> | <i>5141</i> | <i>3.33</i> | <i>20</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>5017</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>100</i> | <i>70 - 125</i> | <i>4938</i> | <i>1.59</i> | <i>20</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>5412</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>108</i> | <i>74 - 125</i> | <i>5336</i> | <i>1.41</i> | <i>20</i> | |
| <i>Surr: Toluene-d8</i> | <i>4894</i> | <i>100</i> | <i>5000</i> | <i>0</i> | <i>97.9</i> | <i>75 - 125</i> | <i>4856</i> | <i>0.776</i> | <i>20</i> | |

The following samples were analyzed in this batch: HS15111052-01

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265526 **Instrument:** VOA2 **Method:** SW8260

| MBLK | | Sample ID: VBLKW-151130 | | Units: ug/L | | Analysis Date: 30-Nov-2015 11:27 | | | |
|------------------------------------|--------|-------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: VOA2_265526 | | SeqNo: 3509949 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 39.19 | 1.0 | 50 | 0 | 78.4 | 71 - 125 | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.46 | 1.0 | 50 | 0 | 96.9 | 70 - 125 | | | |
| <i>Surr: Dibromofluoromethane</i> | 48.5 | 1.0 | 50 | 0 | 97.0 | 74 - 125 | | | |
| <i>Surr: Toluene-d8</i> | 50.37 | 1.0 | 50 | 0 | 101 | 75 - 125 | | | |

| LCS | | Sample ID: VLCSW-151130 | | Units: ug/L | | Analysis Date: 30-Nov-2015 10:34 | | | |
|------------------------------------|--------|-------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: VOA2_265526 | | SeqNo: 3509948 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 44.7 | 1.0 | 50 | 0 | 89.4 | 80 - 120 | | | |
| Ethylbenzene | 46.67 | 1.0 | 50 | 0 | 93.3 | 80 - 120 | | | |
| Methyl tert-butyl ether | 47.63 | 1.0 | 50 | 0 | 95.3 | 70 - 130 | | | |
| Toluene | 44.83 | 1.0 | 50 | 0 | 89.7 | 75 - 121 | | | |
| Xylenes, Total | 139.6 | 3.0 | 150 | 0 | 93.1 | 79 - 124 | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 40.09 | 1.0 | 50 | 0 | 80.2 | 71 - 125 | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.8 | 1.0 | 50 | 0 | 99.6 | 70 - 125 | | | |
| <i>Surr: Dibromofluoromethane</i> | 48.13 | 1.0 | 50 | 0 | 96.3 | 74 - 125 | | | |
| <i>Surr: Toluene-d8</i> | 47.08 | 1.0 | 50 | 0 | 94.2 | 75 - 125 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265526 **Instrument:** VOA2 **Method:** SW8260

| MS | | Sample ID: HS15111146-01MS | | | Units: ug/L | | Analysis Date: 30-Nov-2015 13:35 | | | |
|------------------------------------|--------------|-----------------------------------|-----------|---------------|-----------------------|-----------------|---|------|--------------|------|
| Client ID: | | Run ID: VOA2_265526 | | | SeqNo: 3510159 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 45.4 | 1.0 | 50 | 0 | 90.8 | 80 - 120 | | | | |
| Ethylbenzene | 47.76 | 1.0 | 50 | 0.5796 | 94.4 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 42.13 | 1.0 | 50 | 0 | 84.3 | 70 - 130 | | | | |
| Toluene | 44.88 | 1.0 | 50 | 0 | 89.8 | 75 - 121 | | | | |
| Xylenes, Total | 139.3 | 3.0 | 150 | 2.183 | 91.4 | 80 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>39.91</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>79.8</i> | <i>71 - 125</i> | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>49.64</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>99.3</i> | <i>70 - 125</i> | | | | |
| <i>Surr: Dibromofluoromethane</i> | <i>45.7</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>91.4</i> | <i>74 - 125</i> | | | | |
| <i>Surr: Toluene-d8</i> | <i>48.18</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>96.4</i> | <i>75 - 125</i> | | | | |

| MSD | | Sample ID: HS15111146-01MSD | | | Units: ug/L | | Analysis Date: 30-Nov-2015 14:00 | | | |
|------------------------------------|--------------|------------------------------------|-----------|---------------|-----------------------|-----------------|---|---------------|--------------|------|
| Client ID: | | Run ID: VOA2_265526 | | | SeqNo: 3510160 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.96 | 1.0 | 50 | 0 | 89.9 | 80 - 120 | 45.4 | 0.964 | 20 | |
| Ethylbenzene | 45.64 | 1.0 | 50 | 0.5796 | 90.1 | 80 - 120 | 47.76 | 4.55 | 20 | |
| Methyl tert-butyl ether | 44.15 | 1.0 | 50 | 0 | 88.3 | 70 - 130 | 42.13 | 4.69 | 20 | |
| Toluene | 44.07 | 1.0 | 50 | 0 | 88.1 | 75 - 121 | 44.88 | 1.8 | 20 | |
| Xylenes, Total | 137.6 | 3.0 | 150 | 2.183 | 90.3 | 80 - 124 | 139.3 | 1.2 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>40.21</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>80.4</i> | <i>71 - 125</i> | <i>39.91</i> | <i>0.729</i> | <i>20</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>49.28</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>98.6</i> | <i>70 - 125</i> | <i>49.64</i> | <i>0.741</i> | <i>20</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>48.19</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>96.4</i> | <i>74 - 125</i> | <i>45.7</i> | <i>5.3</i> | <i>20</i> | |
| <i>Surr: Toluene-d8</i> | <i>48.21</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>96.4</i> | <i>75 - 125</i> | <i>48.18</i> | <i>0.0698</i> | <i>20</i> | |

The following samples were analyzed in this batch: HS15111052-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

| Batch ID: 99284 | | Instrument: WetChem_HS | | Method: M4500 NH3 D | | | | | | |
|--------------------------|------------------------------------|------------------------|------------------------------|----------------------------------|------|---------------|---------------|----------|-----------|------|
| MBLK | Sample ID: MBLK-99284 | Units: mg/L | | Analysis Date: 25-Nov-2015 13:00 | | | | | | |
| Client ID: | Run ID: WetChem_HS_265429 | SeqNo: 3507810 | PrepDate: 24-Nov-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Nitrogen, Total Kjeldahl | < 0.50 | 0.50 | | | | | | | | |
| LCS | Sample ID: LCS-99284 | Units: mg/L | | Analysis Date: 25-Nov-2015 13:00 | | | | | | |
| Client ID: | Run ID: WetChem_HS_265429 | SeqNo: 3507812 | PrepDate: 24-Nov-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Nitrogen, Total Kjeldahl | 21.4 | 0.50 | 20 | 0 | 107 | 80 - 120 | | | | |
| MS | Sample ID: HS15110899-06MS | Units: mg/L | | Analysis Date: 25-Nov-2015 13:00 | | | | | | |
| Client ID: | Run ID: WetChem_HS_265429 | SeqNo: 3507811 | PrepDate: 24-Nov-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Nitrogen, Total Kjeldahl | 19.94 | 0.50 | 20 | 1.506 | 92.2 | 75 - 125 | | | | |
| MSD | Sample ID: HS15110899-06MSD | Units: mg/L | | Analysis Date: 25-Nov-2015 13:00 | | | | | | |
| Client ID: | Run ID: WetChem_HS_265429 | SeqNo: 3507809 | PrepDate: 24-Nov-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Nitrogen, Total Kjeldahl | 20 | 0.50 | 20 | 1.506 | 92.5 | 75 - 125 | 19.94 | 0.3 | 20 | |

The following samples were analyzed in this batch: HS15111052-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: 99328 **Instrument:** UV-2450 **Method:** E365.3

| | | | | | | | | | |
|-------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|----------------|
| MBLK | Sample ID: MBLK-99328 | Units: mg/L | Analysis Date: 25-Nov-2015 14:00 | | | | | | |
| Client ID: | Run ID: UV-2450_265441 | SeqNo: 3508063 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |

Phosphorus, Total (As P) < 0.0500 0.0500

| | | | | | | | | | |
|------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|----------------|
| LCS | Sample ID: LCS-99328 | Units: mg/L | Analysis Date: 25-Nov-2015 14:00 | | | | | | |
| Client ID: | Run ID: UV-2450_265441 | SeqNo: 3508061 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |

Phosphorus, Total (As P) 0.231 0.0500 0.25 0 92.4 80 - 120

| | | | | | | | | | |
|--------------------------------------|-----------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|----------------|
| MS | Sample ID: HS15111052-01MS | Units: mg/L | Analysis Date: 25-Nov-2015 14:00 | | | | | | |
| Client ID: Corral (136716-01) | Run ID: UV-2450_265441 | SeqNo: 3508060 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |

Phosphorus, Total (As P) 0.271 0.0500 0.25 0.016 102 80 - 120

| | | | | | | | | | |
|--------------------------------------|------------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|----------------|
| MSD | Sample ID: HS15111052-01MSD | Units: mg/L | Analysis Date: 25-Nov-2015 14:00 | | | | | | |
| Client ID: Corral (136716-01) | Run ID: UV-2450_265441 | SeqNo: 3508062 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |

Phosphorus, Total (As P) 0.267 0.0500 0.25 0.016 100 80 - 120 0.271 1.49 20

The following samples were analyzed in this batch: HS15111052-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

| Batch ID: 99332 | | Instrument: UV-2450 | | Method: SM4500 NH3-B-F | | | | | | |
|--------------------------|------------------------------------|-------------------------------|-----------------------|---|--------------|---------------|---------------|----------|-----------|----------|
| MBLK | Sample ID: MBLK-99332 | Units: mg/L | | Analysis Date: 25-Nov-2015 17:05 | | | | | | |
| Client ID: | | Run ID: UV-2450_265463 | SeqNo: 3508570 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | RPD Qual |
| Nitrogen, Ammonia (as N) | < 0.050 | 0.050 | | | | | | | | |
| LCS | Sample ID: LCS-99332 | Units: mg/L | | Analysis Date: 25-Nov-2015 17:05 | | | | | | |
| Client ID: | | Run ID: UV-2450_265463 | SeqNo: 3508568 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | RPD Qual |
| Nitrogen, Ammonia (as N) | 0.446 | 0.050 | 0.5 | 0 | 89.2 | 80 - 120 | | | | |
| MS | Sample ID: HS15111097-01MS | Units: mg/L | | Analysis Date: 25-Nov-2015 17:05 | | | | | | |
| Client ID: | | Run ID: UV-2450_265463 | SeqNo: 3508569 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | RPD Qual |
| Nitrogen, Ammonia (as N) | 0.654 | 0.050 | 0.5 | 0.365 | 57.8 | 80 - 120 | | | | S |
| MSD | Sample ID: HS15111097-01MSD | Units: mg/L | | Analysis Date: 25-Nov-2015 17:05 | | | | | | |
| Client ID: | | Run ID: UV-2450_265463 | SeqNo: 3508567 | PrepDate: 25-Nov-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | RPD Qual |
| Nitrogen, Ammonia (as N) | 0.681 | 0.050 | 0.5 | 0.365 | 63.2 | 80 - 120 | 0.654 | 4.04 | 20 | S |

The following samples were analyzed in this batch: HS15111052-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265393 Instrument: ICS2100 Method: E300

MBLK Sample ID: **WBLKW3-112415** Units: **mg/L** Analysis Date: **23-Nov-2015 21:01**
 Client ID: Run ID: **ICS2100_265393** SeqNo: **3506652** PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|--------------------------|---------|-------|--|--|--|--|--|--|--|--|
| Chloride | < 0.500 | 0.500 | | | | | | | | |
| Nitrogen, Nitrate (As N) | < 0.100 | 0.100 | | | | | | | | |
| Sulfate | < 0.500 | 0.500 | | | | | | | | |

LCS Sample ID: **WLC3W3-112415** Units: **mg/L** Analysis Date: **23-Nov-2015 21:16**
 Client ID: Run ID: **ICS2100_265393** SeqNo: **3506653** PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|--------------------------|-------|-------|----|---|------|----------|--|--|--|--|
| Chloride | 20.13 | 0.500 | 20 | 0 | 101 | 90 - 110 | | | | |
| Nitrogen, Nitrate (As N) | 3.975 | 0.100 | 4 | 0 | 99.4 | 90 - 110 | | | | |
| Sulfate | 20.43 | 0.500 | 20 | 0 | 102 | 90 - 110 | | | | |

LCSD Sample ID: **WLCSDW3-112415** Units: **mg/L** Analysis Date: **23-Nov-2015 21:30**
 Client ID: Run ID: **ICS2100_265393** SeqNo: **3506654** PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | |
|--------------------------|-------|-------|----|---|------|----------|-------|-------|----|
| Chloride | 20.1 | 0.500 | 20 | 0 | 100 | 90 - 110 | 20.13 | 0.144 | 20 |
| Nitrogen, Nitrate (As N) | 3.991 | 0.100 | 4 | 0 | 99.8 | 90 - 110 | 3.975 | 0.402 | 20 |
| Sulfate | 20.25 | 0.500 | 20 | 0 | 101 | 90 - 110 | 20.43 | 0.89 | 20 |

MS Sample ID: **HS15111045-02MS** Units: **mg/L** Analysis Date: **24-Nov-2015 09:12**
 Client ID: Run ID: **ICS2100_265393** SeqNo: **3506675** PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | |
|--------------------------|-------|-------|----|-------|------|----------|--|--|--|
| Chloride | 12.17 | 0.500 | 10 | 2.002 | 102 | 80 - 120 | | | |
| Nitrogen, Nitrate (As N) | 2.069 | 0.100 | 2 | 0.203 | 93.3 | 80 - 120 | | | |
| Sulfate | 14.1 | 0.500 | 10 | 4.428 | 96.7 | 80 - 120 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265393 **Instrument:** ICS2100 **Method:** E300

| MS | | Sample ID: HS15110891-01MS | | | Units: mg/L | | Analysis Date: 23-Nov-2015 21:59 | | | |
|--------------------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICS2100_265393 | | | SeqNo: 3506656 | | PrepDate: | | DF: 200 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 9360 | 100 | 2000 | 7337 | 101 | 80 - 120 | | | | |
| Nitrogen, Nitrate (As N) | 389.3 | 20.0 | 400 | 23.4 | 91.5 | 80 - 120 | | | | |
| Sulfate | 3340 | 100 | 2000 | 1307 | 102 | 80 - 120 | | | | |

| MSD | | Sample ID: HS15111045-02MSD | | | Units: mg/L | | Analysis Date: 24-Nov-2015 09:26 | | | |
|--------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICS2100_265393 | | | SeqNo: 3506676 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 12.38 | 0.500 | 10 | 2.002 | 104 | 80 - 120 | 12.17 | 1.69 | 20 | |
| Nitrogen, Nitrate (As N) | 2.111 | 0.100 | 2 | 0.203 | 95.4 | 80 - 120 | 2.069 | 2.01 | 20 | |
| Sulfate | 14.47 | 0.500 | 10 | 4.428 | 100 | 80 - 120 | 14.1 | 2.57 | 20 | |

| MSD | | Sample ID: HS15110891-01MSD | | | Units: mg/L | | Analysis Date: 23-Nov-2015 22:14 | | | |
|--------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICS2100_265393 | | | SeqNo: 3506657 | | PrepDate: | | DF: 200 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 9207 | 100 | 2000 | 7337 | 93.5 | 80 - 120 | 9360 | 1.64 | 20 | |
| Nitrogen, Nitrate (As N) | 383.5 | 20.0 | 400 | 23.4 | 90.0 | 80 - 120 | 389.3 | 1.52 | 20 | |
| Sulfate | 3282 | 100 | 2000 | 1307 | 98.7 | 80 - 120 | 3340 | 1.77 | 20 | |

The following samples were analyzed in this batch: HS15111052-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

QC BATCH REPORT

Batch ID: R265484 Instrument: Balance1 Method: M2540C

| | | | | | |
|-------------|--------------------------------|-----------------------|---|---------------|--|
| MBLK | Sample ID: WBLK-112515 | Units: mg/L | Analysis Date: 25-Nov-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265484 | SeqNo: 3509176 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) < 10.0 10.0

| | | | | | |
|------------|--------------------------------|-----------------------|---|---------------|--|
| LCS | Sample ID: WLCS-112515 | Units: mg/L | Analysis Date: 25-Nov-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265484 | SeqNo: 3509177 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) 1048 10.0 1000 0 105 85 - 115

| | | | | | |
|------------|------------------------------------|-----------------------|---|---------------|--|
| DUP | Sample ID: HS15110897-01DUP | Units: mg/L | Analysis Date: 25-Nov-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265484 | SeqNo: 3509171 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) 1916 10.0 1934 0.935 5

The following samples were analyzed in this batch: HS15111052-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15111052

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|----------------------|
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15111052

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|-------------------------------|--------|-----------------------|--------|--------------|
| HS15111052-01 | Corral (136716-01) | Login | 11/24/2015 9:14:02 AM | RPG | 10C |
| HS15111052-01 | Corral (136716-01) | Login | 11/24/2015 9:14:02 AM | RPG | 10C |
| HS15111052-01 | Corral (136716-01) | Login | 11/24/2015 9:14:02 AM | RPG | 10C |
| HS15111052-01 | Corral (136716-01) | Login | 11/24/2015 9:14:02 AM | RPG | VW-3 |
| HS15111052-01 | Corral (136716-01) | Login | 11/24/2015 9:14:02 AM | RPG | TPH C1 |
| HS15111052-02 | Trip Blank (Not ALS Supplied) | Login | 11/24/2015 9:26:12 AM | RPG | VW-3 |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
Work Order: HS15111052

Date/Time Received: 24-Nov-2015 07:00
Received by: JML

Checklist completed by: Raegen Giga
eSignature
Date: 24-Nov-2015

Reviewed by: Dane J. Wacasey
eSignature
Date: 30-Nov-2015

Matrices: Liquid

Carrier name: FedEx First Overnight

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [checked] No [] Not Present []
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [] No [checked]
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
TX1005 solids received in hermetically sealed vials? Yes [] No [] N/A [checked]
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No []

Temperature(s)/Thermometer(s): 2.3c/2.5c uc/c IR 4
Cooler(s)/Kit(s): White
Date/Time sample(s) sent to storage: 11/24/2015 09:31
Water - VOA vials have zero headspace? Yes [checked] No [] No VOA vials submitted []
Water - pH acceptable upon receipt? Yes [checked] No [] N/A []
pH adjusted? Yes [] No [checked] N/A []
pH adjusted by:

Login Notes: Trip Blank = 1 vial received not ALS Provided, Label ID does not indicate Trip Blank. Logged in as Trip Blank per COC

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Chain of Custody Form

HS15111052

Texas Commission on Environmental Quality
Groundwater Sampling

Environmental

Page 1 of 1
COC ID: 136716



ALS Project Manager:

| Customer Information | | Project Information | |
|----------------------|----------------------------|---------------------|----------------------|
| Purchase Order | | Project Name | Groundwater Sampling |
| Work Order | | Project Number | 8260 - BTEX/MTBE |
| Company Name | TCEQ-Corpus Christi | Bill To Company | TX1005 - TPH |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin |
| Phone | Corpus Christi | Phone | (512) 238-5725 |
| Fax | (361) 825-3127 | Fax | |
| e-Mail Address | Bill.Ross@tceq.texas.gov | e-Mail Address | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|--------------------|----------|-------|--------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | Corral (136716-01) | 11/23/15 | 11:35 | L | 2.3.1 | 10 | X | X | X | X | X | X | | | | | |
| 2 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| Shipper's Name & Sign | Shipper's Signature | Shipper's Title | Shipper's Phone | Shipper's Email | Shipper's Address | Shipper's City/State/Zip | Shipper's Country |
| Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> | Received by: <i>Jan Hildebrand</i> |
| Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 | Date: 11/23/15 |
| Time: 4:00 | Time: 4:00 | Time: 4:00 | Time: 4:00 | Time: 4:00 | Time: 4:00 | Time: 4:00 | Time: 4:00 |
| Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): | Received by (Laboratory): |
| Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): | Checked by (Laboratory): |
| Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 |

Notes: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

TUE - 24 NOV 8:00A
FIRST OVERNIGHT

FedEx
TRACKING
0063 1376 9592

77099
TX-US
IAH

A1 SGRA



FD 5111489 23NOV15 CRPA 539C2/3F56/3106



FO

FedEx First Overnight®

151969 REV 7/08 RRD



10450 Stancliff Rd. Suite 210
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www.alsglobal.com

January 04, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15120053**

Revision: **1**

Laboratory Results for: **Groundwater Sampling**

Dear Bill,

ALS Environmental received 1 sample(s) on Dec 02, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read 'Dane Wacasey', with a long horizontal flourish extending to the right.

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15120053

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|--------------------|--------|-------------------|-------------------|-------------------|--------------------------|
| HS15120053-01 | Corral (136716-01) | Liquid | HS1511105 2-01 | 23-Nov-2015 11:35 | 24-Nov-2015 07:00 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15120053

CASE NARRATIVE

Work Order Comments

- This report was revised January 4, 2016 in order to adjust the reported list of metals per phone call from Ms. Edwards on December 29, 2015.
 - This report contains additional analyses per your request on December 2, 2015. The laboratory analyzed your sample "Corral (136716-01)" for RCRA 12 Metals by Method SW6020/SW7470. The sample was originally reported as ALS Workorder Number HS15111052.
-

Metals by Method SW7470

Batch ID: 99550

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Metals by Method SW6020

Batch ID: 99466

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Corral (136716-01)
 Collection Date: 23-Nov-2015 11:35

ANALYTICAL REPORT
 WorkOrder:HS15120053
 Lab ID:HS15120053-01
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------|-------------|----------------------|----------------|----------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3018A / 03-Dec-2015 | | Analyst: JDE |
| Antimony | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Barium | 1.39 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Beryllium | < 0.00200 | | 0.00200 | mg/L | 1 | 04-Dec-2015 18:21 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 04-Dec-2015 18:21 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Copper | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Potassium | 2.49 | | 0.200 | mg/L | 1 | 04-Dec-2015 18:21 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Silver | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Vanadium | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| Zinc | < 0.00500 | | 0.00500 | mg/L | 1 | 04-Dec-2015 18:21 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 07-Dec-2015 | | Analyst: OFO |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 07-Dec-2015 12:43 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

Batch ID: 99466 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

| SamplID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120053-01 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 99550 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

| SamplID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120053-01 | 1 | 40 | 40 (mL) | 1 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-----------------------|---|-------------------|-----------------------|-------------------|-------------------|----|
| Batch ID 99466 | Test Name : ICP-MS METALS BY SW6020A | | Matrix: Liquid | | | |
| HS15120053-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 03 Dec 2015 09:01 | 04 Dec 2015 18:21 | 1 |
| Batch ID 99550 | Test Name : MERCURY BY SW7470A | | Matrix: Liquid | | | |
| HS15120053-01 | Corral (136716-01) | 23 Nov 2015 11:35 | | 07 Dec 2015 10:07 | 07 Dec 2015 12:43 | 1 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99466 Instrument: ICPMS04 Method: SW6020

| MBLK | Sample ID: MBLK-99466 | Units: mg/L | | | Analysis Date: 04-Dec-2015 14:50 | | | | | |
|------------|-----------------------|------------------------|----------------|-----------------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_265787 | SeqNo: 3515012 | PrepDate: 03-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | < 0.00500 | 0.00500 | | | | | | | | |
| Arsenic | < 0.00500 | 0.00500 | | | | | | | | |
| Barium | < 0.00500 | 0.00500 | | | | | | | | |
| Beryllium | < 0.00200 | 0.00200 | | | | | | | | |
| Cadmium | < 0.00200 | 0.00200 | | | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | | | |
| Molybdenum | < 0.00500 | 0.00500 | | | | | | | | |
| Potassium | < 0.200 | 0.200 | | | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | | | |
| Silver | < 0.00500 | 0.00500 | | | | | | | | |
| Zinc | < 0.00500 | 0.00500 | | | | | | | | |

| MBLK | Sample ID: MBLK-99466 | Units: mg/L | | | Analysis Date: 07-Dec-2015 14:07 | | | | | |
|------------|-----------------------|------------------------|----------------|-----------------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_265900 | SeqNo: 3516286 | PrepDate: 03-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chromium | < 0.00500 | 0.00500 | | | | | | | | |
| Copper | < 0.00500 | 0.00500 | | | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | | | |
| Vanadium | < 0.00500 | 0.00500 | | | | | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99466 **Instrument:** ICPMS04 **Method:** SW6020

| LCS | | Sample ID: MLCS-99466 | | | Units: mg/L | | Analysis Date: 04-Dec-2015 14:54 | | | |
|------------|---------|------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_265787 | | | SeqNo: 3515013 | | PrepDate: 03-Dec-2015 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.05195 | 0.00500 | 0.05 | 0 | 104 | 80 - 120 | | | | |
| Arsenic | 0.04509 | 0.00500 | 0.05 | 0 | 90.2 | 80 - 120 | | | | |
| Barium | 0.04544 | 0.00500 | 0.05 | 0 | 90.9 | 80 - 120 | | | | |
| Beryllium | 0.04665 | 0.00200 | 0.05 | 0 | 93.3 | 80 - 120 | | | | |
| Cadmium | 0.04505 | 0.00200 | 0.05 | 0 | 90.1 | 80 - 120 | | | | |
| Lead | 0.04499 | 0.00500 | 0.05 | 0 | 90.0 | 80 - 120 | | | | |
| Molybdenum | 0.0437 | 0.00500 | 0.05 | 0 | 87.4 | 80 - 120 | | | | |
| Potassium | 4.546 | 0.200 | 5 | 0 | 90.9 | 80 - 120 | | | | |
| Selenium | 0.04562 | 0.00500 | 0.05 | 0 | 91.2 | 80 - 120 | | | | |
| Silver | 0.04784 | 0.00500 | 0.05 | 0 | 95.7 | 80 - 120 | | | | |
| Zinc | 0.04816 | 0.00500 | 0.05 | 0 | 96.3 | 80 - 120 | | | | |

| LCS | | Sample ID: MLCS-99466 | | | Units: mg/L | | Analysis Date: 07-Dec-2015 14:12 | | | |
|------------|---------|------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_265900 | | | SeqNo: 3516287 | | PrepDate: 03-Dec-2015 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chromium | 0.0451 | 0.00500 | 0.05 | 0 | 90.2 | 80 - 120 | | | | |
| Copper | 0.04507 | 0.00500 | 0.05 | 0 | 90.1 | 80 - 120 | | | | |
| Nickel | 0.04712 | 0.00500 | 0.05 | 0 | 94.2 | 80 - 120 | | | | |
| Vanadium | 0.0455 | 0.00500 | 0.05 | 0 | 91.0 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99466 Instrument: ICPMS04 Method: SW6020

| MS | Sample ID: HS15120018-01MS | Units: mg/L | | | Analysis Date: 04-Dec-2015 17:59 | | | | | |
|------------|----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|----------|-----------|------|
| Client ID: | Run ID: ICPMS04_265787 | SeqNo: 3515304 | PrepDate: 03-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Antimony | 0.04914 | 0.00500 | 0.05 | 0.000201 | 97.9 | 80 - 120 | | | | |
| Arsenic | 0.05449 | 0.00500 | 0.05 | 0.007351 | 94.3 | 80 - 120 | | | | |
| Barium | 0.1138 | 0.00500 | 0.05 | 0.06723 | 93.2 | 80 - 120 | | | | |
| Beryllium | 0.05249 | 0.00200 | 0.05 | 0.000022 | 105 | 80 - 120 | | | | |
| Cadmium | 0.04604 | 0.00200 | 0.05 | 0.000005 | 92.1 | 80 - 120 | | | | |
| Chromium | 0.04458 | 0.00500 | 0.05 | 0.000929 | 87.3 | 80 - 120 | | | | |
| Copper | 0.04247 | 0.00500 | 0.05 | 0.000318 | 84.3 | 80 - 120 | | | | |
| Lead | 0.04487 | 0.00500 | 0.05 | 0.000172 | 89.4 | 80 - 120 | | | | |
| Molybdenum | 0.05001 | 0.00500 | 0.05 | 0.005214 | 89.6 | 80 - 120 | | | | |
| Nickel | 0.04532 | 0.00500 | 0.05 | 0.001219 | 88.2 | 80 - 120 | | | | |
| Potassium | 6.665 | 0.200 | 5 | 1.939 | 94.5 | 80 - 120 | | | | |
| Selenium | 0.04627 | 0.00500 | 0.05 | 0.000146 | 92.3 | 80 - 120 | | | | |
| Silver | 0.04382 | 0.00500 | 0.05 | -0.000003 | 87.6 | 80 - 120 | | | | |
| Vanadium | 0.04635 | 0.00500 | 0.05 | 0.002919 | 86.9 | 80 - 120 | | | | |
| Zinc | 0.0481 | 0.00500 | 0.05 | 0.003634 | 88.9 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99466 **Instrument:** ICPMS04 **Method:** SW6020

| MSD | Sample ID: HS15120018-01MSD | Units: mg/L | | | Analysis Date: 04-Dec-2015 18:03 | | | | |
|------------|-----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|-----------|----------|
| Client ID: | Run ID: ICPMS04_265787 | SeqNo: 3515305 | PrepDate: 03-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Antimony | 0.04879 | 0.00500 | 0.05 | 0.000201 | 97.2 | 80 - 120 | 0.04914 | 0.731 | 20 |
| Arsenic | 0.05434 | 0.00500 | 0.05 | 0.007351 | 94.0 | 80 - 120 | 0.05449 | 0.279 | 20 |
| Barium | 0.1134 | 0.00500 | 0.05 | 0.06723 | 92.3 | 80 - 120 | 0.1138 | 0.414 | 20 |
| Beryllium | 0.05253 | 0.00200 | 0.05 | 0.000022 | 105 | 80 - 120 | 0.05249 | 0.0781 | 20 |
| Cadmium | 0.04564 | 0.00200 | 0.05 | 0.000005 | 91.3 | 80 - 120 | 0.04604 | 0.877 | 20 |
| Chromium | 0.04413 | 0.00500 | 0.05 | 0.000929 | 86.4 | 80 - 120 | 0.04458 | 1.03 | 20 |
| Copper | 0.04198 | 0.00500 | 0.05 | 0.000318 | 83.3 | 80 - 120 | 0.04247 | 1.16 | 20 |
| Lead | 0.04498 | 0.00500 | 0.05 | 0.000172 | 89.6 | 80 - 120 | 0.04487 | 0.265 | 20 |
| Molybdenum | 0.04985 | 0.00500 | 0.05 | 0.005214 | 89.3 | 80 - 120 | 0.05001 | 0.338 | 20 |
| Nickel | 0.04521 | 0.00500 | 0.05 | 0.001219 | 88.0 | 80 - 120 | 0.04532 | 0.236 | 20 |
| Potassium | 6.616 | 0.200 | 5 | 1.939 | 93.5 | 80 - 120 | 6.665 | 0.736 | 20 |
| Selenium | 0.04614 | 0.00500 | 0.05 | 0.000146 | 92.0 | 80 - 120 | 0.04627 | 0.29 | 20 |
| Silver | 0.04362 | 0.00500 | 0.05 | -0.000003 | 87.3 | 80 - 120 | 0.04382 | 0.439 | 20 |
| Vanadium | 0.04641 | 0.00500 | 0.05 | 0.002919 | 87.0 | 80 - 120 | 0.04635 | 0.134 | 20 |
| Zinc | 0.04839 | 0.00500 | 0.05 | 0.003634 | 89.5 | 80 - 120 | 0.0481 | 0.595 | 20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99466 **Instrument:** ICPMS04 **Method:** SW6020

| PDS | | Sample ID: HS15120018-01BS | | | Units: mg/L | | Analysis Date: 04-Dec-2015 18:08 | | | |
|------------|---------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_265787 | | | SeqNo: 3515306 | | PrepDate: 03-Dec-2015 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.09555 | 0.00500 | 0.1 | 0.000201 | 95.4 | 75 - 125 | | | | |
| Arsenic | 0.1002 | 0.00500 | 0.1 | 0.007351 | 92.9 | 75 - 125 | | | | |
| Barium | 0.1579 | 0.00500 | 0.1 | 0.06723 | 90.7 | 75 - 125 | | | | |
| Beryllium | 0.09152 | 0.00200 | 0.1 | 0.000022 | 91.5 | 75 - 125 | | | | |
| Cadmium | 0.09095 | 0.00200 | 0.1 | 0.000005 | 90.9 | 75 - 125 | | | | |
| Chromium | 0.08569 | 0.00500 | 0.1 | 0.000929 | 84.8 | 75 - 125 | | | | |
| Copper | 0.0828 | 0.00500 | 0.1 | 0.000318 | 82.5 | 75 - 125 | | | | |
| Lead | 0.08859 | 0.00500 | 0.1 | 0.000172 | 88.4 | 75 - 125 | | | | |
| Molybdenum | 0.09215 | 0.00500 | 0.1 | 0.005214 | 86.9 | 75 - 125 | | | | |
| Nickel | 0.08736 | 0.00500 | 0.1 | 0.001219 | 86.1 | 75 - 125 | | | | |
| Potassium | 11.06 | 0.200 | 10 | 1.939 | 91.2 | 75 - 125 | | | | |
| Selenium | 0.09149 | 0.00500 | 0.1 | 0.000146 | 91.3 | 75 - 125 | | | | |
| Silver | 0.09086 | 0.00500 | 0.1 | -0.000003 | 90.9 | 75 - 125 | | | | |
| Vanadium | 0.08862 | 0.00500 | 0.1 | 0.002919 | 85.7 | 75 - 125 | | | | |
| Zinc | 0.09186 | 0.00500 | 0.1 | 0.003634 | 88.2 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

| Batch ID: 99466 | | Instrument: ICPMS04 | | Method: SW6020 | | | | | | |
|-----------------|---------------------------------|---------------------|-----------------------|----------------------------------|------|---------------|---------------|-------|-------|------|
| SD | Sample ID: HS15120018-01 DIL SX | Units: mg/L | | Analysis Date: 04-Dec-2015 17:55 | | | | | | |
| Client ID: | Run ID: ICPMS04_265787 | SeqNo: 3515303 | PrepDate: 03-Dec-2015 | DF: 5 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | Limit | Qual |
| Antimony | < 0.0250 | 0.0250 | | | | | 0.000201 | 0 | 10 | |
| Arsenic | 0.007033 | 0.0250 | | | | | 0.007351 | 0 | 10 | J |
| Barium | 0.06464 | 0.0250 | | | | | 0.06723 | 3.85 | 10 | |
| Beryllium | < 0.0100 | 0.0100 | | | | | 0.000022 | 0 | 10 | |
| Cadmium | < 0.0100 | 0.0100 | | | | | 0.000005 | 0 | 10 | |
| Chromium | < 0.0250 | 0.0250 | | | | | 0.000929 | 0 | 10 | |
| Copper | < 0.0250 | 0.0250 | | | | | 0.000318 | 0 | 10 | |
| Lead | < 0.0250 | 0.0250 | | | | | 0.000172 | 0 | 10 | |
| Molybdenum | 0.005315 | 0.0250 | | | | | 0.005214 | 0 | 10 | J |
| Nickel | < 0.0250 | 0.0250 | | | | | 0.001219 | 0 | 10 | |
| Potassium | 1.923 | 1.00 | | | | | 1.939 | 0.811 | 10 | |
| Selenium | < 0.0250 | 0.0250 | | | | | 0.000146 | 0 | 10 | |
| Silver | < 0.0250 | 0.0250 | | | | | -0.000003 | 0 | 10 | |
| Vanadium | 0.008796 | 0.0250 | | | | | 0.002919 | 0 | 10 | J |
| Zinc | < 0.0250 | 0.0250 | | | | | 0.003634 | 0 | 10 | |

The following samples were analyzed in this batch: HS15120053-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

QC BATCH REPORT

Batch ID: 99550 Instrument: HG03 Method: SW7470

| | | | | | | | | | | |
|-------------|------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|-----------|------|
| MBLK | Sample ID: MBLK-99550 | Units: mg/L | Analysis Date: 07-Dec-2015 12:34 | | | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516148 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Mercury < 0.000200 0.000200

| | | | | | | | | | | |
|------------|-----------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|-----------|------|
| LCS | Sample ID: LCS-99550 | Units: mg/L | Analysis Date: 07-Dec-2015 12:36 | | | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516149 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Mercury 0.0049 0.000200 0.005 0 98.0 80 - 124

| | | | | | | | | | | |
|------------|-----------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|-----------|------|
| MS | Sample ID: HS15120210-08MS | Units: mg/L | Analysis Date: 07-Dec-2015 12:40 | | | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516151 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Mercury 0.00517 0.000200 0.005 -0.000027 104 80 - 124

| | | | | | | | | | | |
|------------|------------------------------------|-----------------------|---|---------------|------|---------------|---------------|----------|-----------|------|
| MSD | Sample ID: HS15120210-08MSD | Units: mg/L | Analysis Date: 07-Dec-2015 12:41 | | | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516152 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Mercury 0.00501 0.000200 0.005 -0.000027 101 80 - 124 0.00517 3.14 20

The following samples were analyzed in this batch: HS15120053-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS15120053

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS15120053

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|--------------------|--------|-----------------------|--------|--------------|
| HS15120053-01 | Corral (136716-01) | Login | 12/2/2015 10:19:49 AM | DJW | 10C |
| HS15120053-01 | Corral (136716-01) | Login | 12/2/2015 10:19:49 AM | DJW | 10C |
| HS15120053-01 | Corral (136716-01) | Login | 12/2/2015 10:19:49 AM | DJW | 10C |
| HS15120053-01 | Corral (136716-01) | Login | 12/2/2015 10:19:49 AM | DJW | VW-3 |
| HS15120053-01 | Corral (136716-01) | Login | 12/2/2015 10:19:49 AM | DJW | TPH C1 |
| HS15120053-01 | Corral (136716-01) | Out | 12/3/2015 9:09:29 AM | HAS | METPREP |
| HS15120053-01 | Corral (136716-01) | Return | 12/3/2015 3:08:40 PM | HAS | 10C |
| HS15120053-01 | Corral (136716-01) | Out | 12/7/2015 10:07:43 AM | OFO | METPREP |
| HS15120053-01 | Corral (136716-01) | Return | 12/7/2015 11:04:37 AM | OFO | 10C |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS15120053

Date/Time Received: **02-Dec-2015 10:19**
 Received by: **JML**

Checklist completed by: Raegen Giga 24-Nov-2015
 eSignature Date

Reviewed by: Dane J. Wacasey 2-Dec-2015
 eSignature Date

Matrices: **Liquid**

Carrier name: **FedEx First Overnight**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 2.3c/2.5c uc/c IR 4

Cooler(s)/Kit(s): White

Date/Time sample(s) sent to storage: 11/24/2015 09:31

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes: SRC for re-log of HS15111052 for metals analysis only

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Chain of Custody Form

Page 1 of 1

COC ID: 136716

HS15120053

Texas Commission on Environmental Quality
Groundwater Sampling



| Customer Information | | | | Project Information | | | | ALS Project Manager: | | | | | | | | | | | |
|----------------------|----------------------------|-----------------|-----------------------|---------------------|--|-----------|---|----------------------|---|---|---|---|---|---|---|---|------|--|--|
| Purchase Order | Project Name | Project Number | Groundwater Sampling | A | 8260 - BTEX/MIBC | | | | | | | | | | | | | | |
| Work Order | TCEQ-Corpus Christi | Bill To Company | TCEQ-Accounts Payable | B | TX1005 - TPH | | | | | | | | | | | | | | |
| Company Name | Bill Ross | Invoice Attn | Juile Steger | C | 300-Cl, SO4, 2540-TDS, 300-(NO3-48hr hold) | | | | | | | | | | | | | | |
| Send Report To | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 | D | TKN, Ammonia, Tot. Phosphorous | | | | | | | | | | | | | | |
| Address | NRC Building Suite 1200 | City/State/Zip | Austin | E | 60207470 - Total Metals (12 w/Hg) | | | | | | | | | | | | | | |
| City/State/Zip | Corpus Christi | Phone | (512) 239-5725 | F | Trip Blank | | | | | | | | | | | | | | |
| Phone | (361) 825-3127 | Fax | | G | | | | | | | | | | | | | | | |
| e-Mail Address | Bill.Ross@tceq.texas.gov | e-Mail Address | | H | | | | | | | | | | | | | | | |
| | | | | I | | | | | | | | | | | | | | | |
| | | | | J | | | | | | | | | | | | | | | |
| No. | Sample Description | Date | Time | Magn. | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold | | |
| 1 | Corral (136716-01) | 11/23/15 | 11:35 | L | 2,3,1 | 10 | X | X | X | X | X | X | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

Sample(s) Picked, Packed & Signed: *[Signature]* Shipment Method: *FedEx*

Relinquished by: *[Signature]* Date: 11/27/15 Time: 4:00 Received by: *FedEx*

Relinquished by: *[Signature]* Date: Time: Received by (Laboratory):

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Preservative Key: 1-HCl, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Na2S2O3, 6-NaHSO3, 7-Other, 8-4°C, 9-5035

QC Package: (Check One Box Below)

Level Std QC TRRP Chk List

Level Std OC/Row db TRRP Level 4

Level SW846/CLP Other

Notes:

Required Turnaround Time: (Check Box)

Std 10 WK DB/2 5 WK DB/2 2 WK DB/2 Other

Results Due Date:

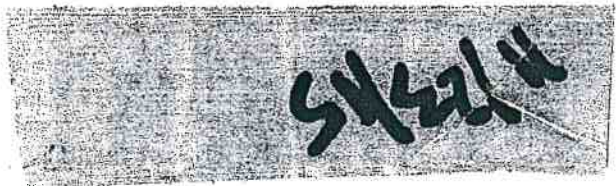
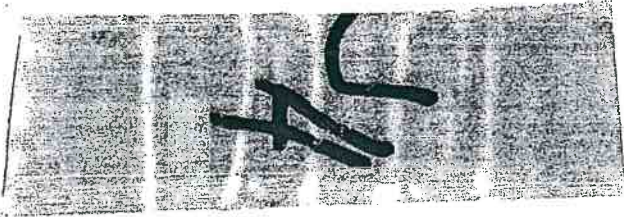
Copyright 2011 by ALS Environmental.

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

151989 REV 7/08 RRD

FedEx First Overnight

FO



FID 5111489 23NOV16 CRPA 539C2/3F56/3108



IAH TX-US 77099

At SGRA

TUE - 24 NOV 8:00A
FIRST OVERNIGHT

FedEx TRK# 8063 1376 9592



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 04, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15120102**

Revision: **1**

Laboratory Results for: **TCEQ Region 14 COC 136715**

Dear Bill,

ALS Environmental received 3 sample(s) on Dec 03, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read 'Dane Wacasey', with a long horizontal flourish extending to the right.

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
Work Order: HS15120102

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS15120102-01 | Well #1 | Liquid | | 02-Dec-2015 11:40 | 03-Dec-2015 09:52 | <input type="checkbox"/> |
| HS15120102-02 | Well #4 | Liquid | | 02-Dec-2015 13:04 | 03-Dec-2015 09:52 | <input type="checkbox"/> |
| HS15120102-03 | Well #4 (13:10) | Liquid | | 02-Dec-2015 13:10 | 03-Dec-2015 09:52 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
Work Order: HS15120102

CASE NARRATIVE

Work Order Comments

- This report was revised January 4, 2016 in order to include MTBE and to adjust the reported list of metals per phone call from Ms. Edwards on December 29, 2015.

GC Semivolatiles by Method TX1005

Batch ID: 99495

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R265752

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 99571

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470

Batch ID: 99550

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R265783

- Sample ID: HS15120080-04
- MS and MSD are for an unrelated sample

WetChemistry by Method M2540C

Batch ID: R265999

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500 NH3-B-F

Batch ID: 99736

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: 99539

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M4500 NH3 D

Batch ID: 99524

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Texas Commission on Environmental Quality
 Project: TCEQ Region 14 COC 136715
 Sample ID: Well #1
 Collection Date: 02-Dec-2015 11:40

ANALYTICAL REPORT
 WorkOrder:HS15120102
 Lab ID:HS15120102-01
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|---------------|------------------------------|----------------|--------------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 07-Dec-2015 | | Analyst: RPM |
| Antimony | < 0.00500 | | 0.00500 | mg/L | 1 | 09-Dec-2015 11:06 |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Barium | 1.72 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Beryllium | < 0.00200 | | 0.00200 | mg/L | 1 | 08-Dec-2015 13:25 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 08-Dec-2015 13:25 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Copper | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 09-Dec-2015 11:06 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Potassium | 2.53 | | 0.200 | mg/L | 1 | 08-Dec-2015 13:25 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Silver | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Vanadium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| Zinc | 0.0200 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:25 |
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 18:54 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 18:54 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 18:54 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 18:54 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 03-Dec-2015 18:54 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 83.2 | | 71-125 | %REC | 1 | 03-Dec-2015 18:54 |
| <i>Surr: 4-Bromofluorobenzene</i> | 99.4 | | 70-125 | %REC | 1 | 03-Dec-2015 18:54 |
| <i>Surr: Dibromofluoromethane</i> | 101 | | 74-125 | %REC | 1 | 03-Dec-2015 18:54 |
| <i>Surr: Toluene-d8</i> | 98.4 | | 75-125 | %REC | 1 | 03-Dec-2015 18:54 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 07-Dec-2015 | | Analyst: OFO |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 07-Dec-2015 12:48 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 03-Dec-2015 | | Analyst: AAP |
| nC6 to nC12 | < 0.48 | | 0.48 | mg/L | 1 | 08-Dec-2015 12:56 |
| >nC12 to nC28 | < 0.48 | | 0.48 | mg/L | 1 | 08-Dec-2015 12:56 |
| >nC28 to nC35 | < 0.48 | | 0.48 | mg/L | 1 | 08-Dec-2015 12:56 |
| Total Petroleum Hydrocarbon | < 0.48 | | 0.48 | mg/L | 1 | 08-Dec-2015 12:56 |
| <i>Surr: 2-Fluorobiphenyl</i> | 90.0 | | 70-130 | %REC | 1 | 08-Dec-2015 12:56 |
| <i>Surr: Trifluoromethyl benzene</i> | 75.4 | | 70-130 | %REC | 1 | 08-Dec-2015 12:56 |
| AMMONIA AS N BY SM4500 NH3-B-F | | Method:SM4500 NH3-B-F | | Prep:M4500-NH3 B / 10-Dec-2015 | | Analyst: JHD |
| Nitrogen, Ammonia (as N) | < 0.050 | | 0.050 | mg/L | 1 | 11-Dec-2015 16:32 |
| TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Method:M4500 NH3 D | | Prep:M4500-N C / 04-Dec-2015 | | Analyst: AP |
| Nitrogen, Total Kjeldahl | 0.85 | | 0.50 | mg/L | 1 | 07-Dec-2015 16:05 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: TCEQ Region 14 COC 136715
 Sample ID: Well #1
 Collection Date: 02-Dec-2015 11:40

ANALYTICAL REPORT
 WorkOrder:HS15120102
 Lab ID:HS15120102-01
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|----------|----------------------|--------------|---------------------------|-----------------|-------------------|
| PHOSPHORUS BY E365.3 | | Method:E365.3 | | Prep:E365.3 / 04-Dec-2015 | | Analyst: TDW |
| Phosphorus, Total (As P) | < 0.0500 | | 0.0500 | mg/L | 1 | 04-Dec-2015 16:09 |
| TOTAL DISSOLVED SOLIDS BY SM2540C | | Method:M2540C | | | | Analyst: KAH |
| Total Dissolved Solids (Residue, Filterable) | 590 | | 10.0 | mg/L | 1 | 07-Dec-2015 15:00 |
| ANIONS BY E300.0 | | Method:E300 | | | | Analyst: JBA |
| Chloride | 183 | | 10.0 | mg/L | 20 | 03-Dec-2015 13:55 |
| Nitrogen, Nitrate (As N) | < 0.100 | | 0.100 | mg/L | 1 | 03-Dec-2015 13:11 |
| Sulfate | 1.02 | | 0.500 | mg/L | 1 | 03-Dec-2015 13:11 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: TCEQ Region 14 COC 136715
 Sample ID: Well #4
 Collection Date: 02-Dec-2015 13:04

ANALYTICAL REPORT
 WorkOrder:HS15120102
 Lab ID:HS15120102-02
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|---------------|------------------------------|----------------|--------------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 07-Dec-2015 | | Analyst: RPM |
| Antimony | < 0.00500 | | 0.00500 | mg/L | 1 | 09-Dec-2015 11:09 |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Barium | 0.128 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Beryllium | < 0.00200 | | 0.00200 | mg/L | 1 | 08-Dec-2015 13:28 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 08-Dec-2015 13:28 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Copper | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 09-Dec-2015 11:09 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Potassium | 0.773 | | 0.200 | mg/L | 1 | 08-Dec-2015 13:28 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Silver | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Vanadium | < 0.00500 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| Zinc | 0.0101 | | 0.00500 | mg/L | 1 | 08-Dec-2015 13:28 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 07-Dec-2015 | | Analyst: OFO |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 07-Dec-2015 12:50 |
| AMMONIA AS N BY SM4500 NH3-B-F | | Method:SM4500 NH3-B-F | | Prep:M4500-NH3 B / 10-Dec-2015 | | Analyst: JHD |
| Nitrogen, Ammonia (as N) | 0.069 | | 0.050 | mg/L | 1 | 11-Dec-2015 16:32 |
| TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Method:M4500 NH3 D | | Prep:M4500-N C / 04-Dec-2015 | | Analyst: AP |
| Nitrogen, Total Kjeldahl | 0.81 | | 0.50 | mg/L | 1 | 07-Dec-2015 16:05 |
| PHOSPHORUS BY E365.3 | | Method:E365.3 | | Prep:E365.3 / 04-Dec-2015 | | Analyst: TDW |
| Phosphorus, Total (As P) | < 0.0500 | | 0.0500 | mg/L | 1 | 04-Dec-2015 16:09 |
| TOTAL DISSOLVED SOLIDS BY SM2540C | | Method:M2540C | | | | Analyst: KAH |
| Total Dissolved Solids (Residue, Filterable) | 574 | | 10.0 | mg/L | 1 | 07-Dec-2015 15:00 |
| ANIONS BY E300.0 | | Method:E300 | | | | Analyst: JBA |
| Chloride | 178 | | 10.0 | mg/L | 20 | 03-Dec-2015 14:24 |
| Nitrogen, Nitrate (As N) | < 0.100 | | 0.100 | mg/L | 1 | 03-Dec-2015 14:10 |
| Sulfate | 6.42 | | 0.500 | mg/L | 1 | 03-Dec-2015 14:10 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: TCEQ Region 14 COC 136715
 Sample ID: Well #4 (13:10)
 Collection Date: 02-Dec-2015 13:10

ANALYTICAL REPORT
 WorkOrder:HS15120102
 Lab ID:HS15120102-03
 Matrix:Liquid

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|------------------------------------|---------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 19:19 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 19:19 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 19:19 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 03-Dec-2015 19:19 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 03-Dec-2015 19:19 |
| Surr: 1,2-Dichloroethane-d4 | 83.4 | | 71-125 | %REC | 1 | 03-Dec-2015 19:19 |
| Surr: 4-Bromofluorobenzene | 98.8 | | 70-125 | %REC | 1 | 03-Dec-2015 19:19 |
| Surr: Dibromofluoromethane | 101 | | 74-125 | %REC | 1 | 03-Dec-2015 19:19 |
| Surr: Toluene-d8 | 99.9 | | 75-125 | %REC | 1 | 03-Dec-2015 19:19 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | | Prep:TX1005PR / 03-Dec-2015 | Analyst: AAP |
| nC6 to nC12 | < 0.46 | | 0.46 | mg/L | 1 | 04-Dec-2015 15:20 |
| >nC12 to nC28 | < 0.46 | | 0.46 | mg/L | 1 | 04-Dec-2015 15:20 |
| >nC28 to nC35 | < 0.46 | | 0.46 | mg/L | 1 | 04-Dec-2015 15:20 |
| Total Petroleum Hydrocarbon | < 0.46 | | 0.46 | mg/L | 1 | 04-Dec-2015 15:20 |
| Surr: 2-Fluorobiphenyl | 84.3 | | 70-130 | %REC | 1 | 04-Dec-2015 15:20 |
| Surr: Trifluoromethyl benzene | 94.8 | | 70-130 | %REC | 1 | 04-Dec-2015 15:20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

Batch ID: 99495 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 31.06 | 3 (mL) | 0.09659 |
| HS15120102-03 | 1 | 32.56 | 3 (mL) | 0.09214 |

Batch ID: 99524 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 25 | 50 (mL) | 2 |
| HS15120102-02 | 1 | 25 | 50 (mL) | 2 |

Batch ID: 99539 **Method:** PHOSPHORUS BY E365.3 **Prep:** P_TW_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 50 | 50 (mL) | 1 |
| HS15120102-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 99550 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 40 | 40 (mL) | 1 |
| HS15120102-02 | 1 | 40 | 40 (mL) | 1 |

Batch ID: 99571 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 50 | 50 (mL) | 1 |
| HS15120102-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 99736 **Method:** AMMONIA AS N BY SM4500 NH3-B-F **Prep:** NIT_AMM_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15120102-01 | 1 | 50 | 50 (mL) | 1 |
| HS15120102-02 | 1 | 50 | 50 (mL) | 1 |

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|-----------------|--|-----------|-----------------------|-------------------|----|
| Batch ID 99495 | | Test Name : LOW-LEVEL TEXAS TPH BY TX1005 | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 03 Dec 2015 15:45 | 08 Dec 2015 12:56 | 1 |
| HS15120102-03 | Well #4 (13:10) | 02 Dec 2015 13:10 | | 03 Dec 2015 15:45 | 04 Dec 2015 15:20 | 1 |
| Batch ID 99524 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 04 Dec 2015 10:20 | 07 Dec 2015 16:05 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 04 Dec 2015 10:20 | 07 Dec 2015 16:05 | 1 |
| Batch ID 99539 | | Test Name : PHOSPHORUS BY E365.3 | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 04 Dec 2015 09:12 | 04 Dec 2015 16:09 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 04 Dec 2015 09:12 | 04 Dec 2015 16:09 | 1 |
| Batch ID 99550 | | Test Name : MERCURY BY SW7470A | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 07 Dec 2015 10:07 | 07 Dec 2015 12:48 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 07 Dec 2015 10:07 | 07 Dec 2015 12:50 | 1 |
| Batch ID 99571 | | Test Name : ICP-MS METALS BY SW6020A | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 07 Dec 2015 14:53 | 09 Dec 2015 11:06 | 1 |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 07 Dec 2015 14:53 | 08 Dec 2015 13:25 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 07 Dec 2015 14:53 | 09 Dec 2015 11:09 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 07 Dec 2015 14:53 | 08 Dec 2015 13:28 | 1 |
| Batch ID 99736 | | Test Name : AMMONIA AS N BY SM4500 NH3-B-F | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | 10 Dec 2015 10:54 | 11 Dec 2015 16:32 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | 10 Dec 2015 10:54 | 11 Dec 2015 16:32 | 1 |
| Batch ID R265752 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | | 03 Dec 2015 18:54 | 1 |
| HS15120102-03 | Well #4 (13:10) | 02 Dec 2015 13:10 | | | 03 Dec 2015 19:19 | 1 |
| Batch ID R265783 | | Test Name : ANIONS BY E300.0 | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | | 03 Dec 2015 13:55 | 20 |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | | 03 Dec 2015 13:11 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | | 03 Dec 2015 14:24 | 20 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | | 03 Dec 2015 14:10 | 1 |
| Batch ID R265999 | | Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C | | Matrix: Liquid | | |
| HS15120102-01 | Well #1 | 02 Dec 2015 11:40 | | | 07 Dec 2015 15:00 | 1 |
| HS15120102-02 | Well #4 | 02 Dec 2015 13:04 | | | 07 Dec 2015 15:00 | 1 |

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: 99495 | | Instrument: FID-13 | | Method: TX1005 | | | | | | |
|-----------------------------------|-----------------------------------|------------------------------|---------|---|------------------------------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: MBLK-99495 | Units: mg/L | | Analysis Date: 04-Dec-2015 09:44 | | | | | | |
| Client ID: | | Run ID: FID-13_265807 | | SeqNo: 3514710 | PrepDate: 03-Dec-2015 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 2.127 | 0 | 2.5 | 0 | 85.1 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.085 | 0 | 2.5 | 0 | 83.4 | 70 - 130 | | | | |
| LCS | Sample ID: LCS-99495 | Units: mg/L | | Analysis Date: 04-Dec-2015 10:14 | | | | | | |
| Client ID: | | Run ID: FID-13_265807 | | SeqNo: 3514711 | PrepDate: 03-Dec-2015 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 23.34 | 0.50 | 25 | 0 | 93.4 | 75 - 125 | | | | |
| >nC12 to nC28 | 26.21 | 0.50 | 25 | 0 | 105 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 2.185 | 0 | 2.5 | 0 | 87.4 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.079 | 0 | 2.5 | 0 | 83.1 | 70 - 130 | | | | |
| LCSD | Sample ID: LCSD-99495 | Units: mg/L | | Analysis Date: 04-Dec-2015 10:44 | | | | | | |
| Client ID: | | Run ID: FID-13_265807 | | SeqNo: 3514712 | PrepDate: 03-Dec-2015 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 24.69 | 0.50 | 25 | 0 | 98.7 | 75 - 125 | 23.34 | 5.61 | 20 | |
| >nC12 to nC28 | 24.07 | 0.50 | 25 | 0 | 96.3 | 75 - 125 | 26.21 | 8.51 | 20 | |
| Surr: 2-Fluorobiphenyl | 2.441 | 0 | 2.5 | 0 | 97.6 | 70 - 130 | 2.185 | 11.1 | 20 | |
| Surr: Trifluoromethyl benzene | 2.188 | 0 | 2.5 | 0 | 87.5 | 70 - 130 | 2.079 | 5.13 | 20 | |
| MS | Sample ID: HS15120102-03MS | Units: mg/L | | Analysis Date: 04-Dec-2015 15:20 | | | | | | |
| Client ID: Well #4 (13:10) | | Run ID: FID-13_265807 | | SeqNo: 3515191 | PrepDate: 03-Dec-2015 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 25.93 | 0.47 | 23.46 | 0 | 111 | 75 - 125 | | | | |
| >nC12 to nC28 | 28.23 | 0.47 | 23.46 | 0 | 120 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 2.807 | 0 | 2.346 | 0 | 120 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.487 | 0 | 2.346 | 0 | 106 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99495 **Instrument:** FID-13 **Method:** TX1005

| MSD | Sample ID: | HS15120102-03MSD | Units: | mg/L | Analysis Date: | 04-Dec-2015 15:51 | | | | |
|--------------------------------------|-----------------|------------------|---------------|---------------|----------------|-------------------|---------------|------|-----------|------|
| Client ID: | Well #4 (13:10) | Run ID: | FID-13_265807 | SeqNo: | 3515192 | PrepDate: | 03-Dec-2015 | DF: | 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 27.48 | 0.48 | 23.76 | 0 | 116 | 75 - 125 | 25.93 | 5.79 | 20 | |
| >nC12 to nC28 | 28.88 | 0.48 | 23.76 | 0 | 122 | 75 - 125 | 28.23 | 2.3 | 20 | |
| <i>Surr: 2-Fluorobiphenyl</i> | 2.605 | 0 | 2.376 | 0 | 110 | 70 - 130 | 2.807 | 7.45 | 20 | |
| <i>Surr: Trifluoromethyl benzene</i> | 2.336 | 0 | 2.376 | 0 | 98.3 | 70 - 130 | 2.487 | 6.26 | 20 | |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: 99550 | | Instrument: HG03 | | Method: SW7470 | | | | | |
|-----------------|------------------------------------|-----------------------|------------------------------|---|------|---------------|---------------|-----------|----------|
| MBLK | Sample ID: MBLK-99550 | Units: mg/L | | Analysis Date: 07-Dec-2015 12:34 | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516148 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Mercury | < 0.000200 | 0.000200 | | | | | | | |
| LCS | Sample ID: LCS-99550 | Units: mg/L | | Analysis Date: 07-Dec-2015 12:36 | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516149 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Mercury | 0.0049 | 0.000200 | 0.005 | 0 | 98.0 | 80 - 124 | | | |
| MS | Sample ID: HS15120210-08MS | Units: mg/L | | Analysis Date: 07-Dec-2015 12:40 | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516151 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Mercury | 0.00517 | 0.000200 | 0.005 | -0.000027 | 104 | 80 - 124 | | | |
| MSD | Sample ID: HS15120210-08MSD | Units: mg/L | | Analysis Date: 07-Dec-2015 12:41 | | | | | |
| Client ID: | Run ID: HG03_265912 | SeqNo: 3516152 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Mercury | 0.00501 | 0.000200 | 0.005 | -0.000027 | 101 | 80 - 124 | 0.00517 | 3.14 | 20 |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99571 **Instrument:** ICPMS05 **Method:** SW6020

MBLK **Sample ID:** MBLK-99571 **Units:** mg/L **Analysis Date:** 08-Dec-2015 12:01

Client ID: **Run ID:** ICPMS05_265956 **SeqNo:** 3517319 **PrepDate:** 07-Dec-2015 **DF:** 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
|------------|-----------|---------|---------|---------------|------|---------------|---------------|----------|----------------|
| Antimony | < 0.00500 | 0.00500 | | | | | | | |
| Arsenic | < 0.00500 | 0.00500 | | | | | | | |
| Barium | < 0.00500 | 0.00500 | | | | | | | |
| Beryllium | < 0.00200 | 0.00200 | | | | | | | |
| Cadmium | < 0.00200 | 0.00200 | | | | | | | |
| Chromium | < 0.00500 | 0.00500 | | | | | | | |
| Copper | < 0.00500 | 0.00500 | | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | | |
| Molybdenum | < 0.00500 | 0.00500 | | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | | |
| Potassium | < 0.200 | 0.200 | | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | | |
| Silver | < 0.00500 | 0.00500 | | | | | | | |
| Vanadium | < 0.00500 | 0.00500 | | | | | | | |
| Zinc | < 0.00500 | 0.00500 | | | | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: 99571 | | instrument: ICPMS05 | | Method: SW6020 | | | | | | |
|-----------------|------------------------|---------------------|-----------------------|----------------------------------|------|---------------|---------------|------|-----------|------|
| LCS | Sample ID: MLCS-99571 | Units: mg/L | | Analysis Date: 08-Dec-2015 12:03 | | | | | | |
| Client ID: | Run ID: ICPMS05_265956 | SeqNo: 3517320 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.04532 | 0.00500 | 0.05 | 0 | 90.6 | 80 - 120 | | | | |
| Arsenic | 0.04683 | 0.00500 | 0.05 | 0 | 93.7 | 80 - 120 | | | | |
| Barium | 0.04614 | 0.00500 | 0.05 | 0 | 92.3 | 80 - 120 | | | | |
| Beryllium | 0.04505 | 0.00200 | 0.05 | 0 | 90.1 | 80 - 120 | | | | |
| Cadmium | 0.04723 | 0.00200 | 0.05 | 0 | 94.5 | 80 - 120 | | | | |
| Chromium | 0.04772 | 0.00500 | 0.05 | 0 | 95.4 | 80 - 120 | | | | |
| Copper | 0.04869 | 0.00500 | 0.05 | 0 | 97.4 | 80 - 120 | | | | |
| Lead | 0.0458 | 0.00500 | 0.05 | 0 | 91.6 | 80 - 120 | | | | |
| Molybdenum | 0.04438 | 0.00500 | 0.05 | 0 | 88.8 | 80 - 120 | | | | |
| Nickel | 0.0479 | 0.00500 | 0.05 | 0 | 95.8 | 80 - 120 | | | | |
| Potassium | 4.543 | 0.200 | 5 | 0 | 90.9 | 80 - 120 | | | | |
| Selenium | 0.04655 | 0.00500 | 0.05 | 0 | 93.1 | 80 - 120 | | | | |
| Silver | 0.04678 | 0.00500 | 0.05 | 0 | 93.6 | 80 - 120 | | | | |
| Vanadium | 0.04654 | 0.00500 | 0.05 | 0 | 93.1 | 80 - 120 | | | | |
| Zinc | 0.05006 | 0.00500 | 0.05 | 0 | 100 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99571 Instrument: ICPMS05 Method: SW6020

| MS | Sample ID: HS15120225-06MS | Units: mg/L | | | Analysis Date: 08-Dec-2015 12:33 | | | | | |
|------------|----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS05_265956 | SeqNo: 3517330 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.04629 | 0.00500 | 0.05 | -0.000087 | 92.7 | 80 - 120 | | | | |
| Arsenic | 0.04534 | 0.00500 | 0.05 | 0.000044 | 90.6 | 80 - 120 | | | | |
| Barium | 0.08988 | 0.00500 | 0.05 | 0.04142 | 96.9 | 80 - 120 | | | | |
| Beryllium | 0.04606 | 0.00200 | 0.05 | 0.000005 | 92.1 | 80 - 120 | | | | |
| Cadmium | 0.04714 | 0.00200 | 0.05 | -0.000008 | 94.3 | 80 - 120 | | | | |
| Chromium | 0.04616 | 0.00500 | 0.05 | -0.000075 | 92.5 | 80 - 120 | | | | |
| Copper | 0.04702 | 0.00500 | 0.05 | -0.000223 | 94.5 | 80 - 120 | | | | |
| Lead | 0.04524 | 0.00500 | 0.05 | 0.000034 | 90.4 | 80 - 120 | | | | |
| Molybdenum | 0.04472 | 0.00500 | 0.05 | -0.000026 | 89.5 | 80 - 120 | | | | |
| Nickel | 0.04658 | 0.00500 | 0.05 | -0.000095 | 93.3 | 80 - 120 | | | | |
| Potassium | 4.62 | 0.200 | 5 | 0.004117 | 92.3 | 80 - 120 | | | | |
| Selenium | 0.04514 | 0.00500 | 0.05 | 0.000071 | 90.1 | 80 - 120 | | | | |
| Silver | 0.0468 | 0.00500 | 0.05 | 0.00001 | 93.6 | 80 - 120 | | | | |
| Vanadium | 0.04577 | 0.00500 | 0.05 | 0.000083 | 91.4 | 80 - 120 | | | | |
| Zinc | 0.04915 | 0.00500 | 0.05 | 0.00299 | 92.3 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: 99571 | | Instrument: ICPMS05 | | Method: SW6020 | | | | | | |
|-----------------|-----------------------------|---------------------|-----------------------|----------------|----------------------------------|---------------|---------------|-------|-----------|------|
| MSD | Sample ID: HS15120225-06MSD | Units: mg/L | | | Analysis Date: 08-Dec-2015 12:36 | | | | | |
| Client ID: | Run ID: ICPMS05_265956 | SeqNo: 3517331 | PrepDate: 07-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.0454 | 0.00500 | 0.05 | -0.000087 | 91.0 | 80 - 120 | 0.04629 | 1.94 | 20 | |
| Arsenic | 0.04474 | 0.00500 | 0.05 | 0.000044 | 89.4 | 80 - 120 | 0.04534 | 1.32 | 20 | |
| Barium | 0.08688 | 0.00500 | 0.05 | 0.04142 | 90.9 | 80 - 120 | 0.08988 | 3.4 | 20 | |
| Beryllium | 0.04451 | 0.00200 | 0.05 | 0.000005 | 89.0 | 80 - 120 | 0.04606 | 3.42 | 20 | |
| Cadmium | 0.04645 | 0.00200 | 0.05 | -0.000008 | 92.9 | 80 - 120 | 0.04714 | 1.49 | 20 | |
| Chromium | 0.04508 | 0.00500 | 0.05 | -0.000075 | 90.3 | 80 - 120 | 0.04616 | 2.37 | 20 | |
| Copper | 0.0453 | 0.00500 | 0.05 | -0.000223 | 91.1 | 80 - 120 | 0.04702 | 3.71 | 20 | |
| Lead | 0.04474 | 0.00500 | 0.05 | 0.000034 | 89.4 | 80 - 120 | 0.04524 | 1.11 | 20 | |
| Molybdenum | 0.04345 | 0.00500 | 0.05 | -0.000026 | 86.9 | 80 - 120 | 0.04472 | 2.89 | 20 | |
| Nickel | 0.04588 | 0.00500 | 0.05 | -0.000095 | 92.0 | 80 - 120 | 0.04658 | 1.5 | 20 | |
| Potassium | 4.564 | 0.200 | 5 | 0.004117 | 91.2 | 80 - 120 | 4.62 | 1.22 | 20 | |
| Selenium | 0.04545 | 0.00500 | 0.05 | 0.000071 | 90.8 | 80 - 120 | 0.04514 | 0.691 | 20 | |
| Silver | 0.04621 | 0.00500 | 0.05 | 0.00001 | 92.4 | 80 - 120 | 0.0468 | 1.27 | 20 | |
| Vanadium | 0.0448 | 0.00500 | 0.05 | 0.000083 | 89.4 | 80 - 120 | 0.04577 | 2.15 | 20 | |
| Zinc | 0.04707 | 0.00500 | 0.05 | 0.00299 | 88.2 | 80 - 120 | 0.04915 | 4.32 | 20 | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99571 Instrument: ICPMS05 Method: SW6020

| PDS | | Sample ID: HS15120225-06BS | | | Units: mg/L | | Analysis Date: 08-Dec-2015 12:39 | | | |
|------------|---------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS05_265956 | | | SeqNo: 3517332 | | PrepDate: 07-Dec-2015 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Antimony | 0.08633 | 0.00500 | 0.1 | 0 | 86.3 | 75 - 125 | | | | |
| Arsenic | 0.08778 | 0.00500 | 0.1 | 0 | 87.8 | 75 - 125 | | | | |
| Barium | 0.129 | 0.00500 | 0.1 | 0.04142 | 87.6 | 75 - 125 | | | | |
| Beryllium | 0.08009 | 0.00200 | 0.1 | 0 | 80.1 | 75 - 125 | | | | |
| Cadmium | 0.09072 | 0.00200 | 0.1 | 0 | 90.7 | 75 - 125 | | | | |
| Chromium | 0.08873 | 0.00500 | 0.1 | 0 | 88.7 | 75 - 125 | | | | |
| Copper | 0.08991 | 0.00500 | 0.1 | 0 | 89.9 | 75 - 125 | | | | |
| Lead | 0.08601 | 0.00500 | 0.1 | 0 | 86.0 | 75 - 125 | | | | |
| Molybdenum | 0.08765 | 0.00500 | 0.1 | 0 | 87.7 | 75 - 125 | | | | |
| Nickel | 0.09012 | 0.00500 | 0.1 | 0 | 90.1 | 75 - 125 | | | | |
| Potassium | 8.907 | 0.200 | 10 | 0 | 89.1 | 75 - 125 | | | | |
| Selenium | 0.08701 | 0.00500 | 0.1 | 0 | 87.0 | 75 - 125 | | | | |
| Silver | 0.08915 | 0.00500 | 0.1 | 0 | 89.1 | 75 - 125 | | | | |
| Vanadium | 0.08853 | 0.00500 | 0.1 | 0 | 88.5 | 75 - 125 | | | | |
| Zinc | 0.09231 | 0.00500 | 0.1 | 0.00299 | 89.3 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99571 Instrument: ICPMS05 Method: SW6020

| SD | Sample ID: HS15120225-06 DIL SX | Units: mg/L | Analysis Date: 08-Dec-2015 12:24 | | | | | | | |
|------------|---------------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|-------|----------|------|
| Client ID: | Run ID: ICPMS05_265956 | SeqNo: 3517327 | PrepDate: 07-Dec-2015 | DF: 5 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
| Antimony | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Arsenic | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Barium | 0.04155 | 0.0250 | | | | | 0.04142 | 0.309 | 10 | |
| Beryllium | < 0.0100 | 0.0100 | | | | | 0 | 0 | 10 | |
| Cadmium | < 0.0100 | 0.0100 | | | | | 0 | 0 | 10 | |
| Chromium | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Copper | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Lead | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Molybdenum | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Nickel | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Potassium | < 1.00 | 1.00 | | | | | 0 | 0 | 10 | |
| Selenium | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Silver | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Vanadium | < 0.0250 | 0.0250 | | | | | 0 | 0 | 10 | |
| Zinc | < 0.0250 | 0.0250 | | | | | 0.00299 | 0 | 10 | |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: R265752 Instrument: VOA2 Method: SW8260

| MBLK | Sample ID: VBLKW-151203 | Units: ug/L | | | Analysis Date: 03-Dec-2015 11:20 | | | | | |
|------------------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|----------|-----------|------|
| Client ID: | Run ID: VOA2_265752 | SeqNo: 3513603 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 39.55 | 1.0 | 50 | 0 | 79.1 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.94 | 1.0 | 50 | 0 | 97.9 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 49.21 | 1.0 | 50 | 0 | 98.4 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 50.11 | 1.0 | 50 | 0 | 100 | 75 - 125 | | | | |

| LCS | Sample ID: VLCSW-151203 | Units: ug/L | | | Analysis Date: 03-Dec-2015 10:30 | | | | | |
|------------------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|----------|-----------|------|
| Client ID: | Run ID: VOA2_265752 | SeqNo: 3513602 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Benzene | 44.44 | 1.0 | 50 | 0 | 88.9 | 80 - 120 | | | | |
| Ethylbenzene | 47.03 | 1.0 | 50 | 0 | 94.1 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 44.72 | 1.0 | 50 | 0 | 89.4 | 70 - 130 | | | | |
| Toluene | 44.21 | 1.0 | 50 | 0 | 88.4 | 75 - 121 | | | | |
| Xylenes, Total | 138.2 | 3.0 | 150 | 0 | 92.1 | 79 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 40.58 | 1.0 | 50 | 0 | 81.2 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.72 | 1.0 | 50 | 0 | 99.4 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 47.78 | 1.0 | 50 | 0 | 95.6 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 48.75 | 1.0 | 50 | 0 | 97.5 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: R265752 Instrument: VOA2 Method: SW8260

| MS | Sample ID: | HS15120079-01MS | Units: ug/L | | | Analysis Date: 03-Dec-2015 13:53 | | | | |
|-----------------------------|------------|-----------------|-------------|---------------|-----------|----------------------------------|---------------|------|-----------|------|
| Client ID: | Run ID: | VOA2_265752 | SeqNo: | 3513784 | PrepDate: | DF: | 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 43.52 | 1.0 | 50 | 0 | 87.0 | 80 - 120 | | | | |
| Ethylbenzene | 46.41 | 1.0 | 50 | 0 | 92.8 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 43.16 | 1.0 | 50 | 0 | 86.3 | 70 - 130 | | | | |
| Toluene | 43.62 | 1.0 | 50 | 0 | 87.2 | 75 - 121 | | | | |
| Xylenes, Total | 135.3 | 3.0 | 150 | 0 | 90.2 | 80 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 41.54 | 1.0 | 50 | 0 | 83.1 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 50.08 | 1.0 | 50 | 0 | 100 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 46.1 | 1.0 | 50 | 0 | 92.2 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 48.71 | 1.0 | 50 | 0 | 97.4 | 75 - 125 | | | | |

| MSD | Sample ID: | HS15120079-01MSD | Units: ug/L | | | Analysis Date: 03-Dec-2015 14:18 | | | | |
|-----------------------------|------------|------------------|-------------|---------------|-----------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | Run ID: | VOA2_265752 | SeqNo: | 3513785 | PrepDate: | DF: | 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 40.73 | 1.0 | 50 | 0 | 81.5 | 80 - 120 | 43.52 | 6.64 | 20 | |
| Ethylbenzene | 43.06 | 1.0 | 50 | 0 | 86.1 | 80 - 120 | 46.41 | 7.49 | 20 | |
| Methyl tert-butyl ether | 40.26 | 1.0 | 50 | 0 | 80.5 | 70 - 130 | 43.16 | 6.94 | 20 | |
| Toluene | 41.15 | 1.0 | 50 | 0 | 82.3 | 75 - 121 | 43.62 | 5.82 | 20 | |
| Xylenes, Total | 127.3 | 3.0 | 150 | 0 | 84.9 | 80 - 124 | 135.3 | 6.04 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 40.55 | 1.0 | 50 | 0 | 81.1 | 71 - 125 | 41.54 | 2.41 | 20 | |
| Surr: 4-Bromofluorobenzene | 49.76 | 1.0 | 50 | 0 | 99.5 | 70 - 125 | 50.08 | 0.646 | 20 | |
| Surr: Dibromofluoromethane | 48.34 | 1.0 | 50 | 0 | 96.7 | 74 - 125 | 46.1 | 4.74 | 20 | |
| Surr: Toluene-d8 | 48.53 | 1.0 | 50 | 0 | 97.1 | 75 - 125 | 48.71 | 0.379 | 20 | |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99524 Instrument: WetChem_HS Method: M4500 NH3 D

| | | | | | | | | | | |
|-------------|----------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|----------|-----------|------|
| MBLK | Sample ID: MBLK-99524 | Units: mg/L | Analysis Date: 07-Dec-2015 16:05 | | | | | | | |
| Client ID: | Run ID: WetChem_HS_265929 | SeqNo: 3516504 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Nitrogen, Total Kjeldahl < 0.50 0.50

| | | | | | | | | | | |
|------------|----------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|----------|-----------|------|
| LCS | Sample ID: LCS-99524 | Units: mg/L | Analysis Date: 07-Dec-2015 16:05 | | | | | | | |
| Client ID: | Run ID: WetChem_HS_265929 | SeqNo: 3516506 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Nitrogen, Total Kjeldahl 20.6 0.50 20 0 103 80 - 120

| | | | | | | | | | | |
|------------|-----------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|----------|-----------|------|
| MS | Sample ID: HS15120134-01MS | Units: mg/L | Analysis Date: 07-Dec-2015 16:05 | | | | | | | |
| Client ID: | Run ID: WetChem_HS_265929 | SeqNo: 3516505 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Nitrogen, Total Kjeldahl 19.86 0.50 20 1.772 90.4 75 - 125

| | | | | | | | | | | |
|------------|------------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|----------|-----------|------|
| MSD | Sample ID: HS15120134-01MSD | Units: mg/L | Analysis Date: 07-Dec-2015 16:05 | | | | | | | |
| Client ID: | Run ID: WetChem_HS_265929 | SeqNo: 3516503 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

Nitrogen, Total Kjeldahl 19.68 0.50 20 1.772 89.5 75 - 125 19.86 0.91 20

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: 99539 | | Instrument: UV-2450 | | Method: E365.3 | | | | | | |
|---------------------------|------------------------------------|------------------------|----------------|----------------------------------|-------|---------------|---------------|----------|-----------|------|
| MBLK | Sample ID: MBLK-99539 | Units: mg/L | | Analysis Date: 04-Dec-2015 16:09 | | | | | | |
| Client ID: | | Run ID: UV-2450_265822 | SeqNo: 3515135 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Phosphorus, Total (As P) | < 0.0500 | 0.0500 | | | | | | | | |
| LCS | Sample ID: LCS-99539 | Units: mg/L | | Analysis Date: 04-Dec-2015 16:09 | | | | | | |
| Client ID: | | Run ID: UV-2450_265822 | SeqNo: 3515132 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Phosphorus, Total (As P) | 0.25 | 0.0500 | 0.25 | 0 | 100 | 80 - 120 | | | | |
| MS | Sample ID: HS15120102-01MS | Units: mg/L | | Analysis Date: 04-Dec-2015 16:09 | | | | | | |
| Client ID: Well #1 | | Run ID: UV-2450_265822 | SeqNo: 3515133 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Phosphorus, Total (As P) | 0.246 | 0.0500 | 0.25 | 0.008 | 95.2 | 80 - 120 | | | | |
| MSD | Sample ID: HS15120102-01MSD | Units: mg/L | | Analysis Date: 04-Dec-2015 16:09 | | | | | | |
| Client ID: Well #1 | | Run ID: UV-2450_265822 | SeqNo: 3515130 | PrepDate: 04-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Phosphorus, Total (As P) | 0.254 | 0.0500 | 0.25 | 0.008 | 98.4 | 80 - 120 | 0.246 | 3.2 | 20 | |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: 99736 Instrument: UV-2450 Method: SM4500 NH3-B-F

| | | | | | | | | | |
|--------------------------|-------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MBLK | Sample ID: MBLK-99736 | Units: mg/L | | | Analysis Date: 11-Dec-2015 16:32 | | | | |
| Client ID: | Run ID: UV-2450_266211 | SeqNo: 3521606 | PrepDate: 10-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Nitrogen, Ammonia (as N) | < 0.050 | 0.050 | | | | | | | |

| | | | | | | | | | |
|--------------------------|-------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| LCS | Sample ID: LCS-99736 | Units: mg/L | | | Analysis Date: 11-Dec-2015 16:32 | | | | |
| Client ID: | Run ID: UV-2450_266211 | SeqNo: 3521608 | PrepDate: 10-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Nitrogen, Ammonia (as N) | 0.428 | 0.050 | 0.5 | 0 | 85.6 | 80 - 120 | | | |

| | | | | | | | | | |
|--------------------------|-----------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MS | Sample ID: HS15120080-04MS | Units: mg/L | | | Analysis Date: 11-Dec-2015 16:32 | | | | |
| Client ID: | Run ID: UV-2450_266211 | SeqNo: 3521605 | PrepDate: 10-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Nitrogen, Ammonia (as N) | 0.451 | 0.050 | 0.5 | 0.028 | 84.6 | 80 - 120 | | | |

| | | | | | | | | | |
|--------------------------|------------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MSD | Sample ID: HS15120080-04MSD | Units: mg/L | | | Analysis Date: 11-Dec-2015 16:32 | | | | |
| Client ID: | Run ID: UV-2450_266211 | SeqNo: 3521607 | PrepDate: 10-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Nitrogen, Ammonia (as N) | 0.467 | 0.050 | 0.5 | 0.028 | 87.8 | 80 - 120 | 0.451 | 3.49 | 20 |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

| Batch ID: R265783 | | Instrument: ICS2100 | | Method: E300 | | | | | | |
|---------------------------|-----------------------------------|-----------------------|-----------|----------------------------------|------|---------------|---------------|-------|-----------|------|
| MBLK | Sample ID: WBLKW2-120315 | Units: mg/L | | Analysis Date: 03-Dec-2015 11:44 | | | | | | |
| Client ID: | Run ID: ICS2100_265783 | SeqNo: 3514223 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | < 0.500 | 0.500 | | | | | | | | |
| Nitrogen, Nitrate (As N) | < 0.100 | 0.100 | | | | | | | | |
| Sulfate | < 0.500 | 0.500 | | | | | | | | |
| LCS | Sample ID: WLCSW2-120315 | Units: mg/L | | Analysis Date: 03-Dec-2015 11:58 | | | | | | |
| Client ID: | Run ID: ICS2100_265783 | SeqNo: 3514224 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 19.96 | 0.500 | 20 | 0 | 99.8 | 90 - 110 | | | | |
| Nitrogen, Nitrate (As N) | 3.975 | 0.100 | 4 | 0 | 99.4 | 90 - 110 | | | | |
| Sulfate | 20.24 | 0.500 | 20 | 0 | 101 | 90 - 110 | | | | |
| LCSD | Sample ID: WLCSDW2-120315 | Units: mg/L | | Analysis Date: 03-Dec-2015 12:13 | | | | | | |
| Client ID: | Run ID: ICS2100_265783 | SeqNo: 3514225 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 20.17 | 0.500 | 20 | 0 | 101 | 90 - 110 | 19.96 | 1.04 | 20 | |
| Nitrogen, Nitrate (As N) | 4.009 | 0.100 | 4 | 0 | 100 | 90 - 110 | 3.975 | 0.852 | 20 | |
| Sulfate | 20.3 | 0.500 | 20 | 0 | 102 | 90 - 110 | 20.24 | 0.326 | 20 | |
| MS | Sample ID: HS15120102-01MS | Units: mg/L | | Analysis Date: 03-Dec-2015 13:26 | | | | | | |
| Client ID: Well #1 | Run ID: ICS2100_265783 | SeqNo: 3514227 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 201.4 | 0.500 | 10 | 192 | 94.1 | 80 - 120 | | | | EO |
| Nitrogen, Nitrate (As N) | 1.913 | 0.100 | 2 | 0 | 95.6 | 80 - 120 | | | | |
| Sulfate | 10.86 | 0.500 | 10 | 1.017 | 98.4 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: R265783 Instrument: ICS2100 Method: E300

| MS | | Sample ID: HS15120080-04MS | | | Units: mg/L | | Analysis Date: 04-Dec-2015 11:00 | | | |
|--------------------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICS2100_265783 | | | SeqNo: 3514511 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 89.74 | 0.500 | 10 | 82.17 | 75.8 | 80 - 120 | | | | SO |
| Nitrogen, Nitrate (As N) | 11.08 | 0.100 | 2 | 9.286 | 89.8 | 80 - 120 | | | | O |
| Sulfate | 63.97 | 0.500 | 10 | 55.31 | 86.6 | 80 - 120 | | | | O |

| MS | | Sample ID: HS15120080-01MS | | | Units: mg/L | | Analysis Date: 03-Dec-2015 16:35 | | | |
|--------------------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICS2100_265783 | | | SeqNo: 3514240 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 33.07 | 0.500 | 10 | 23 | 101 | 80 - 120 | | | | |
| Nitrogen, Nitrate (As N) | 7.988 | 0.100 | 2 | 6.159 | 91.4 | 80 - 120 | | | | |
| Sulfate | 33.02 | 0.500 | 10 | 23.58 | 94.4 | 80 - 120 | | | | |

| MSD | | Sample ID: HS15120102-01MSD | | | Units: mg/L | | Analysis Date: 03-Dec-2015 13:41 | | | |
|--------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|-------|-----------|------|
| Client ID: Well #1 | | Run ID: ICS2100_265783 | | | SeqNo: 3514228 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 203.1 | 0.500 | 10 | 192 | 111 | 80 - 120 | 201.4 | 0.841 | 20 | EO |
| Nitrogen, Nitrate (As N) | 1.947 | 0.100 | 2 | 0 | 97.4 | 80 - 120 | 1.913 | 1.76 | 20 | |
| Sulfate | 11.04 | 0.500 | 10 | 1.017 | 100 | 80 - 120 | 10.86 | 1.64 | 20 | |

| MSD | | Sample ID: HS15120080-04MSD | | | Units: mg/L | | Analysis Date: 04-Dec-2015 11:15 | | | |
|--------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|--------|-----------|------|
| Client ID: | | Run ID: ICS2100_265783 | | | SeqNo: 3514512 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 89.68 | 0.500 | 10 | 82.17 | 75.1 | 80 - 120 | 89.74 | 0.0769 | 20 | SO |
| Nitrogen, Nitrate (As N) | 11.02 | 0.100 | 2 | 9.286 | 86.7 | 80 - 120 | 11.08 | 0.552 | 20 | O |
| Sulfate | 63.48 | 0.500 | 10 | 55.31 | 81.7 | 80 - 120 | 63.97 | 0.755 | 20 | O |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: R265783 **Instrument:** ICS2100 **Method:** E300

| MSD | Sample ID: | HS15120080-01MSD | | | Units: | mg/L | | Analysis Date: 03-Dec-2015 16:50 | | |
|--------------------------|------------|------------------|---------|---------------|--------|---------------|---------------|----------------------------------|-----------|------|
| Client ID: | Run ID: | ICS2100_265783 | | | SeqNo: | 3514241 | | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 32.96 | 0.500 | 10 | 23 | 99.6 | 80 - 120 | 33.07 | 0.345 | 20 | |
| Nitrogen, Nitrate (As N) | 8.045 | 0.100 | 2 | 6.159 | 94.3 | 80 - 120 | 7.988 | 0.711 | 20 | |
| Sulfate | 33.26 | 0.500 | 10 | 23.58 | 96.8 | 80 - 120 | 33.02 | 0.733 | 20 | |

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

QC BATCH REPORT

Batch ID: R265999 Instrument: Balance1 Method: M2540C

| | | | | | |
|-------------|--------------------------------|-----------------------|---|---------------|--|
| MBLK | Sample ID: WBLK-120715 | Units: mg/L | Analysis Date: 07-Dec-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265999 | SeqNo: 3517738 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) < 10.0 10.0

| | | | | | |
|------------|--------------------------------|-----------------------|---|---------------|--|
| LCS | Sample ID: WLCS-120715 | Units: mg/L | Analysis Date: 07-Dec-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265999 | SeqNo: 3517739 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) 988 10.0 1000 0 98.8 85 - 115

| | | | | | |
|------------|------------------------------------|-----------------------|---|---------------|--|
| DUP | Sample ID: HS15120080-04DUP | Units: mg/L | Analysis Date: 07-Dec-2015 15:00 | | |
| Client ID: | Run ID: Balance1_265999 | SeqNo: 3517732 | PrepDate: | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |

Total Dissolved Solids (Residue, Filterable) 540 10.0 540 0 5

The following samples were analyzed in this batch: HS15120102-01 HS15120102-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
WorkOrder: HS15120102

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|----------------------|
| mg/L | Milligrams per Liter |

CERTIFICATIONS, ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: TCEQ Region 14 COC 136715
Work Order: HS15120102

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS15120102-01 | Well #1 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-01 | Well #1 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-01 | Well #1 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-01 | Well #1 | Login | 12/3/2015 11:06:59 AM | PMG | VW-3 |
| HS15120102-01 | Well #1 | Login | 12/3/2015 11:06:59 AM | PMG | TPH C1 |
| HS15120102-02 | Well #4 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-02 | Well #4 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-02 | Well #4 | Login | 12/3/2015 11:06:59 AM | PMG | 13A |
| HS15120102-02 | Well #4 | Login | 12/3/2015 11:06:59 AM | PMG | VW-3 |
| HS15120102-02 | Well #4 | Login | 12/3/2015 11:06:59 AM | PMG | TPH C1 |
| HS15120102-03 | Well #4 (13:10) | Login | 12/3/2015 11:28:38 AM | PMG | VW-3 |
| HS15120102-03 | Well #4 (13:10) | Login | 12/3/2015 11:28:38 AM | PMG | TPH C1 |
| HS15120102-01 | Well #1 | Out | 12/7/2015 10:07:43 AM | OFO | METPREP |
| HS15120102-02 | Well #4 | Out | 12/7/2015 10:07:43 AM | OFO | METPREP |
| HS15120102-03 | Well #4 (13:10) | Out | 12/7/2015 10:07:43 AM | OFO | METPREP |
| HS15120102-01 | Well #1 | Return | 12/7/2015 11:04:37 AM | OFO | 13A |
| HS15120102-01 | Well #1 | Return | 12/8/2015 1:09:39 PM | HAS | 13A |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS15120102

Date/Time Received: 03-Dec-2015 09:52
 Received by: JJT

Checklist completed by: Paresh M. Giga 3-Dec-2015
 eSignature Date

Reviewed by: Dane J. Wacasey 8-Dec-2015
 eSignature Date

Matrices: Liquid

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 2.2c/2.4c U/C IR4

Cooler(s)/Kit(s): Blue (Returned)

Date/Time sample(s) sent to storage: 12/2/15 11:25

- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No N/A
- pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Chain of Custody Form
Page of
COC ID: 136715

HS15120102
Texas Commission on Environmental Quality
TCEQ Region 14 COC 136715

ton, WV
68
80

Environmental

ALS Project Manager:

| Customer Information | | | | Project Information | | | | | | | | | | | | | |
|----------------------|--------------------|---------|-------|----------------------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| Purchase Order | Project Name | | | Groundwater Sampling | | | | | | | | | | | | | |
| Work Order | Project Number | | | well #1 of well #4 | | | | | | | | | | | | | |
| Company Name | Bill To Company | | | TCEQ-Campus Christi | | | | | | | | | | | | | |
| Send Report To | Invoice Attn | | | Julie Steger | | | | | | | | | | | | | |
| Address: | Address: | | | P.O. Box 13087 | | | | | | | | | | | | | |
| City/State/Zip | City/State/Zip: | | | Austin | | | | | | | | | | | | | |
| Phone | Phone: | | | (512) 239-5725 | | | | | | | | | | | | | |
| Fax | Fax: | | | | | | | | | | | | | | | | |
| e-Mail Address | e-Mail Address: | | | | | | | | | | | | | | | | |
| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
| 1 | well #1 | 12/2/15 | 11:40 | L | HNO3 | 1 | | | | | X | | | | | | |
| 2 | well #1 | 12/2/15 | 11:40 | L | | 1 | | | X | | | | | | | | |
| 3 | well #1 | 12/2/15 | 11:40 | L | H2SO4 | 1 | | | | X | | | | | | | |
| 4 | well #1 | 12/2/15 | 11:40 | L | HCL | 6 | X | X | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | well #4 | 12/2/15 | 13:04 | L | HNO3 | 1 | | | | | X | | | | | | |
| 8 | well #4 | 12/2/15 | 13:04 | L | | 1 | | | X | | | | | | | | |
| 9 | well #4 | 12/2/15 | 13:04 | L | H2SO4 | 1 | | | | X | | | | | | | |
| 10 | well #4 | 12/2/15 | 13:04 | L | HCL | 6 | X | X | | | | | | | | | |

Shipments Method: Fed-EX
 Required Turnaround Time: (Check Box)
 5 Wk Days 3 Wk Days 24 Hours
 Note: Other

Relinquished by: Gerardo Arambold Date: 12/3/15 Time: 16:30
 Received by: Fed-EX

Relinquished by: _____ Date: 12/3/15 Time: 09:52
 Received by: Gerardo Arambold

Logged by (Laboratory): _____
 Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O8 6-NaHSO4 7-Other 8-4°C 9-5095

QC Package: (Check One Box Below)
 Level 2 Std QC
 Level 3 Std QC/Row da
 Level 4 SW846/CLP
 Other

Cooler ID: _____ Cooler Temp: _____
 TRRP Chk List
 TRRP Level 4

Copyright 2011 by ALS Environmental.

THU - 03 DEC 10:30A
PRIORITY OVERNIGHT

TRK/ 8063 1376 9570
021E

43 SGRA

77099
TX-US IAH



DEC15
LB
2 IN

30 JAN 05 1455551 #184
1 1/2 IN X 1 1/2 IN

0315



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F: +1 281 530 5887
www.alsglobal.com

January 15, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS16010183**

Laboratory Results for: **Groundwater Sampling**

Dear Bill,

ALS Environmental received 2 sample(s) on Jan 08, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: **Jumoke.Lawal**
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS16010183

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|--------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS16010183-01 | Mayfield No. 3 | Water | | 07-Jan-2016 14:04 | 08-Jan-2016 09:50 | <input type="checkbox"/> |
| HS16010183-02 | Electric Pump/Well | Water | | 07-Jan-2016 16:25 | 08-Jan-2016 09:50 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS16010183

CASE NARRATIVE

GC Semivolatiles by Method TX1005**Batch ID: 100404**Sample ID: **Mayfield No. 3 (HS16010183-01)**Sample ID: **Electric Pump/Well (HS16010183-02)**

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

GCMS Volatiles by Method SW8260**Batch ID: R267447**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020**Batch ID: 100489**Sample ID: **HS16010139-01MS**

- MS/MSD and DUPs are for an unrelated sample

Metals by Method SW7470**Batch ID: 100458**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M4500 NH3 D**Batch ID: 100551**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C**Batch ID: R267615**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300**Batch ID: R267462**Sample ID: **DP-25 (48-49) (HS16010183-01MS)**

- The MS and MSD recoveries were outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount for Chloride

WetChemistry by Method E365.3**Batch ID: 100521**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500 NH3-B-F**Batch ID: 100480**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Mayfield No. 3
 Collection Date: 07-Jan-2016 14:04

ANALYTICAL REPORT
 WorkOrder:HS16010183
 Lab ID:HS16010183-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|----------------|------------------------------|----------------|--------------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 13-Jan-2016 | | Analyst: RPM |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Barium | 1.75 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 14-Jan-2016 12:47 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Copper | 0.00626 | | 0.00200 | mg/L | 1 | 14-Jan-2016 12:47 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Potassium | 2.40 | | 0.200 | mg/L | 1 | 14-Jan-2016 12:47 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| Zinc | 0.153 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:47 |
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:05 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:05 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:05 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:05 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 09-Jan-2016 05:05 |
| Surr: 1,2-Dichloroethane-d4 | 95.9 | | 71-125 | %REC | 1 | 09-Jan-2016 05:05 |
| Surr: 4-Bromofluorobenzene | 111 | | 70-125 | %REC | 1 | 09-Jan-2016 05:05 |
| Surr: Dibromofluoromethane | 106 | | 74-125 | %REC | 1 | 09-Jan-2016 05:05 |
| Surr: Toluene-d8 | 109 | | 75-125 | %REC | 1 | 09-Jan-2016 05:05 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 12-Jan-2016 | | Analyst: JCJ |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 12-Jan-2016 15:04 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 09-Jan-2016 05:45 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 09-Jan-2016 05:45 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 09-Jan-2016 05:45 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 09-Jan-2016 05:45 |
| Surr: 2-Fluorobiphenyl | 142 | S | 70-130 | %REC | 1 | 09-Jan-2016 05:45 |
| Surr: Trifluoromethyl benzene | 133 | S | 70-130 | %REC | 1 | 09-Jan-2016 05:45 |
| AMMONIA AS N BY SM4500 NH3-B-F | | Method:SM4500 NH3-B-F | | Prep:M4500-NH3 B / 12-Jan-2016 | | Analyst: JHD |
| Nitrogen, Ammonia (as N) | 0.057 | | 0.050 | mg/L | 1 | 13-Jan-2016 11:30 |
| TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Method:M4500 NH3 D | | Prep:M4500-N C / 14-Jan-2016 | | Analyst: JBA |
| Nitrogen, Total Kjeldahl | 0.83 | | 0.50 | mg/L | 1 | 15-Jan-2016 14:20 |
| PHOSPHORUS BY E365.3 | | Method:E365.3 | | Prep:E365.3 / 13-Jan-2016 | | Analyst: JHD |
| Phosphorus, Total (As P) | < 0.0500 | | 0.0500 | mg/L | 1 | 13-Jan-2016 14:54 |
| TOTAL DISSOLVED SOLIDS BY SM2540C | | Method:M2540C | | | | Analyst: KAH |
| Total Dissolved Solids (Residue, Filterable) | 514 | | 10.0 | mg/L | 1 | 12-Jan-2016 17:00 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Mayfield No. 3
 Collection Date: 07-Jan-2016 14:04

ANALYTICAL REPORT
 WorkOrder:HS16010183
 Lab ID:HS16010183-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--------------------------|---------|--------------------|--------------|-------|-----------------|-------------------|
| ANIONS BY E300.0 | | Method:E300 | | | | Analyst: JBA |
| Chloride | 131 | | 10.0 | mg/L | 20 | 08-Jan-2016 18:02 |
| Nitrogen, Nitrate (As N) | < 0.100 | | 0.100 | mg/L | 1 | 08-Jan-2016 16:57 |
| Sulfate | < 0.500 | | 0.500 | mg/L | 1 | 08-Jan-2016 16:57 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Electric Pump/Well
 Collection Date: 07-Jan-2016 16:25

ANALYTICAL REPORT
 WorkOrder:HS16010183
 Lab ID:HS16010183-02
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|------------|------------------------------|--------------|--------------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 13-Jan-2016 | | Analyst: RPM |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Barium | 0.166 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 14-Jan-2016 12:50 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Copper | < 0.00200 | | 0.00200 | mg/L | 1 | 14-Jan-2016 12:50 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Potassium | 1.11 | | 0.200 | mg/L | 1 | 14-Jan-2016 12:50 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| Zinc | 0.214 | | 0.00500 | mg/L | 1 | 14-Jan-2016 12:50 |
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:30 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:30 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:30 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 09-Jan-2016 05:30 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 09-Jan-2016 05:30 |
| Surr: 1,2-Dichloroethane-d4 | 93.7 | | 71-125 | %REC | 1 | 09-Jan-2016 05:30 |
| Surr: 4-Bromofluorobenzene | 110 | | 70-125 | %REC | 1 | 09-Jan-2016 05:30 |
| Surr: Dibromofluoromethane | 104 | | 74-125 | %REC | 1 | 09-Jan-2016 05:30 |
| Surr: Toluene-d8 | 111 | | 75-125 | %REC | 1 | 09-Jan-2016 05:30 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 12-Jan-2016 | | Analyst: JCJ |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 12-Jan-2016 15:06 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 0.48 | | 0.48 | mg/L | 1 | 08-Jan-2016 19:35 |
| >nC12 to nC28 | < 0.48 | | 0.48 | mg/L | 1 | 08-Jan-2016 19:35 |
| >nC28 to nC35 | < 0.48 | | 0.48 | mg/L | 1 | 08-Jan-2016 19:35 |
| Total Petroleum Hydrocarbon | < 0.48 | | 0.48 | mg/L | 1 | 08-Jan-2016 19:35 |
| Surr: 2-Fluorobiphenyl | 133 | S | 70-130 | %REC | 1 | 08-Jan-2016 19:35 |
| Surr: Trifluoromethyl benzene | 127 | | 70-130 | %REC | 1 | 08-Jan-2016 19:35 |
| AMMONIA AS N BY SM4500 NH3-B-F | | Method:SM4500 NH3-B-F | | Prep:M4500-NH3 B / 12-Jan-2016 | | Analyst: JHD |
| Nitrogen, Ammonia (as N) | < 0.050 | | 0.050 | mg/L | 1 | 13-Jan-2016 11:30 |
| TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Method:M4500 NH3 D | | Prep:M4500-N C / 14-Jan-2016 | | Analyst: JBA |
| Nitrogen, Total Kjeldahl | 0.86 | | 0.50 | mg/L | 1 | 15-Jan-2016 14:20 |
| PHOSPHORUS BY E365.3 | | Method:E365.3 | | Prep:E365.3 / 13-Jan-2016 | | Analyst: JHD |
| Phosphorus, Total (As P) | < 0.0500 | | 0.0500 | mg/L | 1 | 13-Jan-2016 14:54 |
| TOTAL DISSOLVED SOLIDS BY SM2540C | | Method:M2540C | | | | Analyst: KAH |
| Total Dissolved Solids (Residue, Filterable) | 574 | | 10.0 | mg/L | 1 | 12-Jan-2016 17:00 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: Groundwater Sampling
 Sample ID: Electric Pump/Well
 Collection Date: 07-Jan-2016 16:25

ANALYTICAL REPORT
 WorkOrder:HS16010183
 Lab ID:HS16010183-02
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--------------------------|---------|--------------------|--------------|-------|-----------------|-------------------|
| ANIONS BY E300.0 | | Method:E300 | | | | Analyst: JBA |
| Chloride | 116 | | 10.0 | mg/L | 20 | 08-Jan-2016 19:29 |
| Nitrogen, Nitrate (As N) | < 0.100 | | 0.100 | mg/L | 1 | 08-Jan-2016 19:07 |
| Sulfate | 25.9 | | 0.500 | mg/L | 1 | 08-Jan-2016 19:07 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

Batch ID: 100404 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 30.59 | 3 (mL) | 0.09807 |
| HS16010183-02 | 1 | 31 | 3 (mL) | 0.09677 |

Batch ID: 100458 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 40 | 40 (mL) | 1 |
| HS16010183-02 | 1 | 40 | 40 (mL) | 1 |

Batch ID: 100480 **Method:** AMMONIA AS N BY SM4500 NH3-B-F **Prep:** NIT_AMM_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 50 | 50 (mL) | 1 |
| HS16010183-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 100489 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 50 | 50 (mL) | 1 |
| HS16010183-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 100521 **Method:** PHOSPHORUS BY E365.3 **Prep:** P_TW_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 50 | 50 (mL) | 1 |
| HS16010183-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 100551 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_W_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010183-01 | 1 | 25 | 50 (mL) | 2 |
| HS16010183-02 | 1 | 25 | 50 (mL) | 2 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|---------------------------|--|-----------|----------------------|-------------------|----|
| Batch ID 100404 | | Test Name : LOW-LEVEL TEXAS TPH BY TX1005 | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 08 Jan 2016 11:31 | 09 Jan 2016 05:45 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 08 Jan 2016 11:31 | 08 Jan 2016 19:35 | 1 |
| Batch ID 100458 | | Test Name : MERCURY BY SW7470A | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 12 Jan 2016 11:10 | 12 Jan 2016 15:04 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 12 Jan 2016 11:10 | 12 Jan 2016 15:06 | 1 |
| Batch ID 100480 | | Test Name : AMMONIA AS N BY SM4500 NH3-B-F | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 12 Jan 2016 11:23 | 13 Jan 2016 11:30 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 12 Jan 2016 11:23 | 13 Jan 2016 11:30 | 1 |
| Batch ID 100489 | | Test Name : ICP-MS METALS BY SW6020A | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 13 Jan 2016 08:48 | 14 Jan 2016 12:47 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 13 Jan 2016 08:48 | 14 Jan 2016 12:50 | 1 |
| Batch ID 100521 | | Test Name : PHOSPHORUS BY E365.3 | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 13 Jan 2016 10:03 | 13 Jan 2016 14:54 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 13 Jan 2016 10:03 | 13 Jan 2016 14:54 | 1 |
| Batch ID 100551 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | 14 Jan 2016 07:10 | 15 Jan 2016 14:20 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | 14 Jan 2016 07:10 | 15 Jan 2016 14:20 | 1 |
| Batch ID R267447 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | | 09 Jan 2016 05:05 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | | 09 Jan 2016 05:30 | 1 |
| Batch ID R267462 | | Test Name : ANIONS BY E300.0 | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | | 08 Jan 2016 18:02 | 20 |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | | 08 Jan 2016 16:57 | 1 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | | 08 Jan 2016 19:29 | 20 |
| HS16010183-02 | Electric Pump/Well | 07 Jan 2016 16:25 | | | 08 Jan 2016 19:07 | 1 |
| Batch ID R267615 | | Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C | | Matrix: Water | | |
| HS16010183-01 | Mayfield No. 3 | 07 Jan 2016 14:04 | | | 12 Jan 2016 17:00 | 1 |
| HS16010183-02 | Simons Electric Pump/Well | 07 Jan 2016 16:25 | | | 12 Jan 2016 17:00 | 1 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

| Batch ID: 100404 | | Instrument: FID-11 | | Method: TX1005 | | | | | |
|-------------------------------|-----------------------------------|------------------------------|---------|-----------------------|---|---------------|---------------|------|----------------|
| MBLK | Sample ID: MBLK-100404 | Units: mg/L | | | Analysis Date: 08-Jan-2016 18:07 | | | | |
| Client ID: | | Run ID: FID-11_267528 | | SeqNo: 3549413 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | |
| Surr: 2-Fluorobiphenyl | 2.334 | 0 | 2.5 | 0 | 93.4 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 2.452 | 0 | 2.5 | 0 | 98.1 | 70 - 130 | | | |
| LCS | Sample ID: LCS-100404 | Units: mg/L | | | Analysis Date: 08-Jan-2016 18:36 | | | | |
| Client ID: | | Run ID: FID-11_267528 | | SeqNo: 3549414 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 24.46 | 0.50 | 25 | 0 | 97.8 | 75 - 125 | | | |
| >nC12 to nC28 | 24.39 | 0.50 | 25 | 0 | 97.6 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 2.965 | 0 | 2.5 | 0 | 119 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 2.787 | 0 | 2.5 | 0 | 111 | 70 - 130 | | | |
| LCSD | Sample ID: LCSD-100404 | Units: mg/L | | | Analysis Date: 08-Jan-2016 19:06 | | | | |
| Client ID: | | Run ID: FID-11_267528 | | SeqNo: 3549415 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 25.16 | 0.50 | 25 | 0 | 101 | 75 - 125 | 24.46 | 2.84 | 20 |
| >nC12 to nC28 | 23.34 | 0.50 | 25 | 0 | 93.3 | 75 - 125 | 24.39 | 4.42 | 20 |
| Surr: 2-Fluorobiphenyl | 2.912 | 0 | 2.5 | 0 | 116 | 70 - 130 | 2.965 | 1.8 | 20 |
| Surr: Trifluoromethyl benzene | 2.756 | 0 | 2.5 | 0 | 110 | 70 - 130 | 2.787 | 1.1 | 20 |
| MS | Sample ID: HS16010183-02MS | Units: mg/L | | | Analysis Date: 08-Jan-2016 20:04 | | | | |
| Client ID: | Electric Pump/Well | Run ID: FID-11_267528 | | SeqNo: 3549417 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 28.96 | 0.50 | 24.95 | 0 | 116 | 75 - 125 | | | |
| >nC12 to nC28 | 23.07 | 0.50 | 24.95 | 0 | 92.5 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 3.174 | 0 | 2.495 | 0 | 127 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 2.765 | 0 | 2.495 | 0 | 111 | 70 - 130 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100404 Instrument: FID-11 Method: TX1005

MSD Sample ID: HS16010183-02MSD Units: mg/L Analysis Date: 08-Jan-2016 20:33
 Client ID: Electric Pump/Well Run ID: FID-11_267528 SeqNo: 3549418 PrepDate: 08-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|-------------------------------|--------|------|---------|---------------|------|---------------|---------------|------|-----------|------|
| nC6 to nC12 | 26.2 | 0.49 | 24.45 | 0 | 107 | 75 - 125 | 28.96 | 10 | 20 | |
| >nC12 to nC28 | 24.53 | 0.49 | 24.45 | 0 | 100 | 75 - 125 | 23.07 | 6.13 | 20 | |
| Surr: 2-Fluorobiphenyl | 2.818 | 0 | 2.445 | 0 | 115 | 70 - 130 | 3.174 | 11.9 | 20 | |
| Surr: Trifluoromethyl benzene | 2.666 | 0 | 2.445 | 0 | 109 | 70 - 130 | 2.765 | 3.64 | 20 | |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

| Batch ID: 100458 | | Instrument: HG03 | | Method: SW7470 | |
|------------------|------------------------------------|-----------------------|------------------------------|---|--|
| MBLK | Sample ID: MBLK-100458 | Units: mg/L | | Analysis Date: 12-Jan-2016 14:35 | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549968 | PrepDate: 12-Jan-2016 | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |
| Mercury | < 0.000200 | 0.000200 | | | |
| LCS | Sample ID: LCS-100458 | Units: mg/L | | Analysis Date: 12-Jan-2016 14:37 | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549969 | PrepDate: 12-Jan-2016 | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |
| Mercury | 0.00527 | 0.000200 | 0.005 | 0 | 105 80 - 124 |
| MS | Sample ID: HS16010271-01MS | Units: mg/L | | Analysis Date: 12-Jan-2016 15:26 | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549992 | PrepDate: 12-Jan-2016 | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |
| Mercury | 0.00531 | 0.000200 | 0.005 | -0.000012 | 106 80 - 124 |
| MSD | Sample ID: HS16010271-01MSD | Units: mg/L | | Analysis Date: 12-Jan-2016 15:27 | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549993 | PrepDate: 12-Jan-2016 | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC Control Limit RPD Ref Value %RPD Limit Qual |
| Mercury | 0.00516 | 0.000200 | 0.005 | -0.000012 | 103 80 - 124 0.00531 2.87 20 |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100489 Instrument: ICPMS05 Method: SW6020

MBLK Sample ID: **MBLK-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 12:05**
 Client ID: Run ID: **ICPMS05_267626** SeqNo: **3551800** PrepDate: **13-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|------------|-----------|---------|--|--|--|--|--|--|--|--|
| Arsenic | < 0.00500 | 0.00500 | | | | | | | | |
| Barium | < 0.00500 | 0.00500 | | | | | | | | |
| Cadmium | < 0.00200 | 0.00200 | | | | | | | | |
| Chromium | < 0.00500 | 0.00500 | | | | | | | | |
| Copper | < 0.00200 | 0.00200 | | | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | | | |
| Molybdenum | < 0.00500 | 0.00500 | | | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | | | |
| Potassium | < 0.200 | 0.200 | | | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | | | |
| Zinc | < 0.00500 | 0.00500 | | | | | | | | |

LCS Sample ID: **MLCS-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 12:08**
 Client ID: Run ID: **ICPMS05_267626** SeqNo: **3551801** PrepDate: **13-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|-----------|---------|---------|------|---|------|----------|--|--|--|--|
| Arsenic | 0.0456 | 0.00500 | 0.05 | 0 | 91.2 | 80 - 120 | | | | |
| Barium | 0.04395 | 0.00500 | 0.05 | 0 | 87.9 | 80 - 120 | | | | |
| Cadmium | 0.04508 | 0.00200 | 0.05 | 0 | 90.2 | 80 - 120 | | | | |
| Chromium | 0.0445 | 0.00500 | 0.05 | 0 | 89.0 | 80 - 120 | | | | |
| Copper | 0.04377 | 0.00200 | 0.05 | 0 | 87.5 | 80 - 120 | | | | |
| Lead | 0.04355 | 0.00500 | 0.05 | 0 | 87.1 | 80 - 120 | | | | |
| Nickel | 0.04453 | 0.00500 | 0.05 | 0 | 89.1 | 80 - 120 | | | | |
| Potassium | 4.308 | 0.200 | 5 | 0 | 86.2 | 80 - 120 | | | | |
| Selenium | 0.0444 | 0.00500 | 0.05 | 0 | 88.8 | 80 - 120 | | | | |
| Zinc | 0.04662 | 0.00500 | 0.05 | 0 | 93.2 | 80 - 120 | | | | |

LCS Sample ID: **MLCS-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 13:18**
 Client ID: Run ID: **ICPMS04_267636** SeqNo: **3551862** PrepDate: **13-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|------------|---------|---------|------|---|------|----------|--|--|--|--|
| Molybdenum | 0.04194 | 0.00500 | 0.05 | 0 | 83.9 | 80 - 120 | | | | |
|------------|---------|---------|------|---|------|----------|--|--|--|--|

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

| | | |
|-------------------------|----------------------------|-----------------------|
| Batch ID: 100489 | Instrument: ICPMS05 | Method: SW6020 |
|-------------------------|----------------------------|-----------------------|

| MS | | Sample ID: HS16010139-01MS | | | Units: mg/L | | Analysis Date: 14-Jan-2016 12:32 | | | |
|------------|---------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS05_267626 | | | SeqNo: 3551815 | | PrepDate: 13-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 0.09857 | 0.00500 | 0.05 | 0.0488 | 99.5 | 80 - 120 | | | | |
| Barium | 6.218 | 0.00500 | 0.05 | 6.232 | -29.4 | 80 - 120 | | | | SEO |
| Cadmium | 0.04515 | 0.00200 | 0.05 | -0.000026 | 90.3 | 80 - 120 | | | | |
| Chromium | 0.04542 | 0.00500 | 0.05 | 0.000192 | 90.4 | 80 - 120 | | | | |
| Copper | 0.04136 | 0.00200 | 0.05 | -0.000482 | 83.7 | 80 - 120 | | | | |
| Lead | 0.04484 | 0.00500 | 0.05 | 0.000066 | 89.5 | 80 - 120 | | | | |
| Molybdenum | 0.04906 | 0.00500 | 0.05 | 0.007823 | 82.5 | 80 - 120 | | | | |
| Nickel | 0.04219 | 0.00500 | 0.05 | -0.000263 | 84.9 | 80 - 120 | | | | |
| Potassium | 13.27 | 0.200 | 5 | 9.397 | 77.5 | 80 - 120 | | | | S |
| Selenium | 0.04799 | 0.00500 | 0.05 | 0.000321 | 95.3 | 80 - 120 | | | | |
| Zinc | 0.04696 | 0.00500 | 0.05 | 0.001606 | 90.7 | 80 - 120 | | | | |

| MSD | | Sample ID: HS16010139-01MSD | | | Units: mg/L | | Analysis Date: 14-Jan-2016 12:35 | | | |
|------------|---------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|--------|-----------|------|
| Client ID: | | Run ID: ICPMS05_267626 | | | SeqNo: 3551816 | | PrepDate: 13-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 0.09453 | 0.00500 | 0.05 | 0.0488 | 91.5 | 80 - 120 | 0.09857 | 4.19 | 20 | |
| Barium | 6.212 | 0.00500 | 0.05 | 6.232 | -40.0 | 80 - 120 | 6.218 | 0.0852 | 20 | SEO |
| Cadmium | 0.04468 | 0.00200 | 0.05 | -0.000026 | 89.4 | 80 - 120 | 0.04515 | 1.04 | 20 | |
| Chromium | 0.04357 | 0.00500 | 0.05 | 0.000192 | 86.8 | 80 - 120 | 0.04542 | 4.14 | 20 | |
| Copper | 0.03952 | 0.00200 | 0.05 | -0.000482 | 80.0 | 80 - 120 | 0.04136 | 4.54 | 20 | |
| Lead | 0.04379 | 0.00500 | 0.05 | 0.000066 | 87.4 | 80 - 120 | 0.04484 | 2.37 | 20 | |
| Molybdenum | 0.05051 | 0.00500 | 0.05 | 0.007823 | 85.4 | 80 - 120 | 0.04906 | 2.93 | 20 | |
| Nickel | 0.03943 | 0.00500 | 0.05 | -0.000263 | 79.4 | 80 - 120 | 0.04219 | 6.76 | 20 | S |
| Potassium | 13.23 | 0.200 | 5 | 9.397 | 76.7 | 80 - 120 | 13.27 | 0.312 | 20 | S |
| Selenium | 0.04654 | 0.00500 | 0.05 | 0.000321 | 92.4 | 80 - 120 | 0.04799 | 3.08 | 20 | |
| Zinc | 0.0448 | 0.00500 | 0.05 | 0.001606 | 86.4 | 80 - 120 | 0.04696 | 4.7 | 20 | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100489 Instrument: ICPMS05 Method: SW6020

PDS Sample ID: HS16010139-01BS Units: mg/L Analysis Date: 14-Jan-2016 12:38
 Client ID: Run ID: ICPMS05_267626 SeqNo: 3551817 PrepDate: 13-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|----------------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|----------------|

| | | | | | | | | | |
|------------|---------|---------|-----|-----------|------|----------|--|--|---|
| Arsenic | 0.1377 | 0.00500 | 0.1 | 0.0488 | 88.9 | 75 - 125 | | | |
| Cadmium | 0.08708 | 0.00200 | 0.1 | -0.000026 | 87.1 | 75 - 125 | | | |
| Chromium | 0.08404 | 0.00500 | 0.1 | 0.000192 | 83.9 | 75 - 125 | | | |
| Copper | 0.07625 | 0.00200 | 0.1 | -0.000482 | 76.7 | 75 - 125 | | | |
| Lead | 0.08657 | 0.00500 | 0.1 | 0.000066 | 86.5 | 75 - 125 | | | |
| Molybdenum | 0.08918 | 0.00500 | 0.1 | 0.007823 | 81.4 | 75 - 125 | | | |
| Nickel | 0.07689 | 0.00500 | 0.1 | -0.000263 | 77.2 | 75 - 125 | | | |
| Potassium | 16.86 | 0.200 | 10 | 9.397 | 74.6 | 75 - 125 | | | S |
| Selenium | 0.0929 | 0.00500 | 0.1 | 0.000321 | 92.6 | 75 - 125 | | | |
| Zinc | 0.08318 | 0.00500 | 0.1 | 0.001606 | 81.6 | 75 - 125 | | | |

PDS Sample ID: HS16010139-01BS Units: mg/L Analysis Date: 14-Jan-2016 12:17
 Client ID: Run ID: ICPMS05_267626 SeqNo: 3551804 PrepDate: 13-Jan-2016 DF: 10

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|----------------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|----------------|

| | | | | | | | | | |
|--------|-------|--------|---|-------|------|----------|--|--|---|
| Barium | 6.733 | 0.0500 | 1 | 5.957 | 77.6 | 75 - 125 | | | O |
|--------|-------|--------|---|-------|------|----------|--|--|---|

SD Sample ID: HS16010139-01 DIL SX Units: mg/L Analysis Date: 14-Jan-2016 12:29
 Client ID: Run ID: ICPMS05_267626 SeqNo: 3551814 PrepDate: 13-Jan-2016 DF: 5

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|---------------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|---------------|

| | | | | | | | | | |
|------------|----------|--------|--|--|--|--|-----------|------|------|
| Arsenic | 0.04941 | 0.0250 | | | | | 0.0488 | 1.25 | 10 |
| Cadmium | < 0.0100 | 0.0100 | | | | | -0.000026 | 0 | 10 |
| Chromium | < 0.0250 | 0.0250 | | | | | 0.000192 | 0 | 10 |
| Copper | < 0.0100 | 0.0100 | | | | | -0.000482 | 0 | 10 |
| Lead | < 0.0250 | 0.0250 | | | | | 0.000066 | 0 | 10 |
| Molybdenum | 0.007455 | 0.0250 | | | | | 0.007823 | 0 | 10 J |
| Nickel | < 0.0250 | 0.0250 | | | | | -0.000263 | 0 | 10 |
| Potassium | 8.871 | 1.00 | | | | | 9.397 | 5.6 | 10 |
| Selenium | < 0.0250 | 0.0250 | | | | | 0.000321 | 0 | 10 |
| Zinc | < 0.0250 | 0.0250 | | | | | 0.001606 | 0 | 10 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100489 Instrument: ICPMS05 Method: SW6020

| | | | | | | | | | | |
|------------|---------------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-------|------|
| SD | Sample ID: HS16010139-01 DIL SX | Units: mg/L | Analysis Date: 14-Jan-2016 12:14 | | | | | | | |
| Client ID: | Run ID: ICPMS05_267626 | SeqNo: 3551803 | PrepDate: 13-Jan-2016 | DF: 50 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | Limit | Qual |
| Barium | 5.864 | 0.250 | | | | | 5.957 | 1.55 | 10 | |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: R267447 Instrument: VOA2 Method: SW8260

MBLK Sample ID: VBLKW-160108 Units: ug/L Analysis Date: 08-Jan-2016 22:48
 Client ID: Run ID: VOA2_267447 SeqNo: 3547953 PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|-----------------------------|-------|-----|----|---|------|----------|--|--|--|--|
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.75 | 1.0 | 50 | 0 | 95.5 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 54.43 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 52.31 | 1.0 | 50 | 0 | 105 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 55.42 | 1.0 | 50 | 0 | 111 | 75 - 125 | | | | |

LCS Sample ID: VLCSW-160108 Units: ug/L Analysis Date: 08-Jan-2016 21:58
 Client ID: Run ID: VOA2_267447 SeqNo: 3547952 PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|-----------------------------|-------|-----|-----|---|------|----------|--|--|--|--|
| Benzene | 42.17 | 1.0 | 50 | 0 | 84.3 | 75 - 122 | | | | |
| Ethylbenzene | 47.62 | 1.0 | 50 | 0 | 95.2 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 47.29 | 1.0 | 50 | 0 | 94.6 | 70 - 130 | | | | |
| Toluene | 44.59 | 1.0 | 50 | 0 | 89.2 | 75 - 121 | | | | |
| Xylenes, Total | 138 | 3.0 | 150 | 0 | 92.0 | 79 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.6 | 1.0 | 50 | 0 | 99.2 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 56.44 | 1.0 | 50 | 0 | 113 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 50.15 | 1.0 | 50 | 0 | 100 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.8 | 1.0 | 50 | 0 | 108 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: R267447 Instrument: VOA2 Method: SW8260

| MS | | Sample ID: HS16010196-01MS | Units: ug/L | | | Analysis Date: 09-Jan-2016 00:54 | | | | |
|-----------------------------|--------|----------------------------|----------------|---------------|-----------|----------------------------------|---------------|------|-----------|------|
| Client ID: | | Run ID: VOA2_267447 | SeqNo: 3547958 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 53.15 | 1.0 | 50 | 0 | 106 | 75 - 122 | | | | |
| Ethylbenzene | 58.2 | 1.0 | 50 | 0 | 116 | 80 - 120 | | | | |
| Methyl tert-butyl ether | 55.83 | 1.0 | 50 | 0 | 112 | 70 - 130 | | | | |
| Toluene | 55.27 | 1.0 | 50 | 0 | 111 | 75 - 121 | | | | |
| Xylenes, Total | 161.5 | 3.0 | 150 | 0 | 108 | 80 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.82 | 1.0 | 50 | 0 | 99.6 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 54.67 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 49.9 | 1.0 | 50 | 0 | 99.8 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.53 | 1.0 | 50 | 0 | 107 | 75 - 125 | | | | |

| MSD | | Sample ID: HS16010196-01MSD | Units: ug/L | | | Analysis Date: 09-Jan-2016 01:19 | | | | |
|-----------------------------|--------|-----------------------------|----------------|---------------|-----------|----------------------------------|---------------|--------|-----------|------|
| Client ID: | | Run ID: VOA2_267447 | SeqNo: 3547959 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 51.74 | 1.0 | 50 | 0 | 103 | 75 - 122 | 53.15 | 2.68 | 20 | |
| Ethylbenzene | 59.96 | 1.0 | 50 | 0 | 120 | 80 - 120 | 58.2 | 2.97 | 20 | |
| Methyl tert-butyl ether | 56.25 | 1.0 | 50 | 0 | 112 | 70 - 130 | 55.83 | 0.744 | 20 | |
| Toluene | 54.75 | 1.0 | 50 | 0 | 110 | 75 - 121 | 55.27 | 0.949 | 20 | |
| Xylenes, Total | 162.8 | 3.0 | 150 | 0 | 109 | 80 - 124 | 161.5 | 0.784 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 49.81 | 1.0 | 50 | 0 | 99.6 | 71 - 125 | 49.82 | 0.0276 | 20 | |
| Surr: 4-Bromofluorobenzene | 56.53 | 1.0 | 50 | 0 | 113 | 70 - 125 | 54.67 | 3.34 | 20 | |
| Surr: Dibromofluoromethane | 51.49 | 1.0 | 50 | 0 | 103 | 74 - 125 | 49.9 | 3.14 | 20 | |
| Surr: Toluene-d8 | 54.59 | 1.0 | 50 | 0 | 109 | 75 - 125 | 53.53 | 1.96 | 20 | |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100480 **Instrument:** UV-2450 **Method:** SM4500 NH3-B-F

| | | | | | | | | | | |
|-------------|-------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: MBLK-100480 | Units: mg/L | Analysis Date: 13-Jan-2016 11:30 | | | | | | | |
| Client ID: | Run ID: UV-2450_267581 | SeqNo: 3550628 | PrepDate: 12-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

Nitrogen, Ammonia (as N) < 0.050 0.050

| | | | | | | | | | | |
|------------|-------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| LCS | Sample ID: LCS-100480 | Units: mg/L | Analysis Date: 13-Jan-2016 11:30 | | | | | | | |
| Client ID: | Run ID: UV-2450_267581 | SeqNo: 3550626 | PrepDate: 12-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

Nitrogen, Ammonia (as N) 0.423 0.050 0.5 0 84.6 80 - 120

| | | | | | | | | | | |
|------------|-----------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| MS | Sample ID: HS16010171-01MS | Units: mg/L | Analysis Date: 13-Jan-2016 11:30 | | | | | | | |
| Client ID: | Run ID: UV-2450_267581 | SeqNo: 3550625 | PrepDate: 12-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

Nitrogen, Ammonia (as N) 0.525 0.050 0.5 0.09 87.0 80 - 120

| | | | | | | | | | | |
|------------|------------------------------------|-----------------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| MSD | Sample ID: HS16010171-01MSD | Units: mg/L | Analysis Date: 13-Jan-2016 11:30 | | | | | | | |
| Client ID: | Run ID: UV-2450_267581 | SeqNo: 3550627 | PrepDate: 12-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

Nitrogen, Ammonia (as N) 0.52 0.050 0.5 0.09 86.0 80 - 120 0.525 0.957 20

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100521 **Instrument:** UV-2450 **Method:** E365.3

| | | | | |
|-------------|-------------------------------|-----------------------|---|---|
| MBLK | Sample ID: MBLK-100521 | Units: mg/L | Analysis Date: 13-Jan-2016 14:54 | |
| Client ID: | Run ID: UV-2450_267633 | SeqNo: 3551618 | PrepDate: 13-Jan-2016 | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Phosphorus, Total (As P) < 0.0500 0.0500

| | | | | |
|------------|-------------------------------|-----------------------|---|---|
| LCS | Sample ID: LCS-100521 | Units: mg/L | Analysis Date: 13-Jan-2016 14:54 | |
| Client ID: | Run ID: UV-2450_267633 | SeqNo: 3551617 | PrepDate: 13-Jan-2016 | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Phosphorus, Total (As P) 0.271 0.0500 0.25 0 108 80 - 120

| | | | | |
|------------|-----------------------------------|-----------------------|---|---|
| MS | Sample ID: HS16010230-02MS | Units: mg/L | Analysis Date: 13-Jan-2016 14:54 | |
| Client ID: | Run ID: UV-2450_267633 | SeqNo: 3551624 | PrepDate: 13-Jan-2016 | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Phosphorus, Total (As P) 0.317 0.0500 0.25 0.06 103 80 - 120

| | | | | |
|------------|------------------------------------|-----------------------|---|---|
| MSD | Sample ID: HS16010230-02MSD | Units: mg/L | Analysis Date: 13-Jan-2016 14:54 | |
| Client ID: | Run ID: UV-2450_267633 | SeqNo: 3551625 | PrepDate: 13-Jan-2016 | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual |

Phosphorus, Total (As P) 0.337 0.0500 0.25 0.06 111 80 - 120 0.317 6.12 20

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: 100551 **Instrument:** WetChem_HS **Method:** M4500 NH3 D

MBLK Sample ID: **MBLK-100551** Units: mg/L Analysis Date: **15-Jan-2016 14:20**
 Client ID: Run ID: **WetChem_HS_267739** SeqNo: **3553455** PrepDate: **14-Jan-2016** DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Nitrogen, Total Kjeldahl < 0.50 0.50

LCS Sample ID: **LCS-100551** Units: mg/L Analysis Date: **15-Jan-2016 14:20**
 Client ID: Run ID: **WetChem_HS_267739** SeqNo: **3553453** PrepDate: **14-Jan-2016** DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Nitrogen, Total Kjeldahl 18.75 0.50 20 0 93.8 80 - 120

MS Sample ID: **HS16010348-06MS** Units: mg/L Analysis Date: **15-Jan-2016 14:20**
 Client ID: Run ID: **WetChem_HS_267739** SeqNo: **3553452** PrepDate: **14-Jan-2016** DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Nitrogen, Total Kjeldahl 25.68 0.50 20 1.758 120 75 - 125

MSD Sample ID: **HS16010348-06MSD** Units: mg/L Analysis Date: **15-Jan-2016 14:20**
 Client ID: Run ID: **WetChem_HS_267739** SeqNo: **3553454** PrepDate: **14-Jan-2016** DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Nitrogen, Total Kjeldahl 26.02 0.50 20 1.758 121 75 - 125 25.68 1.32 20

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

| Batch ID: R267462 | | Instrument: ICS3K2 | | Method: E300 | | | | | | |
|----------------------------------|-----------------------------------|-----------------------|---------|---|------|---------------|---------------|-------|-----------|------|
| MBLK | Sample ID: WBLKW1-010816 | Units: mg/L | | Analysis Date: 08-Jan-2016 15:08 | | | | | | |
| Client ID: | Run ID: ICS3K2_267462 | SeqNo: 3548179 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | < 0.500 | 0.500 | | | | | | | | |
| Nitrogen, Nitrate (As N) | < 0.100 | 0.100 | | | | | | | | |
| Sulfate | < 0.500 | 0.500 | | | | | | | | |
| LCS | Sample ID: WLCSW1-010816 | Units: mg/L | | Analysis Date: 08-Jan-2016 15:30 | | | | | | |
| Client ID: | Run ID: ICS3K2_267462 | SeqNo: 3548180 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 20.24 | 0.500 | 20 | 0 | 101 | 90 - 110 | | | | |
| Nitrogen, Nitrate (As N) | 4.058 | 0.100 | 4 | 0 | 101 | 90 - 110 | | | | |
| Sulfate | 20.36 | 0.500 | 20 | 0 | 102 | 90 - 110 | | | | |
| LCSD | Sample ID: WLCSDW1-010816 | Units: mg/L | | Analysis Date: 08-Jan-2016 15:52 | | | | | | |
| Client ID: | Run ID: ICS3K2_267462 | SeqNo: 3548181 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 20.35 | 0.500 | 20 | 0 | 102 | 90 - 110 | 20.24 | 0.572 | 20 | |
| Nitrogen, Nitrate (As N) | 4.084 | 0.100 | 4 | 0 | 102 | 90 - 110 | 4.058 | 0.639 | 20 | |
| Sulfate | 20.8 | 0.500 | 20 | 0 | 104 | 90 - 110 | 20.36 | 2.14 | 20 | |
| MS | Sample ID: HS16010183-01MS | Units: mg/L | | Analysis Date: 08-Jan-2016 17:18 | | | | | | |
| Client ID: Mayfield No. 3 | Run ID: ICS3K2_267462 | SeqNo: 3548185 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 136.7 | 0.500 | 10 | 129 | 77.3 | 80 - 120 | | | | SEO |
| Nitrogen, Nitrate (As N) | 2.116 | 0.100 | 2 | 0.021 | 105 | 80 - 120 | | | | |
| Sulfate | 10.82 | 0.500 | 10 | 0 | 108 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

Batch ID: R267462 Instrument: ICS3K2 Method: E300

| MSD | | Sample ID: HS16010183-01MSD | | Units: mg/L | | Analysis Date: 08-Jan-2016 17:40 | | | | |
|---------------------------|--------|-----------------------------|---------|----------------|------|----------------------------------|---------------|--------|-----------|------|
| Client ID: Mayfield No. 3 | | Run ID: ICS3K2_267462 | | SeqNo: 3548186 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Chloride | 136.8 | 0.500 | 10 | 129 | 77.9 | 80 - 120 | 136.7 | 0.0453 | 20 | SEO |
| Nitrogen, Nitrate (As N) | 2.118 | 0.100 | 2 | 0.021 | 105 | 80 - 120 | 2.116 | 0.0945 | 20 | |
| Sulfate | 10.77 | 0.500 | 10 | 0 | 108 | 80 - 120 | 10.82 | 0.435 | 20 | |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

QC BATCH REPORT

| Batch ID: R267615 | | Instrument: Balance1 | | | Method: M2540C | | | | |
|--|------------------------------------|--------------------------------|---------|-----------------------|----------------------------------|---------------|---------------|-----------|------|
| MBLK | Sample ID: WBLK-011216 | Units: mg/L | | | Analysis Date: 12-Jan-2016 17:00 | | | | |
| Client ID: | | Run ID: Balance1_267615 | | SeqNo: 3551304 | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | < 10.0 | 10.0 | | | | | | |
| LCS | Sample ID: WLCS-011216 | Units: mg/L | | | Analysis Date: 12-Jan-2016 17:00 | | | | |
| Client ID: | | Run ID: Balance1_267615 | | SeqNo: 3551305 | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 1068 | 10.0 | 1000 | 0 | 107 | 85 - 115 | | |
| DUP | Sample ID: HS16010173-02DUP | Units: mg/L | | | Analysis Date: 12-Jan-2016 17:00 | | | | |
| Client ID: | | Run ID: Balance1_267615 | | SeqNo: 3551296 | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 3400 | 10.0 | | | | 3300 | 2.99 | 5 |
| DUP | Sample ID: HS16010162-01DUP | Units: mg/L | | | Analysis Date: 12-Jan-2016 17:00 | | | | |
| Client ID: | | Run ID: Balance1_267615 | | SeqNo: 3551287 | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 34320 | 10.0 | | | | 33960 | 1.05 | 5 |

The following samples were analyzed in this batch: HS16010183-01 HS16010183-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
WorkOrder: HS16010183

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|----------------------|
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: Groundwater Sampling
Work Order: HS16010183

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|--------------------|--------|-----------------------|--------|--------------|
| HS16010183-01 | Mayfield No. 3 | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-01 | Mayfield No. 3 | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-01 | Mayfield No. 3 | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-01 | Mayfield No. 3 | Login | 1/8/2016 10:40:01 AM | CGG | VW-3 |
| HS16010183-01 | Mayfield No. 3 | Login | 1/8/2016 10:40:01 AM | CGG | TPH C1 |
| HS16010183-02 | Electric Pump/Well | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-02 | Electric Pump/Well | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-02 | Electric Pump/Well | Login | 1/8/2016 10:40:01 AM | CGG | 4C |
| HS16010183-02 | Electric Pump/Well | Login | 1/8/2016 10:40:01 AM | CGG | VW-3 |
| HS16010183-02 | Electric Pump/Well | Login | 1/8/2016 10:40:01 AM | CGG | TPH C1 |
| HS16010183-01 | Mayfield No. 3 | Out | 1/12/2016 11:13:44 AM | JCJ | METPREP |
| HS16010183-02 | Electric Pump/Well | Out | 1/12/2016 11:13:44 AM | JCJ | METPREP |
| HS16010183-01 | Mayfield No. 3 | Return | 1/12/2016 11:13:58 AM | JCJ | 4C |
| HS16010183-02 | Electric Pump/Well | Return | 1/12/2016 11:13:58 AM | JCJ | 4C |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS16010183

Date/Time Received: 08-Jan-2016 09:50
 Received by: PMG

Checklist completed by: Corey Grandits 8-Jan-2016 Reviewed by: Dane Wacasey 11-Jan-2016
 eSignature Date eSignature Date

Matrices: Water Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 2.8c/3.0c uc/c IR#4

Cooler(s)/Kit(s): Lg Red

Date/Time sample(s) sent to storage: 01/08/2016 10:50

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Environmental

Cincinnati, OH +1 513 733 5336
 Fort Collins, CO +1 970 490 1511
 Everett, WA +1 425 356 2600
 Holland, MI +1 616 399 6070

Chain of Custody For

HS16010183

Texas Commission on Environmental Quality
 Groundwater Sampling

Page 1 of 1
 COC ID: 135339



ALS Project Manager:

Customer Information

Project Information

| | | | | |
|----------------|----------------------------|-----------------|-----------------------|--|
| Purchase Order | | Project Name | Groundwater Sampling | |
| Work Order | | Project Number | | |
| Company Name | TCEQ-Corpus Christi | Bill To Company | TCEQ-Accounts Payable | |
| Sand Report To | Bill Ross | Invoice Acct | Julie Steger | |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 | |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin | |
| Phone | (361) 825-3127 | Phone | (512) 239-5725 | |
| Fax | | Fax | | |
| e-Mail Address | | e-Mail Address | | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|---------------------|--------|------|--------|---------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | Maxfield No. 3 | 1/7/16 | 1404 | W | 16/Ver. | 9 | X | X | X | X | X | X | | | | | |
| 2 | Technical Pump/Well | 1/7/16 | 1625 | W | 16/Ver. | 9 | X | X | X | X | X | X | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Robert King / Robert King Damon W. Hester

Required Turnaround Time: (Check Box)
 1-2 Wk. Days
 3-4 Wk. Days
 5-6 Wk. Days
 7-8 Wk. Days
 9-10 Wk. Days

Required by: 1/16/16 Time: 6:55
 Requisitioned by: Robert King
 Checked by (Laboratory): Robert King
 Date: 1/16/16 Time: 6:55
 Checked by (Laboratory): Robert King
 Date: 1/16/16 Time: 6:55

Notes: F.W.K. Date Other 2 Wk. Date 3 Wk. Date 4 Wk. Date

QC Package: (Check One Box Below)
 Level 2 Std QC
 Level 3 Std QC/Row da
 Level 4 SW846/CLP
 Other: CLP

Results Due Date: 1/16/16

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.



ALS Environmental

10450 Stanciliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5837

CUSTODY SEAL

Date: 1/8/12 Time: 6:25
Name: Robt. R. King
Company: ALS Environmental

Signature

[Signature]

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**CORPUS CHRISTI - NUECES COUNTY PUBLIC HEALTH DISTRICT
LABORATORY**

1702 Horne Road, P.O. Box 9727 (78469-9727)
Corpus Christi, Texas 78416
Phone: 361-826-7213, Fax: 361-826-7217

Public Health
Prevent. Promote. Protect.

Water Bacteriology Report

Batch #: E152721
Date Received: 11/23/2015 3:16:00PM

Submitter:
TB803
TCEQ
6300 OCEAN DRIVE, UNIT 5839
CORPUS CHRISTI, TX 78412

Sample #: E152721-001
PWSID:
Date Collected: 11/23/2015 11:35:00AM
Received By: LD
Sample Site: Corral

Sampler Name: Blas Rizzo
Sampler Phone #:
Laboratory Tested Total Chlorine Residual (mg/l): 0
Laboratory Receipt Temperature: 4.4 °C
Chilling Process Begun: Yes
Received in Ice: Yes
Temperature Consistent with Collection Time: Yes

System Type: Private/Individual
PWS Name:
Sample Type: Raw Well #
Repeat Sample #:
Repeat Desc.:
Water Source: Groundwater
Field Disinfectant Residual (mg/l): 0.0
Field Chlorine: Free Chlorine

| Test | Result | Test Method | Date/Time Tested | Date/Time Completed |
|--|--------|-------------|----------------------|-----------------------|
| <u>Colilert Presence/Absence Test</u> | | | | |
| Coliforms | Absent | SM9223 | 11/23/2015 4:45:00PM | 11/24/2015 10:43:00AM |
| E. Coli | Absent | SM9223 | 11/23/2015 4:45:00PM | 11/24/2015 10:43:00AM |

Analyst Name: Ken Diercouff

Analyst Signature: 

Resulted by: Ken Diercouff

Signature: 

Comments:

Rev. Name: Rachel Rios
Rev. Title: Clinical Super

Rev. Signature: 

Date/Time Approved: 11/24/2015

Report Type: **FINAL**



**CORPUS CHRISTI - NUECES COUNTY PUBLIC HEALTH DISTRICT
LABORATORY**

1702 Home Road, P.O. Box 9727 (78469-9727)
Corpus Christi, Texas 78416
Phone: 361-826-7213, Fax: 361-826-7217

Public Health
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Water Bacteriology Report

Batch #: E152775
Date Received: 12/02/2015 3:22:00PM

Submitter:
Blas Rizzo
Blas Rizzo
6300 Ocean Dr.
Corpus Christi, TX 78412

Sample #: E152775-002
PWSID:
Date Collected: 12/02/2015 1:02:00PM
Received By: LD
Sample Site: Well #4

Sampler Name: Blas Rizzo
Sampler Phone #: (361) 825-3100
Laboratory Tested Total Chlorine Residual (mg/l): 0
Laboratory Receipt Temperature: 4.1 °C
Chilling Process Begun: Yes
Received in Ice: Yes
Temperature Consistent with Collection Time: Yes

System Type: Private/Individual
PWS Name:
Sample Type: Raw Well #
Repeat Sample #:
Repeat Desc.:
Water Source: Groundwater
Field Disinfectant Residual (mg/l): 0.00
Field Chlorine:

| Test | Result | Test Method | Date/Time Tested | Date/Time Completed |
|--|--------|-------------|----------------------|-----------------------|
| <u>Colilert Presence/Absence Test</u> | | | | |
| Coliforms | Absent | SM9223 | 12/02/2015 3:56:00PM | 12/03/2015 10:04:00AM |
| E. Coli | Absent | SM9223 | 12/02/2015 3:56:00PM | 12/03/2015 10:04:00AM |

Analyst Name: Ken Diercouff

Analyst Signature: 

Resulted by: Ken Diercouff

Signature: 

Comments:

Rev. Name: Valerie Requenez

Rev. Title: Analyst

Rev. Signature: 

Date/Time Approved: 12/03/2015

Report Type: **FINAL**



**CORPUS CHRISTI - NUECES COUNTY PUBLIC HEALTH DISTRICT
LABORATORY**

1702 Horne Road, P.O. Box 9727 (78469-9727)
Corpus Christi, Texas 78416
Phone: 361-826-7213, Fax: 361-826-7217

Public Health
Prevent. Promote. Protect.

Water Bacteriology Report

Batch #: E152775
Date Received: 12/02/2015 3:22:00PM

Submitter:
Blas Rizzo
Blas Rizzo
6300 Ocean Dr.
Corpus Christi, TX 78412

Sample #: E152775-001
PWSID:
Date Collected: 12/02/2015 11:37:00AM
Received By: LD
Sample Site: Well #1

System Type: Private/Individual
PWS Name:
Sample Type: Raw Well #
Repeat Sample #:
Repeat Desc.:
Water Source: Groundwater
Field Disinfectant Residual (mg/l): 0.00
Field Chlorine:

Sampler Name: Blas Rizzo
Sampler Phone #: (361) 825-3100
Laboratory Tested Total Chlorine Residual (mg/l): 0
Laboratory Receipt Temperature: 4.1 °C
Chilling Process Begun: Yes
Received in Ice: Yes
Temperature Consistent with Collection Time: Yes

| Test | Result | Test Method | Date/Time Tested | Date/Time Completed |
|--|--------|-------------|----------------------|-----------------------|
| <u>Colilert Presence/Absence Test</u> | | | | |
| Coliforms | Absent | SM9223 | 12/02/2015 3:56:00PM | 12/03/2015 10:04:00AM |
| E. Coli | Absent | SM9223 | 12/02/2015 3:56:00PM | 12/03/2015 10:04:00AM |

Analyst Name: Ken Diercouff

Analyst Signature: 

Resulted by: Ken Diercouff

Signature: 

Comments:

Rev. Name: Valerie Requenez

Rev. Title: Analyst

Rev. Signature: 

Date/Time Approved: 12/03/2015

Report Type: **FINAL**



**CORPUS CHRISTI - NUECES COUNTY PUBLIC HEALTH DISTRICT
LABORATORY**

1702 Horne Road, P.O. Box 9727 (78469-9727)
Corpus Christi, Texas 78416
Phone: 361-826-7213, Fax: 361-826-7217

Water Bacteriology Report

Public Health
Prevent. Promote. Protect.

Batch #: E160044
Date Received: 01/08/2016 9:51:00AM

Submitter:
TB803
TCEQ
6300 OCEAN DRIVE, UNIT 5839
CORPUS CHRISTI, TX 78412

Sample #: E160044-001
PWSID:
Date Collected: 01/07/2016 2:04:00PM
Received By: LD
Sample Site: Mayfield no. 3

Sampler Name: SWS
Sampler Phone #:
Laboratory Tested Total Chlorine Residual (mg/l): 0
Laboratory Receipt Temperature: 4.1 °C
Chilling Process Begun: Yes
Received in Ice: Yes
Temperature Consistent with Collection Time: Yes

System Type: Private/Individual
PWS Name: Arenosa Creek
Sample Type: Raw Well #
Repeat Sample #:
Repeat Desc.:
Water Source: Groundwater
Field Disinfectant Residual (mg/l):
Field Chlorine:

| Test | Result | Test Method | Date/Time Tested | Date/Time Completed |
|--|---------|-------------|----------------------|-----------------------|
| <u>Colifert Presence/Absence Test</u> | | | | |
| Coliforms | Present | SM9223 | 01/08/2016 3:14:00PM | 01/09/2016 10:25:00AM |
| E. Coli | Absent | SM9223 | 01/08/2016 3:14:00PM | 01/09/2016 10:25:00AM |

Analyst Name: Rachel Rios

Analyst Signature: *Rachel Rios*

Resulted by: Rachel Rios

Signature: *Rachel Rios*

Comments:

Rev. Name: Ken Diercouff

Rev. Title: Analyst

Rev. Signature: *Ken Diercouff*

Date/Time Approved: 01/11/2016

Report Type: **FINAL**



**CORPUS CHRISTI - NUECES COUNTY PUBLIC HEALTH DISTRICT
LABORATORY**

1702 Horne Road, P.O. Box 9727 (78469-9727)
Corpus Christi, Texas 78416
Phone: 361-826-7213, Fax: 361-826-7217

Public Health
Prevent. Promote. Protect.

Water Bacteriology Report

Batch #: E160044
Date Received: 01/08/2016 9:51:00AM

Submitter:
TB803
TCEQ
6300 OCEAN DRIVE, UNIT 5839
CORPUS CHRISTI, TX 78412

Sample #: E160044-002
PWSID:
Date Collected: 01/07/2016 4:25:00PM
Received By: LD
Sample Site: [Redacted] Electric Pump/Well

System Type: Private/Individual
PWS Name: [Redacted]
Sample Type: Raw Well #
Repeat Sample #:
Repeat Desc.:
Water Source: Groundwater
Field Disinfectant Residual (mg/l):
Field Chlorine:

Sampler Name: SWS
Sampler Phone #: (817) 829-9135
Laboratory Tested Total Chlorine Residual (mg/l): 0
Laboratory Receipt Temperature: 4.1 °C
Chilling Process Begun: Yes
Received in Ice: Yes
Temperature Consistent with Collection Time: Yes

| Test | Result | Test Method | Date/Time Tested | Date/Time Completed |
|---------------------------------------|---------|-------------|----------------------|-----------------------|
| <u>Colilert Presence/Absence Test</u> | | | | |
| Coliforms | Present | SM9223 | 01/08/2016 3:14:00PM | 01/09/2016 10:25:00AM |
| E. Coli | Absent | SM9223 | 01/08/2016 3:14:00PM | 01/09/2016 10:25:00AM |

Analyst Name: Rachel Rios

Analyst Signature: *Rachel Rios*

Resulted by: Rachel Rios

Signature: *Rachel Rios*

Comments:

Rev. Name: Ken Diercuff

Rev. Title: Analyst

Rev. Signature: *Ken Diercuff*

Date/Time Approved: 01/11/2016

Report Type: **FINAL**

TCEQ Interoffice Memorandum

To: Gregg Easley, Section Manager

From: Paul Askenasy
Water Quality Assessment Team

Date: February 1, 2016

Subject: Agronomy Technical Findings, Field Office soil analysis results for Arenosa Ranch # 4666, Victoria County, Texas

Field sampling and analysis parameters: The field office soil sampled ten (10) different locations plus a soil grab sample from a suspect grit trap waste site. The ten locations (locations A-J) were sampled at depths 0-6", 6-12" and 6-24" and analyzed for a suite of parameters per the Region Office's plan. The 0-6" and 6-24" depth samples were analyzed for the standard set of parameters required in the sludge TLAPs. The 0-6" and 6-12" depths samples were analyzed for Benzene, Ethylbenzene, Toluene, Total Xylenes, 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, Toluene-d8, Total Petroleum Hydrocarbons, cC6 to nC12, >nC12 to nC28, > nC28 to nC35, 2-Fluorobiphenil and Trifluoromethyl benzene.

Results: The standard suite of sludge TLAP soil monitoring parameters results (pH; Electrical Conductivity; nitrate-N; ammonium-N; Total Kjeldahl -N; plant-available P, K, Na, Mg, Ca; and total metals to include As, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se and Zn) are **within normal agronomic ranges.**

All organic analysis results for Benzene, Ethylbenzene, Toluene, Total Xylenes, 1,2-Dichloroethane-d4, 4-Bromofluorobenzene, Dibromofluoromethane, Toluene-d8, Total Petroleum Hydrocarbons, cC6 to nC12, >nC12 to nC28, > nC28 to nC35, 2-Fluorobiphenil and Trifluoromethyl benzene **were below detection limits.**

The suspect grit trap waste soil grab sample analysis produced elevated values for TKN and ammonium-N (both results expected because of the high organic matter content of the sample) but below detection limit results for the subject organic parameters analyzed for this sample. This sample is from a single grab and not representative of the sludge application area.

The analytical results from analyses of representative samples indicate the following:

1. absence of grit trap waste residuals in the soil, and
2. Soil fertility and total metal content results are within normal agronomic ranges.

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

| Parameters | PCLs | HS16010093 | | | | |
|------------------------------------|-------|------------|---------|---------|---------|---------|
| | | A 0-6" | A 6-12" | A 6-24" | B 0-6" | B 6-12" |
| Volatiles 8260C | | | | | | |
| Benzene (mg/kg) | 120 | ND | ND | --- | ND | ND |
| Ethylbenzene (mg/kg) | 6400 | ND | ND | --- | ND | ND |
| m,p-Xylene (mg/kg) | 8900 | ND | ND | --- | ND | ND |
| o-Xylene (mg/kg) | 48000 | ND | ND | --- | ND | ND |
| Xylenes, Total (mg/kg) | 6000 | ND | ND | --- | ND | ND |
| MTBE (mg/kg) | 800 | ND | ND | --- | ND | ND |
| TPH 1005 | | | | | | |
| TPH Total (mg/kg) | --- | ND | ND | --- | ND | ND |
| TPH, C6 - C12 (mg/kg) | 1600 | ND | ND | --- | ND | ND |
| TPH, >C12-C28 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| TPH, >C28 - C35 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| Metals 6020A | | | | | | |
| Arsenic (mg/kg) | 24 | 2.26 | --- | --- | 1.14 | --- |
| Cadmium (mg/kg) | 52 | ND | --- | --- | ND | --- |
| Chromium (mg/kg) | 33000 | 3.14 | --- | --- | 3.24 | --- |
| Copper (mg/kg) | 1300 | 2.14 | --- | --- | 1.9 | --- |
| Lead (mg/kg) | 500 | 13 | --- | --- | 5.25 | --- |
| Molybdenum (mg/kg) | 160 | ND | --- | --- | ND | --- |
| Nickel (mg/kg) | 840 | 1.23 | --- | --- | 0.885 | --- |
| Selenium (mg/kg) | 310 | ND | --- | --- | ND | --- |
| Zinc (mg/kg) | 9900 | 4.12 | --- | --- | 4.85 | --- |
| Others | | | | | | |
| pH (su) | --- | 5.87 | --- | 7.21 | 5.68 | --- |
| Mercury (mg/kg) | 3.6 | 0.00909 | --- | --- | 0.00997 | --- |
| TKN (mg/kg) | --- | 600 | --- | 758 | 672 | --- |
| Nitrate Nitrogen (mg/kg) | --- | ND | --- | ND | ND | --- |
| Ammonia Nitrogen (mg/kg) | --- | 5.7 | --- | 3.9 | 6.2 | --- |
| Phosphorus (mg/kg) | --- | 9 | --- | ND | 10 | --- |
| Potassium (mg/kg) | --- | 38 | --- | 99 | 36 | --- |
| Sodium (mg/kg) | --- | 62 | --- | 416 | 58 | --- |
| Magnesium (mg/kg) | --- | 172 | --- | 526 | 157 | --- |
| Calcium (mg/kg) | --- | 802 | --- | 2240 | 800 | --- |
| Electrical Conductivity (mmhos/cm) | --- | 0.2 | --- | 0.2 | 0.2 | --- |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

| Parameters | PCLs | HS16010093 | | HS16010148 | |
|------------------------------------|-------|------------|--------|------------|---------|
| | | B 6-24" | C 0-6" | C 6-12" | C 6-24" |
| Volatiles 8260C | | | | | |
| Benzene (mg/kg) | 120 | --- | ND | ND | --- |
| Ethylbenzene (mg/kg) | 6400 | --- | ND | ND | --- |
| m,p-Xylene (mg/kg) | 8900 | --- | ND | ND | --- |
| o-Xylene (mg/kg) | 48000 | --- | ND | ND | --- |
| Xylenes, Total (mg/kg) | 6000 | --- | ND | ND | --- |
| MTBE (mg/kg) | 800 | --- | ND | ND | --- |
| TPH 1005 | | | | | |
| TPH Total (mg/kg) | --- | --- | ND | ND | --- |
| TPH, C6 - C12 (mg/kg) | 1600 | --- | ND | ND | --- |
| TPH, >C12-C28 (mg/kg) | 2300 | --- | ND | ND | --- |
| TPH, >C28 - C35 (mg/kg) | 2300 | --- | ND | ND | --- |
| Metals 6020A | | | | | |
| Arsenic (mg/kg) | 24 | --- | 1.05 | --- | --- |
| Cadmium (mg/kg) | 52 | --- | ND | --- | --- |
| Chromium (mg/kg) | 33000 | --- | 2.09 | --- | --- |
| Copper (mg/kg) | 1300 | --- | 1.33 | --- | --- |
| Lead (mg/kg) | 500 | --- | 4.62 | --- | --- |
| Molybdenum (mg/kg) | 160 | --- | ND | --- | --- |
| Nickel (mg/kg) | 840 | --- | 0.808 | --- | --- |
| Selenium (mg/kg) | 310 | --- | ND | --- | --- |
| Zinc (mg/kg) | 9900 | --- | 5.12 | --- | --- |
| Others | | | | | |
| pH (su) | --- | 6.98 | 5.96 | --- | 7.23 |
| Mercury (mg/kg) | 3.6 | --- | 0.0129 | --- | --- |
| TKN (mg/kg) | --- | 560 | 686 | --- | 583 |
| Nitrate Nitrogen (mg/kg) | --- | ND | ND | --- | ND |
| Ammonia Nitrogen (mg/kg) | --- | 4.1 | 7.6 | --- | 4.6 |
| Phosphorus (mg/kg) | --- | ND | 10 | --- | ND |
| Potassium (mg/kg) | --- | 87 | 39 | --- | 106 |
| Sodium (mg/kg) | --- | 340 | 82 | --- | 539 |
| Magnesium (mg/kg) | --- | 459 | 156 | --- | 558 |
| Calcium (mg/kg) | --- | 2200 | 766 | --- | 2610 |
| Electrical Conductivity (mmhos/cm) | --- | 0.3 | 0.2 | --- | 0.5 |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

| Parameters | PCLs | HS15121245 | | | HS15121095 | |
|------------------------------------|-------|------------|---------|---------|------------|---------|
| | | D 0-6" | D 6-12" | D 6-24" | E 0-6" | E 6-12" |
| Volatiles 8260C | | | | | | |
| Benzene (mg/kg) | 120 | ND | ND | --- | ND | ND |
| Ethylbenzene (mg/kg) | 6400 | ND | ND | --- | ND | ND |
| m,p-Xylene (mg/kg) | 8900 | ND | ND | --- | ND | ND |
| o-Xylene (mg/kg) | 48000 | ND | ND | --- | ND | ND |
| Xylenes, Total (mg/kg) | 6000 | ND | ND | --- | ND | ND |
| MTBE (mg/kg) | 800 | ND | ND | --- | ND | ND |
| TPH-1005 | | | | | | |
| TPH Total (mg/kg) | --- | ND | ND | --- | ND | ND |
| TPH, C6 - C12 (mg/kg) | 1600 | ND | ND | --- | ND | ND |
| TPH, >C12-C28 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| TPH, >C28 - C35 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| Metals 6020A | | | | | | |
| Arsenic (mg/kg) | 24 | 1.18 | --- | --- | 1.07 | --- |
| Cadmium (mg/kg) | 52 | ND | --- | --- | ND | --- |
| Chromium (mg/kg) | 33000 | 2.18 | --- | --- | 3.85 | --- |
| Copper (mg/kg) | 1300 | 1.39 | --- | --- | 16.3 | --- |
| Lead (mg/kg) | 500 | 4.39 | --- | --- | 5.76 | --- |
| Molybdenum (mg/kg) | 160 | ND | --- | --- | ND | --- |
| Nickel (mg/kg) | 840 | 0.0584 | --- | --- | 1.59 | --- |
| Selenium (mg/kg) | 310 | ND | --- | --- | ND | --- |
| Zinc (mg/kg) | 9900 | 5.88 | --- | --- | 36.1 | --- |
| Others | | | | | | |
| pH (su) | --- | 6.33 | --- | 6.91 | 6.63 | --- |
| Mercury (mg/kg) | 3.6 | 0.00977 | --- | --- | 0.0133 | --- |
| TKN (mg/kg) | --- | 800 | --- | 714 | 1080 | --- |
| Nitrate Nitrogen (mg/kg) | --- | ND | --- | ND | 9.8 | --- |
| Ammonia Nitrogen (mg/kg) | --- | 8.4 | --- | 5.2 | 5.3 | --- |
| Phosphorus (mg/kg) | --- | 12 | --- | ND | 68 | --- |
| Potassium (mg/kg) | --- | 40 | --- | 94 | 46 | --- |
| Sodium (mg/kg) | --- | 38 | --- | 186 | 93 | --- |
| Magnesium (mg/kg) | --- | 155 | --- | 456 | 74 | --- |
| Calcium (mg/kg) | --- | 828 | --- | 2230 | 2140 | --- |
| Electrical Conductivity (mmhos/cm) | --- | 0.1 | --- | 0.1 | 0.3 | --- |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

| Parameters | PCLs | HS15121095 | | HS16010186 | |
|------------------------------------|-------|------------|--------|------------|---------|
| | | E 6-24" | F 0-6" | F 6-12" | F 6-24" |
| Volatiles 8260C | | | | | |
| Benzene (mg/kg) | 120 | --- | ND | ND | --- |
| Ethylbenzene (mg/kg) | 6400 | --- | ND | ND | --- |
| m,p-Xylene (mg/kg) | 8900 | --- | ND | ND | --- |
| o-Xylene (mg/kg) | 48000 | --- | ND | ND | --- |
| Xylenes, Total (mg/kg) | 6000 | --- | ND | ND | --- |
| MTBE (mg/kg) | 800 | --- | ND | ND | --- |
| TPH 1005 | | | | | |
| TPH Total (mg/kg) | --- | --- | ND | ND | --- |
| TPH, C6 - C12 (mg/kg) | 1600 | --- | ND | ND | --- |
| TPH, >C12-C28 (mg/kg) | 2300 | --- | ND | ND | --- |
| TPH, >C28 - C35 (mg/kg) | 2300 | --- | ND | ND | --- |
| Metals 6020A | | | | | |
| Arsenic (mg/kg) | 24 | --- | 1.19 | --- | --- |
| Cadmium (mg/kg) | 52 | --- | ND | --- | --- |
| Chromium (mg/kg) | 33000 | --- | 2.8 | --- | --- |
| Copper (mg/kg) | 1300 | --- | 1.56 | --- | --- |
| Lead (mg/kg) | 500 | --- | 5.28 | --- | --- |
| Molybdenum (mg/kg) | 160 | --- | ND | --- | --- |
| Nickel (mg/kg) | 840 | --- | 1.06 | --- | --- |
| Selenium (mg/kg) | 310 | --- | ND | --- | --- |
| Zinc (mg/kg) | 9900 | --- | 4.63 | --- | --- |
| Others | | | | | |
| pH (su) | --- | 6.661 | 7.13 | --- | 5.91 |
| Mercury (mg/kg) | 3.6 | --- | 0.0102 | --- | --- |
| TKN (mg/kg) | --- | 538 | 714 | --- | 896 |
| Nitrate Nitrogen (mg/kg) | --- | 8.6 | ND | --- | 1.5 |
| Ammonia Nitrogen (mg/kg) | --- | 5.4 | 7.2 | --- | 4.1 |
| Phosphorus (mg/kg) | --- | ND | 6 | --- | ND |
| Potassium (mg/kg) | --- | 123 | 37 | --- | 65 |
| Sodium (mg/kg) | --- | 226 | 71 | --- | 309 |
| Magnesium (mg/kg) | --- | 594 | 226 | --- | 430 |
| Calcium (mg/kg) | --- | 3160 | 1050 | --- | 1910 |
| Electrical Conductivity (mmhos/cm) | --- | 0.4 | 0.1 | --- | 0.2 |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

HS15121246

HS16010148

| Parameters | PCLs | G 0-6" | G 6-12" | G 6-24" | H 0-6" | H 6-12" |
|------------------------------------|-------|--------|---------|---------|--------|---------|
| Volatiles 8260C | | | | | | |
| Benzene (mg/kg) | 120 | ND | ND | --- | ND | ND |
| Ethylbenzene (mg/kg) | 6400 | ND | ND | --- | ND | ND |
| m,p-Xylene (mg/kg) | 8900 | ND | ND | --- | ND | ND |
| o-Xylene (mg/kg) | 48000 | ND | ND | --- | ND | ND |
| Xylenes, Total (mg/kg) | 6000 | ND | ND | --- | ND | ND |
| MTBE (mg/kg) | 800 | ND | ND | --- | ND | ND |
| TPH 1005 | | | | | | |
| TPH Total (mg/kg) | --- | ND | ND | --- | ND | ND |
| TPH, C6 - C12 (mg/kg) | 1600 | ND | ND | --- | ND | ND |
| TPH, >C12-C28 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| TPH, >C28 - C35 (mg/kg) | 2300 | ND | ND | --- | ND | ND |
| Metals 6020A | | | | | | |
| Arsenic (mg/kg) | 24 | 1.06 | --- | --- | 1.72 | --- |
| Cadmium (mg/kg) | 52 | ND | --- | --- | ND | --- |
| Chromium (mg/kg) | 33000 | 2.2 | --- | --- | 3.92 | --- |
| Copper (mg/kg) | 1300 | 1.52 | --- | --- | 12.5 | --- |
| Lead (mg/kg) | 500 | 4.89 | --- | --- | 7.82 | --- |
| Molybdenum (mg/kg) | 160 | ND | --- | --- | ND | --- |
| Nickel (mg/kg) | 840 | 0.811 | --- | --- | 1.68 | --- |
| Selenium (mg/kg) | 310 | ND | --- | --- | ND | --- |
| Zinc (mg/kg) | 9900 | 4.27 | --- | --- | 19.6 | --- |
| Others | | | | | | |
| pH (su) | --- | 5.47 | --- | 6.53 | 6.96 | --- |
| Mercury (mg/kg) | 3.6 | 0.0101 | --- | --- | 0.0227 | --- |
| TKN (mg/kg) | --- | 616 | --- | 560 | 1220 | --- |
| Nitrate Nitrogen (mg/kg) | --- | ND | --- | ND | 2.9 | --- |
| Ammonia Nitrogen (mg/kg) | --- | 6.9 | --- | 3 | 11.3 | --- |
| Phosphorus (mg/kg) | --- | 9 | --- | ND | 60 | --- |
| Potassium (mg/kg) | --- | 42 | --- | 71 | 53 | --- |
| Sodium (mg/kg) | --- | 49 | --- | 211 | 41 | --- |
| Magnesium (mg/kg) | --- | 199 | --- | 426 | 160 | --- |
| Calcium (mg/kg) | --- | 1100 | --- | 1920 | 1790 | --- |
| Electrical Conductivity (mmhos/cm) | --- | 0.2 | --- | 0.2 | 0.4 | --- |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

HS15121095

HS15121172

| Parameters | PCLs | HS15121095 | | HS15121172 | |
|------------------------------------|-------|------------|--------|------------|---------|
| | | H 6-24" | I 0-6" | I 6-12" | I 6-24" |
| Volatiles 8260C | | | | | |
| Benzene (mg/kg) | 120 | --- | ND | ND | --- |
| Ethylbenzene (mg/kg) | 6400 | --- | ND | ND | --- |
| m,p-Xylene (mg/kg) | 8900 | --- | ND | ND | --- |
| o-Xylene (mg/kg) | 48000 | --- | ND | ND | --- |
| Xylenes, Total (mg/kg) | 6000 | --- | ND | ND | --- |
| MTBE (mg/kg) | 800 | --- | ND | ND | --- |
| TPH 1005 | | | | | |
| TPH Total (mg/kg) | --- | --- | ND | ND | --- |
| TPH, C6 - C12 (mg/kg) | 1600 | --- | ND | ND | --- |
| TPH, >C12-C28 (mg/kg) | 2300 | --- | ND | ND | --- |
| TPH, >C28 - C35 (mg/kg) | 2300 | --- | ND | ND | --- |
| Metals 6020A | | | | | |
| Arsenic (mg/kg) | 24 | --- | 0.876 | --- | --- |
| Cadmium (mg/kg) | 52 | --- | ND | --- | --- |
| Chromium (mg/kg) | 33000 | --- | 2.36 | --- | --- |
| Copper (mg/kg) | 1300 | --- | 2.96 | --- | --- |
| Lead (mg/kg) | 500 | --- | 4.83 | --- | --- |
| Molybdenum (mg/kg) | 160 | --- | ND | --- | --- |
| Nickel (mg/kg) | 840 | --- | 1.03 | --- | --- |
| Selenium (mg/kg) | 310 | --- | ND | --- | --- |
| Zinc (mg/kg) | 9900 | --- | 8.37 | --- | --- |
| Others | | | | | |
| pH (su) | --- | 6.84 | 7.45 | --- | 7.7 |
| Mercury (mg/kg) | 3.6 | --- | 0.0132 | --- | --- |
| TKN (mg/kg) | --- | 494 | 1050 | --- | 560 |
| Nitrate Nitrogen (mg/kg) | --- | ND | 11 | --- | 5.5 |
| Ammonia Nitrogen (mg/kg) | --- | 3.6 | 8.5 | --- | 3 |
| Phosphorus (mg/kg) | --- | ND | 31 | --- | ND |
| Potassium (mg/kg) | --- | 79 | 52 | --- | 81 |
| Sodium (mg/kg) | --- | 212 | 29 | --- | 171 |
| Magnesium (mg/kg) | --- | 656 | 140 | --- | 511 |
| Calcium (mg/kg) | --- | 2650 | 1970 | --- | 2260 |
| Electrical Conductivity (mmhos/cm) | --- | 0.4 | 0.3 | --- | 0.2 |

Arenosa Creek Soil Sampling Results

Texas Risk Reduction Standards (30 TAC 350) for Tier 1 Residential Soil Protective Concentration Limits (PCLs)

Laboratory Work Orders

HS15121172

| Parameters | PCLs | J 0-6" | J 6-12" | J 6-24" |
|------------------------------------|-------|--------|---------|---------|
| Volatiles 8260C | | | | |
| Benzene (mg/kg) | 120 | ND | ND | --- |
| Ethylbenzene (mg/kg) | 6400 | ND | ND | --- |
| m,p-Xylene (mg/kg) | 8900 | ND | ND | --- |
| o-Xylene (mg/kg) | 48000 | ND | ND | --- |
| Xylenes, Total (mg/kg) | 6000 | ND | ND | --- |
| MTBE (mg/kg) | 800 | ND | ND | --- |
| TPH 1005 | | | | |
| TPH Total (mg/kg) | --- | ND | ND | --- |
| TPH, C6 - C12 (mg/kg) | 1600 | ND | ND | --- |
| TPH, >C12-C28 (mg/kg) | 2300 | ND | ND | --- |
| TPH, >C28 - C35 (mg/kg) | 2300 | ND | ND | --- |
| Metals 6020A | | | | |
| Arsenic (mg/kg) | 24 | 0.959 | --- | --- |
| Cadmium (mg/kg) | 52 | ND | --- | --- |
| Chromium (mg/kg) | 33000 | 2.39 | --- | --- |
| Copper (mg/kg) | 1300 | 3.6 | --- | --- |
| Lead (mg/kg) | 500 | 5.41 | --- | --- |
| Molybdenum (mg/kg) | 160 | ND | --- | --- |
| Nickel (mg/kg) | 840 | 1.18 | --- | --- |
| Selenium (mg/kg) | 310 | ND | --- | --- |
| Zinc (mg/kg) | 9900 | 8.15 | --- | --- |
| Others | | | | |
| pH (su) | --- | 7.97 | --- | 7.96 |
| Mercury (mg/kg) | 3.6 | 0.0126 | --- | --- |
| TKN (mg/kg) | --- | 1060 | --- | 560 |
| Nitrate Nitrogen (mg/kg) | --- | 7.8 | --- | 1.6 |
| Ammonia Nitrogen (mg/kg) | --- | 9.7 | --- | 3.6 |
| Phosphorus (mg/kg) | --- | 29 | --- | ND |
| Potassium (mg/kg) | --- | 54 | --- | 90 |
| Sodium (mg/kg) | --- | 33 | --- | 217 |
| Magnesium (mg/kg) | --- | 132 | --- | 672 |
| Calcium (mg/kg) | --- | 1860 | --- | 2280 |
| Electrical Conductivity (mmhos/cm) | --- | 0.3 | --- | 0.2 |



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January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15121095**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 5 sample(s) on Dec 29, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121095

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS15121095-01 | Trip Blank | Water | | 28-Dec-2015 00:00 | 29-Dec-2015 09:10 | <input type="checkbox"/> |
| HS15121095-02 | Equipment Blank | Water | | 28-Dec-2015 11:35 | 29-Dec-2015 09:10 | <input type="checkbox"/> |
| HS15121095-03 | E-0-6" | Soil | | 28-Dec-2015 16:30 | 29-Dec-2015 09:10 | <input type="checkbox"/> |
| HS15121095-04 | E-6"-12" | Soil | | 28-Dec-2015 16:35 | 29-Dec-2015 09:10 | <input type="checkbox"/> |
| HS15121095-05 | E-6"-24" | Soil | | 28-Dec-2015 16:42 | 29-Dec-2015 09:10 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121095

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier. The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is appended

GC Semivolatiles by Method TX1005**Batch ID: 100198,100284**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R267115**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R267066Sample ID: **HS15120950-10**

- MS and MSD are for an unrelated sample.

Batch ID: R267040Sample ID: **E-0-6" (HS15121095-03)**

- MS failed QC limits for select compounds due to suspect matrix effect.

Metals by Method SW7471A**Batch ID: 100431**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470**Batch ID: 100362**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020**Batch ID: 100396**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 100205Sample ID: **HS15121094-01**

- MS and MSD are for an unrelated sample.

WetChemistry by Method SW3550**Batch ID: R267149****Revision:1**

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121095

CASE NARRATIVE

WetChemistry by Method SW3550

Batch ID: R267149

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B

Batch ID: R267053

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Trip Blank
 Collection Date: 28-Dec-2015 00:00

ANALYTICAL REPORT
 WorkOrder:HS15121095
 Lab ID:HS15121095-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: PC |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Dec-2015 20:56 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Dec-2015 20:56 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 30-Dec-2015 20:56 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 30-Dec-2015 20:56 |
| Surr: 1,2-Dichloroethane-d4 | 103 | | 71-125 | %REC | 1 | 30-Dec-2015 20:56 |
| Surr: 4-Bromofluorobenzene | 86.9 | | 70-125 | %REC | 1 | 30-Dec-2015 20:56 |
| Surr: Dibromofluoromethane | 99.7 | | 74-125 | %REC | 1 | 30-Dec-2015 20:56 |
| Surr: Toluene-d8 | 98.0 | | 75-125 | %REC | 1 | 30-Dec-2015 20:56 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Equipment Blank
 Collection Date: 28-Dec-2015 11:35

ANALYTICAL REPORT
 WorkOrder:HS15121095
 Lab ID:HS15121095-02
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------------|----------------------|----------------|-----------------------------|-----------------|--------------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 08-Jan-2016 | | Analyst: RPM |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 11-Jan-2016 12:29 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Copper | 0.00609 | | 0.00200 | mg/L | 1 | 11-Jan-2016 12:29 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| Zinc | 0.0104 | | 0.00500 | mg/L | 1 | 11-Jan-2016 12:29 |
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: PC |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 31-Dec-2015 18:34 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 31-Dec-2015 18:34 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 31-Dec-2015 18:34 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 31-Dec-2015 18:34 |
| Surr: 1,2-Dichloroethane-d4 | 102 | | 71-125 | %REC | 1 | 31-Dec-2015 18:34 |
| Surr: 4-Bromofluorobenzene | 83.0 | | 70-125 | %REC | 1 | 31-Dec-2015 18:34 |
| Surr: Dibromofluoromethane | 101 | | 74-125 | %REC | 1 | 31-Dec-2015 18:34 |
| Surr: Toluene-d8 | 102 | | 75-125 | %REC | 1 | 31-Dec-2015 18:34 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 06-Jan-2016 | | Analyst: ALR |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 07-Jan-2016 23:21 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 30-Dec-2015 | | Analyst: KHT |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 30-Dec-2015 17:11 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 30-Dec-2015 17:11 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 30-Dec-2015 17:11 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 30-Dec-2015 17:11 |
| Surr: 2-Fluorobiphenyl | 101 | | 70-130 | %REC | 1 | 30-Dec-2015 17:11 |
| Surr: Trifluoromethyl benzene | 102 | | 70-130 | %REC | 1 | 30-Dec-2015 17:11 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: E-0-6"
 Collection Date: 28-Dec-2015 16:30

ANALYTICAL REPORT
 WorkOrder:HS15121095
 Lab ID:HS15121095-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep SW3050A / 30-Dec-2015 | | Analyst: JDE |
| Arsenic | 1.07 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Cadmium | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Chromium | 3.85 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Copper | 16.3 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Lead | 5.76 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Molybdenum | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 05-Jan-2016 11:38 |
| Nickel | 1.59 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Selenium | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| Zinc | 36.1 | | 0.559 | mg/Kg-dry | 1 | 31-Dec-2015 21:19 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| Ethylbenzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| Methyl tert-butyl ether | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| o-Xylene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| Toluene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 30-Dec-2015 11:46 |
| Surr: 1,2-Dichloroethane-d4 | 82.7 | | 70-128 | %REC | 1 | 30-Dec-2015 11:46 |
| Surr: 4-Bromofluorobenzene | 90.4 | | 73-126 | %REC | 1 | 30-Dec-2015 11:46 |
| Surr: Dibromofluoromethane | 90.5 | | 71-128 | %REC | 1 | 30-Dec-2015 11:46 |
| Surr: Toluene-d8 | 105 | | 73-127 | %REC | 1 | 30-Dec-2015 11:46 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0133 | | 0.00434 | mg/Kg-dry | 1 | 11-Jan-2016 14:30 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 02:55 |
| >nC12 to nC28 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 02:55 |
| >nC28 to nC35 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 02:55 |
| Total Petroleum Hydrocarbon | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 02:55 |
| Surr: 2-Fluorobiphenyl | 91.7 | | 70-130 | %REC | 1 | 05-Jan-2016 02:55 |
| Surr: Trifluoromethyl benzene | 84.9 | | 70-130 | %REC | 1 | 05-Jan-2016 02:55 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 14.1 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.63 | H | 0.100 | pH Units | 1 | 30-Dec-2015 15:34 |
| Temp Deg C @pH | 20.6 | H | 0 | °C | 1 | 30-Dec-2015 15:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: E-6"-12"
 Collection Date: 28-Dec-2015 16:35

ANALYTICAL REPORT

WorkOrder:HS15121095
 Lab ID:HS15121095-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|----------------------|--------------|-----------------------------|-----------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | Analyst: WLR | | |
| Benzene | < 0.0050 | | 0.0050 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| Ethylbenzene | < 0.0050 | | 0.0050 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| m,p-Xylene | < 0.010 | | 0.010 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| Methyl tert-butyl ether | < 0.0050 | | 0.0050 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| o-Xylene | < 0.0050 | | 0.0050 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| Toluene | < 0.0050 | | 0.0050 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| Xylenes, Total | < 0.010 | | 0.010 | mg/Kg-dry | 1 | 30-Dec-2015 12:14 |
| Surr: 1,2-Dichloroethane-d4 | 92.2 | | 70-128 | %REC | 1 | 30-Dec-2015 12:14 |
| Surr: 4-Bromofluorobenzene | 91.3 | | 73-126 | %REC | 1 | 30-Dec-2015 12:14 |
| Surr: Dibromofluoromethane | 99.2 | | 71-128 | %REC | 1 | 30-Dec-2015 12:14 |
| Surr: Toluene-d8 | 104 | | 73-127 | %REC | 1 | 30-Dec-2015 12:14 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 55 | | 55 | mg/Kg-dry | 1 | 05-Jan-2016 03:24 |
| >nC12 to nC28 | < 55 | | 55 | mg/Kg-dry | 1 | 05-Jan-2016 03:24 |
| >nC28 to nC35 | < 55 | | 55 | mg/Kg-dry | 1 | 05-Jan-2016 03:24 |
| Total Petroleum Hydrocarbon | < 55 | | 55 | mg/Kg-dry | 1 | 05-Jan-2016 03:24 |
| Surr: 2-Fluorobiphenyl | 105 | | 70-130 | %REC | 1 | 05-Jan-2016 03:24 |
| Surr: Trifluoromethyl benzene | 95.5 | | 70-130 | %REC | 1 | 05-Jan-2016 03:24 |
| MOISTURE | | Method:SW3550 | | Analyst: DFF | | |
| Percent Moisture | 10.7 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: E-6"-24"
 Collection Date: 28-Dec-2015 16:42

ANALYTICAL REPORT

WorkOrder:HS15121095
 Lab ID:HS15121095-05
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|----------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 19.3 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.61 | H | 0.100 | pH Units | 1 | 30-Dec-2015 15:34 |
| Temp Deg C @pH | 20.4 | H | 0 | °C | 1 | 30-Dec-2015 15:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

Batch ID: 715 **Method:** VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS15121095-03 | 1 | 5.019 (g) | 5 (mL) | 1 | Bulk (5030B) |
| HS15121095-04 | 1 | 5.59 (g) | 5 (mL) | 0.89 | Bulk (5030B) |

Batch ID: 100193 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-03 | 1 | 1.1047 | 50 (mL) | 45.26 |
| HS15121095-05 | 1 | 1.3314 | 50 (mL) | 37.55 |

Batch ID: 100198 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-02 | 1 | 30.32 | 3 (mL) | 0.09894 |

Batch ID: 100205 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-03 | 1 | 0.5211 | 50 (mL) | 95.95 |

Batch ID: 100284 **Method:** TEXAS TPH BY TX1005 **Prep:** TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-03 | 1 | 10.09 | 10 (mL) | 0.9911 |
| HS15121095-04 | 1 | 10.11 | 10 (mL) | 0.9891 |

Batch ID: 100362 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-02 | 1 | 40 | 40 (mL) | 1 |

Batch ID: 100396 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-02 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 100431 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121095-03 | 1 | 0.5352 | 40 (mL) | 74.74 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|-----------------|--|-----------|----------------------|-------------------|----|
| Batch ID 100193 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | 30 Dec 2015 09:58 | 31 Dec 2015 12:34 | 1 |
| HS15121095-05 | E-6"-24" | 28 Dec 2015 16:42 | | 30 Dec 2015 09:58 | 31 Dec 2015 12:34 | 1 |
| Batch ID 100198 | | Test Name : LOW-LEVEL TEXAS TPH BY TX1005 | | Matrix: Water | | |
| HS15121095-02 | Equipment Blank | 28 Dec 2015 11:35 | | 30 Dec 2015 11:03 | 30 Dec 2015 17:11 | 1 |
| Batch ID 100205 | | Test Name : METALS BY SW6020A | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | 30 Dec 2015 12:05 | 31 Dec 2015 21:19 | 1 |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | 30 Dec 2015 12:05 | 05 Jan 2016 11:38 | 1 |
| Batch ID 100284 | | Test Name : TEXAS TPH BY TX1005 | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | 04 Jan 2016 11:20 | 05 Jan 2016 02:55 | 1 |
| HS15121095-04 | E-6"-12" | 28 Dec 2015 16:35 | | 04 Jan 2016 11:20 | 05 Jan 2016 03:24 | 1 |
| Batch ID 100362 | | Test Name : MERCURY BY SW7470A | | Matrix: Water | | |
| HS15121095-02 | Equipment Blank | 28 Dec 2015 11:35 | | 06 Jan 2016 20:15 | 07 Jan 2016 23:21 | 1 |
| Batch ID 100396 | | Test Name : ICP-MS METALS BY SW6020A | | Matrix: Water | | |
| HS15121095-02 | Equipment Blank | 28 Dec 2015 11:35 | | 08 Jan 2016 09:11 | 11 Jan 2016 12:29 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:30 | 1 |
| Batch ID R267040 | | Test Name : VOLATILES BY SW8260C | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | | 30 Dec 2015 11:46 | 1 |
| HS15121095-04 | E-6"-12" | 28 Dec 2015 16:35 | | | 30 Dec 2015 12:14 | 1 |
| Batch ID R267053 | | Test Name : PH SOIL BY SW9045D | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | | 30 Dec 2015 15:34 | 1 |
| HS15121095-05 | E-6"-24" | 28 Dec 2015 16:42 | | | 30 Dec 2015 15:34 | 1 |
| Batch ID R267066 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | |
| HS15121095-01 | Trip Blank | 28 Dec 2015 00:00 | | | 30 Dec 2015 20:56 | 1 |
| Batch ID R267115 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | |
| HS15121095-02 | Equipment Blank | 28 Dec 2015 11:35 | | | 31 Dec 2015 18:34 | 1 |
| Batch ID R267149 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | | 31 Dec 2015 09:47 | 1 |
| HS15121095-04 | E-6"-12" | 28 Dec 2015 16:35 | | | 31 Dec 2015 09:47 | 1 |
| HS15121095-05 | E-6"-24" | 28 Dec 2015 16:42 | | | 31 Dec 2015 09:47 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | Matrix: Soil | | |
| HS15121095-03 | E-0-6" | 28 Dec 2015 16:30 | | | 15 Jan 2016 16:37 | 1 |
| HS15121095-05 | E-6"-24" | 28 Dec 2015 16:42 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| Batch ID: 100198 | | Instrument: FID-12 | | Method: TX1005 | | | | | | |
|-------------------------------|-----------------------------------|-----------------------|------------------------------|---|------|---------------|---------------|-------|-----------|------|
| MBLK | Sample ID: MBLK-100198 | Units: mg/L | | Analysis Date: 30-Dec-2015 12:04 | | | | | | |
| Client ID: | Run ID: FID-12_267044 | SeqNo: 3540105 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 1.935 | 0 | 2.5 | 0 | 77.4 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.218 | 0 | 2.5 | 0 | 88.7 | 70 - 130 | | | | |
| LCS | Sample ID: LCS-100198 | Units: mg/L | | Analysis Date: 30-Dec-2015 12:35 | | | | | | |
| Client ID: | Run ID: FID-12_267044 | SeqNo: 3540106 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 27.23 | 0.50 | 25 | 0 | 109 | 75 - 125 | | | | |
| >nC12 to nC28 | 26.98 | 0.50 | 25 | 0 | 108 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 2.883 | 0 | 2.5 | 0 | 115 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.731 | 0 | 2.5 | 0 | 109 | 70 - 130 | | | | |
| LCSD | Sample ID: LCSD-100198 | Units: mg/L | | Analysis Date: 30-Dec-2015 13:05 | | | | | | |
| Client ID: | Run ID: FID-12_267044 | SeqNo: 3540107 | PrepDate: 29-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 26.86 | 0.50 | 25 | 0 | 107 | 75 - 125 | 27.23 | 1.37 | 20 | |
| >nC12 to nC28 | 26.7 | 0.50 | 25 | 0 | 107 | 75 - 125 | 26.98 | 1.05 | 20 | |
| Surr: 2-Fluorobiphenyl | 2.887 | 0 | 2.5 | 0 | 115 | 70 - 130 | 2.883 | 0.116 | 20 | |
| Surr: Trifluoromethyl benzene | 2.662 | 0 | 2.5 | 0 | 106 | 70 - 130 | 2.731 | 2.53 | 20 | |
| MS | Sample ID: HS15120989-01MS | Units: mg/L | | Analysis Date: 30-Dec-2015 14:07 | | | | | | |
| Client ID: | Run ID: FID-12_267044 | SeqNo: 3540246 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 25.11 | 0.49 | 24.49 | 0 | 102 | 75 - 125 | | | | |
| >nC12 to nC28 | 26.06 | 0.49 | 24.49 | 0 | 106 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 2.84 | 0 | 2.449 | 0 | 116 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.597 | 0 | 2.449 | 0 | 106 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100198 **Instrument:** FID-12 **Method:** TX1005

MSD **Sample ID:** HS15120989-01MSD **Units:** mg/L **Analysis Date:** 30-Dec-2015 14:38

Client ID: **Run ID:** FID-12_267044 **SeqNo:** 3540247 **PrepDate:** 30-Dec-2015 **DF:** 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
|--------------------------------------|--------|------|---------|---------------|------|---------------|---------------|------|-----------|----------|
| nC6 to nC12 | 23.94 | 0.50 | 25.14 | 0 | 95.2 | 75 - 125 | 25.11 | 4.75 | 20 | |
| >nC12 to nC28 | 24.65 | 0.50 | 25.14 | 0 | 98.0 | 75 - 125 | 26.06 | 5.57 | 20 | |
| <i>Surr: 2-Fluorobiphenyl</i> | 2.966 | 0 | 2.514 | 0 | 118 | 70 - 130 | 2.84 | 4.36 | 20 | |
| <i>Surr: Trifluoromethyl benzene</i> | 2.782 | 0 | 2.514 | 0 | 111 | 70 - 130 | 2.597 | 6.88 | 20 | |

The following samples were analyzed in this batch: HS15121095-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100284 **Instrument:** FID-12 **Method:** TX1005

MBLK Sample ID: **MBLK-100284** Units: **mg/Kg** Analysis Date: **04-Jan-2016 18:18**

Client ID: Run ID: **FID-12_267204** SeqNo: **3543736** PrepDate: **04-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|-------------------------------|-------|----|----|---|-----|----------|--|--|--|--|
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 28.12 | 0 | 25 | 0 | 112 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 26.17 | 0 | 25 | 0 | 105 | 70 - 130 | | | | |

LCS Sample ID: **LCS-100284** Units: **mg/Kg** Analysis Date: **04-Jan-2016 18:49**

Client ID: Run ID: **FID-12_267204** SeqNo: **3543737** PrepDate: **04-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|-------------------------------|-------|----|-----|---|------|----------|--|--|--|--|
| nC6 to nC12 | 246.8 | 50 | 250 | 0 | 98.7 | 75 - 125 | | | | |
| >nC12 to nC28 | 295.2 | 50 | 250 | 0 | 118 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 32.42 | 0 | 25 | 0 | 130 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 27.55 | 0 | 25 | 0 | 110 | 70 - 130 | | | | |

LCSD Sample ID: **LCSD-100284** Units: **mg/Kg** Analysis Date: **04-Jan-2016 19:19**

Client ID: Run ID: **FID-12_267204** SeqNo: **3543738** PrepDate: **04-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|-------------------------------|-------|----|-----|---|------|----------|-------|------|----|--|
| nC6 to nC12 | 240.2 | 50 | 250 | 0 | 96.1 | 75 - 125 | 246.8 | 2.71 | 20 | |
| >nC12 to nC28 | 305.7 | 50 | 250 | 0 | 122 | 75 - 125 | 295.2 | 3.51 | 20 | |
| Surr: 2-Fluorobiphenyl | 31.84 | 0 | 25 | 0 | 127 | 70 - 130 | 32.42 | 1.81 | 20 | |
| Surr: Trifluoromethyl benzene | 26.03 | 0 | 25 | 0 | 104 | 70 - 130 | 27.55 | 5.64 | 20 | |

MS Sample ID: **HS15121198-01MS** Units: **mg/Kg** Analysis Date: **04-Jan-2016 20:21**

Client ID: Run ID: **FID-12_267204** SeqNo: **3543741** PrepDate: **04-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|-------------------------------|-------|----|-------|---|------|----------|--|--|--|--|
| nC6 to nC12 | 209 | 50 | 247.8 | 0 | 84.4 | 75 - 125 | | | | |
| >nC12 to nC28 | 252.8 | 50 | 247.8 | 0 | 102 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 26.47 | 0 | 24.78 | 0 | 107 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 23.91 | 0 | 24.78 | 0 | 96.5 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100284 Instrument: FID-12 Method: TX1005

| MSD | Sample ID: HS15121198-01MSD | Units: mg/Kg | | | Analysis Date: 04-Jan-2016 20:51 | | | | | |
|-------------------------------|-----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: FID-12_267204 | SeqNo: 3543747 | PrepDate: 04-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 219.1 | 50 | 248.3 | 0 | 88.2 | 75 - 125 | 209 | 4.7 | 20 | |
| >nC12 to nC28 | 277 | 50 | 248.3 | 0 | 112 | 75 - 125 | 252.8 | 9.12 | 20 | |
| Surr: 2-Fluorobiphenyl | 30.26 | 0 | 24.83 | 0 | 122 | 70 - 130 | 26.47 | 13.4 | 20 | |
| Surr: Trifluoromethyl benzene | 24.58 | 0 | 24.83 | 0 | 99.0 | 70 - 130 | 23.91 | 2.77 | 20 | |

The following samples were analyzed in this batch: HS15121095-03 HS15121095-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | |
|-------------------------|----------------------------|-----------------------|
| Batch ID: 100205 | Instrument: ICPMS03 | Method: SW6020 |
|-------------------------|----------------------------|-----------------------|

| | | | | | | | | | |
|-------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|-----------|----------|
| MBLK | Sample ID: MBLK-100205 | Units: mg/Kg | Analysis Date: 31-Dec-2015 19:53 | | | | | | |
| Client ID: | Run ID: ICPMS03_267097 | SeqNo: 3542219 | PrepDate: 30-Dec-2015 DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Arsenic | < 0.500 | 0.500 | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | |
| Copper | < 0.500 | 0.500 | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | |

| | | | | | | | | | |
|-------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|-----------|----------|
| MBLK | Sample ID: MBLK-100205 | Units: mg/Kg | Analysis Date: 05-Jan-2016 11:29 | | | | | | |
| Client ID: | Run ID: ICPMS04_267205 | SeqNo: 3543966 | PrepDate: 30-Dec-2015 DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Molybdenum | < 0.500 | 0.500 | | | | | | | |

| | | | | | | | | | |
|------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|-----------|----------|
| LCS | Sample ID: MLCS-100205 | Units: mg/Kg | Analysis Date: 31-Dec-2015 19:57 | | | | | | |
| Client ID: | Run ID: ICPMS03_267097 | SeqNo: 3542220 | PrepDate: 30-Dec-2015 DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Arsenic | 9.507 | 0.500 | 10 | 0 | 95.1 | 80 - 120 | | | |
| Cadmium | 9.024 | 0.500 | 10 | 0 | 90.2 | 80 - 120 | | | |
| Chromium | 9.427 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | |
| Copper | 9.477 | 0.500 | 10 | 0 | 94.8 | 80 - 120 | | | |
| Lead | 9.336 | 0.500 | 10 | 0 | 93.4 | 80 - 120 | | | |
| Nickel | 9.324 | 0.500 | 10 | 0 | 93.2 | 80 - 120 | | | |
| Selenium | 9.328 | 0.500 | 10 | 0 | 93.3 | 80 - 120 | | | |
| Zinc | 9.365 | 0.500 | 10 | 0 | 93.6 | 80 - 120 | | | |

| | | | | | | | | | |
|------------|-------------------------------|-----------------------|---|---------------|------|---------------|---------------|-----------|----------|
| LCS | Sample ID: MLCS-100205 | Units: mg/Kg | Analysis Date: 05-Jan-2016 11:34 | | | | | | |
| Client ID: | Run ID: ICPMS04_267205 | SeqNo: 3543967 | PrepDate: 30-Dec-2015 DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Molybdenum | 9.231 | 0.500 | 10 | 0 | 92.3 | 80 - 120 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| Batch ID: 100205 | | Instrument: ICPMS03 | | Method: SW6020 | | | | | |
|------------------|----------------------------|---------------------|-----------------------|----------------------------------|------|---------------|---------------|------|----------------|
| MS | Sample ID: HS15121094-01MS | Units: mg/Kg | | Analysis Date: 31-Dec-2015 20:36 | | | | | |
| Client ID: | Run ID: ICPMS03_267097 | SeqNo: 3542229 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 11.76 | 0.474 | 9.489 | 2.766 | 94.8 | 75 - 125 | | | |
| Cadmium | 8.682 | 0.474 | 9.489 | 0.02251 | 91.3 | 75 - 125 | | | |
| Chromium | 17.83 | 0.474 | 9.489 | 7.311 | 111 | 75 - 125 | | | |
| Copper | 17.06 | 0.474 | 9.489 | 7.513 | 101 | 75 - 125 | | | |
| Lead | 22.8 | 0.474 | 9.489 | 13.3 | 100 | 75 - 125 | | | |
| Nickel | 15.07 | 0.474 | 9.489 | 4.9 | 107 | 75 - 125 | | | |
| Selenium | 9.67 | 0.474 | 9.489 | 0.6853 | 94.7 | 75 - 125 | | | |
| Zinc | 108.9 | 0.474 | 9.489 | 68.21 | 429 | 75 - 125 | | | SO |

| MS | Sample ID: HS15121094-01MS | Units: mg/Kg | | Analysis Date: 05-Jan-2016 11:50 | | | | | |
|------------|----------------------------|----------------|-----------------------|----------------------------------|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: ICPMS04_267205 | SeqNo: 3543971 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Molybdenum | 9 | 0.474 | 9.489 | 0.577 | 88.8 | 75 - 125 | | | |

| MSD | Sample ID: HS15121094-01MSD | Units: mg/Kg | | Analysis Date: 31-Dec-2015 20:40 | | | | | |
|------------|-----------------------------|----------------|-----------------------|----------------------------------|------|---------------|---------------|-------|----------------|
| Client ID: | Run ID: ICPMS03_267097 | SeqNo: 3542230 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 11.61 | 0.458 | 9.158 | 2.766 | 96.6 | 75 - 125 | 11.76 | 1.25 | 20 |
| Cadmium | 8.386 | 0.458 | 9.158 | 0.02251 | 91.3 | 75 - 125 | 8.682 | 3.46 | 20 |
| Chromium | 17.35 | 0.458 | 9.158 | 7.311 | 110 | 75 - 125 | 17.83 | 2.71 | 20 |
| Copper | 16.91 | 0.458 | 9.158 | 7.513 | 103 | 75 - 125 | 17.06 | 0.872 | 20 |
| Lead | 21.28 | 0.458 | 9.158 | 13.3 | 87.2 | 75 - 125 | 22.8 | 6.9 | 20 |
| Nickel | 14.74 | 0.458 | 9.158 | 4.9 | 107 | 75 - 125 | 15.07 | 2.18 | 20 |
| Selenium | 9.405 | 0.458 | 9.158 | 0.6853 | 95.2 | 75 - 125 | 9.67 | 2.78 | 20 |
| Zinc | 77.21 | 0.458 | 9.158 | 68.21 | 98.3 | 75 - 125 | 108.9 | 34.1 | 20 RO |

| MSD | Sample ID: HS15121094-01MSD | Units: mg/Kg | | Analysis Date: 05-Jan-2016 11:54 | | | | | |
|------------|-----------------------------|----------------|-----------------------|----------------------------------|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: ICPMS04_267205 | SeqNo: 3543972 | PrepDate: 30-Dec-2015 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Molybdenum | 8.635 | 0.458 | 9.158 | 0.577 | 88.0 | 75 - 125 | 9 | 4.14 | 20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| Batch ID: 100205 | | Instrument: ICPMS03 | | Method: SW6020 | | | | |
|------------------|--------|---------------------------------|---------|----------------|------|----------------------------------|---------------|----------------|
| PDS | | Sample ID: HS15121094-01BS | | Units: mg/Kg | | Analysis Date: 31-Dec-2015 20:44 | | |
| Client ID: | | Run ID: ICPMS03_267097 | | SeqNo: 3542231 | | PrepDate: 30-Dec-2015 DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual |
| Arsenic | 12.12 | 0.484 | 9.684 | 2.766 | 96.5 | 75 - 125 | | |
| Cadmium | 8.772 | 0.484 | 9.684 | 0.02251 | 90.3 | 75 - 125 | | |
| Chromium | 16.3 | 0.484 | 9.684 | 7.311 | 92.8 | 75 - 125 | | |
| Copper | 16.06 | 0.484 | 9.684 | 7.513 | 88.2 | 75 - 125 | | |
| Lead | 22.19 | 0.484 | 9.684 | 13.3 | 91.8 | 75 - 125 | | |
| Molybdenum | 7.631 | 0.484 | 9.684 | -0.9446 | 88.6 | 75 - 125 | | |
| Nickel | 13.63 | 0.484 | 9.684 | 4.9 | 90.1 | 75 - 125 | | |
| Selenium | 10.23 | 0.484 | 9.684 | 0.6853 | 98.5 | 75 - 125 | | |
| Zinc | 75.73 | 0.484 | 9.684 | 68.21 | 77.7 | 75 - 125 | | |
| PDS | | Sample ID: HS15121094-01BS | | Units: mg/Kg | | Analysis Date: 05-Jan-2016 11:58 | | |
| Client ID: | | Run ID: ICPMS04_267205 | | SeqNo: 3543973 | | PrepDate: 30-Dec-2015 DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual |
| Molybdenum | 9.671 | 0.484 | 9.684 | 0.577 | 93.9 | 75 - 125 | | |
| SD | | Sample ID: HS15121094-01 DIL SX | | Units: mg/Kg | | Analysis Date: 31-Dec-2015 20:32 | | |
| Client ID: | | Run ID: ICPMS03_267097 | | SeqNo: 3542228 | | PrepDate: 30-Dec-2015 DF: 5 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D Limit Qual |
| Arsenic | 2.754 | 2.42 | | | | | 2.766 | 0.438 10 |
| Cadmium | < 2.42 | 2.42 | | | | | 0.02251 | 0 10 |
| Chromium | 7.283 | 2.42 | | | | | 7.311 | 0.384 10 |
| Copper | 7.549 | 2.42 | | | | | 7.513 | 0.477 10 |
| Lead | 14.3 | 2.42 | | | | | 13.3 | 7.57 10 |
| Nickel | 4.84 | 2.42 | | | | | 4.9 | 1.24 10 |
| Selenium | < 2.42 | 2.42 | | | | | 0.6853 | 0 10 |
| Zinc | 70.84 | 2.42 | | | | | 68.21 | 3.86 10 |
| SD | | Sample ID: HS15121094-01 DIL SX | | Units: mg/Kg | | Analysis Date: 05-Jan-2016 11:46 | | |
| Client ID: | | Run ID: ICPMS04_267205 | | SeqNo: 3543970 | | PrepDate: 30-Dec-2015 DF: 5 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D Limit Qual |
| Molybdenum | < 2.42 | 2.42 | | | | | 0.577 | 0 10 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100205 Instrument: ICPMS03 Method: SW6020

The following samples were analyzed in this batch:

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100362 **Instrument:** HG03 **Method:** SW7470

MBLK Sample ID: **MBLK-100362** Units: **mg/L** Analysis Date: **07-Jan-2016 23:18**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546706** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury < 0.000200 0.000200

LCS Sample ID: **LCS-100362** Units: **mg/L** Analysis Date: **07-Jan-2016 23:19**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546707** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury 0.00473 0.000200 0.005 0 94.6 80 - 124

MS Sample ID: **HS16010117-07MS** Units: **mg/L** Analysis Date: **07-Jan-2016 23:47**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546722** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury 0.00452 0.000200 0.005 0.000009 90.2 80 - 124

MS Sample ID: **HS16010117-03MS** Units: **mg/L** Analysis Date: **07-Jan-2016 23:38**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546717** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury 0.00503 0.000200 0.005 0.000001 101 80 - 124

MSD Sample ID: **HS16010117-07MSD** Units: **mg/L** Analysis Date: **07-Jan-2016 23:49**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546723** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury 0.00494 0.000200 0.005 0.000009 98.6 80 - 124 0.00452 8.88 20

MSD Sample ID: **HS16010117-03MSD** Units: **mg/L** Analysis Date: **07-Jan-2016 23:40**
 Client ID: Run ID: **HG03_267369** SeqNo: **3546718** PrepDate: **06-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD Limit Qual

Mercury 0.00485 0.000200 0.005 0.000001 97.0 80 - 124 0.00503 3.64 20

The following samples were analyzed in this batch: HS15121095-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| Batch ID: 100396 | | Instrument: ICPMS05 | | Method: SW6020 | | | | |
|------------------|-------------------------------|-----------------------|------------------------------|----------------------------------|------|---------------|---------------|---------------------|
| MBLK | Sample ID: MBLK-100396 | Units: mg/L | | Analysis Date: 11-Jan-2016 12:23 | | | | |
| Client ID: | Run ID: ICPMS05_267445 | SeqNo: 3548519 | PrepDate: 08-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Arsenic | < 0.00500 | 0.00500 | | | | | | |
| Cadmium | < 0.00200 | 0.00200 | | | | | | |
| Chromium | < 0.00500 | 0.00500 | | | | | | |
| Copper | < 0.00200 | 0.00200 | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | |
| Molybdenum | < 0.00500 | 0.00500 | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | |
| Zinc | < 0.00500 | 0.00500 | | | | | | |

| LCS | Sample ID: MLCS-100396 | Units: mg/L | | Analysis Date: 11-Jan-2016 12:26 | | | | |
|------------|-------------------------------|-----------------------|------------------------------|----------------------------------|------|---------------|---------------|---------------------|
| Client ID: | Run ID: ICPMS05_267445 | SeqNo: 3548520 | PrepDate: 08-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Arsenic | 0.04611 | 0.00500 | 0.05 | 0 | 92.2 | 80 - 120 | | |
| Cadmium | 0.04622 | 0.00200 | 0.05 | 0 | 92.4 | 80 - 120 | | |
| Chromium | 0.04791 | 0.00500 | 0.05 | 0 | 95.8 | 80 - 120 | | |
| Copper | 0.04867 | 0.00200 | 0.05 | 0 | 97.3 | 80 - 120 | | |
| Lead | 0.04575 | 0.00500 | 0.05 | 0 | 91.5 | 80 - 120 | | |
| Molybdenum | 0.04685 | 0.00500 | 0.05 | 0 | 93.7 | 80 - 120 | | |
| Nickel | 0.04817 | 0.00500 | 0.05 | 0 | 96.3 | 80 - 120 | | |
| Selenium | 0.04634 | 0.00500 | 0.05 | 0 | 92.7 | 80 - 120 | | |
| Zinc | 0.05017 | 0.00500 | 0.05 | 0 | 100 | 80 - 120 | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: 100396 **Instrument:** ICPMS05 **Method:** SW6020

| MS | | Sample ID: HS16010043-29MS | | Units: mg/L | | Analysis Date: 11-Jan-2016 13:57 | | | |
|------------|---------|----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS05_267445 | | SeqNo: 3548586 | | PrepDate: 08-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 0.0573 | 0.00500 | 0.05 | 0.01047 | 93.7 | 80 - 120 | | | |
| Cadmium | 0.04614 | 0.00200 | 0.05 | 0.000009 | 92.3 | 80 - 120 | | | |
| Chromium | 0.04582 | 0.00500 | 0.05 | 0.000037 | 91.6 | 80 - 120 | | | |
| Copper | 0.04635 | 0.00200 | 0.05 | 0.000087 | 92.5 | 80 - 120 | | | |
| Lead | 0.04466 | 0.00500 | 0.05 | 0.000289 | 88.7 | 80 - 120 | | | |
| Molybdenum | 0.04822 | 0.00500 | 0.05 | 0.003276 | 89.9 | 80 - 120 | | | |
| Nickel | 0.04582 | 0.00500 | 0.05 | -0.00029 | 92.2 | 80 - 120 | | | |
| Selenium | 0.04842 | 0.00500 | 0.05 | 0.000544 | 95.7 | 80 - 120 | | | |
| Zinc | 0.05209 | 0.00500 | 0.05 | 0.004984 | 94.2 | 80 - 120 | | | |

| MSD | | Sample ID: HS16010043-29MSD | | Units: mg/L | | Analysis Date: 11-Jan-2016 12:48 | | | |
|------------|---------|-----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS05_267445 | | SeqNo: 3548527 | | PrepDate: 08-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 0.05785 | 0.00500 | 0.05 | 0.01047 | 94.8 | 80 - 120 | 0.0573 | 0.952 | 20 |
| Cadmium | 0.04629 | 0.00200 | 0.05 | 0.000009 | 92.6 | 80 - 120 | 0.04614 | 0.318 | 20 |
| Chromium | 0.04573 | 0.00500 | 0.05 | 0.000037 | 91.4 | 80 - 120 | 0.04582 | 0.199 | 20 |
| Copper | 0.04619 | 0.00200 | 0.05 | 0.000087 | 92.2 | 80 - 120 | 0.04635 | 0.346 | 20 |
| Lead | 0.04514 | 0.00500 | 0.05 | 0.000289 | 89.7 | 80 - 120 | 0.04466 | 1.06 | 20 |
| Molybdenum | 0.04882 | 0.00500 | 0.05 | 0.003276 | 91.1 | 80 - 120 | 0.04822 | 1.22 | 20 |
| Nickel | 0.04535 | 0.00500 | 0.05 | -0.00029 | 91.3 | 80 - 120 | 0.04582 | 1.03 | 20 |
| Selenium | 0.0466 | 0.00500 | 0.05 | 0.000544 | 92.1 | 80 - 120 | 0.04842 | 3.82 | 20 |
| Zinc | 0.05092 | 0.00500 | 0.05 | 0.004984 | 91.9 | 80 - 120 | 0.05209 | 2.26 | 20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | |
|------------------|---------------------|----------------|
| Batch ID: 100396 | Instrument: ICPMS05 | Method: SW6020 |
|------------------|---------------------|----------------|

| PDS | | Sample ID: HS16010043-29BS | | | Units: mg/L | | Analysis Date: 11-Jan-2016 12:51 | | |
|------------|---------|----------------------------|---------|----------------|-------------|-----------------------|----------------------------------|-------|----------------|
| Client ID: | | Run ID: ICPMS05_267445 | | SeqNo: 3548528 | | PrepDate: 08-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 0.1056 | 0.00500 | 0.1 | 0.01047 | 95.2 | 75 - 125 | | | |
| Cadmium | 0.09283 | 0.00200 | 0.1 | 0.000009 | 92.8 | 75 - 125 | | | |
| Chromium | 0.09398 | 0.00500 | 0.1 | 0.000037 | 93.9 | 75 - 125 | | | |
| Copper | 0.09282 | 0.00200 | 0.1 | 0.000087 | 92.7 | 75 - 125 | | | |
| Lead | 0.09213 | 0.00500 | 0.1 | 0.000289 | 91.8 | 75 - 125 | | | |
| Molybdenum | 0.09613 | 0.00500 | 0.1 | 0.003276 | 92.9 | 75 - 125 | | | |
| Nickel | 0.09343 | 0.00500 | 0.1 | -0.00029 | 93.7 | 75 - 125 | | | |
| Selenium | 0.09653 | 0.00500 | 0.1 | 0.000544 | 96.0 | 75 - 125 | | | |
| Zinc | 0.09979 | 0.00500 | 0.1 | 0.004984 | 94.8 | 75 - 125 | | | |

| SD | | Sample ID: HS16010043-29 DIL SX | | | Units: mg/L | | Analysis Date: 11-Jan-2016 12:35 | | |
|------------|----------|---------------------------------|---------|----------------|-------------|-----------------------|----------------------------------|-------|---------------|
| Client ID: | | Run ID: ICPMS05_267445 | | SeqNo: 3548523 | | PrepDate: 08-Jan-2016 | | DF: 5 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit Qual |
| Arsenic | 0.01055 | 0.0250 | | 0.01047 | | | 0.01047 | 0 10 | J |
| Cadmium | < 0.0100 | 0.0100 | | 0.000009 | | | 0.000009 | 0 10 | |
| Chromium | < 0.0250 | 0.0250 | | 0.000037 | | | 0.000037 | 0 10 | |
| Copper | < 0.0100 | 0.0100 | | 0.000087 | | | 0.000087 | 0 10 | |
| Lead | < 0.0250 | 0.0250 | | 0.000289 | | | 0.000289 | 0 10 | |
| Molybdenum | 0.003294 | 0.0250 | | 0.003276 | | | 0.003276 | 0 10 | J |
| Nickel | < 0.0250 | 0.0250 | | -0.00029 | | | -0.00029 | 0 10 | |
| Selenium | < 0.0250 | 0.0250 | | 0.000544 | | | 0.000544 | 0 10 | |
| Zinc | < 0.0250 | 0.0250 | | 0.004984 | | | 0.004984 | 0 10 | |

The following samples were analyzed in this batch: HS15121095-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | | | | | | | | |
|------------------|------------------------|---------------------|---------|----------------------------------|-----------------------|---------------|---------------|-----------|----------|
| Batch ID: 100431 | | Instrument: HG02 | | Method: SW7471A | | | | | |
| MBLK | Sample ID: MBLK-100431 | Units: ug/Kg | | Analysis Date: 11-Jan-2016 14:24 | | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548754 | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual |
| Mercury | < 3.32 | 3.32 | | | | | | | |

| | | | | | | | | | | |
|------------|--------|-----------------------|--------------|----------------|----------------------------------|---------------|---------------|-----------|----------|--|
| LCS | | Sample ID: LCS-100431 | Units: ug/Kg | | Analysis Date: 11-Jan-2016 14:26 | | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548755 | PrepDate: 11-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual | |
| Mercury | 372.7 | 3.32 | 333.3 | 0 | 112 | 85 - 115 | | | | |

| | | | | | | | | | | |
|-------------------|--------|----------------------------|--------------|----------------|----------------------------------|---------------|---------------|-----------|----------|--|
| MS | | Sample ID: HS15121095-03MS | Units: ug/Kg | | Analysis Date: 11-Jan-2016 14:32 | | | | | |
| Client ID: E-0-6" | | Run ID: HG02_267495 | | SeqNo: 3548757 | PrepDate: 11-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual | |
| Mercury | 380.9 | 3.73 | 374.2 | 11.43 | 98.7 | 85 - 115 | | | | |

| | | | | | | | | | | |
|-------------------|--------|-----------------------------|--------------|----------------|----------------------------------|---------------|---------------|-----------|----------|--|
| MSD | | Sample ID: HS15121095-03MSD | Units: ug/Kg | | Analysis Date: 11-Jan-2016 14:34 | | | | | |
| Client ID: E-0-6" | | Run ID: HG02_267495 | | SeqNo: 3548758 | PrepDate: 11-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | RPD Qual | |
| Mercury | 399.9 | 3.71 | 372.3 | 11.43 | 104 | 85 - 115 | 380.9 | 4.85 | 20 | |

The following samples were analyzed in this batch: HS15121095-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | |
|-------------------|------------------|----------------|
| Batch ID: R267040 | Instrument: VOA8 | Method: SW8260 |
|-------------------|------------------|----------------|

| MBLK | Sample ID: VBLKS1-123015 | Units: ug/Kg | | | Analysis Date: 30-Dec-2015 11:19 | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|---------------------|
| Client ID: | Run ID: VOA8_267040 | SeqNo: 3540034 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Benzene | < 5.0 | 5.0 | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 43.38 | 0 | 50 | 0 | 86.8 | 70 - 128 | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 46.48 | 0 | 50 | 0 | 93.0 | 73 - 126 | | |
| <i>Surr: Dibromofluoromethane</i> | 49.85 | 0 | 50 | 0 | 99.7 | 71 - 128 | | |
| <i>Surr: Toluene-d8</i> | 51.33 | 0 | 50 | 0 | 103 | 73 - 127 | | |

| LCS | Sample ID: VLCSS1-123015 | Units: ug/Kg | | | Analysis Date: 30-Dec-2015 10:23 | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|---------------------|
| Client ID: | Run ID: VOA8_267040 | SeqNo: 3540033 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Benzene | 51.69 | 5.0 | 50 | 0 | 103 | 79 - 122 | | |
| Ethylbenzene | 49 | 5.0 | 50 | 0 | 98.0 | 80 - 122 | | |
| m,p-Xylene | 94.62 | 10 | 100 | 0 | 94.6 | 79 - 122 | | |
| Methyl tert-butyl ether | 50.15 | 5.0 | 50 | 0 | 100 | 76 - 124 | | |
| o-Xylene | 49.03 | 5.0 | 50 | 0 | 98.1 | 80 - 123 | | |
| Toluene | 48.12 | 5.0 | 50 | 0 | 96.2 | 79 - 120 | | |
| Xylenes, Total | 143.6 | 10 | 150 | 0 | 95.8 | 80 - 120 | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 51.24 | 0 | 50 | 0 | 102 | 70 - 128 | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.86 | 0 | 50 | 0 | 99.7 | 73 - 126 | | |
| <i>Surr: Dibromofluoromethane</i> | 49.82 | 0 | 50 | 0 | 99.6 | 71 - 128 | | |
| <i>Surr: Toluene-d8</i> | 48.89 | 0 | 50 | 0 | 97.8 | 73 - 127 | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | |
|--------------------------|-------------------------|-----------------------|
| Batch ID: R267040 | Instrument: VOA8 | Method: SW8260 |
|--------------------------|-------------------------|-----------------------|

| MS | | Sample ID: HS15121095-03MS | | Units: ug/Kg | | Analysis Date: 30-Dec-2015 12:41 | | | |
|------------------------------------|--------------|----------------------------|-------------|----------------|------------|----------------------------------|---------------|-------|----------------|
| Client ID: E-0-6" | | Run ID: VOA8_267040 | | SeqNo: 3540103 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 46.09 | 4.8 | 48.5 | 0 | 95.0 | 79 - 122 | | | |
| Ethylbenzene | 37.38 | 4.8 | 48.5 | 0 | 77.1 | 80 - 122 | | | S |
| m,p-Xylene | 71.82 | 9.7 | 97 | 0 | 74.0 | 79 - 122 | | | S |
| Methyl tert-butyl ether | 46.15 | 4.8 | 48.5 | 0 | 95.2 | 76 - 124 | | | |
| o-Xylene | 36.77 | 4.8 | 48.5 | 0 | 75.8 | 80 - 123 | | | S |
| Toluene | 40.11 | 4.8 | 48.5 | 0 | 82.7 | 79 - 120 | | | |
| Xylenes, Total | 108.6 | 9.7 | 145.5 | 0 | 74.6 | 80 - 120 | | | S |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>49.39</i> | <i>0</i> | <i>48.5</i> | <i>0</i> | <i>102</i> | <i>70 - 128</i> | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>48.82</i> | <i>0</i> | <i>48.5</i> | <i>0</i> | <i>101</i> | <i>73 - 126</i> | | | |
| <i>Surr: Dibromofluoromethane</i> | <i>49.14</i> | <i>0</i> | <i>48.5</i> | <i>0</i> | <i>101</i> | <i>71 - 128</i> | | | |
| <i>Surr: Toluene-d8</i> | <i>49.4</i> | <i>0</i> | <i>48.5</i> | <i>0</i> | <i>102</i> | <i>73 - 127</i> | | | |

| MSD | | Sample ID: HS15121095-03MSD | | Units: ug/Kg | | Analysis Date: 30-Dec-2015 13:09 | | | |
|------------------------------------|--------------|-----------------------------|-----------|----------------|-------------|----------------------------------|---------------|--------------|----------------|
| Client ID: E-0-6" | | Run ID: VOA8_267040 | | SeqNo: 3540104 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 55.31 | 5.0 | 50 | 0 | 111 | 79 - 122 | 46.09 | 18.2 | 30 |
| Ethylbenzene | 45.69 | 5.0 | 50 | 0 | 91.4 | 80 - 122 | 37.38 | 20 | 30 |
| m,p-Xylene | 87.9 | 10 | 100 | 0 | 87.9 | 79 - 122 | 71.82 | 20.1 | 30 |
| Methyl tert-butyl ether | 55.97 | 5.0 | 50 | 0 | 112 | 76 - 124 | 46.15 | 19.2 | 30 |
| o-Xylene | 44.62 | 5.0 | 50 | 0 | 89.2 | 80 - 123 | 36.77 | 19.3 | 30 |
| Toluene | 48.72 | 5.0 | 50 | 0 | 97.4 | 79 - 120 | 40.11 | 19.4 | 30 |
| Xylenes, Total | 132.5 | 10 | 150 | 0 | 88.3 | 80 - 120 | 108.6 | 19.8 | 30 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>51.15</i> | <i>0</i> | <i>50</i> | <i>0</i> | <i>102</i> | <i>70 - 128</i> | <i>49.39</i> | <i>3.51</i> | <i>30</i> |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>49.21</i> | <i>0</i> | <i>50</i> | <i>0</i> | <i>98.4</i> | <i>73 - 126</i> | <i>48.82</i> | <i>0.787</i> | <i>30</i> |
| <i>Surr: Dibromofluoromethane</i> | <i>49.41</i> | <i>0</i> | <i>50</i> | <i>0</i> | <i>98.8</i> | <i>71 - 128</i> | <i>49.14</i> | <i>0.544</i> | <i>30</i> |
| <i>Surr: Toluene-d8</i> | <i>49.92</i> | <i>0</i> | <i>50</i> | <i>0</i> | <i>99.8</i> | <i>73 - 127</i> | <i>49.4</i> | <i>1.05</i> | <i>30</i> |

The following samples were analyzed in this batch: HS15121095-03 HS15121095-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: R267066 **Instrument:** VOA6 **Method:** SW8260

| MBLK | | Sample ID: VBLKW-151230 | | Units: ug/L | | Analysis Date: 30-Dec-2015 18:32 | | | |
|------------------------------------|--------|--------------------------------|---------|-----------------------|------|---|---------------|--------------|----------------|
| Client ID: | | Run ID: VOA6_267066 | | SeqNo: 3541142 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 51.29 | 1.0 | 50 | 0 | 103 | 71 - 125 | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 42.36 | 1.0 | 50 | 0 | 84.7 | 70 - 125 | | | |
| <i>Surr: Dibromofluoromethane</i> | 50.19 | 1.0 | 50 | 0 | 100 | 74 - 125 | | | |
| <i>Surr: Toluene-d8</i> | 51.83 | 1.0 | 50 | 0 | 104 | 75 - 125 | | | |

| LCS | | Sample ID: VLCSW-151230 | | Units: ug/L | | Analysis Date: 30-Dec-2015 17:19 | | | |
|------------------------------------|--------|--------------------------------|---------|-----------------------|------|---|---------------|--------------|----------------|
| Client ID: | | Run ID: VOA6_267066 | | SeqNo: 3540668 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 45.61 | 1.0 | 50 | 0 | 91.2 | 75 - 122 | | | |
| Ethylbenzene | 46.5 | 1.0 | 50 | 0 | 93.0 | 80 - 120 | | | |
| Toluene | 45.64 | 1.0 | 50 | 0 | 91.3 | 75 - 121 | | | |
| Xylenes, Total | 137.6 | 3.0 | 150 | 0 | 91.8 | 79 - 124 | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 53.2 | 1.0 | 50 | 0 | 106 | 71 - 125 | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49 | 1.0 | 50 | 0 | 98.0 | 70 - 125 | | | |
| <i>Surr: Dibromofluoromethane</i> | 51.33 | 1.0 | 50 | 0 | 103 | 74 - 125 | | | |
| <i>Surr: Toluene-d8</i> | 49.05 | 1.0 | 50 | 0 | 98.1 | 75 - 125 | | | |

| MS | | Sample ID: HS15120950-10MS | | Units: ug/L | | Analysis Date: 30-Dec-2015 19:44 | | | |
|------------------------------------|--------|-----------------------------------|---------|-----------------------|------|---|---------------|---------------|----------------|
| Client ID: | | Run ID: VOA6_267066 | | SeqNo: 3541145 | | PrepDate: | | DF: 25 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 3209 | 25 | 1250 | 2617 | 47.4 | 75 - 122 | | | S |
| Ethylbenzene | 1450 | 25 | 1250 | 283.7 | 93.3 | 80 - 120 | | | |
| Toluene | 1200 | 25 | 1250 | 0 | 96.0 | 75 - 121 | | | |
| Xylenes, Total | 5208 | 75 | 3750 | 1765 | 91.8 | 80 - 124 | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 1328 | 25 | 1250 | 0 | 106 | 71 - 125 | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 1241 | 25 | 1250 | 0 | 99.3 | 70 - 125 | | | |
| <i>Surr: Dibromofluoromethane</i> | 1270 | 25 | 1250 | 0 | 102 | 74 - 125 | | | |
| <i>Surr: Toluene-d8</i> | 1225 | 25 | 1250 | 0 | 98.0 | 75 - 125 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: R267066 Instrument: VOA6 Method: SW8260

| MSD | Sample ID: HS15120950-10MSD | Units: ug/L | | | Analysis Date: 30-Dec-2015 20:08 | | | | | |
|-----------------------------|-----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|-------|-----------|------|
| Client ID: | Run ID: VOA6_267066 | SeqNo: 3541146 | PrepDate: | DF: 25 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 3153 | 25 | 1250 | 2617 | 42.9 | 75 - 122 | 3209 | 1.77 | 20 | S |
| Ethylbenzene | 1477 | 25 | 1250 | 283.7 | 95.5 | 80 - 120 | 1450 | 1.86 | 20 | |
| Toluene | 1200 | 25 | 1250 | 0 | 96.0 | 75 - 121 | 1200 | 0.054 | 20 | |
| Xylenes, Total | 5249 | 75 | 3750 | 1765 | 92.9 | 80 - 124 | 5208 | 0.779 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 1318 | 25 | 1250 | 0 | 105 | 71 - 125 | 1328 | 0.777 | 20 | |
| Surr: 4-Bromofluorobenzene | 1234 | 25 | 1250 | 0 | 98.7 | 70 - 125 | 1241 | 0.531 | 20 | |
| Surr: Dibromofluoromethane | 1274 | 25 | 1250 | 0 | 102 | 74 - 125 | 1270 | 0.272 | 20 | |
| Surr: Toluene-d8 | 1229 | 25 | 1250 | 0 | 98.3 | 75 - 125 | 1225 | 0.354 | 20 | |

The following samples were analyzed in this batch: HS15121095-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: R267115 Instrument: VOA6 Method: SW8260

| MBLK | Sample ID: VBLKW-151231 | Units: ug/L | | | Analysis Date: 31-Dec-2015 15:45 | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|---------------------|
| Client ID: | Run ID: VOA6_267115 | SeqNo: 3542465 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Benzene | < 1.0 | 1.0 | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 51.94 | 1.0 | 50 | 0 | 104 | 71 - 125 | | |
| Surr: 4-Bromofluorobenzene | 41.87 | 1.0 | 50 | 0 | 83.7 | 70 - 125 | | |
| Surr: Dibromofluoromethane | 50.18 | 1.0 | 50 | 0 | 100 | 74 - 125 | | |
| Surr: Toluene-d8 | 51.65 | 1.0 | 50 | 0 | 103 | 75 - 125 | | |

| LCS | Sample ID: VLCSW-151231 | Units: ug/L | | | Analysis Date: 31-Dec-2015 14:33 | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|---------------------|
| Client ID: | Run ID: VOA6_267115 | SeqNo: 3541694 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Benzene | 45.41 | 1.0 | 50 | 0 | 90.8 | 75 - 122 | | |
| Ethylbenzene | 45.37 | 1.0 | 50 | 0 | 90.7 | 80 - 120 | | |
| Toluene | 45.1 | 1.0 | 50 | 0 | 90.2 | 75 - 121 | | |
| Xylenes, Total | 134.7 | 3.0 | 150 | 0 | 89.8 | 79 - 124 | | |
| Surr: 1,2-Dichloroethane-d4 | 52.91 | 1.0 | 50 | 0 | 106 | 71 - 125 | | |
| Surr: 4-Bromofluorobenzene | 49.56 | 1.0 | 50 | 0 | 99.1 | 70 - 125 | | |
| Surr: Dibromofluoromethane | 51.38 | 1.0 | 50 | 0 | 103 | 74 - 125 | | |
| Surr: Toluene-d8 | 49.49 | 1.0 | 50 | 0 | 99.0 | 75 - 125 | | |

| MS | Sample ID: HS15121137-02MS | Units: ug/L | | | Analysis Date: 31-Dec-2015 16:57 | | | |
|-----------------------------|----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|---------------------|
| Client ID: | Run ID: VOA6_267115 | SeqNo: 3542468 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD Limit Qual |
| Benzene | 46.53 | 1.0 | 50 | 0 | 93.1 | 75 - 122 | | |
| Ethylbenzene | 47.31 | 1.0 | 50 | 0 | 94.6 | 80 - 120 | | |
| Toluene | 47.05 | 1.0 | 50 | 0 | 94.1 | 75 - 121 | | |
| Xylenes, Total | 142.4 | 3.0 | 150 | 0 | 94.9 | 80 - 124 | | |
| Surr: 1,2-Dichloroethane-d4 | 52.53 | 1.0 | 50 | 0 | 105 | 71 - 125 | | |
| Surr: 4-Bromofluorobenzene | 49.86 | 1.0 | 50 | 0 | 99.7 | 70 - 125 | | |
| Surr: Dibromofluoromethane | 51.28 | 1.0 | 50 | 0 | 103 | 74 - 125 | | |
| Surr: Toluene-d8 | 48.92 | 1.0 | 50 | 0 | 97.8 | 75 - 125 | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: R267115 Instrument: VOA6 Method: SW8260

| MSD | Sample ID: HS15121137-02MSD | Units: ug/L | | | Analysis Date: 31-Dec-2015 17:21 | | | | | |
|------------------------------------|-----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|-------|-----------|------|
| Client ID: | Run ID: VOA6_267115 | SeqNo: 3542469 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 47.05 | 1.0 | 50 | 0 | 94.1 | 75 - 122 | 46.53 | 1.12 | 20 | |
| Ethylbenzene | 45.8 | 1.0 | 50 | 0 | 91.6 | 80 - 120 | 47.31 | 3.24 | 20 | |
| Toluene | 46.59 | 1.0 | 50 | 0 | 93.2 | 75 - 121 | 47.05 | 0.983 | 20 | |
| Xylenes, Total | 141.4 | 3.0 | 150 | 0 | 94.2 | 80 - 124 | 142.4 | 0.701 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 53.37 | 1.0 | 50 | 0 | 107 | 71 - 125 | 52.53 | 1.58 | 20 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.22 | 1.0 | 50 | 0 | 98.4 | 70 - 125 | 49.86 | 1.3 | 20 | |
| <i>Surr: Dibromofluoromethane</i> | 51.37 | 1.0 | 50 | 0 | 103 | 74 - 125 | 51.28 | 0.175 | 20 | |
| <i>Surr: Toluene-d8</i> | 49.58 | 1.0 | 50 | 0 | 99.2 | 75 - 125 | 48.92 | 1.35 | 20 | |

The following samples were analyzed in this batch: HS15121095-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

| | | |
|-------------------|------------------------|-----------------|
| Batch ID: R267053 | Instrument: WetChem_HS | Method: SW9045B |
|-------------------|------------------------|-----------------|

| | | | | | | | | | |
|------------|---------------------------|-----------------|----------------------------------|---------------|------|---------------|---------------|----------|----------------|
| LCS | Sample ID: LCS-267053 | Units: pH Units | Analysis Date: 30-Dec-2015 15:34 | | | | | | |
| Client ID: | Run ID: WetChem_HS_267053 | SeqNo: 3540332 | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| pH | 6.02 | 0.100 | 6 | 0 | 100 | 97 - 103 | | | |

| | | | | | | | | | |
|-------------------|-----------------------------|-----------------|----------------------------------|---------------|------|---------------|---------------|----------|----------------|
| DUP | Sample ID: HS15121095-03DUP | Units: pH Units | Analysis Date: 30-Dec-2015 15:34 | | | | | | |
| Client ID: E-0-6" | Run ID: WetChem_HS_267053 | SeqNo: 3540333 | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| pH | 6.95 | 0.100 | | | | | 6.63 | 4.71 | 10 |
| Temp Deg C @pH | 20.4 | 0 | | | | | 20.6 | 0.976 | 10 |

The following samples were analyzed in this batch: HS15121095-03 HS15121095-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

QC BATCH REPORT

Batch ID: R267149 **Instrument:** Balance1 **Method:** SW3550

DUP **Sample ID:** HS15121172-06DUP **Units:** wt% **Analysis Date:** 31-Dec-2015 09:47
Client ID: **Run ID:** Balance1_267149 **SeqNo:** 3542836 **PrepDate:** **DF:** 1
Analyte **Result** **PQL** **SPK Val** **SPK Ref Value** **%REC** **Control Limit** **RPD Ref Value** **%RPD** **RPD Limit Qual**

Percent Moisture 13.9 0.0100 14.7 5.59 20

The following samples were analyzed in this batch: HS15121095-03 HS15121095-04 HS15121095-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121095

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |
| mg/L | Milligrams per Liter |

CERTIFICATIONS, ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121095

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS15121095-01 | Trip Blank | Login | 12/29/2015 1:33:00 PM | PMG | VW-3 |
| HS15121095-02 | Equipment Blank | Login | 12/29/2015 1:33:00 PM | PMG | 1C |
| HS15121095-02 | Equipment Blank | Login | 12/29/2015 1:33:00 PM | PMG | VW-3 |
| HS15121095-02 | Equipment Blank | Login | 12/29/2015 1:33:00 PM | PMG | TPH C1 |
| HS15121095-03 | E-0-6" | Login | 12/29/2015 1:40:14 PM | PMG | VW-2 |
| HS15121095-03 | E-0-6" | Login | 12/29/2015 1:40:14 PM | PMG | TPH C1 |
| HS15121095-03 | E-0-6" | Login | 12/29/2015 1:40:14 PM | PMG | 1D |
| HS15121095-03 | E-0-6" | Login | 12/29/2015 1:40:14 PM | PMG | Sub |
| HS15121095-04 | E-6"-12" | Login | 12/29/2015 1:40:14 PM | PMG | VW-2 |
| HS15121095-04 | E-6"-12" | Login | 12/29/2015 1:40:14 PM | PMG | LF-22 |
| HS15121095-05 | E-6"-24" | Login | 12/29/2015 1:40:14 PM | PMG | 1D |
| HS15121095-05 | E-6"-24" | Login | 12/29/2015 1:40:14 PM | PMG | Sub |
| HS15121095-03 | E-0-6" | Return | 12/30/2015 2:55:18 PM | HAS | 1D |
| HS15121095-02 | Equipment Blank | Return | 1/8/2016 1:10:30 PM | HAS | 1C |
| HS15121095-03 | E-0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS15121095-03 | E-0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 1D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS15121095

Date/Time Received: 29-Dec-2015 09:10
 Received by: NDR

Checklist completed by: Pareesh M. Giga 29-Dec-2015
 eSignature Date

Reviewed by: Dane J. Wacasey 4-Jan-2016
 eSignature Date

Matrices: Soil/Water

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 3.5c/3.7c U/C IR4

Cooler(s)/Kit(s): Red

Date/Time sample(s) sent to storage: 12/29/15 15:10

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes: Limited sample for soils (Nutrients).

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



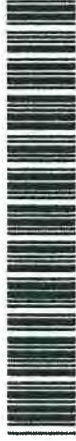
Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Chain of Custody Form

Page 1 of
COC ID: **135938**

HS15121095

Texas Commission on Environmental Quality
800 Acre Tract Soil Project



Environmental

| Customer Information | | | | Project Information | | | | | | | | | | | | | |
|--|-----------------------------------|-------------------|-----------------------------------|-----------------------------------|--|-----------|---|---------------------------------------|---|---|---|-------------------------|---|---|---|---|------|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project | A | SUB (No line item - Nutrients (Energy Labs)) | | | | | | | | | | | | |
| Work Order | | Project Number | | B | TKN_S_4500NH3 D (Group E - TKN) | | | | | | | | | | | | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental | C | PH_S (Group _ pH) | | | | | | | | | | | | |
| Send/Report To | Bill Ross | Invoice Attn | Julie Steger - A/P | D | ICP_S_Low (Group B Total Metals 6020/7470 (10 w/Hg)) | | | | | | | | | | | | |
| Address | 6300 Ocean Drive Unit 5839 | | P.O. Box 13087 | E | 8260_S (Group B BTEX+MTBE 8260) | | | | | | | | | | | | |
| City/State/Zip | NRC Building Suite 1200 | | Austin, TX 78711 | F | TX1005_S_REV3 (Group B TPH TX1005) | | | | | | | | | | | | |
| Phone | (361) 825-3100 | City/State/Zip | (512) 239-5725 | G | ICP_TW (Group B Total Metals 6020/7470 (10 w/Hg) EBLK) | | | | | | | | | | | | |
| Fax | (361) 825-3101 | Phone | | H | 8260_LL_W (Group B BTEX/MTBE 8260 EBLK) | | | | | | | | | | | | |
| e-Mail Address | | Fax | | I | TX1005_W_Low (Group B-TPH TX1005 EBLK) | | | | | | | | | | | | |
| | | e-Mail Address | | J | <i>Sup Blank</i> | | | | | | | | | | | | |
| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
| 1 | <i>Equipment Blank</i> | <i>12/28/2015</i> | <i>N/A</i> | <i>soil</i> | <i>none</i> | | | | | | | | | | | X | |
| 2 | <i>Sup Blank</i> | <i>12/28/2015</i> | | <i>soil</i> | <i>HCL</i> | | | | | | | | | | | | X |
| 3 | <i>Equipment Blank</i> | <i>12/28/2015</i> | <i>1135</i> | <i>soil</i> | <i>none</i> | <i>7</i> | | | | | | | | | | X | |
| 4 | <i>E-0-6"</i> | <i>12/28/2015</i> | <i>1630</i> | <i>soil</i> | <i>see</i> | <i>4</i> | X | X | X | X | X | X | X | X | X | X | |
| 5 | <i>E-6"-12"</i> | <i>12/28/2015</i> | <i>1635</i> | <i>soil</i> | <i>see</i> | <i>2</i> | | | | | | | | | | | |
| 6 | <i>E-6"-24"</i> | <i>12/28/2015</i> | <i>1642</i> | <i>soil</i> | <i>see</i> | <i>1</i> | X | X | X | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| Sampler(s) Please Print & Sign | | | | Shipment Method | | | | Required Turnaround Time: (Check Box) | | | | Results Due Date: | | | | | |
| Requisitioned by: <i>Henry M. Wang</i> | | | | Received by: <i>R. Riggs</i> | | | | TAT: <u>15</u> days | | | | Other: _____ | | | | | |
| Date: <i>12/29/2015</i> | | | | Time: <i>7:15</i> | | | | Cooler ID: <i>Kel 4100</i> | | | | Cooler Temp: <i>4°C</i> | | | | | |
| Date: <i>12/29/15</i> | | | | Time: <i>9:10</i> | | | | QC Level: <i>STD</i> | | | | Other: _____ | | | | | |
| Date: _____ | | | | Time: _____ | | | | QC Level: _____ | | | | Other: _____ | | | | | |
| Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | | | | Notes: ITCEO, Corvus Soil Project | | | | QC Packages: (Check One Box Below) | | | | | | | | | |

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

| | | |
|---------------------------------|------------|-----------------|
| CUSTODY SEAL | | Seal Broken By: |
| Date: 12/29/15 | Time: 7:15 | NA |
| Name: Terry J. Moore | | |
| Company: ALS Environmental Svc. | | |

ALS Environmental
 10450 Stanciff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5856
 Fax. +1 281 530 5887



250 19 100



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T15120146 Quote ID: T2980 - TCEQ Soil Analysis
Project Name: HS15121095

Energy Laboratories Inc. College Station TX received the following 2 samples for ALS - Houston on 12/31/2015 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|------------------|----------------|--------------|--------|---|
| T15120146-001 | HS15121095-03 | 12/28/15 16:30 | 12/31/15 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract 2:1 KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T15120146-002 | HS15121095-05 | 12/28/15 16:42 | 12/31/15 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Digitally signed by
Amanda Myatt
Date: 2016.01.20 16:42:03 -06:00



CLIENT: ALS - Houston
Project: HS15121095
Work Order: T15120146

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELL-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121095
Lab ID: T15120146-001
Client Sample ID: HS15121095-03

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/28/15 16:30
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 6.8 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 12:56 / eli-h |
| Ammonia as N, KCL Extract | 5.3 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 12:56 / eli-h |
| Conductivity, 1:2 | 0.3 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:37 / tdl |
| Nitrate+Nitrite as N, KCI Extract | 9.8 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:26 / rda |
| Total Kjeldahl Nitrogen | 1080 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2140 | mg/kg | | 5 | | SW6010B | 01/08/16 11:14 / jtr |
| Magnesium | 74 | mg/kg | | 5 | | SW6010B | 01/08/16 11:14 / jtr |
| Phosphorus | 68 | mg/kg | | 5 | | SW6010B | 01/08/16 12:51 / jtr |
| Potassium | 46 | mg/kg | | 5 | | SW6010B | 01/08/16 11:14 / jtr |
| Sodium | 93 | mg/kg | | 5 | | SW6010B | 01/08/16 11:14 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121095
Lab ID: T15120146-002
Client Sample ID: HS15121095-05

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/28/15 16:42
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 6.9 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 12:58 / eli-h |
| Ammonia as N, KCL Extract | 5.4 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 12:58 / eli-h |
| Conductivity, 1:2 | 0.4 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:38 / tdl |
| Nitrate+Nitrite as N, KCl Extract | 8.6 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:29 / rda |
| Total Kjeldahl Nitrogen | 538 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 3160 | mg/kg | | 5 | | SW6010B | 01/08/16 11:18 / jtr |
| Magnesium | 594 | mg/kg | | 5 | | SW6010B | 01/08/16 11:18 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/08/16 12:56 / jtr |
| Potassium | 123 | mg/kg | | 5 | | SW6010B | 01/08/16 11:18 / jtr |
| Sodium | 226 | mg/kg | | 5 | | SW6010B | 01/08/16 11:18 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120146

Client: ALS - Houston

Project: HS15121095

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|--|-------|---|----------|------|------|-----------|------------|-----|----------|----------------|
| Method: A2510 B Analytical Run: COND3_160105B | | | | | | | | | | |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:21 |
| Conductivity, 1:2 | | 0.108 | mmhos/cm | 0.10 | 108 | 90 | 110 | | | |
| Lab ID: COND 2000 Continuing Calibration Verification Standard 01/05/16 13:21 | | | | | | | | | | |
| Conductivity, 1:2 | | 1.92 | mmhos/cm | 0.10 | 96 | 90 | 110 | | | |
| Lab ID: ICV-1413 Initial Calibration Verification Standard 01/05/16 13:23 | | | | | | | | | | |
| Conductivity, 1:2 | | 1.50 | mmhos/cm | 0.10 | 107 | 90 | 110 | | | |
| Method: A2510 B Batch: 160105A-COND-S-SM2510 | | | | | | | | | | |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard Run: COND3_160105B | | | | | | | | 01/05/16 13:22 |
| Conductivity, 1:2 | | 7.14 | mmhos/cm | 0.10 | 102 | 90 | 110 | | | |
| Method: A2510 B Batch: 24659 | | | | | | | | | | |
| Lab ID: LCS-24659 | | Laboratory Control Sample Run: COND3_160105B | | | | | | | | 01/05/16 13:35 |
| Conductivity, 1:2 | | 1.11 | mmhos/cm | 0.10 | 98 | 80 | 120 | | | |
| Lab ID: MB-24659 Method Blank Run: COND3_160105B 01/05/16 13:37 | | | | | | | | | | |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | |
| Lab ID: T15120146-001ADUP Sample Duplicate Run: COND3_160105B 01/05/16 13:38 | | | | | | | | | | |
| Conductivity, 1:2 | | 0.334 | mmhos/cm | 0.10 | | | | 4.5 | 10 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: HS15121095

Work Order: T15120146

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------|-------|-------------------------------|-------|-----|------|-----------|------------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31700 |
| Lab ID: LCS-31700 | | Laboratory Control Sample | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | 1030 | mg/kg | 30 | 110 | 70 | 130 | | | | |
| Lab ID: MB-31700 | | Method Blank | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | ND | mg/kg | 30 | | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | 2750 | mg/kg | 30 | 83 | 50 | 150 | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike Duplicate | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | 2580 | mg/kg | 30 | 75 | 50 | 150 | 6.0 | 30 | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120146

Client: ALS - Houston

Project: HS15121095

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---|---|--------|-------|----|------|-----------|------------|-----|----------|------|
| Method: ASA33-7 Analytical Run: SUB-H112204 | | | | | | | | | | |
| Lab ID: ICV | Initial Calibration Verification Standard 01/12/16 12:49 | | | | | | | | | |
| Ammonia as N, KCL Extract | 9.09 | mg/kg | 1.2 | 98 | 90 | 110 | | | | |
| Method: ASA33-7 Batch: H_31690 | | | | | | | | | | |
| Lab ID: LCS-31690 | Laboratory Control Sample Run: SUB-H112204 01/12/16 12:53 | | | | | | | | | |
| Ammonia as N, KCL Extract | 2.96 | mg/kg | 0.50 | 93 | 70 | 130 | | | | |
| Lab ID: MB-31690 | Method Blank Run: SUB-H112204 01/12/16 12:55 | | | | | | | | | |
| Ammonia as N, KCL Extract | 0.3 | mg/kg | 0.1 | | | | | | | |
| Lab ID: T15120146-001B | Sample Matrix Spike Run: SUB-H112204 01/12/16 12:57 | | | | | | | | | |
| Ammonia as N, KCL Extract | 10.1 | mg/kg | 1.4 | 87 | 90 | 110 | | | | S |
| Lab ID: H16010108-002BDUP | 2 Sample Duplicate Run: SUB-H112204 01/12/16 13:14 | | | | | | | | | |
| Ammonia as N, KCL Extract | 3.06 | mg/kg | 0.50 | | | | | 1.6 | 20 | |
| Ammonia as NH4 | 3.91 | mg/kg | 0.64 | | | | | 1.6 | 20 | |
| Lab ID: T15120146-002B | Sample Duplicate Run: SUB-H112204 01/12/16 12:59 | | | | | | | | | |
| Ammonia as N, KCL Extract | 5.34 | mg/kg | 1.2 | | | | | 1.1 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16
Report Date: 01/15/16
Work Order: T15120146

Client: ALS - Houston
Project: HS15121095

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|------------------------------------|-------|---|-------|------|------|-----------|------------|-----|----------|-----------------------------------|--|
| Method: E200.7 | | | | | | | | | | Analytical Run: ICP102-CS_160108A | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | 01/08/16 10:58 | |
| Calcium | | 48.6 | mg/L | 1.0 | 97 | 95 | 105 | | | | |
| Magnesium | | 48.1 | mg/L | 1.0 | 96 | 95 | 105 | | | | |
| Potassium | | 50.0 | mg/L | 1.0 | 100 | 95 | 105 | | | | |
| Sodium | | 49.4 | mg/L | 1.0 | 99 | 95 | 105 | | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | 01/08/16 11:01 | |
| Calcium | | -0.632 | mg/L | 1.0 | | | | | | | |
| Magnesium | | -0.00839 | mg/L | 1.0 | | | | | | | |
| Potassium | | 0.00321 | mg/L | 1.0 | | | | | | | |
| Sodium | | 0.131 | mg/L | 1.0 | | | | | | | |
| Method: E200.7 | | | | | | | | | | Analytical Run: ICP102-CS_160108B | |
| Lab ID: Initial Calib Verif | | Initial Calibration Verification Standard | | | | | | | | 01/08/16 12:09 | |
| Phosphorus | | 4.92 | mg/L | 0.10 | 98 | 95 | 105 | | | | |
| Lab ID: Initial Calib Blank | | Initial Calibration Blank, Instrument Blank | | | | | | | | 01/08/16 12:15 | |
| Phosphorus | | -0.00340 | mg/L | 0.10 | | 0 | 0 | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120146

Client: ALS - Houston

Project: HS15121095

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|--|----------|-------|------|------|-----------|------------|------------------------------|----------|----------------|
| Method: E353.2 | | | | | | | | Analytical Run: FIA1_160106C | | |
| Lab ID: CCV-160106E-1 | Continuing Calibration Verification Standard | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 1.01 | mg/kg | 1.0 | 101 | 90 | 110 | | | 01/06/16 16:14 |
| Lab ID: CCB-160106E-1 | Continuing Calibration Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | -0.00200 | mg/kg | 1.0 | | | | | | 01/06/16 16:15 |
| Method: E353.2 | | | | | | | | Batch: 24649 | | |
| Lab ID: LCS-24649 | Laboratory Control Sample | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 9.32 | mg/kg | 1.0 | 102 | 80 | 120 | | | 01/06/16 16:07 |
| Lab ID: MB-24649 | Method Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.2 | mg/kg | 0.08 | | | | | | 01/06/16 16:10 |
| Lab ID: T15120146-001APDS | Post Digestion/Distillation Spike | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 17.8 | mg/kg | 1.0 | 80 | 80 | 120 | | | 01/06/16 16:27 |
| Lab ID: T15120146-001ADUP | Sample Duplicate | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 8.41 | mg/kg | 1.0 | | | | 16 | 20 | 01/06/16 16:28 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120146

Client: ALS - Houston

Project: HS15121095

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|-------|---------------------------|-------|-------|------|-----------|------------------------|-----|----------|----------------|
| Method: SW6010B | | | | | | | | | | Batch: 24611 |
| Lab ID: LCS-24611 | 4 | Laboratory Control Sample | | | | | Run: ICP102-CS_160108A | | | 01/08/16 11:10 |
| Calcium | | 1470 | mg/kg | 5.0 | 89 | 80 | 120 | | | |
| Magnesium | | 285 | mg/kg | 5.0 | 81 | 80 | 120 | | | |
| Potassium | | 893 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Sodium | | 76.3 | mg/kg | 5.0 | 85 | 80 | 120 | | | |
| Lab ID: MB-24611 | 4 | Method Blank | | | | | Run: ICP102-CS_160108A | | | 01/08/16 11:12 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | ND | mg/kg | 0.008 | | | | | | |
| Potassium | | 1.0 | mg/kg | 0.002 | | | | | | |
| Sodium | | 2 | mg/kg | 0.004 | | | | | | |
| Lab ID: T15120146-001ADUP | 4 | Sample Duplicate | | | | | Run: ICP102-CS_160108A | | | 01/08/16 11:16 |
| Calcium | | 2100 | mg/kg | 5.0 | | | | 1.9 | 20 | |
| Magnesium | | 69.9 | mg/kg | 5.0 | | | | 6.0 | 20 | |
| Potassium | | 46.8 | mg/kg | 5.0 | | | | 2.1 | 20 | |
| Sodium | | 91.8 | mg/kg | 5.0 | | | | 1.3 | 20 | |
| Lab ID: T15120146-002AMS | 4 | Sample Matrix Spike | | | | | Run: ICP102-CS_160108A | | | 01/08/16 11:21 |
| Calcium | | 4150 | mg/kg | 5.0 | 99 | 70 | 130 | | | |
| Magnesium | | 1470 | mg/kg | 5.0 | 88 | 70 | 130 | | | |
| Potassium | | 1120 | mg/kg | 5.0 | 100 | 70 | 130 | | | |
| Sodium | | 1150 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Method: SW6010B | | | | | | | | | | Batch: 24611 |
| Lab ID: LCS-24611 | | Laboratory Control Sample | | | | | Run: ICP102-CS_160108B | | | 01/08/16 12:26 |
| Phosphorus | | 406 | mg/kg | 5.0 | 92 | 80 | 120 | | | |
| Lab ID: MB-24611 | | Method Blank | | | | | Run: ICP102-CS_160108B | | | 01/08/16 12:31 |
| Phosphorus | | ND | mg/kg | 0.004 | | | | | | |
| Lab ID: T15120146-001ADUP | | Sample Duplicate | | | | | Run: ICP102-CS_160108B | | | 01/08/16 12:54 |
| Phosphorus | | 68.7 | mg/kg | 5.0 | | | | 0.4 | 20 | |
| Lab ID: T15120146-002AMS | | Sample Matrix Spike | | | | | Run: ICP102-CS_160108B | | | 01/08/16 12:59 |
| Phosphorus | | 21.0 | mg/kg | 5.0 | 94 | 70 | 130 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T15120146

Login completed by:

Date Received: 12/31/2015

Reviewed by: BL2000\amyatt

Received by: am1

Reviewed Date: 1/4/2016

Carrier name: Fed Ex Express

| | | | |
|---|---|-----------------------------|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all sample bottles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input type="checkbox"/> |
| Container/Temp Blank temperature: | 1.0°C On Ice | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. No B fraction received for sample 001-002. Splitting in lab. Sample transferred from an 8oz-CG-WM to a 4 oz-AG-WM to create B fraction. Receipt temperature checked with Thermo 1211: read temperature = 1.0°C; no corrections. ADG 151231 11:08



CHAIN OF CUSTODY RECORD

Date 30 Dec 2015
COC ID 4026
Due date 20 JAN 15

| | |
|---|--|
| Subcontractor: | |
| Energy Laboratories, Inc. 415 Graham Road College Station, TX 77845 | Phone 9796902217 Fax 9796902045 |

| Customer Information | | Project Information | |
|----------------------|--|---------------------|--|
| PO | HS15121095 | Project Name | HS15121095 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 | Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasey@alsglobal.com | Email2 | jumoke.lav@alsglobal.com |

T15120146
Lab ID

| | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|------|------------------------|--------------------|--------|--------------------|
| -001 | HS1511095-03 E-0-6" | 28-Dec-15 04:30 pm | Soil | XXX SUB |
| -002 | HS15121095-05 E-6"-24" | 28-Dec-15 04:42 pm | Soil | XXX SUB |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler IDs: | Report/QC Level |
|------------------|---------------|--------------------------|----------------------------------|-------------|-----------------|
| <i>J. Lewis</i> | 12/30/15 1800 | <i>Alison D. Griffin</i> | 12/31/15 10:24 10:53 AM 12/31 | Blue Cooler | STD |

RCD: FED/EX EXPRESS / COOLER + BOTTLE CS / TEMP BLANK
INTACT + SIGN MATCH / RCD /

Receipt Temp - Thermo 1211; 1.0°C

No corrections.



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15121172**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 6 sample(s) on Dec 30, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Dane.Wacasey

Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121172

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS15121172-01 | J-0-6" | Soil | | 29-Dec-2015 11:10 | 30-Dec-2015 09:25 | <input type="checkbox"/> |
| HS15121172-02 | J-6-12" | Soil | | 29-Dec-2015 11:20 | 30-Dec-2015 09:25 | <input type="checkbox"/> |
| HS15121172-03 | J-6-24" | Soil | | 29-Dec-2015 11:27 | 30-Dec-2015 09:25 | <input type="checkbox"/> |
| HS15121172-04 | I-0-6" | Soil | | 29-Dec-2015 15:20 | 30-Dec-2015 09:25 | <input type="checkbox"/> |
| HS15121172-05 | I-6-12" | Soil | | 29-Dec-2015 15:40 | 30-Dec-2015 09:25 | <input type="checkbox"/> |
| HS15121172-06 | I-6-24" | Soil | | 29-Dec-2015 15:45 | 30-Dec-2015 09:25 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121172

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is attached

GC Semivolatiles by Method TX1005**Batch ID: 100293**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R267143**

Sample ID: J-0-6" (HS15121172-01)

- MS and or MSD failed QC limits for select compounds due to suspect matrix effect.

Metals by Method SW7471A**Batch ID: 100431**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020**Batch ID: 100344**

Sample ID: HS16010070-01

- MS and MSD are for an unrelated sample.

WetChemistry by Method SW3550**Batch ID: R267149**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B**Batch ID: R267109**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: J-0-6"
 Collection Date: 29-Dec-2015 11:10

ANALYTICAL REPORT
 WorkOrder:HS15121172
 Lab ID:HS15121172-01
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 06-Jan-2016 | | Analyst: JDE |
| Arsenic | 0.959 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Cadmium | < 0.561 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Chromium | 2.39 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Copper | 3.66 | | 0.224 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Lead | 5.41 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Molybdenum | < 0.561 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Nickel | 1.18 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Selenium | < 0.561 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| Zinc | 8.15 | | 0.561 | mg/Kg-dry | 1 | 06-Jan-2016 16:00 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0053 | | 0.0053 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| Ethylbenzene | < 0.0053 | | 0.0053 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| Methyl tert-butyl ether | < 0.0053 | | 0.0053 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| o-Xylene | < 0.0053 | | 0.0053 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| Toluene | < 0.0053 | | 0.0053 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 21:30 |
| Surr: 1,2-Dichloroethane-d4 | 90.2 | | 70-128 | %REC | 1 | 31-Dec-2015 21:30 |
| Surr: 4-Bromofluorobenzene | 92.6 | | 73-126 | %REC | 1 | 31-Dec-2015 21:30 |
| Surr: Dibromofluoromethane | 96.8 | | 71-128 | %REC | 1 | 31-Dec-2015 21:30 |
| Surr: Toluene-d8 | 100 | | 73-127 | %REC | 1 | 31-Dec-2015 21:30 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0126 | | 0.00437 | mg/Kg-dry | 1 | 11-Jan-2016 14:36 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 11:17 |
| >nC12 to nC28 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 11:17 |
| >nC28 to nC35 | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 11:17 |
| Total Petroleum Hydrocarbon | < 58 | | 58 | mg/Kg-dry | 1 | 05-Jan-2016 11:17 |
| Surr: 2-Fluorobiphenyl | 85.0 | | 70-130 | %REC | 1 | 05-Jan-2016 11:17 |
| Surr: Trifluoromethyl benzene | 86.9 | | 70-130 | %REC | 1 | 05-Jan-2016 11:17 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 14.4 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.97 | H | 0.100 | pH Units | 1 | 31-Dec-2015 13:34 |
| Temp Deg C @pH | 20.0 | H | 0 | °C | 1 | 31-Dec-2015 13:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: J-6-12"
 Collection Date: 29-Dec-2015 11:20

ANALYTICAL REPORT

WorkOrder:HS15121172
 Lab ID:HS15121172-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--------------------------------------|----------|----------------------|--------------|-----------------------------|-----------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0054 | | 0.0054 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| Ethylbenzene | < 0.0054 | | 0.0054 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| Methyl tert-butyl ether | < 0.0054 | | 0.0054 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| o-Xylene | < 0.0054 | | 0.0054 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| Toluene | < 0.0054 | | 0.0054 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 21:53 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 84.0 | | 70-128 | %REC | 1 | 31-Dec-2015 21:53 |
| <i>Surr: 4-Bromofluorobenzene</i> | 91.9 | | 73-126 | %REC | 1 | 31-Dec-2015 21:53 |
| <i>Surr: Dibromofluoromethane</i> | 94.5 | | 71-128 | %REC | 1 | 31-Dec-2015 21:53 |
| <i>Surr: Toluene-d8</i> | 99.8 | | 73-127 | %REC | 1 | 31-Dec-2015 21:53 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| >nC12 to nC28 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| >nC28 to nC35 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| Total Petroleum Hydrocarbon | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| <i>Surr: 2-Fluorobiphenyl</i> | 101 | | 70-130 | %REC | 1 | 05-Jan-2016 12:47 |
| <i>Surr: Trifluoromethyl benzene</i> | 98.2 | | 70-130 | %REC | 1 | 05-Jan-2016 12:47 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 12.6 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: J-6-24"
 Collection Date: 29-Dec-2015 11:27

ANALYTICAL REPORT
 WorkOrder:HS15121172
 Lab ID:HS15121172-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 11.1 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.96 | H | 0.100 | pH Units | 1 | 31-Dec-2015 13:34 |
| Temp Deg C @pH | 20.2 | H | 0 | °C | 1 | 31-Dec-2015 13:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: I-0-6"
 Collection Date: 29-Dec-2015 15:20

ANALYTICAL REPORT
 WorkOrder:HS15121172
 Lab ID:HS15121172-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|------------------------------------|-----------------|---------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 06-Jan-2016 | | Analyst: JDE |
| Arsenic | 0.876 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Cadmium | < 0.571 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Chromium | 2.36 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Copper | 2.96 | | 0.228 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Lead | 4.83 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Molybdenum | < 0.571 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Nickel | 1.03 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Selenium | < 0.571 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| Zinc | 8.37 | | 0.571 | mg/Kg-dry | 1 | 06-Jan-2016 16:05 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0055 | | 0.0055 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| Ethylbenzene | < 0.0055 | | 0.0055 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| Methyl tert-butyl ether | < 0.0055 | | 0.0055 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| o-Xylene | < 0.0055 | | 0.0055 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| Toluene | < 0.0055 | | 0.0055 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 22:16 |
| Surr: 1,2-Dichloroethane-d4 | 83.0 | | 70-128 | %REC | 1 | 31-Dec-2015 22:16 |
| Surr: 4-Bromofluorobenzene | 90.8 | | 73-126 | %REC | 1 | 31-Dec-2015 22:16 |
| Surr: Dibromofluoromethane | 95.2 | | 71-128 | %REC | 1 | 31-Dec-2015 22:16 |
| Surr: Toluene-d8 | 100 | | 73-127 | %REC | 1 | 31-Dec-2015 22:16 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0132 | | 0.00429 | mg/Kg-dry | 1 | 11-Jan-2016 14:38 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 09:47 |
| >nC12 to nC28 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 09:47 |
| >nC28 to nC35 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 09:47 |
| Total Petroleum Hydrocarbon | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 09:47 |
| Surr: 2-Fluorobiphenyl | 95.4 | | 70-130 | %REC | 1 | 05-Jan-2016 09:47 |
| Surr: Trifluoromethyl benzene | 89.3 | | 70-130 | %REC | 1 | 05-Jan-2016 09:47 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 13.1 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.45 | H | 0.100 | pH Units | 1 | 31-Dec-2015 13:34 |
| Temp Deg C @pH | 20.1 | H | 0 | °C | 1 | 31-Dec-2015 13:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: I-6-12"
 Collection Date: 29-Dec-2015 15:40

ANALYTICAL REPORT
 WorkOrder:HS15121172
 Lab ID:HS15121172-05
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|------|----------------------|-----------|---|-------------------|
| VOLATILES BY SW8260C | | | Method:SW8260 | | Analyst: WLR | |
| Benzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| Ethylbenzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| Methyl tert-butyl ether | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| o-Xylene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| Toluene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 31-Dec-2015 22:40 |
| Surr: 1,2-Dichloroethane-d4 | 81.6 | | 70-128 | %REC | 1 | 31-Dec-2015 22:40 |
| Surr: 4-Bromofluorobenzene | 91.1 | | 73-126 | %REC | 1 | 31-Dec-2015 22:40 |
| Surr: Dibromofluoromethane | 94.4 | | 71-128 | %REC | 1 | 31-Dec-2015 22:40 |
| Surr: Toluene-d8 | 100 | | 73-127 | %REC | 1 | 31-Dec-2015 22:40 |
| TEXAS TPH BY TX1005 | | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 Analyst: KHT | |
| nC6 to nC12 | < 60 | | 60 | mg/Kg-dry | 1 | 05-Jan-2016 10:17 |
| >nC12 to nC28 | < 60 | | 60 | mg/Kg-dry | 1 | 05-Jan-2016 10:17 |
| >nC28 to nC35 | < 60 | | 60 | mg/Kg-dry | 1 | 05-Jan-2016 10:17 |
| Total Petroleum Hydrocarbon | < 60 | | 60 | mg/Kg-dry | 1 | 05-Jan-2016 10:17 |
| Surr: 2-Fluorobiphenyl | 80.6 | | 70-130 | %REC | 1 | 05-Jan-2016 10:17 |
| Surr: Trifluoromethyl benzene | 78.7 | | 70-130 | %REC | 1 | 05-Jan-2016 10:17 |
| MOISTURE | | | Method:SW3550 | | Analyst: DFF | |
| Percent Moisture | 16.8 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: I-6-24"
 Collection Date: 29-Dec-2015 15:45

ANALYTICAL REPORT

WorkOrder:HS15121172
 Lab ID:HS15121172-06
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 14.7 | | 0.0100 | wt% | 1 | 31-Dec-2015 09:47 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.70 | H | 0.100 | pH Units | 1 | 31-Dec-2015 13:34 |
| Temp Deg C @pH | 20.1 | H | 0 | °C | 1 | 31-Dec-2015 13:34 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

Batch ID: 716 Method: VOLATILES BY SW8260C

| SampID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS15121172-01 | 1 | 5.529 (g) | 5 (mL) | 0.9 | Bulk (5030B) |
| HS15121172-02 | 1 | 5.279 (g) | 5 (mL) | 0.95 | Bulk (5030B) |
| HS15121172-04 | 1 | 5.229 (g) | 5 (mL) | 0.96 | Bulk (5030B) |
| HS15121172-05 | 1 | 5.247 (g) | 5 (mL) | 0.95 | Bulk (5030B) |

Batch ID: 100279 Method: TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D Prep: TKN_S_PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121172-01 | 1 | 1.0084 | 50 (mL) | 49.58 |
| HS15121172-03 | 1 | 1.053 | 50 (mL) | 47.48 |
| HS15121172-04 | 1 | 1.0082 | 50 (mL) | 49.59 |
| HS15121172-06 | 1 | 1.198 | 50 (mL) | 41.74 |

Batch ID: 100293 Method: TEXAS TPH BY TX1005 Prep: TX 1005_S PR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121172-01 | 1 | 10.07 | 10 (mL) | 0.993 |
| HS15121172-02 | 1 | 10.09 | 10 (mL) | 0.9911 |
| HS15121172-04 | 1 | 10.12 | 10 (mL) | 0.9881 |
| HS15121172-05 | 1 | 10.08 | 10 (mL) | 0.9921 |

Batch ID: 100344 Method: METALS BY SW6020A Prep: 3050_I_LOW

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121172-01 | 1 | 0.5205 | 50 (mL) | 96.06 |
| HS15121172-04 | 1 | 0.5039 | 50 (mL) | 99.23 |

Batch ID: 100431 Method: MERCURY BY SW7471B Prep: HG_S_LOWPR

| SampID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121172-01 | 1 | 0.5335 | 40 (mL) | 74.98 |
| HS15121172-04 | 1 | 0.5352 | 40 (mL) | 74.74 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|----------------|--|-----------|---------------------|-------------------|----|
| Batch ID 100279 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121172-03 | J-6-24" | 29 Dec 2015 11:27 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121172-06 | I-6-24" | 29 Dec 2015 15:45 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| Batch ID 100293 | | Test Name : TEXAS TPH BY TX1005 | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | 04 Jan 2016 14:09 | 05 Jan 2016 11:17 | 1 |
| HS15121172-02 | J-6-12" | 29 Dec 2015 11:20 | | 04 Jan 2016 14:09 | 05 Jan 2016 12:47 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | 04 Jan 2016 14:09 | 05 Jan 2016 09:47 | 1 |
| HS15121172-05 | I-6-12" | 29 Dec 2015 15:40 | | 04 Jan 2016 14:09 | 05 Jan 2016 10:17 | 1 |
| Batch ID 100344 | | Test Name : METALS BY SW6020A | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | 06 Jan 2016 11:06 | 06 Jan 2016 16:00 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | 06 Jan 2016 11:06 | 06 Jan 2016 16:05 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:36 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:38 | 1 |
| Batch ID R267109 | | Test Name : PH SOIL BY SW9045D | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | | 31 Dec 2015 13:34 | 1 |
| HS15121172-03 | J-6-24" | 29 Dec 2015 11:27 | | | 31 Dec 2015 13:34 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | | 31 Dec 2015 13:34 | 1 |
| HS15121172-06 | I-6-24" | 29 Dec 2015 15:45 | | | 31 Dec 2015 13:34 | 1 |
| Batch ID R267143 | | Test Name : VOLATILES BY SW8260C | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | | 31 Dec 2015 21:30 | 1 |
| HS15121172-02 | J-6-12" | 29 Dec 2015 11:20 | | | 31 Dec 2015 21:53 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | | 31 Dec 2015 22:16 | 1 |
| HS15121172-05 | I-6-12" | 29 Dec 2015 15:40 | | | 31 Dec 2015 22:40 | 1 |
| Batch ID R267149 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | | 31 Dec 2015 09:47 | 1 |
| HS15121172-02 | J-6-12" | 29 Dec 2015 11:20 | | | 31 Dec 2015 09:47 | 1 |
| HS15121172-03 | J-6-24" | 29 Dec 2015 11:27 | | | 31 Dec 2015 09:47 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | | 31 Dec 2015 09:47 | 1 |
| HS15121172-05 | I-6-12" | 29 Dec 2015 15:40 | | | 31 Dec 2015 09:47 | 1 |
| HS15121172-06 | I-6-24" | 29 Dec 2015 15:45 | | | 31 Dec 2015 09:47 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | Matrix: Soil | | |
| HS15121172-01 | J-0-6" | 29 Dec 2015 11:10 | | | 15 Jan 2016 16:37 | 1 |
| HS15121172-03 | J-6-24" | 29 Dec 2015 11:27 | | | 15 Jan 2016 16:37 | 1 |
| HS15121172-04 | I-0-6" | 29 Dec 2015 15:20 | | | 15 Jan 2016 16:37 | 1 |
| HS15121172-06 | I-6-24" | 29 Dec 2015 15:45 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

| Batch ID: 100293 | | Instrument: FID-13 | | Method: TX1005 | | | | | | |
|-------------------------------|-----------------------------------|------------------------------|---------|-----------------------|---|------------------------------|---------------|--------------|----------------|--|
| MBLK | Sample ID: MBLK-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 14:18 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544202 | | PrepDate: 04-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual | |
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 27.27 | 0 | 25 | 0 | 109 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 25.03 | 0 | 25 | 0 | 100 | 70 - 130 | | | | |
| LCS | Sample ID: LCS-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:17 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544109 | | PrepDate: 04-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual | |
| nC6 to nC12 | 240.6 | 50 | 250 | 0 | 96.3 | 75 - 125 | | | | |
| >nC12 to nC28 | 227.2 | 50 | 250 | 0 | 90.9 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 29.42 | 0 | 25 | 0 | 118 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 24.34 | 0 | 25 | 0 | 97.4 | 70 - 130 | | | | |
| LCSD | Sample ID: LCSD-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:47 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544110 | | PrepDate: 04-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual | |
| nC6 to nC12 | 234.2 | 50 | 250 | 0 | 93.7 | 75 - 125 | 240.6 | 2.7 | 20 | |
| >nC12 to nC28 | 224.8 | 50 | 250 | 0 | 89.9 | 75 - 125 | 227.2 | 1.02 | 20 | |
| Surr: 2-Fluorobiphenyl | 26.92 | 0 | 25 | 0 | 108 | 70 - 130 | 29.42 | 8.88 | 20 | |
| Surr: Trifluoromethyl benzene | 23.18 | 0 | 25 | 0 | 92.7 | 70 - 130 | 24.34 | 4.89 | 20 | |
| MS | Sample ID: HS15121172-01MS | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 11:47 | | | | | |
| Client ID: J-0-6" | | Run ID: FID-13_267212 | | SeqNo: 3544112 | | PrepDate: 04-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual | |
| nC6 to nC12 | 221 | 50 | 249.3 | 0 | 88.7 | 75 - 125 | | | | |
| >nC12 to nC28 | 230.6 | 50 | 249.3 | 0 | 92.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 26.75 | 0 | 24.93 | 0 | 107 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 23.16 | 0 | 24.93 | 0 | 92.9 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| MBLK | Sample ID: MBLK-100344 | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 15:52 | | | | | |
|------------|------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545527 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

| LCS | Sample ID: MLCS-100344 | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 15:56 | | | | | |
|------------|------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545528 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 9.429 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | | |
| Cadmium | 9.418 | 0.500 | 10 | 0 | 94.2 | 80 - 120 | | | | |
| Chromium | 9.21 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Copper | 9.152 | 0.200 | 10 | 0 | 91.5 | 80 - 120 | | | | |
| Lead | 9.543 | 0.500 | 10 | 0 | 95.4 | 80 - 120 | | | | |
| Molybdenum | 8.639 | 0.500 | 10 | 0 | 86.4 | 80 - 120 | | | | |
| Nickel | 9.826 | 0.500 | 10 | 0 | 98.3 | 80 - 120 | | | | |
| Selenium | 9.199 | 0.500 | 10 | 0 | 92.0 | 80 - 120 | | | | |
| Zinc | 9.783 | 0.500 | 10 | 0 | 97.8 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| MS | | Sample ID: HS16010070-01MS | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:43 | | | |
|------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|----------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545551 | | PrepDate: 06-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Arsenic | 11.8 | 0.487 | 9.745 | 3.275 | 87.5 | 75 - 125 | | | | |
| Cadmium | 9.077 | 0.487 | 9.745 | 0.1306 | 91.8 | 75 - 125 | | | | |
| Chromium | 17.57 | 0.487 | 9.745 | 4.545 | 134 | 75 - 125 | | | | S |
| Copper | 18.84 | 0.195 | 9.745 | 7.877 | 113 | 75 - 125 | | | | |
| Lead | 20.22 | 0.487 | 9.745 | 10.53 | 99.5 | 75 - 125 | | | | |
| Molybdenum | 8.383 | 0.487 | 9.745 | 0.2645 | 83.3 | 75 - 125 | | | | |
| Nickel | 15.78 | 0.487 | 9.745 | 5.883 | 102 | 75 - 125 | | | | |
| Selenium | 9.204 | 0.487 | 9.745 | 0.5686 | 88.6 | 75 - 125 | | | | |
| Zinc | 46.95 | 0.487 | 9.745 | 33.81 | 135 | 75 - 125 | | | | S |

| MSD | | Sample ID: HS16010070-01MSD | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:47 | | | |
|------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|----------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545552 | | PrepDate: 06-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Arsenic | 11.61 | 0.478 | 9.562 | 3.275 | 87.1 | 75 - 125 | 11.8 | 1.66 | 20 | |
| Cadmium | 8.895 | 0.478 | 9.562 | 0.1306 | 91.7 | 75 - 125 | 9.077 | 2.02 | 20 | |
| Chromium | 17.47 | 0.478 | 9.562 | 4.545 | 135 | 75 - 125 | 17.57 | 0.54 | 20 | S |
| Copper | 19.73 | 0.191 | 9.562 | 7.877 | 124 | 75 - 125 | 18.84 | 4.58 | 20 | |
| Lead | 20.22 | 0.478 | 9.562 | 10.53 | 101 | 75 - 125 | 20.22 | 0.0258 | 20 | |
| Molybdenum | 8.09 | 0.478 | 9.562 | 0.2645 | 81.8 | 75 - 125 | 8.383 | 3.55 | 20 | |
| Nickel | 15.75 | 0.478 | 9.562 | 5.883 | 103 | 75 - 125 | 15.78 | 0.198 | 20 | |
| Selenium | 9.19 | 0.478 | 9.562 | 0.5686 | 90.2 | 75 - 125 | 9.204 | 0.15 | 20 | |
| Zinc | 47 | 0.478 | 9.562 | 33.81 | 138 | 75 - 125 | 46.95 | 0.104 | 20 | S |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| PDS | | Sample ID: HS16010070-01BS | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:51 | | | |
|------------|--------|----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS04_267254 | | SeqNo: 3545553 | | PrepDate: 06-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 12.61 | 0.484 | 9.69 | 3.275 | 96.3 | 75 - 125 | | | |
| Cadmium | 9.189 | 0.484 | 9.69 | 0.1306 | 93.5 | 75 - 125 | | | |
| Chromium | 14.57 | 0.484 | 9.69 | 4.545 | 103 | 75 - 125 | | | |
| Copper | 17.89 | 0.194 | 9.69 | 7.877 | 103 | 75 - 125 | | | |
| Lead | 19.74 | 0.484 | 9.69 | 10.53 | 95.0 | 75 - 125 | | | |
| Molybdenum | 8.927 | 0.484 | 9.69 | 0.2645 | 89.4 | 75 - 125 | | | |
| Nickel | 14.95 | 0.484 | 9.69 | 5.883 | 93.6 | 75 - 125 | | | |
| Selenium | 9.88 | 0.484 | 9.69 | 0.5686 | 96.1 | 75 - 125 | | | |
| Zinc | 42.66 | 0.484 | 9.69 | 33.81 | 91.4 | 75 - 125 | | | |

| SD | | Sample ID: HS16010070-01 DIL SX | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 16:22 | | | |
|------------|--------|---------------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS04_267254 | | SeqNo: 3545534 | | PrepDate: 06-Jan-2016 | | DF: 5 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | RPD Limit Qual |
| Arsenic | 3.377 | 2.42 | | | | | 3.275 | 3.12 | 10 |
| Cadmium | < 2.42 | 2.42 | | | | | 0.1306 | 0 | 10 |
| Chromium | 4.835 | 2.42 | | | | | 4.545 | 6.39 | 10 |
| Copper | 8.545 | 0.969 | | | | | 7.877 | 8.47 | 10 |
| Lead | 9.862 | 2.42 | | | | | 10.53 | 6.34 | 10 |
| Molybdenum | < 2.42 | 2.42 | | | | | 0.2645 | 0 | 10 |
| Nickel | 6.358 | 2.42 | | | | | 5.883 | 8.07 | 10 |
| Selenium | < 2.42 | 2.42 | | | | | 0.5686 | 0 | 10 |
| Zinc | 36.45 | 2.42 | | | | | 33.81 | 7.79 | 10 |

The following samples were analyzed in this batch: HS15121172-01 HS15121172-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: 100431 **Instrument:** HG02 **Method:** SW7471A

MBLK Sample ID: **MBLK-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:24**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548754** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD %RPD Limit Qual

Mercury < 3.32 3.32

LCS Sample ID: **LCS-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:26**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548755** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD %RPD Limit Qual

Mercury 372.7 3.32 333.3 0 112 85 - 115

MS Sample ID: **HS15121095-03MS** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:32**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548757** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD %RPD Limit Qual

Mercury 380.9 3.73 374.2 11.43 98.7 85 - 115

MSD Sample ID: **HS15121095-03MSD** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:34**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548758** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value RPD %RPD Limit Qual

Mercury 399.9 3.71 372.3 11.43 104 85 - 115 380.9 4.85 20

The following samples were analyzed in this batch: HS15121172-01 HS15121172-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

| Batch ID: R267143 | | Instrument: VOA5 | | Method: SW8260 | | | | | | |
|------------------------------------|--------------------------|------------------|---------|----------------|----------------------------------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: VBLKS2-123115 | Units: ug/Kg | | | Analysis Date: 31-Dec-2015 20:43 | | | | | |
| Client ID: | Run ID: VOA5_267143 | SeqNo: 3542729 | | PrepDate: | | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 43.46 | 0 | 50 | 0 | 86.9 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 46.63 | 0 | 50 | 0 | 93.3 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 48.02 | 0 | 50 | 0 | 96.0 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.16 | 0 | 50 | 0 | 100 | 73 - 127 | | | | |

| LCS | | Sample ID: VLCSS2-123115 | | Units: ug/Kg | | | Analysis Date: 31-Dec-2015 20:20 | | | |
|------------------------------------|---------------------|--------------------------|---------|---------------|------|---------------|----------------------------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267143 | SeqNo: 3542728 | | PrepDate: | | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 45.88 | 5.0 | 50 | 0 | 91.8 | 79 - 122 | | | | |
| Ethylbenzene | 45.76 | 5.0 | 50 | 0 | 91.5 | 80 - 122 | | | | |
| m,p-Xylene | 90.04 | 10 | 100 | 0 | 90.0 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 46.55 | 5.0 | 50 | 0 | 93.1 | 76 - 124 | | | | |
| o-Xylene | 45.91 | 5.0 | 50 | 0 | 91.8 | 80 - 123 | | | | |
| Toluene | 44.58 | 5.0 | 50 | 0 | 89.2 | 79 - 120 | | | | |
| Xylenes, Total | 136 | 10 | 150 | 0 | 90.6 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 47.64 | 0 | 50 | 0 | 95.3 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.95 | 0 | 50 | 0 | 97.9 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 50.11 | 0 | 50 | 0 | 100 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 48.98 | 0 | 50 | 0 | 98.0 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: R267143 **Instrument:** VOA5 **Method:** SW8260

| MS | | Sample ID: HS15121172-01MS | | | Units: ug/Kg | | Analysis Date: 31-Dec-2015 23:03 | | | |
|------------------------------------|--------------|----------------------------|-------------|---------------|----------------|-----------------|----------------------------------|------|-----------|------|
| Client ID: J-0-6" | | Run ID: VOA5_267143 | | | SeqNo: 3542734 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 34.38 | 4.6 | 46.5 | 0 | 73.9 | 79 - 122 | | | | S |
| Ethylbenzene | 29.67 | 4.6 | 46.5 | 0 | 63.8 | 80 - 122 | | | | S |
| m,p-Xylene | 57.17 | 9.3 | 93 | 0 | 61.5 | 79 - 122 | | | | S |
| Methyl tert-butyl ether | 33.17 | 4.6 | 46.5 | 0 | 71.3 | 76 - 124 | | | | S |
| o-Xylene | 28.96 | 4.6 | 46.5 | 0 | 62.3 | 80 - 123 | | | | S |
| Toluene | 32.31 | 4.6 | 46.5 | 0 | 69.5 | 79 - 120 | | | | S |
| Xylenes, Total | 86.13 | 9.3 | 139.5 | 0 | 61.7 | 80 - 120 | | | | S |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>43.58</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>93.7</i> | <i>70 - 128</i> | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>44.67</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>96.1</i> | <i>73 - 126</i> | | | | |
| <i>Surr: Dibromofluoromethane</i> | <i>45.84</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>98.6</i> | <i>71 - 128</i> | | | | |
| <i>Surr: Toluene-d8</i> | <i>45.27</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>97.3</i> | <i>73 - 127</i> | | | | |

| MSD | | Sample ID: HS15121172-01MSD | | | Units: ug/Kg | | Analysis Date: 31-Dec-2015 23:26 | | | |
|------------------------------------|--------------|-----------------------------|-------------|---------------|----------------|-----------------|----------------------------------|--------------|-----------|------|
| Client ID: J-0-6" | | Run ID: VOA5_267143 | | | SeqNo: 3542735 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 35.33 | 4.6 | 46.5 | 0 | 76.0 | 79 - 122 | 34.38 | 2.73 | 30 | S |
| Ethylbenzene | 31.04 | 4.6 | 46.5 | 0 | 66.7 | 80 - 122 | 29.67 | 4.49 | 30 | S |
| m,p-Xylene | 58.84 | 9.3 | 93 | 0 | 63.3 | 79 - 122 | 57.17 | 2.87 | 30 | S |
| Methyl tert-butyl ether | 35.45 | 4.6 | 46.5 | 0 | 76.2 | 76 - 124 | 33.17 | 6.66 | 30 | |
| o-Xylene | 29.67 | 4.6 | 46.5 | 0 | 63.8 | 80 - 123 | 28.96 | 2.44 | 30 | S |
| Toluene | 33.26 | 4.6 | 46.5 | 0 | 71.5 | 79 - 120 | 32.31 | 2.91 | 30 | S |
| Xylenes, Total | 88.51 | 9.3 | 139.5 | 0 | 63.4 | 80 - 120 | 86.13 | 2.72 | 30 | S |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>43.64</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>93.8</i> | <i>70 - 128</i> | <i>43.58</i> | <i>0.144</i> | <i>30</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>43.45</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>93.4</i> | <i>73 - 126</i> | <i>44.67</i> | <i>2.77</i> | <i>30</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>45.88</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>98.7</i> | <i>71 - 128</i> | <i>45.84</i> | <i>0.107</i> | <i>30</i> | |
| <i>Surr: Toluene-d8</i> | <i>46.77</i> | <i>0</i> | <i>46.5</i> | <i>0</i> | <i>101</i> | <i>73 - 127</i> | <i>45.27</i> | <i>3.27</i> | <i>30</i> | |

The following samples were analyzed in this batch: HS15121172-01 HS15121172-02 HS15121172-04 HS15121172-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: R267109 Instrument: WetChem_HS Method: SW9045B

| | | | | | | | | | | |
|------------|-----------------------|---------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| LCS | Sample ID: LCS-267109 | Units: pH Units | | | | Analysis Date: 31-Dec-2015 13:34 | | | | |
| Client ID: | | Run ID: WetChem_HS_267109 | | SeqNo: 3541547 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| pH | 6.05 | 0.100 | 6 | 0 | 101 | 97 - 103 | | | | |

| | | | | | | | | | | |
|--------------------|-----------------------------|---------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| DUP | Sample ID: HS15121172-06DUP | Units: pH Units | | | | Analysis Date: 31-Dec-2015 13:34 | | | | |
| Client ID: I-6-24" | | Run ID: WetChem_HS_267109 | | SeqNo: 3541548 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| pH | 7.73 | 0.100 | | | | | 7.7 | 0.389 | 10 | |
| Temp Deg C @pH | 20.2 | 0 | | | | | 20.1 | 0.496 | 10 | |

The following samples were analyzed in this batch: HS15121172-01 HS15121172-03 HS15121172-04 HS15121172-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

QC BATCH REPORT

Batch ID: R267149 **Instrument:** Balance1 **Method:** SW3550

| | | | | | | | | | | |
|--------------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| DUP | Sample ID: HS15121172-06DUP | Units: wt% | Analysis Date: 31-Dec-2015 09:47 | | | | | | | |
| Client ID: I-6-24" | Run ID: Balance1_267149 | SeqNo: 3542836 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Percent Moisture | 13.9 | 0.0100 | | | | | 14.7 | 5.59 | 20 | |

| | | | | |
|--|---------------|---------------|---------------|---------------|
| The following samples were analyzed in this batch: | HS15121172-01 | HS15121172-02 | HS15121172-03 | HS15121172-04 |
| | HS15121172-05 | HS15121172-06 | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121172

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| SQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121172

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS15121172-01 | J-0-6" | Login | 12/30/2015 5:15:22 PM | PMG | VW-2 |
| HS15121172-01 | J-0-6" | Login | 12/30/2015 5:15:22 PM | PMG | LF-23 |
| HS15121172-01 | J-0-6" | Login | 12/30/2015 5:15:22 PM | PMG | 1D |
| HS15121172-01 | J-0-6" | Login | 12/30/2015 5:15:22 PM | PMG | Sub |
| HS15121172-02 | J-6-12" | Login | 12/30/2015 5:19:35 PM | PMG | VW-2 |
| HS15121172-02 | J-6-12" | Login | 12/30/2015 5:19:35 PM | PMG | LF-23 |
| HS15121172-03 | J-6-24" | Login | 12/30/2015 5:21:55 PM | PMG | 1D |
| HS15121172-03 | J-6-24" | Login | 12/30/2015 5:21:55 PM | PMG | Sub |
| HS15121172-04 | I-0-6" | Login | 12/30/2015 5:23:53 PM | PMG | VW-2 |
| HS15121172-04 | I-0-6" | Login | 12/30/2015 5:23:53 PM | PMG | LF-23 |
| HS15121172-04 | I-0-6" | Login | 12/30/2015 5:23:53 PM | PMG | 1D |
| HS15121172-04 | I-0-6" | Login | 12/30/2015 5:23:53 PM | PMG | Sub |
| HS15121172-05 | I-6-12" | Login | 12/30/2015 5:24:32 PM | PMG | VW-2 |
| HS15121172-05 | I-6-12" | Login | 12/30/2015 5:24:32 PM | PMG | LF-23 |
| HS15121172-06 | I-6-24" | Login | 12/30/2015 5:25:12 PM | PMG | 1D |
| HS15121172-06 | I-6-24" | Login | 12/30/2015 5:25:12 PM | PMG | Sub |
| HS15121172-01 | J-0-6" | Return | 1/6/2016 4:08:45 PM | HAS | 1D |
| HS15121172-04 | I-0-6" | Return | 1/6/2016 4:08:45 PM | HAS | 1D |
| HS15121172-01 | J-0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS15121172-04 | I-0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS15121172-01 | J-0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 1D |
| HS15121172-04 | I-0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 1D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
Work Order: HS15121172

Date/Time Received: 30-Dec-2015 09:25
Received by: NDR

Checklist completed by: Paresh M. Giga
eSignature
Date: 30-Dec-2015

Reviewed by: Dane J. Wacasey
eSignature
Date: 4-Jan-2016

Matrices: Soil

Carrier name: Client

Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [checked] No [] Not Present []
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
TX1005 solids received in hermetically sealed vials? Yes [] No [checked] N/A []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No []
Temperature(s)/Thermometer(s): 4.5c/4.7c U/C IR4
Cooler(s)/Kit(s): Red
Date/Time sample(s) sent to storage: 12/30/15 17:40
Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted [checked]
Water - pH acceptable upon receipt? Yes [] No [] N/A [checked]
pH adjusted? Yes [] No [checked] N/A []
pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

HS15121172

Texas Commission on Environmental Quality
800 Acre Tract Soil Project

Page of

COC ID: 135943



ALS Project Manager:

| Customer Information | | Project Information | |
|----------------------|-----------------------------------|---------------------|-----------------------------------|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project |
| Work Order | | Project Number | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger - A/P |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin, TX 78711 |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 |
| Fax | (361) 825-3101 | Fax | |
| e-Mail Address | | e-Mail Address | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|--------------------|------------|------|--------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | J-0-6" | 12/29/2015 | 1110 | S | See | 2 | X | X | X | X | X | X | | | | | |
| 2 | J-6-12" | 12/29/2015 | 1120 | S | See | 2 | X | X | X | X | X | X | | | | | |
| 3 | J-6-24" | 12/29/2015 | 1127 | S | See | 3 | X | X | X | X | X | X | | | | | |
| 4 | I-0-6" | 12/29/2015 | 1520 | S | See | 6 | X | X | X | X | X | X | | | | | |
| 5 | I-6-12" | 12/29/2015 | 1540 | S | See | 2 | X | X | X | X | X | X | | | | | |
| 6 | I-6-24" | 12/29/2015 | 1545 | S | See | 3 | X | X | X | X | X | X | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|--|-------------------|
| Sampler(s) Please Print & Sign | Shipment Method | Required Turnaround Time: (Check Box) | Results Due Date: |
| Received by: <i>Henry M. Maki</i> | Received by (Laboratory): <i>9116 sent to Ralston</i> | TAT <u>15</u> days <u> </u> Other <u> </u> | |
| Received by (Laboratory): <i>12/30/15</i> | Received by (Laboratory): <i>NK 12/30/15 09:25</i> | Notes: <u> </u> | |
| Checked by (Laboratory): <i>12/30/15</i> | Checked by (Laboratory): <i>12/30/15</i> | QC Package: (Check One Box Below) | |
| | | QC Level <u>STD</u> | |
| | | Other: <u> </u> | |

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

10X 9
ck 012



ALS Environmental
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

*Red
19100*

| CUSTODY SEAL | | Seal Broken By: |
|---------------------------------------|------------------|-----------------------|
| Date: <i>12/30/2015</i> | Time: <i>725</i> | <i>NR</i> |
| Name: <i>Henry M. H. H. H.</i> | | Date: <i>12/30/15</i> |
| Company: <i>ALS Environmental Inc</i> | | |



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T15120147 Quote ID: T2980 - TCEQ Soil Analysis
Project Name: HS15121172

Energy Laboratories Inc. College Station TX received the following 4 samples for ALS - Houston on 12/31/2015 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|----------------------|----------------|--------------|--------|---|
| T15120147-001 | HS15121172-01 [0-6] | 12/29/15 11:10 | 12/31/15 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract 2:1 KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T15120147-002 | HS15121172-03 [6-24] | 12/29/15 11:27 | 12/31/15 | Soil | Same As Above |
| T15120147-003 | HS15121172-04 [0-6] | 12/29/15 15:20 | 12/31/15 | Soil | Same As Above |
| T15120147-004 | HS15121172-06 [6-24] | 12/29/15 15:45 | 12/31/15 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Digitally signed by
Amanda Myatt
Date: 2016.01.20 16:44:57 -06:00



CLIENT: ALS - Houston
Project: HS15121172
Work Order: T15120147

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121172
Lab ID: T15120147-001
Client Sample ID: HS15121172-01 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/29/15 11:10
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 12.5 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:01 / eli-h |
| Ammonia as N, KCL Extract | 9.7 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:01 / eli-h |
| Conductivity, 1:2 | 0.3 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:39 / tdl |
| Nitrate+Nitrite as N, KCl Extract | 7.8 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:30 / rda |
| Total Kjeldahl Nitrogen | 1060 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1860 | mg/kg | | 5 | | SW6010B | 01/08/16 11:23 / jtr |
| Magnesium | 132 | mg/kg | | 5 | | SW6010B | 01/08/16 11:23 / jtr |
| Phosphorus | 29 | mg/kg | | 5 | | SW6010B | 01/08/16 13:01 / jtr |
| Potassium | 54 | mg/kg | | 5 | | SW6010B | 01/08/16 11:23 / jtr |
| Sodium | 33 | mg/kg | | 5 | | SW6010B | 01/08/16 11:23 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121172
Lab ID: T15120147-002
Client Sample ID: HS15121172-03 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/29/15 11:27
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 4.7 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:02 / eli-h |
| Ammonia as N, KCL Extract | 3.6 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:02 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:40 / tdl |
| Nitrate+Nitrite as N, KCl Extract | 1.6 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:33 / rda |
| Total Kjeldahl Nitrogen | 560 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2280 | mg/kg | | 5 | | SW6010B | 01/08/16 11:32 / jtr |
| Magnesium | 672 | mg/kg | | 5 | | SW6010B | 01/08/16 11:32 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/08/16 13:06 / jtr |
| Potassium | 90 | mg/kg | | 5 | | SW6010B | 01/08/16 11:32 / jtr |
| Sodium | 217 | mg/kg | | 5 | | SW6010B | 01/08/16 11:32 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 ‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121172
Lab ID: T15120147-003
Client Sample ID: HS15121172-04 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/29/15 15:20
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 10.8 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:03 / eli-h |
| Ammonia as N, KCL Extract | 8.5 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:03 / eli-h |
| Conductivity, 1:2 | 0.3 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:41 / tdl |
| Nitrate+Nitrite as N, KCl Extract | 11 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:40 / rda |
| Total Kjeldahl Nitrogen | 1050 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1970 | mg/kg | | 5 | | SW6010B | 01/08/16 11:34 / jtr |
| Magnesium | 140 | mg/kg | | 5 | | SW6010B | 01/08/16 11:34 / jtr |
| Phosphorus | 31 | mg/kg | | 5 | | SW6010B | 01/08/16 13:09 / jtr |
| Potassium | 52 | mg/kg | | 5 | | SW6010B | 01/08/16 11:34 / jtr |
| Sodium | 29 | mg/kg | | 5 | | SW6010B | 01/08/16 11:34 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121172
Lab ID: T15120147-004
Client Sample ID: HS15121172-06 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/29/15 15:45
Date Received: 12/31/15
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 3.9 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:04 / eli-h |
| Ammonia as N, KCL Extract | 3.0 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:04 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/05/16 13:41 / tdl |
| Nitrate+Nitrite as N, KCl Extract | 5.5 | mg/kg | | 1.0 | | E353.2 | 01/06/16 16:41 / rda |
| Total Kjeldahl Nitrogen | 560 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2260 | mg/kg | | 5 | | SW6010B | 01/08/16 11:36 / jtr |
| Magnesium | 511 | mg/kg | | 5 | | SW6010B | 01/08/16 11:36 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/08/16 13:11 / jtr |
| Potassium | 81 | mg/kg | | 5 | | SW6010B | 01/08/16 11:36 / jtr |
| Sodium | 171 | mg/kg | | 5 | | SW6010B | 01/08/16 11:36 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 ‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|-------|--|----------|------|------|-----------|------------|-------------------------------|----------|----------------|
| | | | | | | | | Analytical Run: COND3_160105B | | |
| Method: A2510 B | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:21 |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:21 |
| Conductivity, 1:2 | | 0.108 | mmhos/cm | 0.10 | 108 | 90 | 110 | | | |
| Lab ID: COND 2000 | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:21 |
| Conductivity, 1:2 | | 1.92 | mmhos/cm | 0.10 | 96 | 90 | 110 | | | |
| Lab ID: ICV-1413 | | Initial Calibration Verification Standard | | | | | | | | 01/05/16 13:23 |
| Conductivity, 1:2 | | 1.50 | mmhos/cm | 0.10 | 107 | 90 | 110 | | | |
| | | | | | | | | Batch: 160105A-COND-S-SM2510 | | |
| Method: A2510 B | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:22 |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard | | | | | | | | 01/05/16 13:22 |
| Conductivity, 1:2 | | 7.14 | mmhos/cm | 0.10 | 102 | 90 | 110 | | | |
| | | | | | | | | Batch: 24659 | | |
| Method: A2510 B | | Laboratory Control Sample | | | | | | | | 01/05/16 13:35 |
| Lab ID: LCS-24659 | | Laboratory Control Sample | | | | | | | | 01/05/16 13:35 |
| Conductivity, 1:2 | | 1.11 | mmhos/cm | 0.10 | 98 | 80 | 120 | | | |
| Lab ID: MB-24659 | | Method Blank | | | | | | | | 01/05/16 13:37 |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | |
| Lab ID: T15120147-001ADUP | | Sample Duplicate | | | | | | | | 01/05/16 13:40 |
| Conductivity, 1:2 | | 0.322 | mmhos/cm | 0.10 | | | | 3.8 | 10 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------|-------|-------------------------------|-------|----|------|-----------|------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31700 |
| Lab ID: LCS-31700 | | Laboratory Control Sample | | | | | | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 1030 | mg/kg | 30 | 110 | 70 | 130 | | | |
| Run: SUB-H112244 | | | | | | | | | | |
| Lab ID: MB-31700 | | Method Blank | | | | | | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | |
| Run: SUB-H112244 | | | | | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike | | | | | | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2750 | mg/kg | 30 | 83 | 50 | 150 | | | |
| Run: SUB-H112244 | | | | | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike Duplicate | | | | | | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2580 | mg/kg | 30 | 75 | 50 | 150 | 6.0 | 30 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|---|--------|-------|----|------|-----------|------------------|-----------------------------|----------|----------------|
| | | | | | | | | Analytical Run: SUB-H112204 | | |
| Method: ASA33-7 | | | | | | | | | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | | | |
| Ammonia as N, KCL Extract | 9.09 | mg/kg | 1.2 | 98 | 90 | 110 | | | | |
| | | | | | | | | | | Batch: H_31690 |
| Method: ASA33-7 | | | | | | | | | | |
| Lab ID: LCS-31690 | Laboratory Control Sample | | | | | | | | | |
| Ammonia as N, KCL Extract | 2.96 | mg/kg | 0.50 | 93 | 70 | 130 | Run: SUB-H112204 | | | |
| | | | | | | | | | | 01/12/16 12:53 |
| Lab ID: MB-31690 | Method Blank | | | | | | | | | |
| Ammonia as N, KCL Extract | 0.3 | mg/kg | 0.1 | | | | Run: SUB-H112204 | | | |
| | | | | | | | | | | 01/12/16 12:55 |
| Lab ID: T15120146-001B | Sample Matrix Spike | | | | | | | | | |
| Ammonia as N, KCL Extract | 10.1 | mg/kg | 1.4 | 87 | 90 | 110 | Run: SUB-H112204 | | | |
| | | | | | | | | | | 01/12/16 12:57 |
| | | | | | | | | | | S |
| Lab ID: H16010108-002BDUP | Sample Duplicate | | | | | | | | | |
| Ammonia as N, KCL Extract | 3.06 | mg/kg | 0.50 | | | | Run: SUB-H112204 | | | |
| | | | | | | | | | | 01/12/16 13:14 |
| | | | | | | | | | | 1.6 |
| Lab ID: T15120146-002B | Sample Duplicate | | | | | | | | | |
| Ammonia as N, KCL Extract | 5.34 | mg/kg | 1.2 | | | | Run: SUB-H112204 | | | |
| | | | | | | | | | | 01/12/16 12:59 |
| | | | | | | | | | | 1.1 |
| | | | | | | | | | | 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|------------------------------------|-------|---|-------|------|------|-----------|------------|-----------------------------------|----------|------|--|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160108A | | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | 01/08/16 10:58 | | | |
| Calcium | | 48.6 | mg/L | 1.0 | 97 | 95 | 105 | | | | |
| Magnesium | | 48.1 | mg/L | 1.0 | 96 | 95 | 105 | | | | |
| Potassium | | 50.0 | mg/L | 1.0 | 100 | 95 | 105 | | | | |
| Sodium | | 49.4 | mg/L | 1.0 | 99 | 95 | 105 | | | | |
| Lab ID: Cont Calib Blank | | | | | | | | 01/08/16 11:01 | | | |
| Calcium | | -0.632 | mg/L | 1.0 | | | | | | | |
| Magnesium | | -0.00839 | mg/L | 1.0 | | | | | | | |
| Potassium | | 0.00321 | mg/L | 1.0 | | | | | | | |
| Sodium | | 0.131 | mg/L | 1.0 | | | | | | | |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160108B | | | |
| Lab ID: Initial Calib Verif | | Initial Calibration Verification Standard | | | | | | 01/08/16 12:09 | | | |
| Phosphorus | | 4.92 | mg/L | 0.10 | 98 | 95 | 105 | | | | |
| Lab ID: Initial Calib Blank | | | | | | | | 01/08/16 12:15 | | | |
| Phosphorus | | -0.00340 | mg/L | 0.10 | | 0 | 0 | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|--|----------|-------|------|------|-----------|------------|------------------------------|----------|----------------------|
| | | | | | | | | Analytical Run: FIA1_160106C | | |
| Method: E353.2 | | | | | | | | | | |
| Lab ID: CCV-160106E-1 | Continuing Calibration Verification Standard | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 1.01 | mg/kg | 1.0 | 101 | 90 | 110 | | | 01/06/16 16:14 |
| Lab ID: CCB-160106E-1 | Continuing Calibration Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | -0.00200 | mg/kg | 1.0 | | | | | | 01/06/16 16:15 |
| | | | | | | | | | | Batch: 24649 |
| Method: E353.2 | | | | | | | | | | |
| Lab ID: LCS-24649 | Laboratory Control Sample | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 9.32 | mg/kg | 1.0 | 102 | 80 | 120 | | | 01/06/16 16:07 |
| Lab ID: MB-24649 | Method Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.2 | mg/kg | 0.08 | | | | | | 01/06/16 16:10 |
| Lab ID: T15120146-001APDS | Post Digestion/Distillation Spike | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 17.8 | mg/kg | 1.0 | 80 | 80 | 120 | | | 01/06/16 16:27 |
| Lab ID: T15120147-001ADUP | Sample Duplicate | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 7.98 | mg/kg | 1.0 | | | | 1.6 | | 01/06/16 16:31 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T15120147

Client: ALS - Houston

Project: HS15121172

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|--|-------|---------------------------|-------|-------|------|-----------|------------|-----|----------|---------------------------------------|
| Method: SW6010B Batch: 24611 | | | | | | | | | | |
| Lab ID: LCS-24611 | 4 | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160108A 01/08/16 11:10 |
| Calcium | | 1470 | mg/kg | 5.0 | 89 | 80 | 120 | | | |
| Magnesium | | 285 | mg/kg | 5.0 | 81 | 80 | 120 | | | |
| Potassium | | 893 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Sodium | | 76.3 | mg/kg | 5.0 | 85 | 80 | 120 | | | |
| Lab ID: MB-24611 | 4 | Method Blank | | | | | | | | Run: ICP102-CS_160108A 01/08/16 11:12 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | ND | mg/kg | 0.008 | | | | | | |
| Potassium | | 1.0 | mg/kg | 0.002 | | | | | | |
| Sodium | | 2 | mg/kg | 0.004 | | | | | | |
| Lab ID: T15120146-002AMS | 4 | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160108A 01/08/16 11:21 |
| Calcium | | 4150 | mg/kg | 5.0 | 99 | 70 | 130 | | | |
| Magnesium | | 1470 | mg/kg | 5.0 | 88 | 70 | 130 | | | |
| Potassium | | 1120 | mg/kg | 5.0 | 100 | 70 | 130 | | | |
| Sodium | | 1150 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Lab ID: T15120147-001ADUP | 4 | Sample Duplicate | | | | | | | | Run: ICP102-CS_160108A 01/08/16 11:30 |
| Calcium | | 1840 | mg/kg | 5.0 | | | | 1.2 | 20 | |
| Magnesium | | 128 | mg/kg | 5.0 | | | | 3.4 | 20 | |
| Potassium | | 51.1 | mg/kg | 5.0 | | | | 5.2 | 20 | |
| Sodium | | 31.7 | mg/kg | 5.0 | | | | 5.4 | 20 | |
| Method: SW6010B Batch: 24611 | | | | | | | | | | |
| Lab ID: LCS-24611 | | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160108B 01/08/16 12:26 |
| Phosphorus | | 406 | mg/kg | 5.0 | 92 | 80 | 120 | | | |
| Lab ID: MB-24611 | | Method Blank | | | | | | | | Run: ICP102-CS_160108B 01/08/16 12:31 |
| Phosphorus | | ND | mg/kg | 0.004 | | | | | | |
| Lab ID: T15120146-002AMS | | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160108B 01/08/16 12:59 |
| Phosphorus | | 21.0 | mg/kg | 5.0 | 94 | 70 | 130 | | | |
| Lab ID: T15120147-001ADUP | | Sample Duplicate | | | | | | | | Run: ICP102-CS_160108B 01/08/16 13:04 |
| Phosphorus | | 29.7 | mg/kg | 5.0 | | | | 1.8 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T15120147

Login completed by:

Date Received: 12/31/2015

Reviewed by: BL2000\amyatt

Received by: am1

Reviewed Date: 1/4/2016

Carrier name: Fed Ex Express

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on all shipping container(s)/cooler(s)? Yes No Not Present
- Custody seals intact on all sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time?
(Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes No
- Temp Blank received in all shipping container(s)/cooler(s)? Yes No Not Applicable
- Container/Temp Blank temperature: 1.0°C On Ice
- Water - VOA vials have zero headspace? Yes No Not Applicable
- Water - pH acceptable upon receipt? Yes No Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. Receipt temperature checked with Thermo 1211: read temperature = 1.0°C; no corrections. ADG 151231 11:17



CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 30 Dec 2015

COC ID 4028

Due date 21 JAN 16

| | |
|---|--|
| Subcontractor | |
| Energy Laboratories, Inc. 415 Graham Road College Station, TX 77845 | Phone 9796902217 Fax 9796902045 |

| Customer Information | | Project Information | |
|----------------------|--|---------------------|--|
| PO | HS15121172 | Project Name | HS15121172 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 | Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasey@alsglobal.com | Email2 | jt.rooke.lawal@alsglobal.com |

| Lab ID | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|--------------------|----------------|--------------------|--------|--------------------|
| -001 HS15121172-01 | J-0-6" | 29-Dec-15 11:10 am | Soil | XXX SUB |
| -002 HS15121172-03 | J-8-24" | 29-Dec-15 11:27 am | Soil | XXX SUB |
| -003 HS15121172-04 | I-0-6" | 29-Dec-15 03:20 pm | Soil | XXX SUB |
| -004 HS15121172-06 | I-6-24" | 29-Dec-15 03:45 pm | Soil | XXX SUB |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by | Date/Time | Received by | Date/Time | Cooler IDs | Report/QC Level |
|--------------------|----------------|---|----------------|-------------|-----------------|
| <i>[Signature]</i> | 12/30/15 18:00 | <i>[Signature]</i> Alvin O. Moore ADG151231 | 12/31/15 10:24 | Blue Cooler | STD |

RCD: FED Ex Express / COOLER + BOTTLE CS (BAG) / TEMP BLANK / ON ICE
 INTACT + SIGN MATCH / RCD

RECEIPT TEMP. - THERMO 1211; 1.0°C

No corrections.



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15121246**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 4 sample(s) on Dec 31, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read 'Dane Wacasey', with a long horizontal flourish extending to the right.

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121246

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-----------|-------------------|-------------------|--------------------------|
| HS15121246-01 | Trip Blank | Water | 120915-31 | 31-Dec-2015 00:00 | 31-Dec-2015 15:57 | <input type="checkbox"/> |
| HS15121246-02 | G-0-6" | Soil | | 31-Dec-2015 12:45 | 31-Dec-2015 15:57 | <input type="checkbox"/> |
| HS15121246-03 | G-6-12" | Soil | | 31-Dec-2015 13:00 | 31-Dec-2015 15:57 | <input type="checkbox"/> |
| HS15121246-04 | G-6-24" | Soil | | 31-Dec-2015 13:10 | 31-Dec-2015 15:57 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121246

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
 - This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
 - Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier. The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
 - The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is attached
-

GC Semivolatiles by Method TX1005**Batch ID: 100293**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

GCMS Volatiles by Method SW8260**Batch ID: R267164**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R267168Sample ID: **G-6-12' (HS15121246-03)**

- MS/MSD failed QC limits for select compounds due to suspect matrix effect.
-

Metals by Method SW7471A**Batch ID: 100431**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Metals by Method SW6020**Batch ID: 100344**Sample ID: **HS16010070-01**

- MS and MSD are for an unrelated sample.
-

WetChemistry by Method SW3550**Batch ID: R267215**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SW9045B**Batch ID: R267189**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Trip Blank
 Collection Date: 31-Dec-2015 00:00

ANALYTICAL REPORT

WorkOrder:HS15121246
 Lab ID:HS15121246-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 04-Jan-2016 12:26 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 04-Jan-2016 12:26 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 04-Jan-2016 12:26 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 04-Jan-2016 12:26 |
| Surr: 1,2-Dichloroethane-d4 | 116 | | 71-125 | %REC | 1 | 04-Jan-2016 12:26 |
| Surr: 4-Bromofluorobenzene | 109 | | 70-125 | %REC | 1 | 04-Jan-2016 12:26 |
| Surr: Dibromofluoromethane | 110 | | 74-125 | %REC | 1 | 04-Jan-2016 12:26 |
| Surr: Toluene-d8 | 103 | | 75-125 | %REC | 1 | 04-Jan-2016 12:26 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: G-0-6"
 Collection Date: 31-Dec-2015 12:45

ANALYTICAL REPORT
 WorkOrder:HS15121246
 Lab ID:HS15121246-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep SW3050A / 06-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.06 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Cadmium | < 0.552 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Chromium | 2.20 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Copper | 1.52 | | 0.221 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Lead | 4.89 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Molybdenum | < 0.552 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Nickel | 0.811 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Selenium | < 0.552 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| Zinc | 4.27 | | 0.552 | mg/Kg-dry | 1 | 06-Jan-2016 16:13 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| Ethylbenzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| Methyl tert-butyl ether | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| o-Xylene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| Toluene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 04-Jan-2016 10:34 |
| Surr: 1,2-Dichloroethane-d4 | 93.5 | | 70-128 | %REC | 1 | 04-Jan-2016 10:34 |
| Surr: 4-Bromofluorobenzene | 92.7 | | 73-126 | %REC | 1 | 04-Jan-2016 10:34 |
| Surr: Dibromofluoromethane | 101 | | 71-128 | %REC | 1 | 04-Jan-2016 10:34 |
| Surr: Toluene-d8 | 99.7 | | 73-127 | %REC | 1 | 04-Jan-2016 10:34 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0101 | | 0.00411 | mg/Kg-dry | 1 | 11-Jan-2016 14:55 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 12:47 |
| Surr: 2-Fluorobiphenyl | 96.3 | | 70-130 | %REC | 1 | 05-Jan-2016 12:47 |
| Surr: Trifluoromethyl benzene | 90.8 | | 70-130 | %REC | 1 | 05-Jan-2016 12:47 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.9 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 5.47 | H | 0.100 | pH Units | 1 | 04-Jan-2016 16:48 |
| Temp Deg C @pH | 20.4 | H | 0 | °C | 1 | 04-Jan-2016 16:48 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: G-6-12"
 Collection Date: 31-Dec-2015 13:00

ANALYTICAL REPORT

WorkOrder:HS15121246
 Lab ID:HS15121246-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|----------------------|--------------|-----------------------------|-----------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | Analyst: WLR | | |
| Benzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| Ethylbenzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| Methyl tert-butyl ether | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| o-Xylene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| Toluene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 04-Jan-2016 10:57 |
| Surr: 1,2-Dichloroethane-d4 | 92.2 | | 70-128 | %REC | 1 | 04-Jan-2016 10:57 |
| Surr: 4-Bromofluorobenzene | 94.0 | | 73-126 | %REC | 1 | 04-Jan-2016 10:57 |
| Surr: Dibromofluoromethane | 101 | | 71-128 | %REC | 1 | 04-Jan-2016 10:57 |
| Surr: Toluene-d8 | 103 | | 73-127 | %REC | 1 | 04-Jan-2016 10:57 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 13:17 |
| >nC12 to nC28 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 13:17 |
| >nC28 to nC35 | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 13:17 |
| Total Petroleum Hydrocarbon | < 57 | | 57 | mg/Kg-dry | 1 | 05-Jan-2016 13:17 |
| Surr: 2-Fluorobiphenyl | 89.0 | | 70-130 | %REC | 1 | 05-Jan-2016 13:17 |
| Surr: Trifluoromethyl benzene | 81.4 | | 70-130 | %REC | 1 | 05-Jan-2016 13:17 |
| MOISTURE | | Method:SW3550 | | Analyst: DFF | | |
| Percent Moisture | 13.3 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: G-6-24"
 Collection Date: 31-Dec-2015 13:10

ANALYTICAL REPORT

WorkOrder:HS15121246
 Lab ID:HS15121246-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|----------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 16.5 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.53 | H | 0.100 | pH Units | 1 | 04-Jan-2016 16:48 |
| Temp Deg C @pH | 20.2 | H | 0 | °C | 1 | 04-Jan-2016 16:48 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality

Project: 800 Acre Tract Soil Project

WorkOrder: HS15121246

Batch ID: 721 Method: VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS15121246-02 | 1 | 5.213 (g) | 5 (mL) | 0.96 | Bulk (5030B) |
| HS15121246-03 | 1 | 5.116 (g) | 5 (mL) | 0.98 | Bulk (5030B) |

Batch ID: 100279 Method: TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D Prep: TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121246-02 | 1 | 1.0098 | 50 (mL) | 49.51 |
| HS15121246-04 | 1 | 1.0211 | 50 (mL) | 48.97 |

Batch ID: 100293 Method: TEXAS TPH BY TX1005 Prep: TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121246-02 | 1 | 10.11 | 10 (mL) | 0.9891 |
| HS15121246-03 | 1 | 10.09 | 10 (mL) | 0.9911 |

Batch ID: 100344 Method: METALS BY SW6020A Prep: 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121246-02 | 1 | 0.5388 | 50 (mL) | 92.8 |

Batch ID: 100431 Method: MERCURY BY SW7471B Prep: HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121246-02 | 1 | 0.5765 | 40 (mL) | 69.38 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|----------------|--|-----------|----------------------|-------------------|----|
| Batch ID 100279 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121246-04 | G-6-24" | 31 Dec 2015 13:10 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| Batch ID 100293 | | Test Name : TEXAS TPH BY TX1005 | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | 04 Jan 2016 14:09 | 05 Jan 2016 12:47 | 1 |
| HS15121246-03 | G-6-12" | 31 Dec 2015 13:00 | | 04 Jan 2016 14:09 | 05 Jan 2016 13:17 | 1 |
| Batch ID 100344 | | Test Name : METALS BY SW6020A | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | 06 Jan 2016 11:06 | 06 Jan 2016 16:13 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:55 | 1 |
| Batch ID R267164 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | |
| HS15121246-01 | Trip Blank | 31 Dec 2015 00:00 | | | 04 Jan 2016 12:26 | 1 |
| Batch ID R267168 | | Test Name : VOLATILES BY SW8260C | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | | 04 Jan 2016 10:34 | 1 |
| HS15121246-03 | G-6-12" | 31 Dec 2015 13:00 | | | 04 Jan 2016 10:57 | 1 |
| Batch ID R267189 | | Test Name : PH SOIL BY SW9045D | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | | 04 Jan 2016 16:48 | 1 |
| HS15121246-04 | G-6-24" | 31 Dec 2015 13:10 | | | 04 Jan 2016 16:48 | 1 |
| Batch ID R267215 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | | 05 Jan 2016 11:02 | 1 |
| HS15121246-03 | G-6-12" | 31 Dec 2015 13:00 | | | 05 Jan 2016 11:02 | 1 |
| HS15121246-04 | G-6-24" | 31 Dec 2015 13:10 | | | 05 Jan 2016 11:02 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | Matrix: Soil | | |
| HS15121246-02 | G-0-6" | 31 Dec 2015 12:45 | | | 15 Jan 2016 16:37 | 1 |
| HS15121246-04 | G-6-24" | 31 Dec 2015 13:10 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

| Batch ID: 100293 | | Instrument: FID-13 | | Method: TX1005 | | | | | | |
|-------------------------------|-----------------------------------|------------------------------|---------|-----------------------|---|---------------|---------------|------|-----------|----------|
| MBLK | Sample ID: MBLK-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 14:18 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544202 | PrepDate: 04-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 27.27 | 0 | 25 | 0 | 109 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 25.03 | 0 | 25 | 0 | 100 | 70 - 130 | | | | |
| LCS | Sample ID: LCS-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:17 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544109 | PrepDate: 04-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
| nC6 to nC12 | 240.6 | 50 | 250 | 0 | 96.3 | 75 - 125 | | | | |
| >nC12 to nC28 | 227.2 | 50 | 250 | 0 | 90.9 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 29.42 | 0 | 25 | 0 | 118 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 24.34 | 0 | 25 | 0 | 97.4 | 70 - 130 | | | | |
| LCSD | Sample ID: LCSD-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:47 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544110 | PrepDate: 04-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
| nC6 to nC12 | 234.2 | 50 | 250 | 0 | 93.7 | 75 - 125 | 240.6 | 2.7 | 20 | |
| >nC12 to nC28 | 224.8 | 50 | 250 | 0 | 89.9 | 75 - 125 | 227.2 | 1.02 | 20 | |
| Surr: 2-Fluorobiphenyl | 26.92 | 0 | 25 | 0 | 108 | 70 - 130 | 29.42 | 8.88 | 20 | |
| Surr: Trifluoromethyl benzene | 23.18 | 0 | 25 | 0 | 92.7 | 70 - 130 | 24.34 | 4.89 | 20 | |
| MS | Sample ID: HS15121172-01MS | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 11:47 | | | | | |
| Client ID: | | Run ID: FID-13_267212 | | SeqNo: 3544112 | PrepDate: 04-Jan-2016 | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
| nC6 to nC12 | 221 | 50 | 249.3 | 0 | 88.7 | 75 - 125 | | | | |
| >nC12 to nC28 | 230.6 | 50 | 249.3 | 0 | 92.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 26.75 | 0 | 24.93 | 0 | 107 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 23.16 | 0 | 24.93 | 0 | 92.9 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

| | | |
|-------------------------|----------------------------|-----------------------|
| Batch ID: 100344 | Instrument: ICPMS04 | Method: SW6020 |
|-------------------------|----------------------------|-----------------------|

| | | | | | | | | | | |
|-------------------|-------------------------------|-----------------------|---|----------------------|-------------|----------------------|----------------------|-------------|------------------|-------------|
| MBLK | Sample ID: MBLK-100344 | Units: mg/Kg | Analysis Date: 06-Jan-2016 15:52 | | | | | | | |
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545527 | PrepDate: 06-Jan-2016 DF: 1 | | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

| | | | | | | | | | | |
|-------------------|-------------------------------|-----------------------|---|----------------------|-------------|----------------------|----------------------|-------------|------------------|-------------|
| LCS | Sample ID: MLCS-100344 | Units: mg/Kg | Analysis Date: 06-Jan-2016 15:56 | | | | | | | |
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545528 | PrepDate: 06-Jan-2016 DF: 1 | | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 9.429 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | | |
| Cadmium | 9.418 | 0.500 | 10 | 0 | 94.2 | 80 - 120 | | | | |
| Chromium | 9.21 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Copper | 9.152 | 0.200 | 10 | 0 | 91.5 | 80 - 120 | | | | |
| Lead | 9.543 | 0.500 | 10 | 0 | 95.4 | 80 - 120 | | | | |
| Molybdenum | 8.639 | 0.500 | 10 | 0 | 86.4 | 80 - 120 | | | | |
| Nickel | 9.826 | 0.500 | 10 | 0 | 98.3 | 80 - 120 | | | | |
| Selenium | 9.199 | 0.500 | 10 | 0 | 92.0 | 80 - 120 | | | | |
| Zinc | 9.783 | 0.500 | 10 | 0 | 97.8 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| MS | | Sample ID: HS16010070-01MS | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:43 | | |
|------------|--------|-----------------------------------|---------|---------------|-----------------------|---------------|---|------|----------------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545551 | | PrepDate: 06-Jan-2016 | | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 11.8 | 0.487 | 9.745 | 3.275 | 87.5 | 75 - 125 | | | |
| Cadmium | 9.077 | 0.487 | 9.745 | 0.1306 | 91.8 | 75 - 125 | | | |
| Chromium | 17.57 | 0.487 | 9.745 | 4.545 | 134 | 75 - 125 | | | S |
| Copper | 18.84 | 0.195 | 9.745 | 7.877 | 113 | 75 - 125 | | | |
| Lead | 20.22 | 0.487 | 9.745 | 10.53 | 99.5 | 75 - 125 | | | |
| Molybdenum | 8.383 | 0.487 | 9.745 | 0.2645 | 83.3 | 75 - 125 | | | |
| Nickel | 15.78 | 0.487 | 9.745 | 5.883 | 102 | 75 - 125 | | | |
| Selenium | 9.204 | 0.487 | 9.745 | 0.5686 | 88.6 | 75 - 125 | | | |
| Zinc | 46.95 | 0.487 | 9.745 | 33.81 | 135 | 75 - 125 | | | S |

| MSD | | Sample ID: HS16010070-01MSD | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:47 | | |
|------------|--------|------------------------------------|---------|---------------|-----------------------|---------------|---|--------|----------------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545552 | | PrepDate: 06-Jan-2016 | | DF: 1 |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 11.61 | 0.478 | 9.562 | 3.275 | 87.1 | 75 - 125 | 11.8 | 1.66 | 20 |
| Cadmium | 8.895 | 0.478 | 9.562 | 0.1306 | 91.7 | 75 - 125 | 9.077 | 2.02 | 20 |
| Chromium | 17.47 | 0.478 | 9.562 | 4.545 | 135 | 75 - 125 | 17.57 | 0.54 | 20 S |
| Copper | 19.73 | 0.191 | 9.562 | 7.877 | 124 | 75 - 125 | 18.84 | 4.58 | 20 |
| Lead | 20.22 | 0.478 | 9.562 | 10.53 | 101 | 75 - 125 | 20.22 | 0.0258 | 20 |
| Molybdenum | 8.09 | 0.478 | 9.562 | 0.2645 | 81.8 | 75 - 125 | 8.383 | 3.55 | 20 |
| Nickel | 15.75 | 0.478 | 9.562 | 5.883 | 103 | 75 - 125 | 15.78 | 0.198 | 20 |
| Selenium | 9.19 | 0.478 | 9.562 | 0.5686 | 90.2 | 75 - 125 | 9.204 | 0.15 | 20 |
| Zinc | 47 | 0.478 | 9.562 | 33.81 | 138 | 75 - 125 | 46.95 | 0.104 | 20 S |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| PDS | | Sample ID: HS16010070-01BS | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:51 | | | |
|------------|--------|----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS04_267254 | | SeqNo: 3545553 | | PrepDate: 06-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 12.61 | 0.484 | 9.69 | 3.275 | 96.3 | 75 - 125 | | | |
| Cadmium | 9.189 | 0.484 | 9.69 | 0.1306 | 93.5 | 75 - 125 | | | |
| Chromium | 14.57 | 0.484 | 9.69 | 4.545 | 103 | 75 - 125 | | | |
| Copper | 17.89 | 0.194 | 9.69 | 7.877 | 103 | 75 - 125 | | | |
| Lead | 19.74 | 0.484 | 9.69 | 10.53 | 95.0 | 75 - 125 | | | |
| Molybdenum | 8.927 | 0.484 | 9.69 | 0.2645 | 89.4 | 75 - 125 | | | |
| Nickel | 14.95 | 0.484 | 9.69 | 5.883 | 93.6 | 75 - 125 | | | |
| Selenium | 9.88 | 0.484 | 9.69 | 0.5686 | 96.1 | 75 - 125 | | | |
| Zinc | 42.66 | 0.484 | 9.69 | 33.81 | 91.4 | 75 - 125 | | | |

| SD | | Sample ID: HS16010070-01 DIL SX | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 16:22 | | | |
|------------|--------|---------------------------------|---------|----------------|------|----------------------------------|---------------|-------|------------|
| Client ID: | | Run ID: ICPMS04_267254 | | SeqNo: 3545534 | | PrepDate: 06-Jan-2016 | | DF: 5 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | Limit Qual |
| Arsenic | 3.377 | 2.42 | | | | | 3.275 | 3.12 | 10 |
| Cadmium | < 2.42 | 2.42 | | | | | 0.1306 | 0 | 10 |
| Chromium | 4.835 | 2.42 | | | | | 4.545 | 6.39 | 10 |
| Copper | 8.545 | 0.969 | | | | | 7.877 | 8.47 | 10 |
| Lead | 9.862 | 2.42 | | | | | 10.53 | 6.34 | 10 |
| Molybdenum | < 2.42 | 2.42 | | | | | 0.2645 | 0 | 10 |
| Nickel | 6.358 | 2.42 | | | | | 5.883 | 8.07 | 10 |
| Selenium | < 2.42 | 2.42 | | | | | 0.5686 | 0 | 10 |
| Zinc | 36.45 | 2.42 | | | | | 33.81 | 7.79 | 10 |

The following samples were analyzed in this batch: HS15121246-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: 100431 **Instrument:** HG02 **Method:** SW7471A

MBLK Sample ID: **MBLK-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:24**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548754** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury < 3.32 3.32

LCS Sample ID: **LCS-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:26**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548755** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 372.7 3.32 333.3 0 112 85 - 115

MS Sample ID: **HS15121095-03MS** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:32**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548757** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 380.9 3.73 374.2 11.43 98.7 85 - 115

MSD Sample ID: **HS15121095-03MSD** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:34**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548758** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 399.9 3.71 372.3 11.43 104 85 - 115 380.9 4.85 20

The following samples were analyzed in this batch: HS15121246-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: R267164 **Instrument:** VOA2 **Method:** SW8260

| MBLK | Sample ID: | Units: ug/L | | | Analysis Date: 04-Jan-2016 12:01 | | | | | |
|------------------------------------|------------|-------------|---------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: | VOA2_267164 | SeqNo: | 3543056 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 57.76 | 1.0 | 50 | 0 | 116 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 54.66 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 53.29 | 1.0 | 50 | 0 | 107 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 51.19 | 1.0 | 50 | 0 | 102 | 75 - 125 | | | | |

| LCS | Sample ID: | Units: ug/L | | | Analysis Date: 04-Jan-2016 11:10 | | | | | |
|------------------------------------|------------|-------------|---------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: | VOA2_267164 | SeqNo: | 3543055 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.4 | 1.0 | 50 | 0 | 88.8 | 75 - 122 | | | | |
| Ethylbenzene | 46.47 | 1.0 | 50 | 0 | 92.9 | 80 - 120 | | | | |
| Toluene | 46.06 | 1.0 | 50 | 0 | 92.1 | 75 - 121 | | | | |
| Xylenes, Total | 138.4 | 3.0 | 150 | 0 | 92.3 | 79 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 59.14 | 1.0 | 50 | 0 | 118 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 56.15 | 1.0 | 50 | 0 | 112 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 52.95 | 1.0 | 50 | 0 | 106 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 49.88 | 1.0 | 50 | 0 | 99.8 | 75 - 125 | | | | |

| MS | Sample ID: | Units: ug/L | | | Analysis Date: 04-Jan-2016 15:52 | | | | | |
|------------------------------------|------------|-------------|---------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: | VOA2_267164 | SeqNo: | 3543678 | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 46.09 | 1.0 | 50 | 0 | 92.2 | 75 - 122 | | | | |
| Ethylbenzene | 47.6 | 1.0 | 50 | 0 | 95.2 | 80 - 120 | | | | |
| Toluene | 46.6 | 1.0 | 50 | 0 | 93.2 | 75 - 121 | | | | |
| Xylenes, Total | 137.7 | 3.0 | 150 | 0 | 91.8 | 80 - 124 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 59.76 | 1.0 | 50 | 0 | 120 | 71 - 125 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 56.73 | 1.0 | 50 | 0 | 113 | 70 - 125 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 53.54 | 1.0 | 50 | 0 | 107 | 74 - 125 | | | | |
| <i>Surr: Toluene-d8</i> | 49.66 | 1.0 | 50 | 0 | 99.3 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: R267164 **Instrument:** VOA2 **Method:** SW8260

| MSD | | Sample ID: HS15121247-01MSD | | | Units: ug/L | | Analysis Date: 04-Jan-2016 16:17 | | | |
|-----------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: VOA2_267164 | | | SeqNo: 3543679 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.24 | 1.0 | 50 | 0 | 88.5 | 75 - 122 | 46.09 | | 4.08 | 20 |
| Ethylbenzene | 46.33 | 1.0 | 50 | 0 | 92.7 | 80 - 120 | 47.6 | | 2.71 | 20 |
| Toluene | 45.39 | 1.0 | 50 | 0 | 90.8 | 75 - 121 | 46.6 | | 2.63 | 20 |
| Xylenes, Total | 135.2 | 3.0 | 150 | 0 | 90.1 | 80 - 124 | 137.7 | | 1.84 | 20 |
| Surr: 1,2-Dichloroethane-d4 | 60.69 | 1.0 | 50 | 0 | 121 | 71 - 125 | 59.76 | | 1.54 | 20 |
| Surr: 4-Bromofluorobenzene | 55.7 | 1.0 | 50 | 0 | 111 | 70 - 125 | 56.73 | | 1.83 | 20 |
| Surr: Dibromofluoromethane | 52.24 | 1.0 | 50 | 0 | 104 | 74 - 125 | 53.54 | | 2.46 | 20 |
| Surr: Toluene-d8 | 50.15 | 1.0 | 50 | 0 | 100 | 75 - 125 | 49.66 | | 0.974 | 20 |

The following samples were analyzed in this batch: HS15121246-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: R267168 **Instrument:** VOA5 **Method:** SW8260

| MBLK | | Sample ID: VBLKS1-010416 | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 09:24 | | | | |
|------------------------------------|--------|--------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA5_267168 | | SeqNo: 3543081 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 46.72 | 0 | 50 | 0 | 93.4 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 47.7 | 0 | 50 | 0 | 95.4 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 49.77 | 0 | 50 | 0 | 99.5 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 51.28 | 0 | 50 | 0 | 103 | 73 - 127 | | | | |

| LCS | | Sample ID: VLCSS1-010416 | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 08:38 | | | | |
|------------------------------------|--------|--------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA5_267168 | | SeqNo: 3543080 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 50.77 | 5.0 | 50 | 0 | 102 | 79 - 122 | | | | |
| Ethylbenzene | 51.5 | 5.0 | 50 | 0 | 103 | 80 - 122 | | | | |
| m,p-Xylene | 101.8 | 10 | 100 | 0 | 102 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 50.66 | 5.0 | 50 | 0 | 101 | 76 - 124 | | | | |
| o-Xylene | 51.04 | 5.0 | 50 | 0 | 102 | 80 - 123 | | | | |
| Toluene | 50.49 | 5.0 | 50 | 0 | 101 | 79 - 120 | | | | |
| Xylenes, Total | 152.9 | 10 | 150 | 0 | 102 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 50.6 | 0 | 50 | 0 | 101 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.82 | 0 | 50 | 0 | 99.6 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 50.96 | 0 | 50 | 0 | 102 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.24 | 0 | 50 | 0 | 100 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: R267168 **Instrument:** VOA5 **Method:** SW8260

| MS | | Sample ID: HS15121246-03MS | | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 11:21 | | | |
|-----------------------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: G-6-12" | | Run ID: VOA5_267168 | | | SeqNo: 3543086 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 35.19 | 4.8 | 48 | 0 | 73.3 | 79 - 122 | | | | S |
| Ethylbenzene | 33.31 | 4.8 | 48 | 0 | 69.4 | 80 - 122 | | | | S |
| m,p-Xylene | 65.09 | 9.6 | 96 | 0 | 67.8 | 79 - 122 | | | | S |
| Methyl tert-butyl ether | 32.74 | 4.8 | 48 | 0 | 68.2 | 76 - 124 | | | | S |
| o-Xylene | 32.5 | 4.8 | 48 | 0 | 67.7 | 80 - 123 | | | | S |
| Toluene | 33.88 | 4.8 | 48 | 0 | 70.6 | 79 - 120 | | | | S |
| Xylenes, Total | 97.59 | 9.6 | 144 | 0 | 67.8 | 80 - 120 | | | | S |
| Surr: 1,2-Dichloroethane-d4 | 45.9 | 0 | 48 | 0 | 95.6 | 70 - 128 | | | | |
| Surr: 4-Bromofluorobenzene | 47.26 | 0 | 48 | 0 | 98.5 | 73 - 126 | | | | |
| Surr: Dibromofluoromethane | 47.51 | 0 | 48 | 0 | 99.0 | 71 - 128 | | | | |
| Surr: Toluene-d8 | 48.45 | 0 | 48 | 0 | 101 | 73 - 127 | | | | |

| MSD | | Sample ID: HS15121246-03MSD | | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 11:44 | | | |
|-----------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|--------|-----------|------|
| Client ID: G-6-12" | | Run ID: VOA5_267168 | | | SeqNo: 3543087 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 34.21 | 4.8 | 48 | 0 | 71.3 | 79 - 122 | 35.19 | 2.81 | 30 | S |
| Ethylbenzene | 32.23 | 4.8 | 48 | 0 | 67.1 | 80 - 122 | 33.31 | 3.29 | 30 | S |
| m,p-Xylene | 62.14 | 9.6 | 96 | 0 | 64.7 | 79 - 122 | 65.09 | 4.63 | 30 | S |
| Methyl tert-butyl ether | 32.78 | 4.8 | 48 | 0 | 68.3 | 76 - 124 | 32.74 | 0.117 | 30 | S |
| o-Xylene | 30.83 | 4.8 | 48 | 0 | 64.2 | 80 - 123 | 32.5 | 5.27 | 30 | S |
| Toluene | 32.78 | 4.8 | 48 | 0 | 68.3 | 79 - 120 | 33.88 | 3.3 | 30 | S |
| Xylenes, Total | 92.98 | 9.6 | 144 | 0 | 64.6 | 80 - 120 | 97.59 | 4.84 | 30 | S |
| Surr: 1,2-Dichloroethane-d4 | 47.46 | 0 | 48 | 0 | 98.9 | 70 - 128 | 45.9 | 3.34 | 30 | |
| Surr: 4-Bromofluorobenzene | 47.27 | 0 | 48 | 0 | 98.5 | 73 - 126 | 47.26 | 0.0252 | 30 | |
| Surr: Dibromofluoromethane | 48.68 | 0 | 48 | 0 | 101 | 71 - 128 | 47.51 | 2.45 | 30 | |
| Surr: Toluene-d8 | 48.91 | 0 | 48 | 0 | 102 | 73 - 127 | 48.45 | 0.951 | 30 | |

The following samples were analyzed in this batch: HS15121246-02 HS15121246-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

Batch ID: R267189 Instrument: WetChem_HS Method: SW9045B

| | | | | | | | | | |
|------------|---------------------------|-----------------|----------------------------------|---------------|------|---------------|---------------|-----------|------|
| LCS | Sample ID: LCS-267189 | Units: pH Units | Analysis Date: 04-Jan-2016 16:48 | | | | | | |
| Client ID: | Run ID: WetChem_HS_267189 | SeqNo: 3543504 | PrepDate: | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| pH | 6.03 | 0.100 | 6 | 0 | 100 | 97 - 103 | | | |

| | | | | | | | | | |
|--------------------|-----------------------------|-----------------|----------------------------------|---------------|------|---------------|---------------|-----------|------|
| DUP | Sample ID: HS15121246-04DUP | Units: pH Units | Analysis Date: 04-Jan-2016 16:48 | | | | | | |
| Client ID: G-6-24" | Run ID: WetChem_HS_267189 | SeqNo: 3543505 | PrepDate: | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| pH | 6.63 | 0.100 | | | | | 6.53 | 1.52 | 10 |
| Temp Deg C @pH | 20.1 | 0 | | | | | 20.2 | 0.496 | 10 |

The following samples were analyzed in this batch: HS15121246-02 HS15121246-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

QC BATCH REPORT

| | | | | | | | | | |
|--------------------|-----------------------------|----------------------|---------|----------------------------------|------|---------------|---------------|-----------|------|
| Batch ID: R267215 | | Instrument: Balance1 | | Method: SW3550 | | | | | |
| DUP | Sample ID: HS15121246-04DUP | Units: wt% | | Analysis Date: 05-Jan-2016 11:02 | | | | | |
| Client ID: G-6-24" | Run ID: Balance1_267215 | SeqNo: 3543830 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit | Qual |
| Percent Moisture | 16.3 | 0.0100 | | | | | 16.5 | 1.22 | 20 |

The following samples were analyzed in this batch: HS15121246-02 HS15121246-03 HS15121246-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121246

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| SQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |
| mg/L | Milligrams per Liter |

CERTIFICATIONS, ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121246

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS15121246-01 | Trip Blank | Login | 12/31/2015 4:45:54 PM | CGG | VW-3 |
| HS15121246-02 | G-0-6" | Login | 12/31/2015 4:47:50 PM | CGG | 2D |
| HS15121246-02 | G-0-6" | Login | 12/31/2015 4:47:50 PM | CGG | 2D |
| HS15121246-02 | G-0-6" | Login | 12/31/2015 4:47:50 PM | CGG | 2D |
| HS15121246-02 | G-0-6" | Login | 12/31/2015 4:47:50 PM | CGG | Sub |
| HS15121246-03 | G-6-12" | Login | 12/31/2015 4:47:50 PM | CGG | LF-23 |
| HS15121246-03 | G-6-12" | Login | 12/31/2015 4:47:50 PM | CGG | VW-2 |
| HS15121246-04 | G-6-24" | Login | 12/31/2015 4:47:50 PM | CGG | 2D |
| HS15121246-04 | G-6-24" | Login | 12/31/2015 4:47:50 PM | CGG | Sub |
| HS15121246-02 | G-0-6" | Return | 1/6/2016 4:08:45 PM | HAS | 2D |
| HS15121246-02 | G-0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS15121246-02 | G-0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
Work Order: HS15121246

Date/Time Received: 31-Dec-2015 15:57
Received by: CGG

Checklist completed by: Corey Grandits
eSignature | 31-Dec-2015
Date

Reviewed by: Dane J. Wacasey
eSignature | 5-Jan-2016
Date

Matrices: Soil/Water

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 4.0c/4.2c uc/c IR#4

Cooler(s)/Kit(s): Lg Blue

Date/Time sample(s) sent to storage: 12/31/2015 17:20

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

COC ID: 135939



ALS Project Manager:

| Customer Information | | | | Project Information | | | |
|----------------------|-----------------------------------|-----------------|-----------------------------------|---------------------|--|--|--|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project | A | SUB (No line item - Nutrients (Energy Labs)) | | |
| Work Order | | Project Number | | B | TKN_S_4500NH3 D (Group E - TKN) | | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental | C | PH_S (Group _ pH) | | |
| Sand Report To | Bill Ross | Invoice Attn | Julie Steger - A/P | D | ICP_S_Low (Group B Total Metals 6020/7470 (10 w/Hg)) | | |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 | E | 8260_S (Group B BTEX+MTBE 8260) | | |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin, TX 78711 | F | TX1005_S_REV3 (Group B TPH TX1005) | | |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 | G | ICP_TW (Group B Total Metals 6020/7470 (10 w/Hg) EBLK) | | |
| Fax | (361) 825-3101 | Fax | | H | 8260_LL_W (Group B BTEX/MTBE 8260 EBLK) | | |
| e-Mail Address: | | e-Mail Address | | I | TX1005_W_Low (Group B-TPH TX1005 EBLK) | | |
| | | | | J | | | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|--------------------|------------|------|--------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | Top Blank | 12/31/2015 | | W | HCl | 2 | | | | | | | | X | | | |
| 2 | G-0-6" | 12/31/2015 | 1245 | W | W | 6 | X | X | X | X | X | X | X | X | X | | |
| 3 | G-6-12" | 12/31/2015 | 1300 | W | W | 2 | | | | | | | | | | | |
| 4 | G-6-24" | 12/31/2015 | 1310 | W | W | 3 | X | X | X | X | X | X | X | X | X | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | |
|--------------------------------|-----------------|---------------------------------------|-------------------|
| Sampler(s) Please Print & Sign | Shipment Method | Required Turnaround Time: (Check Box) | Results Due Date: |
| | | TAT 15 days Other: | |

| | | | | | |
|--------------------|------------|-------|--------------------------|----------|-------|
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
| <i>[Signature]</i> | 12/31/2015 | 1557 | <i>[Signature]</i> | 12/31/15 | 1557 |
| Relinquished by: | Date: | Time: | Checked by (Laboratory): | Date: | Time: |
| | | | CC | 12/31/15 | 1557 |

| | | |
|-------------------------|--|-----------------------------------|
| Logged by (Laboratory): | Preservative Key: | QC Package: (Check One Box Below) |
| | 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035 | QC Level STD Other: |

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.



ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5666
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 12/31/2015 Time: 1316
Name: Henry M. Wood
Company: ALS Environmental Inc.

Seal Broken By: *CG*
Date: 12/31



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T16010010 Quote ID: T2980 - TCEQ Soil Analysis
Project Name: HS15121246

Energy Laboratories Inc. College Station TX received the following 2 samples for ALS - Houston on 1/5/2016 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|------------------|----------------|--------------|--------|---|
| T16010010-001 | HS15121246-02 | 12/31/15 12:45 | 01/05/16 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T16010010-002 | HS15121246-04 | 12/31/15 13:10 | 01/05/16 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: *Amanda Myatt*

Digitally signed by
Amanda Myatt
Date: 2016.01.20 16:53:48 -06:00



CLIENT: ALS - Houston
Project: HS15121246
Work Order: T16010010

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121246
Lab ID: T16010010-001
Client Sample ID: HS15121246-02

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/31/15 12:45
Date Received: 01/05/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 8.8 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:09 / eli-h |
| Ammonia as N, KCL Extract | 6.9 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:09 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/08/16 15:02 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:36 / dmp |
| Total Kjeldahl Nitrogen | 616 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1100 | mg/kg | | 5 | | SW6010B | 01/13/16 13:27 / jtr |
| Magnesium | 199 | mg/kg | | 5 | | SW6010B | 01/13/16 13:27 / jtr |
| Phosphorus | 9 | mg/kg | | 5 | | SW6010B | 01/13/16 11:16 / jtr |
| Potassium | 42 | mg/kg | | 5 | | SW6010B | 01/13/16 13:27 / jtr |
| Sodium | 49 | mg/kg | | 5 | | SW6010B | 01/13/16 13:27 / jtr |

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121246
Lab ID: T16010010-002
Client Sample ID: HS15121246-04

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/31/15 13:10
Date Received: 01/05/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 3.8 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:12 / eli-h |
| Ammonia as N, KCL Extract | 3.0 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:12 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/08/16 15:04 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:38 / dmp |
| Total Kjeldahl Nitrogen | 560 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1920 | mg/kg | | 5 | | SW6010B | 01/13/16 13:31 / jtr |
| Magnesium | 426 | mg/kg | | 5 | | SW6010B | 01/13/16 13:31 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:21 / jtr |
| Potassium | 71 | mg/kg | | 5 | | SW6010B | 01/13/16 13:31 / jtr |
| Sodium | 211 | mg/kg | | 5 | | SW6010B | 01/13/16 13:31 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 ‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010010

Client: ALS - Houston

Project: HS15121246

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|-------|--|----------|------|------|-----------|------------|-------------------------------|----------|----------------|
| Method: A2510 B | | | | | | | | Analytical Run: COND3_160108A | | |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | 01/08/16 14:45 |
| Conductivity, 1:2 | | 0.100 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Lab ID: COND 2000 | | Continuing Calibration Verification Standard | | | | | | | | 01/08/16 14:46 |
| Conductivity, 1:2 | | 2.00 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Lab ID: ICV-1413 | | Initial Calibration Verification Standard | | | | | | | | 01/08/16 14:49 |
| Conductivity, 1:2 | | 1.42 | mmhos/cm | 0.10 | 101 | 90 | 110 | | | |
| Method: A2510 B | | | | | | | | Batch: 160108A-COND-S-SM2510 | | |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard | | | | | | | | 01/08/16 14:47 |
| Conductivity, 1:2 | | 7.01 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Method: A2510 B | | | | | | | | Batch: 24671 | | |
| Lab ID: LCS-24671 | | Laboratory Control Sample | | | | | | | | 01/08/16 14:54 |
| Conductivity, 1:2 | | 1.10 | mmhos/cm | 0.10 | 98 | 80 | 120 | | | |
| Lab ID: MB-24671 | | Method Blank | | | | | | | | 01/08/16 14:55 |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | |
| Lab ID: T16010010-001ADUP | | Sample Duplicate | | | | | | | | 01/08/16 15:03 |
| Conductivity, 1:2 | | 0.182 | mmhos/cm | 0.10 | | | | 3.9 | 10 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010010

Client: ALS - Houston

Project: HS15121246

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------|-------|-------------------------------|-------|----|------|-----------|------------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31700 |
| Lab ID: LCS-31700 | | Laboratory Control Sample | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 1030 | mg/kg | 30 | 110 | 70 | 130 | | | |
| Lab ID: MB-31700 | | Method Blank | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2750 | mg/kg | 30 | 83 | 50 | 150 | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike Duplicate | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2580 | mg/kg | 30 | 75 | 50 | 150 | 6.0 | 30 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010010

Client: ALS - Houston

Project: HS15121246

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|---|--------|-------|------|------|-----------|------------------|-----------------------------|----------|----------------|
| Method: ASA33-7 | | | | | | | | Analytical Run: SUB-H112204 | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | | | 01/12/16 12:49 |
| Ammonia as N, KCL Extract | 9.09 | mg/kg | | 1.2 | 98 | 90 | 110 | | | |
| Method: ASA33-7 | | | | | | | | Batch: H_31690 | | |
| Lab ID: LCS-31690 | Laboratory Control Sample | | | | | | Run: SUB-H112204 | | | 01/12/16 12:53 |
| Ammonia as N, KCL Extract | 2.96 | mg/kg | | 0.50 | 93 | 70 | 130 | | | |
| Lab ID: MB-31690 | Method Blank | | | | | | Run: SUB-H112204 | | | 01/12/16 12:55 |
| Ammonia as N, KCL Extract | 0.3 | mg/kg | | 0.1 | | | | | | |
| Lab ID: T15120146-001B | Sample Matrix Spike | | | | | | Run: SUB-H112204 | | | 01/12/16 12:57 |
| Ammonia as N, KCL Extract | 10.1 | mg/kg | | 1.4 | 87 | 90 | 110 | | | S |
| Lab ID: H16010108-002BDUP | Sample Duplicate | | | | | | Run: SUB-H112204 | | | 01/12/16 13:14 |
| Ammonia as N, KCL Extract | 3.06 | mg/kg | | 0.50 | | | | 1.6 | 20 | |
| Lab ID: T15120146-002B | 2 Sample Duplicate | | | | | | Run: SUB-H112204 | | | 01/12/16 12:59 |
| Ammonia as N, KCL Extract | 5.34 | mg/kg | | 1.2 | | | | 1.1 | 20 | |
| Ammonia as NH4 | 6.83 | mg/kg | | 1.6 | | | | 1.1 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010010

Client: ALS - Houston

Project: HS15121246

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|------------------------------------|---|---|-------|------|------|-----------|------------|---|----------|----------------|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113A | | |
| Lab ID: Initial Calib Verif | Initial Calibration Verification Standard | | | | | | | | | |
| Phosphorus | | 5.01 | mg/L | 0.10 | 100 | 95 | 105 | | | 01/13/16 10:42 |
| Lab ID: Initial Calib Blank | | | | | | | | Initial Calibration Blank, Instrument Blank | | |
| Phosphorus | | -0.00428 | mg/L | 0.10 | | 0 | 0 | | | 01/13/16 10:44 |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113B | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | |
| Calcium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | 01/13/16 12:55 |
| Magnesium | | 50.5 | mg/L | 1.0 | 101 | 95 | 105 | | | |
| Potassium | | 49.9 | mg/L | 1.0 | 100 | 95 | 105 | | | |
| Sodium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | |
| Calcium | | -0.260 | mg/L | 1.0 | | | | | | 01/13/16 12:56 |
| Magnesium | | 0.0140 | mg/L | 1.0 | | | | | | |
| Potassium | | -0.0108 | mg/L | 1.0 | | | | | | |
| Sodium | | 0.140 | mg/L | 1.0 | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010010

Client: ALS - Houston

Project: HS15121246

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|---|----------|-------|------|------|-----------|------------|------------------------------|----------|---|
| Method: E353.2 | | | | | | | | Analytical Run: FIA1_160113A | | |
| Lab ID: ICV-160113C | Initial Calibration Verification Standard | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 1.56 | mg/kg | 1.0 | 104 | 90 | 110 | | | 01/13/16 09:18 |
| Lab ID: ICB2-160113C | Initial Calibration Blank, Instrument Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | -0.00800 | mg/kg | 1.0 | | 0 | 0 | | | 01/13/16 09:21 |
| Method: E353.2 | | | | | | | | Batch: 24668 | | |
| Lab ID: LCS-24668 | Laboratory Control Sample | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 9.90 | mg/kg | 1.0 | 109 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 09:26 |
| Lab ID: MB-24668 | Method Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.1 | mg/kg | 0.08 | | | | | | Run: FIA1_160113A 01/13/16 09:28 |
| Lab ID: T16010009-001APDS | Post Digestion/Distillation Spike | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 10.8 | mg/kg | 1.0 | 105 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 09:31 |
| Lab ID: T16010010-001ADUP | Sample Duplicate | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.260 | mg/kg | 1.0 | | | | | | Run: FIA1_160113A 01/13/16 09:37 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: HS15121246

Work Order: T16010010

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|-------|---------------------------|-------|-------|------|-----------|------------|-----|----------|---------------------------------------|
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:54 |
| Phosphorus | | 13.7 | mg/kg | 5.0 | 100 | 80 | 120 | | | |
| Lab ID: MB-24669 | | Method Blank | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:57 |
| Phosphorus | | 0.08 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010009-002AMS | | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:06 |
| Phosphorus | | 20.9 | mg/kg | 5.0 | 96 | 70 | 130 | | | |
| Lab ID: T16010010-001ADUP | | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:19 |
| Phosphorus | | 10.0 | mg/kg | 5.0 | | | | 6.9 | 20 | |
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | 4 | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:09 |
| Calcium | | 2600 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Magnesium | | 311 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Potassium | | 77.2 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Sodium | | 120 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Lab ID: MB-24669 | 4 | Method Blank | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:11 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | 0.03 | mg/kg | 0.007 | | | | | | |
| Potassium | | 0.3 | mg/kg | 0.008 | | | | | | |
| Sodium | | 4 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010009-002AMS | 4 | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:19 |
| Calcium | | 3150 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Magnesium | | 1330 | mg/kg | 5.0 | 87 | 70 | 130 | | | |
| Potassium | | 1110 | mg/kg | 5.0 | 102 | 70 | 130 | | | |
| Sodium | | 1230 | mg/kg | 5.0 | 105 | 70 | 130 | | | |
| Lab ID: T16010010-001ADUP | 4 | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:29 |
| Calcium | | 1060 | mg/kg | 5.0 | | | | 4.0 | 20 | |
| Magnesium | | 195 | mg/kg | 5.0 | | | | 1.6 | 20 | |
| Potassium | | 40.7 | mg/kg | 5.0 | | | | 2.5 | 20 | |
| Sodium | | 48.1 | mg/kg | 5.0 | | | | 1.7 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T16010010

Login completed by:

Date Received: 1/5/2016

Reviewed by: BL2000\kmharrison

Received by: am1

Reviewed Date: 1/12/2016

Carrier name: Fed Ex Express

| | | | |
|---|---|--|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Not Applicable <input type="checkbox"/> |
| Container/Temp Blank temperature: | 3.9°C On Ice | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. Receipt temperature checked with IR2: read temperature = 2.0°C; corrected temperature = 3.9°C. ADG 160105 16:42



CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 5 Jan 2016

COC ID 4033

Due date 22 JAN 16

Subcontractor

Energy Laboratories, Inc.
415 Graham Road
College Station, TX 77845

Phone
9796902217

Fax
9796902045

| Customer Information | | Project Information | |
|----------------------|--|---------------------|--|
| PO | HS15121246 | Project Name | HS15121246 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 | Address | 10450 Stancliff Rd, Ste 210 Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dana.Wacasey@alsglobal.com | Email2 | jumoke.lawal@alsglobal.com |

T16010010
Lab ID

| | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|------|----------------|--------------------|--------|--------------------|
| -001 | HS15121246-02 | 31-Dec-15 12:45 pm | Soil | XXX SUB |
| -002 | HS15121246-04 | 31-Dec-15 01:10 pm | Soil | XXX SUB |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler IDs: | Report/QC Level |
|--------------------|----------------|--------------------|----------------|-------------|-----------------|
| <i>[Signature]</i> | 1/4/16 1800 | <i>[Signature]</i> | 01/05/16 10:44 | Red Cooler | STD |

RCDBY:

FED Ex / CS-SIGN / ON ICE-
EXPRESS / MATCH / NOTEMP / IR2- T=2.0°C
BLANK / CT=3.9°C



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS15121245**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 4 sample(s) on Dec 31, 2015 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey", with a long horizontal stroke extending to the right.

Generated By: Dane.Wacasey

Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121245

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS15121245-01 | D-0-6" | Soil | | 30-Dec-2015 12:10 | 31-Dec-2015 09:39 | <input type="checkbox"/> |
| HS15121245-02 | D-6-12" | Soil | | 30-Dec-2015 12:20 | 31-Dec-2015 09:39 | <input type="checkbox"/> |
| HS15121245-03 | D-6-24" | Soil | | 30-Dec-2015 12:35 | 31-Dec-2015 09:39 | <input type="checkbox"/> |
| HS15121245-04 | H-6-24" | Soil | | 30-Dec-2015 16:55 | 31-Dec-2015 09:39 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121245

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is appended

GC Semivolatiles by Method TX1005

Batch ID: 100293

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R267168

Sample ID: **HS15121246-03**

- MS and MSD are for an unrelated sample.

Metals by Method SW7471A

Batch ID: 100431

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 100344

Sample ID: **HS16010070-01**

- MS and MSD are for an unrelated sample.

WetChemistry by Method SW3550

Batch ID: R267215

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B

Batch ID: R267189

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: D-0-6"
 Collection Date: 30-Dec-2015 12:10

ANALYTICAL REPORT
 WorkOrder:HS15121245
 Lab ID:HS15121245-01
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 06-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.18 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Cadmium | < 0.572 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Chromium | 2.18 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Copper | 1.39 | | 0.229 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Lead | 4.39 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Molybdenum | < 0.572 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Nickel | 0.584 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Selenium | < 0.572 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| Zinc | 5.88 | | 0.572 | mg/Kg-dry | 1 | 06-Jan-2016 16:09 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| Ethylbenzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| Methyl tert-butyl ether | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| o-Xylene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| Toluene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 04-Jan-2016 09:47 |
| Surr: 1,2-Dichloroethane-d4 | 85.6 | | 70-128 | %REC | 1 | 04-Jan-2016 09:47 |
| Surr: 4-Bromofluorobenzene | 93.9 | | 73-126 | %REC | 1 | 04-Jan-2016 09:47 |
| Surr: Dibromofluoromethane | 95.2 | | 71-128 | %REC | 1 | 04-Jan-2016 09:47 |
| Surr: Toluene-d8 | 103 | | 73-127 | %REC | 1 | 04-Jan-2016 09:47 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.00977 | | 0.00424 | mg/Kg-dry | 1 | 11-Jan-2016 14:53 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 10:47 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 10:47 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 10:47 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 05-Jan-2016 10:47 |
| Surr: 2-Fluorobiphenyl | 92.2 | | 70-130 | %REC | 1 | 05-Jan-2016 10:47 |
| Surr: Trifluoromethyl benzene | 86.7 | | 70-130 | %REC | 1 | 05-Jan-2016 10:47 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.0 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.33 | H | 0.100 | pH Units | 1 | 04-Jan-2016 16:48 |
| Temp Deg C @pH | 20.3 | H | 0 | °C | 1 | 04-Jan-2016 16:48 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: D-6-12"
 Collection Date: 30-Dec-2015 12:20

ANALYTICAL REPORT

WorkOrder:HS15121245
 Lab ID:HS15121245-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--------------------------------------|----------|----------------------|--------------|------------------------------------|-----------------|---------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0065 | | 0.0065 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| Ethylbenzene | < 0.0065 | | 0.0065 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| m,p-Xylene | < 0.013 | | 0.013 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| Methyl tert-butyl ether | < 0.0065 | | 0.0065 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| o-Xylene | < 0.0065 | | 0.0065 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| Toluene | < 0.0065 | | 0.0065 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| Xylenes, Total | < 0.013 | | 0.013 | mg/Kg-dry | 1 | 04-Jan-2016 10:11 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 82.1 | | 70-128 | %REC | 1 | 04-Jan-2016 10:11 |
| <i>Surr: 4-Bromofluorobenzene</i> | 89.8 | | 73-126 | %REC | 1 | 04-Jan-2016 10:11 |
| <i>Surr: Dibromofluoromethane</i> | 92.6 | | 71-128 | %REC | 1 | 04-Jan-2016 10:11 |
| <i>Surr: Toluene-d8</i> | 102 | | 73-127 | %REC | 1 | 04-Jan-2016 10:11 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 04-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 66 | | 66 | mg/Kg-dry | 1 | 05-Jan-2016 12:17 |
| >nC12 to nC28 | < 66 | | 66 | mg/Kg-dry | 1 | 05-Jan-2016 12:17 |
| >nC28 to nC35 | < 66 | | 66 | mg/Kg-dry | 1 | 05-Jan-2016 12:17 |
| Total Petroleum Hydrocarbon | < 66 | | 66 | mg/Kg-dry | 1 | 05-Jan-2016 12:17 |
| <i>Surr: 2-Fluorobiphenyl</i> | 88.7 | | 70-130 | %REC | 1 | 05-Jan-2016 12:17 |
| <i>Surr: Trifluoromethyl benzene</i> | 84.6 | | 70-130 | %REC | 1 | 05-Jan-2016 12:17 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 24.9 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: D-6-24"
 Collection Date: 30-Dec-2015 12:35

ANALYTICAL REPORT
 WorkOrder:HS15121245
 Lab ID:HS15121245-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 17.8 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.91 | H | 0.100 | pH Units | 1 | 04-Jan-2016 16:48 |
| Temp Deg C @pH | 20.1 | H | 0 | °C | 1 | 04-Jan-2016 16:48 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: H-6-24"
 Collection Date: 30-Dec-2015 16:55

ANALYTICAL REPORT
 WorkOrder:HS15121245
 Lab ID:HS15121245-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 19.2 | | 0.0100 | wt% | 1 | 05-Jan-2016 11:02 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.84 | H | 0.100 | pH Units | 1 | 04-Jan-2016 16:48 |
| Temp Deg C @pH | 20.1 | H | 0 | °C | 1 | 04-Jan-2016 16:48 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 WorkOrder: HS15121245

Batch ID: 721 Method: VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS15121245-01 | 1 | 5.026 (g) | 5 (mL) | 0.99 | Bulk (5030B) |
| HS15121245-02 | 1 | 5.112 (g) | 5 (mL) | 0.98 | Bulk (5030B) |

Batch ID: 100279 Method: TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D Prep: TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121245-01 | 1 | 1.0896 | 50 (mL) | 45.89 |
| HS15121245-03 | 1 | 1.1944 | 50 (mL) | 41.86 |
| HS15121245-04 | 1 | 1.0483 | 50 (mL) | 47.7 |

Batch ID: 100293 Method: TEXAS TPH BY TX1005 Prep: TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121245-01 | 1 | 10.03 | 10 (mL) | 0.997 |
| HS15121245-02 | 1 | 10.07 | 10 (mL) | 0.993 |

Batch ID: 100344 Method: METALS BY SW6020A Prep: 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121245-01 | 1 | 0.5138 | 50 (mL) | 97.31 |

Batch ID: 100431 Method: MERCURY BY SW7471B Prep: HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS15121245-01 | 1 | 0.5539 | 40 (mL) | 72.22 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|----------------|--|-----------|---------------------|-------------------|----|
| Batch ID 100279 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121245-03 | D-6-24" | 30 Dec 2015 12:35 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| HS15121245-04 | H-6-24" | 30 Dec 2015 16:55 | | 04 Jan 2016 10:25 | 05 Jan 2016 16:19 | 1 |
| Batch ID 100293 | | Test Name : TEXAS TPH BY TX1005 | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | 04 Jan 2016 14:09 | 05 Jan 2016 10:47 | 1 |
| HS15121245-02 | D-6-12" | 30 Dec 2015 12:20 | | 04 Jan 2016 14:09 | 05 Jan 2016 12:17 | 1 |
| Batch ID 100344 | | Test Name : METALS BY SW6020A | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | 06 Jan 2016 11:06 | 06 Jan 2016 16:09 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:53 | 1 |
| Batch ID R267168 | | Test Name : VOLATILES BY SW8260C | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | | 04 Jan 2016 09:47 | 1 |
| HS15121245-02 | D-6-12" | 30 Dec 2015 12:20 | | | 04 Jan 2016 10:11 | 1 |
| Batch ID R267189 | | Test Name : PH SOIL BY SW9045D | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | | 04 Jan 2016 16:48 | 1 |
| HS15121245-03 | D-6-24" | 30 Dec 2015 12:35 | | | 04 Jan 2016 16:48 | 1 |
| HS15121245-04 | H-6-24" | 30 Dec 2015 16:55 | | | 04 Jan 2016 16:48 | 1 |
| Batch ID R267215 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | | 05 Jan 2016 11:02 | 1 |
| HS15121245-02 | D-6-12" | 30 Dec 2015 12:20 | | | 05 Jan 2016 11:02 | 1 |
| HS15121245-03 | D-6-24" | 30 Dec 2015 12:35 | | | 05 Jan 2016 11:02 | 1 |
| HS15121245-04 | H-6-24" | 30 Dec 2015 16:55 | | | 05 Jan 2016 11:02 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | Matrix: Soil | | |
| HS15121245-01 | D-0-6" | 30 Dec 2015 12:10 | | | 15 Jan 2016 16:37 | 1 |
| HS15121245-03 | D-6-24" | 30 Dec 2015 12:35 | | | 15 Jan 2016 16:37 | 1 |
| HS15121245-04 | H-6-24" | 30 Dec 2015 16:55 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100293 Instrument: FID-13 Method: TX1005

| MBLK | | Sample ID: MBLK-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 14:18 | | | | |
|-------------------------------|--------|------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|------|-----------|------|
| Client ID: | | Run ID: FID-13_267212 | SeqNo: 3544202 | | PrepDate: 04-Jan-2016 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 27.27 | 0 | 25 | 0 | 109 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 25.03 | 0 | 25 | 0 | 100 | 70 - 130 | | | | |

| LCS | | Sample ID: LCS-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:17 | | | | |
|-------------------------------|--------|-----------------------|----------------|---------------|-----------------------|----------------------------------|---------------|------|-----------|------|
| Client ID: | | Run ID: FID-13_267212 | SeqNo: 3544109 | | PrepDate: 04-Jan-2016 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 240.6 | 50 | 250 | 0 | 96.3 | 75 - 125 | | | | |
| >nC12 to nC28 | 227.2 | 50 | 250 | 0 | 90.9 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 29.42 | 0 | 25 | 0 | 118 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 24.34 | 0 | 25 | 0 | 97.4 | 70 - 130 | | | | |

| LCSD | | Sample ID: LCSD-100293 | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 10:47 | | | | |
|-------------------------------|--------|------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|------|-----------|------|
| Client ID: | | Run ID: FID-13_267212 | SeqNo: 3544110 | | PrepDate: 04-Jan-2016 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 234.2 | 50 | 250 | 0 | 93.7 | 75 - 125 | 240.6 | 2.7 | 20 | |
| >nC12 to nC28 | 224.8 | 50 | 250 | 0 | 89.9 | 75 - 125 | 227.2 | 1.02 | 20 | |
| Surr: 2-Fluorobiphenyl | 26.92 | 0 | 25 | 0 | 108 | 70 - 130 | 29.42 | 8.88 | 20 | |
| Surr: Trifluoromethyl benzene | 23.18 | 0 | 25 | 0 | 92.7 | 70 - 130 | 24.34 | 4.89 | 20 | |

| MS | | Sample ID: HS15121172-01MS | Units: mg/Kg | | | Analysis Date: 05-Jan-2016 11:47 | | | | |
|-------------------------------|--------|----------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|------|-----------|------|
| Client ID: | | Run ID: FID-13_267212 | SeqNo: 3544112 | | PrepDate: 04-Jan-2016 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 221 | 50 | 249.3 | 0 | 88.7 | 75 - 125 | | | | |
| >nC12 to nC28 | 230.6 | 50 | 249.3 | 0 | 92.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 26.75 | 0 | 24.93 | 0 | 107 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 23.16 | 0 | 24.93 | 0 | 92.9 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100293 **Instrument:** FID-13 **Method:** TX1005

| MSD | | Sample ID: HS15121172-01MSD | | | Units: mg/Kg | | Analysis Date: 05-Jan-2016 12:17 | | | |
|--------------------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: FID-13_267212 | | | SeqNo: 3544113 | | PrepDate: 04-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 227.5 | 50 | 248.8 | 0 | 91.5 | 75 - 125 | 221 | 2.89 | 20 | |
| >nC12 to nC28 | 215.1 | 50 | 248.8 | 0 | 86.5 | 75 - 125 | 230.6 | 6.95 | 20 | |
| <i>Surr: 2-Fluorobiphenyl</i> | 28.3 | 0 | 24.88 | 0 | 114 | 70 - 130 | 26.75 | 5.64 | 20 | |
| <i>Surr: Trifluoromethyl benzene</i> | 23.52 | 0 | 24.88 | 0 | 94.5 | 70 - 130 | 23.16 | 1.53 | 20 | |

The following samples were analyzed in this batch: HS15121245-01 HS15121245-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100344 instrument: ICPMS04 Method: SW6020

| MBLK | Sample ID: MBLK-100344 | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 15:52 | | | | | |
|------------|------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545527 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

| LCS | Sample ID: MLCS-100344 | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 15:56 | | | | | |
|------------|------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545528 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 9.429 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | | |
| Cadmium | 9.418 | 0.500 | 10 | 0 | 94.2 | 80 - 120 | | | | |
| Chromium | 9.21 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Copper | 9.152 | 0.200 | 10 | 0 | 91.5 | 80 - 120 | | | | |
| Lead | 9.543 | 0.500 | 10 | 0 | 95.4 | 80 - 120 | | | | |
| Molybdenum | 8.639 | 0.500 | 10 | 0 | 86.4 | 80 - 120 | | | | |
| Nickel | 9.826 | 0.500 | 10 | 0 | 98.3 | 80 - 120 | | | | |
| Selenium | 9.199 | 0.500 | 10 | 0 | 92.0 | 80 - 120 | | | | |
| Zinc | 9.783 | 0.500 | 10 | 0 | 97.8 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100344 Instrument: ICPMS04 Method: SW6020

| MS | Sample ID: HS16010070-01MS | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 17:43 | | | | | |
|------------|----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545551 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 11.8 | 0.487 | 9.745 | 3.275 | 87.5 | 75 - 125 | | | | |
| Cadmium | 9.077 | 0.487 | 9.745 | 0.1306 | 91.8 | 75 - 125 | | | | |
| Chromium | 17.57 | 0.487 | 9.745 | 4.545 | 134 | 75 - 125 | | | | S |
| Copper | 18.84 | 0.195 | 9.745 | 7.877 | 113 | 75 - 125 | | | | |
| Lead | 20.22 | 0.487 | 9.745 | 10.53 | 99.5 | 75 - 125 | | | | |
| Molybdenum | 8.383 | 0.487 | 9.745 | 0.2645 | 83.3 | 75 - 125 | | | | |
| Nickel | 15.78 | 0.487 | 9.745 | 5.883 | 102 | 75 - 125 | | | | |
| Selenium | 9.204 | 0.487 | 9.745 | 0.5686 | 88.6 | 75 - 125 | | | | |
| Zinc | 46.95 | 0.487 | 9.745 | 33.81 | 135 | 75 - 125 | | | | S |

| MSD | Sample ID: HS16010070-01MSD | Units: mg/Kg | | | Analysis Date: 06-Jan-2016 17:47 | | | | | |
|------------|-----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|--------|-----------|------|
| Client ID: | Run ID: ICPMS04_267254 | SeqNo: 3545552 | PrepDate: 06-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 11.61 | 0.478 | 9.562 | 3.275 | 87.1 | 75 - 125 | 11.8 | 1.66 | 20 | |
| Cadmium | 8.895 | 0.478 | 9.562 | 0.1306 | 91.7 | 75 - 125 | 9.077 | 2.02 | 20 | |
| Chromium | 17.47 | 0.478 | 9.562 | 4.545 | 135 | 75 - 125 | 17.57 | 0.54 | 20 | S |
| Copper | 19.73 | 0.191 | 9.562 | 7.877 | 124 | 75 - 125 | 18.84 | 4.58 | 20 | |
| Lead | 20.22 | 0.478 | 9.562 | 10.53 | 101 | 75 - 125 | 20.22 | 0.0258 | 20 | |
| Molybdenum | 8.09 | 0.478 | 9.562 | 0.2645 | 81.8 | 75 - 125 | 8.383 | 3.55 | 20 | |
| Nickel | 15.75 | 0.478 | 9.562 | 5.883 | 103 | 75 - 125 | 15.78 | 0.198 | 20 | |
| Selenium | 9.19 | 0.478 | 9.562 | 0.5686 | 90.2 | 75 - 125 | 9.204 | 0.15 | 20 | |
| Zinc | 47 | 0.478 | 9.562 | 33.81 | 138 | 75 - 125 | 46.95 | 0.104 | 20 | S |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100344 **Instrument:** ICPMS04 **Method:** SW6020

| PDS | | Sample ID: HS16010070-01BS | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 17:51 | | | |
|------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545553 | | PrepDate: 06-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 12.61 | 0.484 | 9.69 | 3.275 | 96.3 | 75 - 125 | | | | |
| Cadmium | 9.189 | 0.484 | 9.69 | 0.1306 | 93.5 | 75 - 125 | | | | |
| Chromium | 14.57 | 0.484 | 9.69 | 4.545 | 103 | 75 - 125 | | | | |
| Copper | 17.89 | 0.194 | 9.69 | 7.877 | 103 | 75 - 125 | | | | |
| Lead | 19.74 | 0.484 | 9.69 | 10.53 | 95.0 | 75 - 125 | | | | |
| Molybdenum | 8.927 | 0.484 | 9.69 | 0.2645 | 89.4 | 75 - 125 | | | | |
| Nickel | 14.95 | 0.484 | 9.69 | 5.883 | 93.6 | 75 - 125 | | | | |
| Selenium | 9.88 | 0.484 | 9.69 | 0.5686 | 96.1 | 75 - 125 | | | | |
| Zinc | 42.66 | 0.484 | 9.69 | 33.81 | 91.4 | 75 - 125 | | | | |

| SD | | Sample ID: HS16010070-01 DIL SX | | | Units: mg/Kg | | Analysis Date: 06-Jan-2016 16:22 | | | |
|------------|--------|---------------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267254 | | | SeqNo: 3545534 | | PrepDate: 06-Jan-2016 | | DF: 5 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | RPD Limit | Qual |
| Arsenic | 3.377 | 2.42 | | | | | 3.275 | 3.12 | 10 | |
| Cadmium | < 2.42 | 2.42 | | | | | 0.1306 | 0 | 10 | |
| Chromium | 4.835 | 2.42 | | | | | 4.545 | 6.39 | 10 | |
| Copper | 8.545 | 0.969 | | | | | 7.877 | 8.47 | 10 | |
| Lead | 9.862 | 2.42 | | | | | 10.53 | 6.34 | 10 | |
| Molybdenum | < 2.42 | 2.42 | | | | | 0.2645 | 0 | 10 | |
| Nickel | 6.358 | 2.42 | | | | | 5.883 | 8.07 | 10 | |
| Selenium | < 2.42 | 2.42 | | | | | 0.5686 | 0 | 10 | |
| Zinc | 36.45 | 2.42 | | | | | 33.81 | 7.79 | 10 | |

The following samples were analyzed in this batch: HS15121245-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: 100431 Instrument: HG02 Method: SW7471A

| | | | | | | | | | |
|-------------|-------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MBLK | Sample ID: MBLK-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:24 | | | | |
| Client ID: | Run ID: HG02_267495 | SeqNo: 3548754 | PrepDate: 11-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | < 3.32 | 3.32 | | | | | | | |

| | | | | | | | | | |
|------------|------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| LCS | Sample ID: LCS-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:26 | | | | |
| Client ID: | Run ID: HG02_267495 | SeqNo: 3548755 | PrepDate: 11-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 372.7 | 3.32 | 333.3 | 0 | 112 | 85 - 115 | | | |

| | | | | | | | | | |
|------------|-----------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MS | Sample ID: HS15121095-03MS | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:32 | | | | |
| Client ID: | Run ID: HG02_267495 | SeqNo: 3548757 | PrepDate: 11-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 380.9 | 3.73 | 374.2 | 11.43 | 98.7 | 85 - 115 | | | |

| | | | | | | | | | |
|------------|------------------------------------|-----------------------|------------------------------|---------------|---|---------------|---------------|----------|----------------|
| MSD | Sample ID: HS15121095-03MSD | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:34 | | | | |
| Client ID: | Run ID: HG02_267495 | SeqNo: 3548758 | PrepDate: 11-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 399.9 | 3.71 | 372.3 | 11.43 | 104 | 85 - 115 | 380.9 | 4.85 | 20 |

The following samples were analyzed in this batch: HS15121245-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: R267168 **Instrument:** VOA5 **Method:** SW8260

| MBLK | | Sample ID: VBLKS1-010416 | | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 09:24 | | | |
|------------------------------------|--------|--------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: VOA5_267168 | | | SeqNo: 3543081 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 46.72 | 0 | 50 | 0 | 93.4 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 47.7 | 0 | 50 | 0 | 95.4 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 49.77 | 0 | 50 | 0 | 99.5 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 51.28 | 0 | 50 | 0 | 103 | 73 - 127 | | | | |

| LCS | | Sample ID: VLCSS1-010416 | | | Units: ug/Kg | | Analysis Date: 04-Jan-2016 08:38 | | | |
|------------------------------------|--------|--------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: VOA5_267168 | | | SeqNo: 3543080 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 50.77 | 5.0 | 50 | 0 | 102 | 79 - 122 | | | | |
| Ethylbenzene | 51.5 | 5.0 | 50 | 0 | 103 | 80 - 122 | | | | |
| m,p-Xylene | 101.8 | 10 | 100 | 0 | 102 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 50.66 | 5.0 | 50 | 0 | 101 | 76 - 124 | | | | |
| o-Xylene | 51.04 | 5.0 | 50 | 0 | 102 | 80 - 123 | | | | |
| Toluene | 50.49 | 5.0 | 50 | 0 | 101 | 79 - 120 | | | | |
| Xylenes, Total | 152.9 | 10 | 150 | 0 | 102 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 50.6 | 0 | 50 | 0 | 101 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 49.82 | 0 | 50 | 0 | 99.6 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 50.96 | 0 | 50 | 0 | 102 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.24 | 0 | 50 | 0 | 100 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: R267168 Instrument: VOA5 Method: SW8260

| MS | Sample ID: HS15121246-03MS | Units: ug/Kg | | | Analysis Date: 04-Jan-2016 11:21 | | | | | |
|------------------------------------|----------------------------|----------------|-----------|---------------|----------------------------------|-----------------|---------------|----------|-----------|------|
| Client ID: | Run ID: VOA5_267168 | SeqNo: 3543086 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Benzene | 35.19 | 4.8 | 48 | 0 | 73.3 | 79 - 122 | | | | S |
| Ethylbenzene | 33.31 | 4.8 | 48 | 0 | 69.4 | 80 - 122 | | | | S |
| m,p-Xylene | 65.09 | 9.6 | 96 | 0 | 67.8 | 79 - 122 | | | | S |
| Methyl tert-butyl ether | 32.74 | 4.8 | 48 | 0 | 68.2 | 76 - 124 | | | | S |
| o-Xylene | 32.5 | 4.8 | 48 | 0 | 67.7 | 80 - 123 | | | | S |
| Toluene | 33.88 | 4.8 | 48 | 0 | 70.6 | 79 - 120 | | | | S |
| Xylenes, Total | 97.59 | 9.6 | 144 | 0 | 67.8 | 80 - 120 | | | | S |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>45.9</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>95.6</i> | <i>70 - 128</i> | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>47.26</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>98.5</i> | <i>73 - 126</i> | | | | |
| <i>Surr: Dibromofluoromethane</i> | <i>47.51</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>99.0</i> | <i>71 - 128</i> | | | | |
| <i>Surr: Toluene-d8</i> | <i>48.45</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>101</i> | <i>73 - 127</i> | | | | |

| MSD | Sample ID: HS15121246-03MSD | Units: ug/Kg | | | Analysis Date: 04-Jan-2016 11:44 | | | | | |
|------------------------------------|-----------------------------|----------------|-----------|---------------|----------------------------------|-----------------|---------------|---------------|-----------|------|
| Client ID: | Run ID: VOA5_267168 | SeqNo: 3543087 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Benzene | 34.21 | 4.8 | 48 | 0 | 71.3 | 79 - 122 | 35.19 | 2.81 | 30 | S |
| Ethylbenzene | 32.23 | 4.8 | 48 | 0 | 67.1 | 80 - 122 | 33.31 | 3.29 | 30 | S |
| m,p-Xylene | 62.14 | 9.6 | 96 | 0 | 64.7 | 79 - 122 | 65.09 | 4.63 | 30 | S |
| Methyl tert-butyl ether | 32.78 | 4.8 | 48 | 0 | 68.3 | 76 - 124 | 32.74 | 0.117 | 30 | S |
| o-Xylene | 30.83 | 4.8 | 48 | 0 | 64.2 | 80 - 123 | 32.5 | 5.27 | 30 | S |
| Toluene | 32.78 | 4.8 | 48 | 0 | 68.3 | 79 - 120 | 33.88 | 3.3 | 30 | S |
| Xylenes, Total | 92.98 | 9.6 | 144 | 0 | 64.6 | 80 - 120 | 97.59 | 4.84 | 30 | S |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>47.46</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>98.9</i> | <i>70 - 128</i> | <i>45.9</i> | <i>3.34</i> | <i>30</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>47.27</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>98.5</i> | <i>73 - 126</i> | <i>47.26</i> | <i>0.0252</i> | <i>30</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>48.68</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>101</i> | <i>71 - 128</i> | <i>47.51</i> | <i>2.45</i> | <i>30</i> | |
| <i>Surr: Toluene-d8</i> | <i>48.91</i> | <i>0</i> | <i>48</i> | <i>0</i> | <i>102</i> | <i>73 - 127</i> | <i>48.45</i> | <i>0.951</i> | <i>30</i> | |

The following samples were analyzed in this batch: HS15121245-01 HS15121245-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: R267189 **Instrument:** WetChem_HS **Method:** SW9045B

| | | | | | | | | | | |
|-------------------|----------------------------------|------------------------|----------------|----------------------|-------------|---|----------------------|-------------|------------------|-------------|
| LCS | Sample ID: LCS-267189 | Units: pH Units | | | | Analysis Date: 04-Jan-2016 16:48 | | | | |
| Client ID: | Run ID: WetChem_HS_267189 | SeqNo: 3543504 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

| | | | | | | | | | | |
|----|------|-------|---|---|-----|----------|--|--|--|--|
| pH | 6.03 | 0.100 | 6 | 0 | 100 | 97 - 103 | | | | |
|----|------|-------|---|---|-----|----------|--|--|--|--|

| | | | | | | | | | | |
|-------------------|------------------------------------|------------------------|----------------|----------------------|-------------|---|----------------------|-------------|------------------|-------------|
| DUP | Sample ID: HS15121246-04DUP | Units: pH Units | | | | Analysis Date: 04-Jan-2016 16:48 | | | | |
| Client ID: | Run ID: WetChem_HS_267189 | SeqNo: 3543505 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

| | | | | | | | | | | |
|----------------|------|-------|--|--|--|--|------|-------|----|--|
| pH | 6.63 | 0.100 | | | | | 6.53 | 1.52 | 10 | |
| Temp Deg C @pH | 20.1 | 0 | | | | | 20.2 | 0.496 | 10 | |

The following samples were analyzed in this batch: HS15121245-01 HS15121245-03 HS15121245-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

QC BATCH REPORT

Batch ID: R267215 Instrument: Balance1 Method: SW3550

| | | | | | | | | | | |
|------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| DUP | Sample ID: HS15121246-04DUP | Units: wt% | Analysis Date: 05-Jan-2016 11:02 | | | | | | | |
| Client ID: | Run ID: Balance1_267215 | SeqNo: 3543830 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

| | | | | | | | | | |
|------------------|------|--------|--|--|--|--|------|------|----|
| Percent Moisture | 16.3 | 0.0100 | | | | | 16.5 | 1.22 | 20 |
|------------------|------|--------|--|--|--|--|------|------|----|

The following samples were analyzed in this batch: HS15121245-01 HS15121245-02 HS15121245-03 HS15121245-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS15121245

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS15121245

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS15121245-01 | D-0-6" | Login | 12/31/2015 4:44:33 PM | CGG | LF-23 |
| HS15121245-01 | D-0-6" | Login | 12/31/2015 4:44:33 PM | CGG | VW-2 |
| HS15121245-01 | D-0-6" | Login | 12/31/2015 4:44:33 PM | CGG | 2D |
| HS15121245-01 | D-0-6" | Login | 12/31/2015 4:44:33 PM | CGG | Sub |
| HS15121245-02 | D-6-12" | Login | 12/31/2015 4:44:33 PM | CGG | LF-23 |
| HS15121245-02 | D-6-12" | Login | 12/31/2015 4:44:33 PM | CGG | VW-2 |
| HS15121245-03 | D-6-24" | Login | 12/31/2015 4:44:33 PM | CGG | 2D |
| HS15121245-03 | D-6-24" | Login | 12/31/2015 4:44:33 PM | CGG | Sub |
| HS15121245-04 | H-6-24" | Login | 12/31/2015 4:44:33 PM | CGG | 2D |
| HS15121245-04 | H-6-24" | Login | 12/31/2015 4:44:33 PM | CGG | Sub |
| HS15121245-01 | D-0-6" | Return | 1/6/2016 4:08:45 PM | HAS | 2D |
| HS15121245-01 | D-0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS15121245-01 | D-0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS15121245

Date/Time Received: 31-Dec-2015 09:39
 Received by: JJT

Checklist completed by: Corey Grandits 31-Dec-2015
 eSignature Date

Reviewed by: Dane J. Wacasey 5-Jan-2016
 eSignature Date

Matrices: Soil

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 3.7c/4.2c uc/c IR#5

Cooler(s)/Kit(s): 24389

Date/Time sample(s) sent to storage: 12/31/2015 17:05

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page of

COC ID: 135942

HS15121245

Texas Commission on Environmental Quality
800 Acre Tract Soil Project



Environmental

ALS Project Manager:

| Customer Information | | | | Project Information | | | | | | | | | | | | |
|----------------------|-----------------------------------|-----------------|-----------------------------------|---------------------|--|---|---|---|---|---|---|---|---|---|---|------|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project | A | SUB (No line item - Nutrients (Energy Labs)) | | | | | | | | | | | |
| Work Order | | Project Number | | B | TKN_S 4500NH3 D (Group E - TKN) | | | | | | | | | | | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental | C | PH_S (Group _ pH) | | | | | | | | | | | |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger - A/P | D | ICP_S_Low (Group B Total Metals 6020/7470 (10 w/Hg)) | | | | | | | | | | | |
| Address | 6300 Ocean Drive Unit 5639 | Address | P.O. Box 13087 | E | 8260_S (Group B BTEX+MTBE 8260) | | | | | | | | | | | |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin, TX 78711 | F | TX1005_S_REV3 (Group B TPH TX1005) | | | | | | | | | | | |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 | G | ICP_TW (Group B Total Metals 6020/7470 (10 w/Hg) EBLK) | | | | | | | | | | | |
| Fax | (361) 825-3101 | Fax | | H | 8260_LL_W (Group B BTEX/MTBE 8260 EBLK) | | | | | | | | | | | |
| e-Mail Address | | e-Mail Address | | I | TX1005_W_Low (Group B-TPH TX1005 EBLK) | | | | | | | | | | | |
| | | | | J | | | | | | | | | | | | |
| No. | Sample Description | Date | Time | Matrix | Pres. | A | B | C | D | E | F | G | H | I | J | Hold |
| 1 | D-0-6" | 12/30/2015 | 12:10 | S | see | X | X | X | X | X | X | X | X | | | |
| 2 | D-6-12" | 12/30/2015 | 12:20 | S | see | X | X | X | X | X | X | X | X | | | |
| 3 | D-6-24" | 12/30/2015 | 12:35 | S | see | X | X | X | X | X | X | X | X | | | |
| 4 | H-0-6" | 12/30/2015 | 12:40 | S | see | X | X | X | X | X | X | X | X | | | |
| 5 | H-6-12" | 12/30/2015 | 12:50 | S | see | X | X | X | X | X | X | X | X | | | |
| 6 | H-6-24" | 12/30/2015 | 16:55 | S | see | X | X | X | X | X | X | X | X | | | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign

Shipment Method

Required Turnaround Time: (Check Box)

TAT 15 days Other: _____

Results Due Date: _____

Relinquished by: Phyllis M. Wade

Relinquished by (Laboratory): 911 West Parkway

Received by (Laboratory): 12-31-15

Checked by (Laboratory): 12-31-15

Time: 7:15

Time: 7:40

Time: _____

Date: 12/31/15

Date: 12/31/15

Date: _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes: NCEQ Campus Soil Project

Cooler ID: 24369

Cooler Temp: 2.7


QC Package: (Check One Box Below)

QC Level: STD

Other: _____

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

| | | | |
|--|------------------------------|--|-----------------------|
|  ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 | CUSTODY SEAL | | Seal Broken By: SM |
| | Date: 12/31/2015 | Time: 11:30 | Date: |
| | Name: <i>Richard A. Wade</i> | Company: <i>ALS Environmental Services</i> | 12/31/15 |

24389

DEC 31 2015



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T16010009 Quote ID: T2980 - TCEQ Soil Analysis

Project Name: HS15121245

Energy Laboratories Inc. College Station TX received the following 3 samples for ALS - Houston on 1/5/2016 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|------------------|----------------|--------------|--------|---|
| T16010009-001 | HS15121245-01 | 12/30/15 12:10 | 01/05/16 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T16010009-002 | HS15121245-03 | 12/30/15 12:35 | 01/05/16 | Soil | Same As Above |
| T16010009-003 | HS15121245-04 | 12/30/15 16:55 | 01/05/16 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Digitally signed by
Amanda Myatt
Date: 2016.01.20 16:50:29 -06:00



CLIENT: ALS - Houston
Project: HS15121245
Work Order: T16010009

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121245
Lab ID: T16010009-001
Client Sample ID: HS15121245-01

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/30/15 12:10
Date Received: 01/05/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 10.7 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:05 / eli-h |
| Ammonia as N, KCL Extract | 8.4 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:05 / eli-h |
| Conductivity, 1:2 | 0.1 | mmhos/cm | | 0.1 | | A2510 B | 01/08/16 14:56 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:30 / dmp |
| Total Kjeldahl Nitrogen | 800 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 828 | mg/kg | | 5 | | SW6010B | 01/13/16 13:13 / jtr |
| Magnesium | 155 | mg/kg | | 5 | | SW6010B | 01/13/16 13:13 / jtr |
| Phosphorus | 12 | mg/kg | | 5 | | SW6010B | 01/15/16 11:36 / jtr |
| Potassium | 40 | mg/kg | | 5 | | SW6010B | 01/15/16 12:49 / jtr |
| Sodium | 38 | mg/kg | | 5 | | SW6010B | 01/13/16 13:13 / jtr |

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121245
Lab ID: T16010009-002
Client Sample ID: HS15121245-03

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/30/15 12:35
Date Received: 01/05/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 6.7 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:06 / eli-h |
| Ammonia as N, KCL Extract | 5.2 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:06 / eli-h |
| Conductivity, 1:2 | 0.1 | mmhos/cm | | 0.1 | | A2510 B | 01/08/16 14:58 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:33 / dmp |
| Total Kjeldahl Nitrogen | 714 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2230 | mg/kg | | 5 | | SW6010B | 01/13/16 13:17 / jtr |
| Magnesium | 456 | mg/kg | | 5 | | SW6010B | 01/13/16 13:17 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:04 / jtr |
| Potassium | 94 | mg/kg | | 5 | | SW6010B | 01/13/16 13:17 / jtr |
| Sodium | 186 | mg/kg | | 5 | | SW6010B | 01/13/16 13:17 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
 QCL - Quality control limit. ND - Not detected at the reporting limit.
 ‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS15121245
Lab ID: T16010009-003
Client Sample ID: HS15121245-04

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 12/30/15 16:55
Date Received: 01/05/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH ₄ | 4.6 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/12/16 13:08 / eli-h |
| Ammonia as N, KCL Extract | 3.6 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/12/16 13:08 / eli-h |
| Conductivity, 1:2 | 0.4 | mmhos/cm | | 0.1 | | A2510 B | 01/08/16 15:01 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:35 / dmp |
| Total Kjeldahl Nitrogen | 494 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2650 | mg/kg | | 5 | | SW6010B | 01/13/16 13:21 / jtr |
| Magnesium | 656 | mg/kg | | 5 | | SW6010B | 01/13/16 13:21 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:09 / jtr |
| Potassium | 79 | mg/kg | | 5 | | SW6010B | 01/13/16 13:21 / jtr |
| Sodium | 212 | mg/kg | | 5 | | SW6010B | 01/13/16 13:21 / jtr |

Report RL - Analyte reporting limit. MCL - Maximum contaminant level.
Definitions: QCL - Quality control limit. ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010009

Client: ALS - Houston

Project: HS15121245

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|-------|--|----------|------|------|-----------|------------|-------------------------------|----------|----------------|
| Method: A2510 B | | | | | | | | Analytical Run: COND3_160108A | | |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | 01/08/16 14:45 |
| Conductivity, 1:2 | | 0.100 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Lab ID: COND 2000 | | Continuing Calibration Verification Standard | | | | | | | | 01/08/16 14:46 |
| Conductivity, 1:2 | | 2.00 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Lab ID: ICV-1413 | | Initial Calibration Verification Standard | | | | | | | | 01/08/16 14:49 |
| Conductivity, 1:2 | | 1.42 | mmhos/cm | 0.10 | 101 | 90 | 110 | | | |
| Method: A2510 B | | | | | | | | Batch: 160108A-COND-S-SM2510 | | |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard | | | | | | Run: COND3_160108A | | 01/08/16 14:47 |
| Conductivity, 1:2 | | 7.01 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | |
| Method: A2510 B | | | | | | | | Batch: 24671 | | |
| Lab ID: LCS-24671 | | Laboratory Control Sample | | | | | | Run: COND3_160108A | | 01/08/16 14:54 |
| Conductivity, 1:2 | | 1.10 | mmhos/cm | 0.10 | 98 | 80 | 120 | | | |
| Lab ID: MB-24671 | | Method Blank | | | | | | Run: COND3_160108A | | 01/08/16 14:55 |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | |
| Lab ID: T16010009-001ADUP | | Sample Duplicate | | | | | | Run: COND3_160108A | | 01/08/16 14:57 |
| Conductivity, 1:2 | | 0.143 | mmhos/cm | 0.10 | | | | 3.4 | 10 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: HS15121245

Work Order: T16010009

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------|-------|-------------------------------|-------|----|------|-----------|------------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31700 |
| Lab ID: LCS-31700 | | Laboratory Control Sample | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 1030 | mg/kg | 30 | 110 | 70 | 130 | | | |
| Lab ID: MB-31700 | | Method Blank | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2750 | mg/kg | 30 | 83 | 50 | 150 | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike Duplicate | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2580 | mg/kg | 30 | 75 | 50 | 150 | 6.0 | 30 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010009

Client: ALS - Houston

Project: HS15121245

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|---|--------|-------|------|------|-----------|------------|-----------------------------|----------|---------------------|
| Method: ASA33-7 | | | | | | | | Analytical Run: SUB-H112204 | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | | | |
| Ammonia as N, KCL Extract | | 9.09 | mg/kg | 1.2 | 98 | 90 | 110 | | | 01/12/16 12:49 |
| Method: ASA33-7 | | | | | | | | Batch: H_31690 | | |
| Lab ID: LCS-31690 | Laboratory Control Sample | | | | | | | | | |
| Ammonia as N, KCL Extract | | 2.96 | mg/kg | 0.50 | 93 | 70 | 130 | | | 01/12/16 12:53 |
| Lab ID: MB-31690 | Method Blank | | | | | | | | | |
| Ammonia as N, KCL Extract | | 0.3 | mg/kg | 0.1 | | | | | | 01/12/16 12:55 |
| Lab ID: T15120146-001B | Sample Matrix Spike | | | | | | | | | |
| Ammonia as N, KCL Extract | | 10.1 | mg/kg | 1.4 | 87 | 90 | 110 | | | 01/12/16 12:57 S |
| Lab ID: H16010108-002BDUP | 2 Sample Duplicate | | | | | | | | | |
| Ammonia as N, KCL Extract | | 3.06 | mg/kg | 0.50 | | | | 1.6 | 20 | 01/12/16 13:14 |
| Ammonia as NH4 | | 3.91 | mg/kg | 0.64 | | | | 1.6 | 20 | |
| Lab ID: T15120146-002B | Sample Duplicate | | | | | | | | | |
| Ammonia as N, KCL Extract | | 5.34 | mg/kg | 1.2 | | | | 1.1 | 20 | 01/12/16 12:59 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010009

Client: ALS - Houston

Project: HS15121245

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|-----------------------------|-------|---|-------|------|------|-----------|------------|-----------------------------------|----------|------|----------------|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113A | | | |
| Lab ID: Initial Calib Verif | | Initial Calibration Verification Standard | | | | | | | | | 01/13/16 10:42 |
| Phosphorus | | 5.01 | mg/L | 0.10 | 100 | 95 | 105 | | | | |
| Lab ID: Initial Calib Blank | | Initial Calibration Blank, Instrument Blank | | | | | | | | | 01/13/16 10:44 |
| Phosphorus | | -0.00428 | mg/L | 0.10 | | 0 | 0 | | | | |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113B | | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | | 01/13/16 12:55 |
| Calcium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | | |
| Magnesium | | 50.5 | mg/L | 1.0 | 101 | 95 | 105 | | | | |
| Potassium | | 49.9 | mg/L | 1.0 | 100 | 95 | 105 | | | | |
| Sodium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | | 01/13/16 12:56 |
| Calcium | | -0.260 | mg/L | 1.0 | | | | | | | |
| Magnesium | | 0.0140 | mg/L | 1.0 | | | | | | | |
| Potassium | | -0.0108 | mg/L | 1.0 | | | | | | | |
| Sodium | | 0.140 | mg/L | 1.0 | | | | | | | |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160115A | | | |
| Lab ID: Initial Calib Verif | | Initial Calibration Verification Standard | | | | | | | | | 01/15/16 11:19 |
| Phosphorus | | 5.07 | mg/L | 0.10 | 101 | 95 | 105 | | | | |
| Lab ID: Initial Calib Blank | | Initial Calibration Blank, Instrument Blank | | | | | | | | | 01/15/16 11:21 |
| Phosphorus | | 0.000592 | mg/L | 0.10 | | 0 | 0 | | | | |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160115B | | | |
| Lab ID: Initial Calib Verif | | Initial Calibration Verification Standard | | | | | | | | | 01/15/16 12:27 |
| Potassium | | 49.7 | mg/L | 1.0 | 99 | 95 | 105 | | | | |
| Lab ID: Cont Calib Blank | | Continuing Calibration Blank | | | | | | | | | 01/15/16 12:28 |
| Potassium | | -0.000236 | mg/L | 1.0 | | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010009

Client: ALS - Houston

Project: HS15121245

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|-------|---|-------|------|------|-----------|------------|-----|----------|------------------------------|
| Method: E353.2 | | | | | | | | | | Analytical Run: FIA1_160113A |
| Lab ID: ICV-160113C | | Initial Calibration Verification Standard | | | | | | | | 01/13/16 09:18 |
| Nitrate+Nitrite as N, KCl Extract | | 1.56 | mg/kg | 1.0 | 104 | 90 | 110 | | | |
| Lab ID: ICB2-160113C | | Initial Calibration Blank, Instrument Blank | | | | | | | | 01/13/16 09:21 |
| Nitrate+Nitrite as N, KCl Extract | | -0.00800 | mg/kg | 1.0 | | 0 | 0 | | | |
| Method: E353.2 | | | | | | | | | | Batch: 24668 |
| Lab ID: LCS-24668 | | Laboratory Control Sample | | | | | | | | 01/13/16 09:26 |
| Nitrate+Nitrite as N, KCl Extract | | 9.90 | mg/kg | 1.0 | 109 | 80 | 120 | | | Run: FIA1_160113A |
| Lab ID: MB-24668 | | Method Blank | | | | | | | | 01/13/16 09:28 |
| Nitrate+Nitrite as N, KCl Extract | | 0.1 | mg/kg | 0.08 | | | | | | Run: FIA1_160113A |
| Lab ID: T16010009-001APDS | | Post Digestion/Distillation Spike | | | | | | | | 01/13/16 09:31 |
| Nitrate+Nitrite as N, KCl Extract | | 10.8 | mg/kg | 1.0 | 105 | 80 | 120 | | | Run: FIA1_160113A |
| Lab ID: T16010009-001ADUP | | Sample Duplicate | | | | | | | | 01/13/16 09:32 |
| Nitrate+Nitrite as N, KCl Extract | | 0.240 | mg/kg | 1.0 | | | | | | 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: HS15121245

Work Order: T16010009

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|-------|---------------------------|-------|-------|------|-----------|------------|-----|----------|--|
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:54 |
| Phosphorus | | 13.7 | mg/kg | 5.0 | 100 | 80 | 120 | | | |
| Lab ID: MB-24669 | | Method Blank | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:57 |
| Phosphorus | | 0.08 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010009-002AMS | | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:06 |
| Phosphorus | | 20.9 | mg/kg | 5.0 | 96 | 70 | 130 | | | |
| Lab ID: T16010010-001ADUP | | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:19 |
| Phosphorus | | 10.0 | mg/kg | 5.0 | | | | 6.9 | 20 | |
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | 4 | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:09 |
| Calcium | | 2600 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Magnesium | | 311 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Potassium | | 77.2 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Sodium | | 120 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Lab ID: MB-24669 | 4 | Method Blank | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:11 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | 0.03 | mg/kg | 0.007 | | | | | | |
| Potassium | | 0.3 | mg/kg | 0.008 | | | | | | |
| Sodium | | 4 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010009-002AMS | 4 | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:19 |
| Calcium | | 3150 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Magnesium | | 1330 | mg/kg | 5.0 | 87 | 70 | 130 | | | |
| Potassium | | 1110 | mg/kg | 5.0 | 102 | 70 | 130 | | | |
| Sodium | | 1230 | mg/kg | 5.0 | 105 | 70 | 130 | | | |
| Lab ID: T16010010-001ADUP | 4 | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:29 |
| Calcium | | 1060 | mg/kg | 5.0 | | | | 4.0 | 20 | |
| Magnesium | | 195 | mg/kg | 5.0 | | | | 1.6 | 20 | |
| Potassium | | 40.7 | mg/kg | 5.0 | | | | 2.5 | 20 | |
| Sodium | | 48.1 | mg/kg | 5.0 | | | | 1.7 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010009

Client: ALS - Houston

Project: HS15121245

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|-------|---------------------------|-------|-------|------|-----------|------------------------|-----|----------|----------------|
| Method: SW6010B | | | | | | | | | | Batch: 24691 |
| Lab ID: LCS-24691 | | Laboratory Control Sample | | | | | Run: ICP102-CS_160115A | | | 01/15/16 11:31 |
| Phosphorus | | 14.5 | mg/kg | 5.0 | 106 | 80 | 120 | | | |
| Lab ID: MB-24691 | | Method Blank | | | | | Run: ICP102-CS_160115A | | | 01/15/16 11:33 |
| Phosphorus | | 0.03 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010009-001AMS | | Sample Matrix Spike | | | | | Run: ICP102-CS_160115A | | | 01/15/16 11:38 |
| Phosphorus | | 31.9 | mg/kg | 5.0 | 100 | 70 | 130 | | | |
| Lab ID: T16010009-001ADUP | | Sample Duplicate | | | | | Run: ICP102-CS_160115A | | | 01/15/16 11:40 |
| Phosphorus | | 11.5 | mg/kg | 5.0 | | | | 4.2 | 20 | |
| Method: SW6010B | | | | | | | | | | Batch: 24691 |
| Lab ID: LCS-24691 | | Laboratory Control Sample | | | | | Run: ICP102-CS_160115B | | | 01/15/16 12:44 |
| Potassium | | 85.4 | mg/kg | 5.0 | 98 | 80 | 120 | | | |
| Lab ID: MB-24691 | | Method Blank | | | | | Run: ICP102-CS_160115B | | | 01/15/16 12:46 |
| Potassium | | 2 | mg/kg | 0.002 | | | | | | |
| Lab ID: T16010009-001ADUP | | Sample Duplicate | | | | | Run: ICP102-CS_160115B | | | 01/15/16 12:53 |
| Potassium | | 43.2 | mg/kg | 5.0 | | | | 8.6 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T16010009

Login completed by:

Date Received: 1/5/2016

Reviewed by: BL2000\kmharrison

Received by: am1

Reviewed Date: 1/11/2016

Carrier name: Fed Ex Express

| | | | |
|---|---|--|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Not Applicable <input type="checkbox"/> |
| Container/Temp Blank temperature: | 3.9°C On Ice | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. Receipt temperature checked with IR2: read temperature = 2.0°C; corrected temperature = 3.9°C. ADG 160105 16:00



CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 5 Jan 2016
COC ID 4032
Date date 22 JAN 16

Subcontractor

Energy Laboratories, Inc.
415 Graham Road
College Station, TX 77845

Phone 9796902217
Fax 9796902045

| Customer Information | | Project Information | |
|----------------------|---|---------------------|---|
| PO | HS15121245 | Project Name | HS15121245 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Stanciff Rd, Ste 210 Houston, TX 77099 | Address | 10450 Stanciff Rd, Ste 210 Houston, TX 77099 |
| Phone | 281-530-5655 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasey@alsglobal.com | Email2 | sumoke.lawal@alsglobal.com |

T16010009

| Lab ID | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|--------|----------------|--------------------|--------|--------------------|
| -001 | HS15121245-01 | 30-Dec-15 12:10 pm | Soil | XXX SUB |
| -002 | HS15121245-03 | 30-Dec-15 12:45 pm | Soil | XXX SUB |
| -003 | HS15121245-04 | 30-Dec-15 04:55 pm | Soil | XXX SUB |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler IIS: | Report/QC Level |
|--------------------|----------------|--------------------------|----------------|-------------|-----------------|
| <i>[Signature]</i> | 1/4/16 1800 | <i>Alisha D. Griffin</i> | 01/05/16 10:44 | Red Cooler | STD |

RCD By:
 FED Ex / Express / CS- / SIGN / MATCH / ON ICE- / NOTEMP / BLANK / IR2: T=2.0°C / CT=3.9°C



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS16010093**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 7 sample(s) on Jan 06, 2016 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey", with a long horizontal stroke extending to the right.

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010093

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS16010093-01 | Trip Blank | Water | | 05-Jan-2016 00:00 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-02 | A - 0-6" | Soil | | 05-Jan-2016 12:20 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-03 | A - 6-12" | Soil | | 05-Jan-2016 12:42 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-04 | A - 6-24" | Soil | | 05-Jan-2016 12:52 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-05 | B - 0-6" | Soil | | 05-Jan-2016 16:55 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-06 | B - 6-12" | Soil | | 05-Jan-2016 17:08 | 06-Jan-2016 09:25 | <input type="checkbox"/> |
| HS16010093-07 | B - 6-24" | Soil | | 05-Jan-2016 17:15 | 06-Jan-2016 09:25 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010093

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is appended

GC Semivolatiles by Method TX1005

Batch ID: 100353

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R267325,R267338

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 100463

- Sample ID: HS16010174-01
- MS/MSD and DUP are for an unrelated sample.

Metals by Method SW7471A

Batch ID: 100431

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW3550

Batch ID: R267449,R267450

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B

Batch ID: R267359

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Trip Blank
 Collection Date: 05-Jan-2016 00:00

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 07-Jan-2016 16:05 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 07-Jan-2016 16:05 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 07-Jan-2016 16:05 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 07-Jan-2016 16:05 |
| Surr: 1,2-Dichloroethane-d4 | 93.0 | | 71-125 | %REC | 1 | 07-Jan-2016 16:05 |
| Surr: 4-Bromofluorobenzene | 107 | | 70-125 | %REC | 1 | 07-Jan-2016 16:05 |
| Surr: Dibromofluoromethane | 105 | | 74-125 | %REC | 1 | 07-Jan-2016 16:05 |
| Surr: Toluene-d8 | 111 | | 75-125 | %REC | 1 | 07-Jan-2016 16:05 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: A - 0-6"
 Collection Date: 05-Jan-2016 12:20

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 12-Jan-2016 | | Analyst: JDE |
| Arsenic | 2.26 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Cadmium | < 0.544 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Chromium | 3.14 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Copper | 2.14 | | 0.218 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Lead | 13.0 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Molybdenum | < 0.544 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Nickel | 1.23 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Selenium | < 0.544 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| Zinc | 4.12 | | 0.544 | mg/Kg-dry | 1 | 13-Jan-2016 13:50 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| Ethylbenzene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| Methyl tert-butyl ether | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| o-Xylene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| Toluene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 07-Jan-2016 10:46 |
| Surr: 1,2-Dichloroethane-d4 | 82.7 | | 70-128 | %REC | 1 | 07-Jan-2016 10:46 |
| Surr: 4-Bromofluorobenzene | 92.3 | | 73-126 | %REC | 1 | 07-Jan-2016 10:46 |
| Surr: Dibromofluoromethane | 93.4 | | 71-128 | %REC | 1 | 07-Jan-2016 10:46 |
| Surr: Toluene-d8 | 99.7 | | 73-127 | %REC | 1 | 07-Jan-2016 10:46 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.00909 | | 0.00436 | mg/Kg-dry | 1 | 11-Jan-2016 14:57 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 06-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 13:20 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 13:20 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 13:20 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 13:20 |
| Surr: 2-Fluorobiphenyl | 99.5 | | 70-130 | %REC | 1 | 07-Jan-2016 13:20 |
| Surr: Trifluoromethyl benzene | 87.3 | | 70-130 | %REC | 1 | 07-Jan-2016 13:20 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.3 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:00 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 5.87 | H | 0.100 | pH Units | 1 | 07-Jan-2016 17:35 |
| Temp Deg C @pH | 22.1 | H | 0 | °C | 1 | 07-Jan-2016 17:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: A - 6-12"
 Collection Date: 05-Jan-2016 12:42

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|------|----------------------|-----------|--|-------------------|
| VOLATILES BY SW8260C | | | Method:SW8260 | | Analyst: WLR | |
| Benzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| Ethylbenzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| Methyl tert-butyl ether | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| o-Xylene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| Toluene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 07-Jan-2016 11:09 |
| Surr: 1,2-Dichloroethane-d4 | 86.7 | | 70-128 | %REC | 1 | 07-Jan-2016 11:09 |
| Surr: 4-Bromofluorobenzene | 93.7 | | 73-126 | %REC | 1 | 07-Jan-2016 11:09 |
| Surr: Dibromofluoromethane | 93.5 | | 71-128 | %REC | 1 | 07-Jan-2016 11:09 |
| Surr: Toluene-d8 | 98.5 | | 73-127 | %REC | 1 | 07-Jan-2016 11:09 |
| TEXAS TPH BY TX1005 | | | Method:TX1005 | | Prep:TX1005PR / 06-Jan-2016 Analyst: KHT | |
| nC6 to nC12 | < 60 | | 60 | mg/Kg-dry | 1 | 07-Jan-2016 13:52 |
| >nC12 to nC28 | < 60 | | 60 | mg/Kg-dry | 1 | 07-Jan-2016 13:52 |
| >nC28 to nC35 | < 60 | | 60 | mg/Kg-dry | 1 | 07-Jan-2016 13:52 |
| Total Petroleum Hydrocarbon | < 60 | | 60 | mg/Kg-dry | 1 | 07-Jan-2016 13:52 |
| Surr: 2-Fluorobiphenyl | 96.0 | | 70-130 | %REC | 1 | 07-Jan-2016 13:52 |
| Surr: Trifluoromethyl benzene | 85.8 | | 70-130 | %REC | 1 | 07-Jan-2016 13:52 |
| MOISTURE | | | Method:SW3550 | | Analyst: DFF | |
| Percent Moisture | 18.0 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:00 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: A - 6-24"
 Collection Date: 05-Jan-2016 12:52

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 20.6 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:00 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.21 | H | 0.100 | pH Units | 1 | 07-Jan-2016 17:35 |
| Temp Deg C @pH | 22.0 | H | 0 | °C | 1 | 07-Jan-2016 17:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: B - 0-6"
 Collection Date: 05-Jan-2016 16:55

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-05
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|----------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 12-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.14 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Cadmium | < 0.566 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Chromium | 3.24 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Copper | 1.90 | | 0.227 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Lead | 5.25 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Molybdenum | < 0.566 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Nickel | 0.885 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Selenium | < 0.566 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| Zinc | 4.85 | | 0.566 | mg/Kg-dry | 1 | 13-Jan-2016 13:55 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| Ethylbenzene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| Methyl tert-butyl ether | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| o-Xylene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| Toluene | < 0.0057 | | 0.0057 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 07-Jan-2016 11:32 |
| Surr: 1,2-Dichloroethane-d4 | 84.9 | | 70-128 | %REC | 1 | 07-Jan-2016 11:32 |
| Surr: 4-Bromofluorobenzene | 91.6 | | 73-126 | %REC | 1 | 07-Jan-2016 11:32 |
| Surr: Dibromofluoromethane | 94.4 | | 71-128 | %REC | 1 | 07-Jan-2016 11:32 |
| Surr: Toluene-d8 | 99.6 | | 73-127 | %REC | 1 | 07-Jan-2016 11:32 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.00997 | | 0.00433 | mg/Kg-dry | 1 | 11-Jan-2016 14:59 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 06-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 14:24 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 14:24 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 14:24 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 07-Jan-2016 14:24 |
| Surr: 2-Fluorobiphenyl | 95.2 | | 70-130 | %REC | 1 | 07-Jan-2016 14:24 |
| Surr: Trifluoromethyl benzene | 85.9 | | 70-130 | %REC | 1 | 07-Jan-2016 14:24 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.7 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 5.68 | H | 0.100 | pH Units | 1 | 07-Jan-2016 17:35 |
| Temp Deg C @pH | 22.0 | H | 0 | °C | 1 | 07-Jan-2016 17:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: B - 6-12"
 Collection Date: 05-Jan-2016 17:08

ANALYTICAL REPORT

WorkOrder:HS16010093
 Lab ID:HS16010093-06
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--------------------------------------|----------|----------------------|--------------|------------------------------------|-----------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0064 | | 0.0064 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| Ethylbenzene | < 0.0064 | | 0.0064 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| m,p-Xylene | < 0.013 | | 0.013 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| Methyl tert-butyl ether | < 0.0064 | | 0.0064 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| o-Xylene | < 0.0064 | | 0.0064 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| Toluene | < 0.0064 | | 0.0064 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| Xylenes, Total | < 0.013 | | 0.013 | mg/Kg-dry | 1 | 07-Jan-2016 11:56 |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 85.5 | | 70-128 | %REC | 1 | 07-Jan-2016 11:56 |
| <i>Surr: 4-Bromofluorobenzene</i> | 91.5 | | 73-126 | %REC | 1 | 07-Jan-2016 11:56 |
| <i>Surr: Dibromofluoromethane</i> | 95.2 | | 71-128 | %REC | 1 | 07-Jan-2016 11:56 |
| <i>Surr: Toluene-d8</i> | 99.8 | | 73-127 | %REC | 1 | 07-Jan-2016 11:56 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 06-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 64 | | 64 | mg/Kg-dry | 1 | 07-Jan-2016 06:06 |
| >nC12 to nC28 | < 64 | | 64 | mg/Kg-dry | 1 | 07-Jan-2016 06:06 |
| >nC28 to nC35 | < 64 | | 64 | mg/Kg-dry | 1 | 07-Jan-2016 06:06 |
| Total Petroleum Hydrocarbon | < 64 | | 64 | mg/Kg-dry | 1 | 07-Jan-2016 06:06 |
| <i>Surr: 2-Fluorobiphenyl</i> | 106 | | 70-130 | %REC | 1 | 07-Jan-2016 06:06 |
| <i>Surr: Trifluoromethyl benzene</i> | 95.9 | | 70-130 | %REC | 1 | 07-Jan-2016 06:06 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 22.4 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: B - 6-24"
 Collection Date: 05-Jan-2016 17:15

ANALYTICAL REPORT
 WorkOrder:HS16010093
 Lab ID:HS16010093-07
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|----------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 18.1 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.98 | H | 0.100 | pH Units | 1 | 07-Jan-2016 17:35 |
| Temp Deg C @pH | 22.0 | H | 0 | °C | 1 | 07-Jan-2016 17:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

Batch ID: 724 **Method:** VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS16010093-02 | 1 | 5.249 (g) | 5 (mL) | 0.95 | Bulk (5030B) |
| HS16010093-03 | 1 | 5.062 (g) | 5 (mL) | 0.99 | Bulk (5030B) |
| HS16010093-05 | 1 | 5.204 (g) | 5 (mL) | 0.96 | Bulk (5030B) |
| HS16010093-06 | 1 | 5.062 (g) | 5 (mL) | 0.99 | Bulk (5030B) |

Batch ID: 100353 **Method:** TEXAS TPH BY TX1005 **Prep:** TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010093-02 | 1 | 10.05 | 10 (mL) | 0.995 |
| HS16010093-03 | 1 | 10.11 | 10 (mL) | 0.9891 |
| HS16010093-05 | 1 | 10.06 | 10 (mL) | 0.994 |
| HS16010093-06 | 1 | 10.1 | 10 (mL) | 0.9901 |

Batch ID: 100370 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010093-02 | 1 | 1.2274 | 50 (mL) | 40.74 |
| HS16010093-04 | 1 | 1.0984 | 50 (mL) | 45.52 |
| HS16010093-05 | 1 | 1.3998 | 50 (mL) | 35.72 |
| HS16010093-07 | 1 | 1.2542 | 50 (mL) | 39.87 |

Batch ID: 100431 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010093-02 | 1 | 0.5401 | 40 (mL) | 74.06 |
| HS16010093-05 | 1 | 0.5471 | 40 (mL) | 73.11 |

Batch ID: 100463 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010093-02 | 1 | 0.5428 | 50 (mL) | 92.11 |
| HS16010093-05 | 1 | 0.5235 | 50 (mL) | 95.51 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|----------------|--|-----------|----------------------|-------------------|----|
| Batch ID 100353 | | Test Name : TEXAS TPH BY TX1005 | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | 06 Jan 2016 14:57 | 07 Jan 2016 13:20 | 1 |
| HS16010093-03 | A - 6-12" | 05 Jan 2016 12:42 | | 06 Jan 2016 14:57 | 07 Jan 2016 13:52 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | 06 Jan 2016 14:57 | 07 Jan 2016 14:24 | 1 |
| HS16010093-06 | B - 6-12" | 05 Jan 2016 17:08 | | 06 Jan 2016 14:57 | 07 Jan 2016 06:06 | 1 |
| Batch ID 100370 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | 07 Jan 2016 10:29 | 08 Jan 2016 17:13 | 1 |
| HS16010093-04 | A - 6-24" | 05 Jan 2016 12:52 | | 07 Jan 2016 10:29 | 08 Jan 2016 17:13 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | 07 Jan 2016 10:29 | 08 Jan 2016 17:13 | 1 |
| HS16010093-07 | B - 6-24" | 05 Jan 2016 17:15 | | 07 Jan 2016 10:29 | 08 Jan 2016 17:13 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:57 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | 11 Jan 2016 09:51 | 11 Jan 2016 14:59 | 1 |
| Batch ID 100463 | | Test Name : METALS BY SW6020A | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | 12 Jan 2016 12:21 | 13 Jan 2016 13:50 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | 12 Jan 2016 12:21 | 13 Jan 2016 13:55 | 1 |
| Batch ID R267325 | | Test Name : VOLATILES BY SW8260C | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | | 07 Jan 2016 10:46 | 1 |
| HS16010093-03 | A - 6-12" | 05 Jan 2016 12:42 | | | 07 Jan 2016 11:09 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | | 07 Jan 2016 11:32 | 1 |
| HS16010093-06 | B - 6-12" | 05 Jan 2016 17:08 | | | 07 Jan 2016 11:56 | 1 |
| Batch ID R267338 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | Matrix: Water | | |
| HS16010093-01 | Trip Blank | 05 Jan 2016 00:00 | | | 07 Jan 2016 16:05 | 1 |
| Batch ID R267359 | | Test Name : PH SOIL BY SW9045D | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | | 07 Jan 2016 17:35 | 1 |
| HS16010093-04 | A - 6-24" | 05 Jan 2016 12:52 | | | 07 Jan 2016 17:35 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | | 07 Jan 2016 17:35 | 1 |
| HS16010093-07 | B - 6-24" | 05 Jan 2016 17:15 | | | 07 Jan 2016 17:35 | 1 |
| Batch ID R267449 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | | 08 Jan 2016 11:00 | 1 |
| HS16010093-03 | A - 6-12" | 05 Jan 2016 12:42 | | | 08 Jan 2016 11:00 | 1 |
| HS16010093-04 | A - 6-24" | 05 Jan 2016 12:52 | | | 08 Jan 2016 11:00 | 1 |
| Batch ID R267450 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | | 08 Jan 2016 11:08 | 1 |
| HS16010093-06 | B - 6-12" | 05 Jan 2016 17:08 | | | 08 Jan 2016 11:08 | 1 |
| HS16010093-07 | B - 6-24" | 05 Jan 2016 17:15 | | | 08 Jan 2016 11:08 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|----------------|---|-----------|-----------|---------------------|----|
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | | Matrix: Soil | |
| HS16010093-02 | A - 0-6" | 05 Jan 2016 12:20 | | | 15 Jan 2016 16:37 | 1 |
| HS16010093-04 | A - 6-24" | 05 Jan 2016 12:52 | | | 15 Jan 2016 16:37 | 1 |
| HS16010093-05 | B - 0-6" | 05 Jan 2016 16:55 | | | 15 Jan 2016 16:37 | 1 |
| HS16010093-07 | B - 6-24" | 05 Jan 2016 17:15 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: 100353 instrument: FID-13 Method: TX1005

| MBLK | | Sample ID: MBLK-100353 | | Units: mg/Kg | | Analysis Date: 07-Jan-2016 02:31 | | | | |
|-------------------------------|--------|------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: FID-13_267319 | | SeqNo: 3545846 | | PrepDate: 06-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 27.39 | 0 | 25 | 0 | 110 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 24.73 | 0 | 25 | 0 | 98.9 | 70 - 130 | | | | |

| LCS | | Sample ID: LCS-100353 | | Units: mg/Kg | | Analysis Date: 07-Jan-2016 03:02 | | | | |
|-------------------------------|--------|-----------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: FID-13_267319 | | SeqNo: 3545847 | | PrepDate: 06-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 233 | 50 | 250 | 0 | 93.2 | 75 - 125 | | | | |
| >nC12 to nC28 | 228.7 | 50 | 250 | 0 | 91.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 27.95 | 0 | 25 | 0 | 112 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 24.49 | 0 | 25 | 0 | 98.0 | 70 - 130 | | | | |

| LCSD | | Sample ID: LCSD-100353 | | Units: mg/Kg | | Analysis Date: 07-Jan-2016 03:33 | | | | |
|-------------------------------|--------|------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: FID-13_267319 | | SeqNo: 3545848 | | PrepDate: 06-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 224.7 | 50 | 250 | 0 | 89.9 | 75 - 125 | 233 | 3.66 | 20 | |
| >nC12 to nC28 | 247.3 | 50 | 250 | 0 | 98.9 | 75 - 125 | 228.7 | 7.79 | 20 | |
| Surr: 2-Fluorobiphenyl | 25.23 | 0 | 25 | 0 | 101 | 70 - 130 | 27.95 | 10.2 | 20 | |
| Surr: Trifluoromethyl benzene | 21.99 | 0 | 25 | 0 | 87.9 | 70 - 130 | 24.49 | 10.8 | 20 | |

| MS | | Sample ID: HS16010093-06MS | | Units: mg/Kg | | Analysis Date: 07-Jan-2016 06:37 | | | | |
|-------------------------------|--------|----------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: B - 6-12" | | Run ID: FID-13_267319 | | SeqNo: 3545850 | | PrepDate: 06-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 273.9 | 50 | 247.8 | 0 | 111 | 75 - 125 | | | | |
| >nC12 to nC28 | 264.8 | 50 | 247.8 | 0 | 107 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 29.68 | 0 | 24.78 | 0 | 120 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 25.34 | 0 | 24.78 | 0 | 102 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: 100353 Instrument: FID-13 Method: TX1005

MSD Sample ID: HS16010093-06MSD Units: mg/Kg Analysis Date: 07-Jan-2016 07:07
 Client ID: B - 6-12" Run ID: FID-13_267319 SeqNo: 3545851 PrepDate: 06-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|-------------------------------|--------|-----|---------|---------------|------|---------------|---------------|----------|-----------|------|
| nC6 to nC12 | 270.7 | 50 | 248.5 | 0 | 109 | 75 - 125 | 273.9 | 1.19 | 20 | |
| >nC12 to nC28 | 263.1 | 50 | 248.5 | 0 | 106 | 75 - 125 | 264.8 | 0.661 | 20 | |
| Surr: 2-Fluorobiphenyl | 29.6 | 0 | 24.85 | 0 | 119 | 70 - 130 | 29.68 | 0.269 | 20 | |
| Surr: Trifluoromethyl benzene | 25.1 | 0 | 24.85 | 0 | 101 | 70 - 130 | 25.34 | 0.928 | 20 | |

The following samples were analyzed in this batch: HS16010093-02 HS16010093-03 HS16010093-05 HS16010093-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

| Batch ID: 100431 | | Instrument: HG02 | | | Method: SW7471A | | | | |
|------------------|-----------------------------|---------------------|----------------|---------------|----------------------------------|---------------|---------------|----------|----------------|
| MBLK | Sample ID: MBLK-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:24 | | | | |
| Client ID: | | Run ID: HG02_267495 | SeqNo: 3548754 | | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | < 3.32 | 3.32 | | | | | | | |
| LCS | Sample ID: LCS-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:26 | | | | |
| Client ID: | | Run ID: HG02_267495 | SeqNo: 3548755 | | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 372.7 | 3.32 | 333.3 | 0 | 112 | 85 - 115 | | | |
| MS | Sample ID: HS15121095-03MS | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:32 | | | | |
| Client ID: | | Run ID: HG02_267495 | SeqNo: 3548757 | | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 380.9 | 3.73 | 374.2 | 11.43 | 98.7 | 85 - 115 | | | |
| MSD | Sample ID: HS15121095-03MSD | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:34 | | | | |
| Client ID: | | Run ID: HG02_267495 | SeqNo: 3548758 | | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| Mercury | 399.9 | 3.71 | 372.3 | 11.43 | 104 | 85 - 115 | 380.9 | 4.85 | 20 |

The following samples were analyzed in this batch: HS16010093-02 HS16010093-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: 100463 Instrument: ICPMS04 Method: SW6020

| MBLK | | Sample ID: MBLK-100463 | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:35 | | | | |
|------------|---------|------------------------|---------|----------------|------|----------------------------------|---------------|----------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267525 | | SeqNo: 3550281 | | PrepDate: 12-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

| LCS | | Sample ID: MLCS-100463 | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:40 | | | | |
|------------|--------|------------------------|---------|----------------|------|----------------------------------|---------------|----------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267525 | | SeqNo: 3550282 | | PrepDate: 12-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
| Arsenic | 9.244 | 0.500 | 10 | 0 | 92.4 | 80 - 120 | | | | |
| Cadmium | 9.456 | 0.500 | 10 | 0 | 94.6 | 80 - 120 | | | | |
| Chromium | 9.574 | 0.500 | 10 | 0 | 95.7 | 80 - 120 | | | | |
| Copper | 9.684 | 0.200 | 10 | 0 | 96.8 | 80 - 120 | | | | |
| Lead | 9.213 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Molybdenum | 9.209 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Nickel | 9.664 | 0.500 | 10 | 0 | 96.6 | 80 - 120 | | | | |
| Selenium | 9.27 | 0.500 | 10 | 0 | 92.7 | 80 - 120 | | | | |
| Zinc | 9.433 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: 100463 **Instrument:** ICPMS04 **Method:** SW6020

| MS | | Sample ID: HS16010174-01MS | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:53 | | | |
|------------|--------|----------------------------|---------|----------------|-------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS04_267525 | | SeqNo: 3550285 | | PrepDate: 12-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 12.08 | 0.478 | 9.569 | 3.778 | 86.7 | 75 - 125 | | | |
| Cadmium | 9.008 | 0.478 | 9.569 | 0.09814 | 93.1 | 75 - 125 | | | |
| Chromium | 55.63 | 0.478 | 9.569 | 59.42 | -39.6 | 75 - 125 | | | SO |
| Copper | 26.84 | 0.191 | 9.569 | 23.14 | 38.7 | 75 - 125 | | | S |
| Lead | 86.97 | 0.478 | 9.569 | 102.8 | -166 | 75 - 125 | | | SO |
| Molybdenum | 12.08 | 0.478 | 9.569 | 4.251 | 81.9 | 75 - 125 | | | |
| Nickel | 20.57 | 0.478 | 9.569 | 13.71 | 71.7 | 75 - 125 | | | S |
| Selenium | 9.328 | 0.478 | 9.569 | 0.8115 | 89.0 | 75 - 125 | | | |
| Zinc | 36.04 | 0.478 | 9.569 | 30.68 | 56.0 | 75 - 125 | | | S |

| MSD | | Sample ID: HS16010174-01MSD | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:57 | | | |
|------------|--------|-----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: ICPMS04_267525 | | SeqNo: 3550286 | | PrepDate: 12-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Arsenic | 11.86 | 0.476 | 9.527 | 3.778 | 84.9 | 75 - 125 | 12.08 | 1.79 | 20 |
| Cadmium | 8.865 | 0.476 | 9.527 | 0.09814 | 92.0 | 75 - 125 | 9.008 | 1.6 | 20 |
| Chromium | 60.34 | 0.476 | 9.527 | 59.42 | 9.64 | 75 - 125 | 55.63 | 8.11 | 20 SO |
| Copper | 26.79 | 0.191 | 9.527 | 23.14 | 38.3 | 75 - 125 | 26.84 | 0.181 | 20 S |
| Lead | 85.51 | 0.476 | 9.527 | 102.8 | -182 | 75 - 125 | 86.97 | 1.69 | 20 SO |
| Molybdenum | 12.06 | 0.476 | 9.527 | 4.251 | 82.0 | 75 - 125 | 12.08 | 0.204 | 20 |
| Nickel | 21.46 | 0.476 | 9.527 | 13.71 | 81.3 | 75 - 125 | 20.57 | 4.24 | 20 |
| Selenium | 9.217 | 0.476 | 9.527 | 0.8115 | 88.2 | 75 - 125 | 9.328 | 1.2 | 20 |
| Zinc | 34.43 | 0.476 | 9.527 | 30.68 | 39.3 | 75 - 125 | 36.04 | 4.57 | 20 S |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: 100463 Instrument: ICPMS04 Method: SW6020

PDS Sample ID: HS16010174-01BS Units: mg/Kg Analysis Date: 13-Jan-2016 01:02

Client ID: Run ID: ICPMS04_267525 SeqNo: 3550287 PrepDate: 12-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|-------|-------|-------|---------|------|----------|--|--|--|----|
| Arsenic | 12.12 | 0.470 | 9.391 | 3.778 | 88.8 | 75 - 125 | | | | |
| Cadmium | 8.528 | 0.470 | 9.391 | 0.09814 | 89.8 | 75 - 125 | | | | |
| Chromium | 65.91 | 0.470 | 9.391 | 59.42 | 69.1 | 75 - 125 | | | | SO |
| Copper | 30.1 | 0.188 | 9.391 | 23.14 | 74.0 | 75 - 125 | | | | S |
| Lead | 108.1 | 0.470 | 9.391 | 102.8 | 56.3 | 75 - 125 | | | | SO |
| Molybdenum | 12.16 | 0.470 | 9.391 | 4.251 | 84.2 | 75 - 125 | | | | |
| Nickel | 21.3 | 0.470 | 9.391 | 13.71 | 80.8 | 75 - 125 | | | | |
| Selenium | 9.019 | 0.470 | 9.391 | 0.8115 | 87.4 | 75 - 125 | | | | |
| Zinc | 37.03 | 0.470 | 9.391 | 30.68 | 67.6 | 75 - 125 | | | | S |

SD Sample ID: HS16010174-01 DIL SX Units: mg/Kg Analysis Date: 13-Jan-2016 00:49

Client ID: Run ID: ICPMS04_267525 SeqNo: 3550284 PrepDate: 12-Jan-2016 DF: 5

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|----------|------|

| | | | | | | | | | | |
|------------|--------|-------|--|--|--|--|---------|-------|----|--|
| Arsenic | 3.995 | 2.35 | | | | | 3.778 | 5.73 | 10 | |
| Cadmium | < 2.35 | 2.35 | | | | | 0.09814 | 0 | 10 | |
| Chromium | 59.55 | 2.35 | | | | | 59.42 | 0.219 | 10 | |
| Copper | 25.24 | 0.939 | | | | | 23.14 | 9.07 | 10 | |
| Lead | 109.6 | 2.35 | | | | | 102.8 | 6.55 | 10 | |
| Molybdenum | 4.397 | 2.35 | | | | | 4.251 | 3.43 | 10 | |
| Nickel | 14.65 | 2.35 | | | | | 13.71 | 6.82 | 10 | |
| Selenium | < 2.35 | 2.35 | | | | | 0.8115 | 0 | 10 | |
| Zinc | 32.91 | 2.35 | | | | | 30.68 | 7.25 | 10 | |

The following samples were analyzed in this batch: HS16010093-02 HS16010093-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267325 **Instrument:** VOA5 **Method:** SW9260

| MBLK | | Sample ID: VBLKS1-010716 | | Units: ug/Kg | | Analysis Date: 07-Jan-2016 09:36 | | | | |
|------------------------------------|--------|--------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA5_267325 | | SeqNo: 3545940 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 41.46 | 0 | 50 | 0 | 82.9 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 47.5 | 0 | 50 | 0 | 95.0 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 46.76 | 0 | 50 | 0 | 93.5 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.26 | 0 | 50 | 0 | 101 | 73 - 127 | | | | |

| LCS | | Sample ID: VLCSS1-010716 | | Units: ug/Kg | | Analysis Date: 07-Jan-2016 08:25 | | | | |
|------------------------------------|--------|--------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | | Run ID: VOA5_267325 | | SeqNo: 3545939 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 52.64 | 5.0 | 50 | 0 | 105 | 79 - 122 | | | | |
| Ethylbenzene | 55.45 | 5.0 | 50 | 0 | 111 | 80 - 122 | | | | |
| m,p-Xylene | 108.9 | 10 | 100 | 0 | 109 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 50.62 | 5.0 | 50 | 0 | 101 | 76 - 124 | | | | |
| o-Xylene | 54.34 | 5.0 | 50 | 0 | 109 | 80 - 123 | | | | |
| Toluene | 53.38 | 5.0 | 50 | 0 | 107 | 79 - 120 | | | | |
| Xylenes, Total | 163.3 | 10 | 150 | 0 | 109 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 45.39 | 0 | 50 | 0 | 90.8 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.37 | 0 | 50 | 0 | 96.7 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 46.86 | 0 | 50 | 0 | 93.7 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 49.14 | 0 | 50 | 0 | 98.3 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267325 Instrument: VOA5 Method: SW8260

| MS | | Sample ID: HS16010093-02MS | | | Units: ug/Kg | | Analysis Date: 07-Jan-2016 13:06 | | | |
|-----------------------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: A - 0-6" | | Run ID: VOA5_267325 | | | SeqNo: 3546042 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.4 | 4.8 | 48.5 | 0 | 91.6 | 79 - 122 | | | | |
| Ethylbenzene | 45.3 | 4.8 | 48.5 | 0 | 93.4 | 80 - 122 | | | | |
| m,p-Xylene | 88.26 | 9.7 | 97 | 0 | 91.0 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 40.24 | 4.8 | 48.5 | 0 | 83.0 | 76 - 124 | | | | |
| o-Xylene | 43.09 | 4.8 | 48.5 | 0 | 88.9 | 80 - 123 | | | | |
| Toluene | 44.42 | 4.8 | 48.5 | 0 | 91.6 | 79 - 120 | | | | |
| Xylenes, Total | 131.4 | 9.7 | 145.5 | 0 | 90.3 | 80 - 120 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 43.32 | 0 | 48.5 | 0 | 89.3 | 70 - 128 | | | | |
| Surr: 4-Bromofluorobenzene | 45.46 | 0 | 48.5 | 0 | 93.7 | 73 - 126 | | | | |
| Surr: Dibromofluoromethane | 44.79 | 0 | 48.5 | 0 | 92.3 | 71 - 128 | | | | |
| Surr: Toluene-d8 | 47.04 | 0 | 48.5 | 0 | 97.0 | 73 - 127 | | | | |

| MSD | | Sample ID: HS16010093-02MSD | | | Units: ug/Kg | | Analysis Date: 07-Jan-2016 13:29 | | | |
|-----------------------------|--------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|-------|-----------|------|
| Client ID: A - 0-6" | | Run ID: VOA5_267325 | | | SeqNo: 3546043 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 46.07 | 4.8 | 48.5 | 0 | 95.0 | 79 - 122 | 44.4 | 3.68 | 30 | |
| Ethylbenzene | 48.65 | 4.8 | 48.5 | 0 | 100 | 80 - 122 | 45.3 | 7.13 | 30 | |
| m,p-Xylene | 94.38 | 9.7 | 97 | 0 | 97.3 | 79 - 122 | 88.26 | 6.7 | 30 | |
| Methyl tert-butyl ether | 41.89 | 4.8 | 48.5 | 0 | 86.4 | 76 - 124 | 40.24 | 4.02 | 30 | |
| o-Xylene | 46.19 | 4.8 | 48.5 | 0 | 95.2 | 80 - 123 | 43.09 | 6.95 | 30 | |
| Toluene | 47.09 | 4.8 | 48.5 | 0 | 97.1 | 79 - 120 | 44.42 | 5.83 | 30 | |
| Xylenes, Total | 140.6 | 9.7 | 145.5 | 0 | 96.6 | 80 - 120 | 131.4 | 6.78 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 43.66 | 0 | 48.5 | 0 | 90.0 | 70 - 128 | 43.32 | 0.775 | 30 | |
| Surr: 4-Bromofluorobenzene | 45.76 | 0 | 48.5 | 0 | 94.4 | 73 - 126 | 45.46 | 0.676 | 30 | |
| Surr: Dibromofluoromethane | 46.19 | 0 | 48.5 | 0 | 95.2 | 71 - 128 | 44.79 | 3.09 | 30 | |
| Surr: Toluene-d8 | 48 | 0 | 48.5 | 0 | 99.0 | 73 - 127 | 47.04 | 2.02 | 30 | |

The following samples were analyzed in this batch: HS16010093-02 HS16010093-03 HS16010093-05 HS16010093-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267338 Instrument: VOA2 Method: SW8260

| MBLK | Sample ID: VBLKW-160107 | Units: ug/L | | | Analysis Date: 07-Jan-2016 11:04 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267338 | SeqNo: 3546152 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 44.72 | 1.0 | 50 | 0 | 89.4 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 53.42 | 1.0 | 50 | 0 | 107 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 50.36 | 1.0 | 50 | 0 | 101 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 54.85 | 1.0 | 50 | 0 | 110 | 75 - 125 | | | | |

| LCS | Sample ID: VLCSW-160107 | Units: ug/L | | | Analysis Date: 07-Jan-2016 10:14 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267338 | SeqNo: 3546151 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 49.29 | 1.0 | 50 | 0 | 98.6 | 75 - 122 | | | | |
| Ethylbenzene | 47.49 | 1.0 | 50 | 0 | 95.0 | 80 - 120 | | | | |
| Toluene | 45.08 | 1.0 | 50 | 0 | 90.2 | 75 - 121 | | | | |
| Xylenes, Total | 138.6 | 3.0 | 150 | 0 | 92.4 | 79 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 46.73 | 1.0 | 50 | 0 | 93.5 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 56.64 | 1.0 | 50 | 0 | 113 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 49.86 | 1.0 | 50 | 0 | 99.7 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.91 | 1.0 | 50 | 0 | 108 | 75 - 125 | | | | |

| MS | Sample ID: HS16010131-01MS | Units: ug/L | | | Analysis Date: 07-Jan-2016 12:44 | | | | | |
|-----------------------------|----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267338 | SeqNo: 3546156 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 49.02 | 1.0 | 50 | 0 | 98.0 | 75 - 122 | | | | |
| Ethylbenzene | 48.62 | 1.0 | 50 | 0 | 97.2 | 80 - 120 | | | | |
| Toluene | 45.25 | 1.0 | 50 | 0 | 90.5 | 75 - 121 | | | | |
| Xylenes, Total | 139.5 | 3.0 | 150 | 0 | 93.0 | 80 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 45.61 | 1.0 | 50 | 0 | 91.2 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 55.67 | 1.0 | 50 | 0 | 111 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 48.26 | 1.0 | 50 | 0 | 96.5 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 54.17 | 1.0 | 50 | 0 | 108 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267338 Instrument: VOA2 Method: SW8260

| MSD | Sample ID: HS16010131-01MSD | Units: ug/L | | | Analysis Date: 07-Jan-2016 13:09 | | | | | |
|------------------------------------|-----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|-------|-----------|------|
| Client ID: | Run ID: VOA2_267338 | SeqNo: 3546157 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 49.24 | 1.0 | 50 | 0 | 98.5 | 75 - 122 | 49.02 | 0.441 | 20 | |
| Ethylbenzene | 46.87 | 1.0 | 50 | 0 | 93.7 | 80 - 120 | 48.62 | 3.66 | 20 | |
| Toluene | 44.23 | 1.0 | 50 | 0 | 88.5 | 75 - 121 | 45.25 | 2.26 | 20 | |
| Xylenes, Total | 134.7 | 3.0 | 150 | 0 | 89.8 | 80 - 124 | 139.5 | 3.5 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 46.27 | 1.0 | 50 | 0 | 92.5 | 71 - 125 | 45.61 | 1.44 | 20 | |
| <i>Surr: 4-Bromofluorobenzene</i> | 55.31 | 1.0 | 50 | 0 | 111 | 70 - 125 | 55.67 | 0.655 | 20 | |
| <i>Surr: Dibromofluoromethane</i> | 48.17 | 1.0 | 50 | 0 | 96.3 | 74 - 125 | 48.26 | 0.191 | 20 | |
| <i>Surr: Toluene-d8</i> | 53.63 | 1.0 | 50 | 0 | 107 | 75 - 125 | 54.17 | 1 | 20 | |

The following samples were analyzed in this batch: HS16010093-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267359 **instrument:** WetChem_HS **Method:** SW9045B

| | | | | | | | | | | |
|-------------------|------------------------------|----------------------------------|-----------------------|----------------------|------------------|---|----------------------|-------------|------------------|-------------|
| LCS | Sample ID: LCS-267359 | Units: pH Units | | | | Analysis Date: 07-Jan-2016 17:35 | | | | |
| Client ID: | | Run ID: WetChem_HS_267359 | SeqNo: 3546464 | | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| pH | 6.01 | 0.100 | 6 | 0 | 100 | 97 - 103 | | | | |

| | | | | | | | | | | |
|-----------------------------|------------------------------------|----------------------------------|-----------------------|----------------------|------------------|---|----------------------|-------------|------------------|-------------|
| DUP | Sample ID: HS16010093-07DUP | Units: pH Units | | | | Analysis Date: 07-Jan-2016 17:35 | | | | |
| Client ID: B - 6-24" | | Run ID: WetChem_HS_267359 | SeqNo: 3546465 | | PrepDate: | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| pH | 6.79 | 0.100 | | | | | 6.98 | 2.76 | 10 | |
| Temp Deg C @pH | 21.9 | 0 | | | | | 22 | 0.456 | 10 | |

The following samples were analyzed in this batch: HS16010093-02 HS16010093-04 HS16010093-05 HS16010093-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267449 Instrument: Balance1 Method: SW3550

DUP Sample ID: HS16010093-04DUP Units: wt% Analysis Date: 08-Jan-2016 11:00

Client ID: A - 6-24" Run ID: Balance1_267449 SeqNo: 3548003 PrepDate: DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|-----------|------|

| | | | | | | | | | | |
|------------------|------|--------|--|--|--|--|------|-------|----|--|
| Percent Moisture | 20.8 | 0.0100 | | | | | 20.6 | 0.966 | 20 | |
|------------------|------|--------|--|--|--|--|------|-------|----|--|

The following samples were analyzed in this batch: HS16010093-02 HS16010093-03 HS16010093-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

QC BATCH REPORT

Batch ID: R267450 Instrument: Balance1 Method: SW3550

| | | | | | | | | | | |
|------------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| DUP | Sample ID: HS16010186-04DUP | Units: wt% | Analysis Date: 08-Jan-2016 11:08 | | | | | | | |
| Client ID: | Run ID: Balance1_267450 | SeqNo: 3548021 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Percent Moisture | 16.8 | 0.0100 | | | | | 19.2 | 13.3 | 20 | |

The following samples were analyzed in this batch: HS16010093-05 HS16010093-06 HS16010093-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010093

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010093

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS16010093-01 | Trip Blank | Login | 1/6/2016 12:04:20 PM | CGG | VW-3 |
| HS16010093-02 | A - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | LF-23 |
| HS16010093-02 | A - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | VW-2 |
| HS16010093-02 | A - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | 2D |
| HS16010093-02 | A - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | Sub |
| HS16010093-03 | A - 6-12" | Login | 1/6/2016 12:04:20 PM | CGG | LF-23 |
| HS16010093-03 | A - 6-12" | Login | 1/6/2016 12:04:20 PM | CGG | VW-2 |
| HS16010093-04 | A - 6-24" | Login | 1/6/2016 12:04:20 PM | CGG | 2D |
| HS16010093-04 | A - 6-24" | Login | 1/6/2016 12:04:20 PM | CGG | Sub |
| HS16010093-05 | B - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | LF-23 |
| HS16010093-05 | B - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | VW-2 |
| HS16010093-05 | B - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | 2D |
| HS16010093-05 | B - 0-6" | Login | 1/6/2016 12:04:20 PM | CGG | Sub |
| HS16010093-06 | B - 6-12" | Login | 1/6/2016 12:04:20 PM | CGG | LF-23 |
| HS16010093-06 | B - 6-12" | Login | 1/6/2016 12:04:20 PM | CGG | VW-2 |
| HS16010093-07 | B - 6-24" | Login | 1/6/2016 12:04:20 PM | CGG | 2D |
| HS16010093-07 | B - 6-24" | Login | 1/6/2016 12:04:20 PM | CGG | Sub |
| HS16010093-02 | A - 0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010093-05 | B - 0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010093-02 | A - 0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |
| HS16010093-05 | B - 0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS16010093

Date/Time Received: 06-Jan-2016 09:25
 Received by: PMG

Checklist completed by: Corey Grandits 6-Jan-2016
 eSignature Date

Reviewed by: Dane J. Wacasey 8-Jan-2016
 eSignature Date

Matrices: Soil/Water

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 1.4c/1.9c uc/c IR#5

Cooler(s)/Kit(s): Lg Red

Date/Time sample(s) sent to storage: 01/06/2016 12:15

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 135940

HS16010093

Texas Commission on Environmental Quality
800 Acre Tract Soil Project



Environmental

ALS Project Manager:

| Customer Information | | Project Information | |
|----------------------|---|---------------------|-----------------------------------|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project |
| Work Order | | Project Number | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger - A/P |
| Address | 6300 Ocean Drive Unit 5839 NRC Building Suite 1200 | Address | P.O. Box 13087 |
| City/State/Zip | Corpus Christi, TX 78412 | City/State/Zip | Austin, TX 78711 |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 |
| Fax | (361) 825-3101 | Fax | |
| e-Mail Address | | e-Mail Address | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|--------------------|--------|-------|--------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | Trip Blank | | 12:20 | White | 142L | 2 | | | | | | | | | | | |
| 2 | A - 0 - 6" | 1/5/16 | 12:20 | SS | 100 | 6 | X | X | X | X | X | X | | | | | |
| 3 | A - 6" - 12" | 1/5/16 | 12:42 | SS | 100 | 2 | | | | | X | | | | | | |
| 4 | A - 6" - 24" | 1/5/16 | 12:52 | SS | 100 | 3 | X | X | X | | | | | | | | |
| 5 | B - 0 - 6" | 1/5/16 | 16:55 | SS | 100 | 6 | X | X | X | X | X | X | | | | | |
| 6 | B - 6" - 12" | 1/5/16 | 17:08 | SS | 100 | 2 | | | | | X | Y | | | | | |
| 7 | B - 6" - 24" | 1/5/16 | 17:15 | SS | 100 | 3 | X | X | X | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: *Robert King / Damon Wansbuck*

Refrigerated by: *Robert King*

Refrigerated by: *Robert King*

Logged by (Laboratory): *Robert King*

Date: 1/6/16 Time: 7:15

Date: 1/6/16 Time: 3:25

Date: 1/6/16 Time: 09:25

Received by: *Robert King*

Received by (Laboratory): *Robert King*

Checked by (Laboratory): *Robert King*

Required Turnaround Time: (Check Box) TAT 15 days Other

Results Due Date:

Notes: JTCFO Corpus Soil Project

QC Packages: (Check One Box Below)

QC Level: STD

Other:

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS Environmental
10450 Stanciliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887



by Red

CUSTODY SEAL
Date: *1/6/16* Time: *7:15*
Name: *Robert Red*
Company: *S&B Env. Serv.*

Seal Broken By: *GR*
Date: *01/06/16*

JAN 06 2016



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T16010028 Quote ID: T2980 - TCEQ Soil Analysis
Project Name: HS16010093

Energy Laboratories Inc. College Station TX received the following 4 samples for ALS - Houston on 1/8/2016 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|----------------------|----------------|--------------|--------|---|
| T16010028-001 | HS16010093-02 [0-6] | 01/05/16 12:20 | 01/08/16 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T16010028-002 | HS16010093-04 [6-24] | 01/05/16 12:52 | 01/08/16 | Soil | Same As Above |
| T16010028-003 | HS16010093-05 [0-6] | 01/05/16 16:55 | 01/08/16 | Soil | Same As Above |
| T16010028-004 | HS16010093-07 [6-24] | 01/05/16 17:15 | 01/08/16 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Digitally signed by
Amanda Myatt
Date: 2016.01.20 17:01:27 -06:00



CLIENT: ALS - Houston
Project: HS16010093
Work Order: T16010028

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.
Total Kjeldahl Nitrogen by ASA31-3
Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010093
Lab ID: T16010028-001
Client Sample ID: HS16010093-02 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/05/16 12:20
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 7.4 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:02 / eli-h |
| Ammonia as N, KCL Extract | 5.7 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:02 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:43 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:39 / dmp |
| Total Kjeldahl Nitrogen | 600 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 802 | mg/kg | | 5 | | SW6010B | 01/13/16 13:33 / jtr |
| Magnesium | 172 | mg/kg | | 5 | | SW6010B | 01/13/16 13:33 / jtr |
| Phosphorus | 9 | mg/kg | | 5 | | SW6010B | 01/13/16 11:23 / jtr |
| Potassium | 38 | mg/kg | | 5 | | SW6010B | 01/13/16 13:33 / jtr |
| Sodium | 62 | mg/kg | | 5 | | SW6010B | 01/13/16 13:33 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010093
Lab ID: T16010028-002
Client Sample ID: HS16010093-04 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/05/16 12:52
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 4.9 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:04 / eli-h |
| Ammonia as N, KCL Extract | 3.9 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:04 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:44 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:42 / dmp |
| Total Kjeldahl Nitrogen | 758 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2240 | mg/kg | | 5 | | SW6010B | 01/13/16 13:36 / jtr |
| Magnesium | 526 | mg/kg | | 5 | | SW6010B | 01/13/16 13:36 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:28 / jtr |
| Potassium | 99 | mg/kg | | 5 | | SW6010B | 01/13/16 13:36 / jtr |
| Sodium | 416 | mg/kg | | 5 | | SW6010B | 01/13/16 13:36 / jtr |

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010093
Lab ID: T16010028-003
Client Sample ID: HS16010093-05 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/05/16 16:55
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 8.0 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:06 / eli-h |
| Ammonia as N, KCL Extract | 6.2 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:06 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:45 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:49 / dmp |
| Total Kjeldahl Nitrogen | 672 | mg/kg | D‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 800 | mg/kg | | 5 | | SW6010B | 01/13/16 13:38 / jtr |
| Magnesium | 157 | mg/kg | | 5 | | SW6010B | 01/13/16 13:38 / jtr |
| Phosphorus | 10 | mg/kg | | 5 | | SW6010B | 01/13/16 11:31 / jtr |
| Potassium | 36 | mg/kg | | 5 | | SW6010B | 01/13/16 13:38 / jtr |
| Sodium | 58 | mg/kg | | 5 | | SW6010B | 01/13/16 13:38 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010093
Lab ID: T16010028-004
Client Sample ID: HS16010093-07 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/05/16 17:15
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 4.1 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:07 / eli-h |
| Ammonia as N, KCL Extract | 3.2 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:07 / eli-h |
| Conductivity, 1:2 | 0.3 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:45 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:51 / dmp |
| Total Kjeldahl Nitrogen | 560 | mg/kg | ‡ | 30 | | ASA31-3 | 01/13/16 14:20 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2200 | mg/kg | | 5 | | SW6010B | 01/13/16 13:40 / jtr |
| Magnesium | 459 | mg/kg | | 5 | | SW6010B | 01/13/16 13:40 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:33 / jtr |
| Potassium | 87 | mg/kg | | 5 | | SW6010B | 01/13/16 13:40 / jtr |
| Sodium | 340 | mg/kg | | 5 | | SW6010B | 01/13/16 13:40 / jtr |

Report RL - Analyte reporting limit. MCL - Maximum contaminant level.
Definitions: QCL - Quality control limit. ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010028

Client: ALS - Houston

Project: HS16010093

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|---|-------|--|----------|------|------|-----------|------------|-----|----------|------|-----------------------------------|
| Method: A2510 B Analytical Run: COND3_160114A | | | | | | | | | | | |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | | 01/14/16 10:38 |
| Conductivity, 1:2 | | 0.0948 | mmhos/cm | 0.10 | 95 | 90 | 110 | | | | |
| Lab ID: COND 2000 Continuing Calibration Verification Standard 01/14/16 10:39 | | | | | | | | | | | |
| Conductivity, 1:2 | | 1.89 | mmhos/cm | 0.10 | 95 | 90 | 110 | | | | |
| Lab ID: ICV-1413 Initial Calibration Verification Standard 01/14/16 10:40 | | | | | | | | | | | |
| Conductivity, 1:2 | | 1.38 | mmhos/cm | 0.10 | 98 | 90 | 110 | | | | |
| Method: A2510 B Batch: 160114A-COND-S-SM2510 | | | | | | | | | | | |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard | | | | | | | | | Run: COND3_160114A 01/14/16 10:39 |
| Conductivity, 1:2 | | 6.79 | mmhos/cm | 0.10 | 97 | 90 | 110 | | | | |
| Method: A2510 B Batch: 24683 | | | | | | | | | | | |
| Lab ID: LCS-24683 | | Laboratory Control Sample | | | | | | | | | Run: COND3_160114A 01/14/16 10:41 |
| Conductivity, 1:2 | | 1.06 | mmhos/cm | 0.10 | 94 | 80 | 120 | | | | |
| Lab ID: MB-24683 Method Blank Run: COND3_160114A 01/14/16 10:41 | | | | | | | | | | | |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | | |
| Lab ID: T16010028-001ADUP Sample Duplicate Run: COND3_160114A 01/14/16 10:43 | | | | | | | | | | | |
| Conductivity, 1:2 | | 0.159 | mmhos/cm | 0.10 | | | | 1.9 | 10 | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010028

Client: ALS - Houston

Project: HS16010093

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------|-------|-------------------------------|-------|----|------|-----------|------------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31700 |
| Lab ID: LCS-31700 | | Laboratory Control Sample | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 1030 | mg/kg | 30 | 110 | 70 | 130 | | | |
| Lab ID: MB-31700 | | Method Blank | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2750 | mg/kg | 30 | 83 | 50 | 150 | | | |
| Lab ID: T15120146-001B | | Sample Matrix Spike Duplicate | | | | | Run: SUB-H112244 | | | 01/13/16 14:20 |
| Total Kjeldahl Nitrogen | | 2580 | mg/kg | 30 | 75 | 50 | 150 | 6.0 | 30 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010028

Client: ALS - Houston

Project: HS16010093

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------------|---|--------|-------|------|------|-----------|------------|------------------------------------|----------|------|
| Method: ASA33-7 | | | | | | | | Analytical Run: SUB-H112246 | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | 01/13/16 12:54 | | |
| Ammonia as N, KCL Extract | | 9.26 | mg/kg | 1.2 | 100 | 90 | 110 | | | |
| Method: ASA33-7 | | | | | | | | Batch: H_31706 | | |
| Lab ID: LCS-31706 | Laboratory Control Sample | | | | | | | Run: SUB-H112246 01/13/16 12:58 | | |
| Ammonia as N, KCL Extract | | 2.78 | mg/kg | 0.50 | 94 | 70 | 130 | | | |
| Lab ID: MB-31706 | Method Blank | | | | | | | Run: SUB-H112246 01/13/16 13:00 | | |
| Ammonia as N, KCL Extract | | 0.1 | mg/kg | 0.1 | | | | | | |
| Lab ID: H16010126-001BMS | Sample Matrix Spike | | | | | | | Run: SUB-H112246 01/13/16 13:03 | | |
| Ammonia as N, KCL Extract | | 16.0 | mg/kg | 0.55 | 94 | 90 | 110 | | | |
| Lab ID: T16010030-002B | Sample Duplicate | | | | | | | Run: SUB-H112246 01/13/16 13:15 | | |
| Ammonia as N, KCL Extract | | 4.05 | mg/kg | 0.50 | | | | 0.5 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010028

Client: ALS - Houston

Project: HS16010093

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|------------------------------------|---|---|-------|------|------|-----------|------------|-----------------------------------|----------|----------------|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113A | | |
| Lab ID: Initial Calib Verif | Initial Calibration Verification Standard | | | | | | | | | |
| Phosphorus | | 5.01 | mg/L | 0.10 | 100 | 95 | 105 | | | 01/13/16 10:42 |
| Lab ID: Initial Calib Blank | Initial Calibration Blank, Instrument Blank | | | | | | | | | |
| Phosphorus | | -0.00428 | mg/L | 0.10 | | 0 | 0 | | | 01/13/16 10:44 |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113B | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | |
| Calcium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Magnesium | | 50.5 | mg/L | 1.0 | 101 | 95 | 105 | | | |
| Potassium | | 49.9 | mg/L | 1.0 | 100 | 95 | 105 | | | |
| Sodium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | |
| Calcium | | -0.260 | mg/L | 1.0 | | | | | | 01/13/16 12:56 |
| Magnesium | | 0.0140 | mg/L | 1.0 | | | | | | |
| Potassium | | -0.0108 | mg/L | 1.0 | | | | | | |
| Sodium | | 0.140 | mg/L | 1.0 | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010028

Client: ALS - Houston

Project: HS16010093

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|-------|---|-------|------|------|-----------|------------|-----|----------|------------------------------|
| Method: E353.2 | | | | | | | | | | Analytical Run: FIA1_160113A |
| Lab ID: ICV-160113C | | Initial Calibration Verification Standard | | | | | | | | 01/13/16 09:18 |
| Nitrate+Nitrite as N, KCl Extract | | 1.56 | mg/kg | 1.0 | 104 | 90 | 110 | | | |
| Lab ID: ICB2-160113C | | Initial Calibration Blank, Instrument Blank | | | | | | | | 01/13/16 09:21 |
| Nitrate+Nitrite as N, KCl Extract | | -0.00800 | mg/kg | 1.0 | | 0 | 0 | | | |
| Method: E353.2 | | | | | | | | | | Batch: 24668 |
| Lab ID: LCS-24668 | | Laboratory Control Sample | | | | | | | | 01/13/16 09:26 |
| Nitrate+Nitrite as N, KCl Extract | | 9.90 | mg/kg | 1.0 | 109 | 80 | 120 | | | Run: FIA1_160113A |
| Lab ID: MB-24668 | | Method Blank | | | | | | | | 01/13/16 09:28 |
| Nitrate+Nitrite as N, KCl Extract | | 0.1 | mg/kg | 0.08 | | | | | | Run: FIA1_160113A |
| Lab ID: T16010028-001ADUP | | Sample Duplicate | | | | | | | | 01/13/16 09:40 |
| Nitrate+Nitrite as N, KCl Extract | | 0.260 | mg/kg | 1.0 | | | | | | 20 |
| Lab ID: T16010028-003APDS | | Post Digestion/Distillation Spike | | | | | | | | 01/13/16 09:50 |
| Nitrate+Nitrite as N, KCl Extract | | 10.6 | mg/kg | 1.0 | 103 | 80 | 120 | | | Run: FIA1_160113A |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: HS16010093

Work Order: T16010028

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|-------|---------------------------|-------|-------|------|-----------|------------------------|-----|----------|----------------|
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | | Laboratory Control Sample | | | | | Run: ICP102-CS_160113A | | | 01/13/16 10:54 |
| Phosphorus | | 13.7 | mg/kg | 5.0 | 100 | 80 | 120 | | | |
| Lab ID: MB-24669 | | Method Blank | | | | | Run: ICP102-CS_160113A | | | 01/13/16 10:57 |
| Phosphorus | | 0.08 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010028-001ADUP | | Sample Duplicate | | | | | Run: ICP102-CS_160113A | | | 01/13/16 11:26 |
| Phosphorus | | 8.95 | mg/kg | 5.0 | | | | 3.9 | 20 | |
| Lab ID: T16010029-002AMS | | Sample Matrix Spike | | | | | Run: ICP102-CS_160113A | | | 01/13/16 11:48 |
| Phosphorus | | 22.3 | mg/kg | 5.0 | 99 | 70 | 130 | | | |
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | 4 | Laboratory Control Sample | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:09 |
| Calcium | | 2600 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Magnesium | | 311 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Potassium | | 77.2 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Sodium | | 120 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Lab ID: MB-24669 | 4 | Method Blank | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:11 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | 0.03 | mg/kg | 0.007 | | | | | | |
| Potassium | | 0.3 | mg/kg | 0.008 | | | | | | |
| Sodium | | 4 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010028-001ADUP | 4 | Sample Duplicate | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:34 |
| Calcium | | 849 | mg/kg | 5.0 | | | | 5.7 | 20 | |
| Magnesium | | 182 | mg/kg | 5.0 | | | | 5.5 | 20 | |
| Potassium | | 39.1 | mg/kg | 5.0 | | | | 3.8 | 20 | |
| Sodium | | 66.2 | mg/kg | 5.0 | | | | 6.0 | 20 | |
| Lab ID: T16010029-002AMS | 4 | Sample Matrix Spike | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:52 |
| Calcium | | 3530 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Magnesium | | 1430 | mg/kg | 5.0 | 87 | 70 | 130 | | | |
| Potassium | | 1140 | mg/kg | 5.0 | 103 | 70 | 130 | | | |
| Sodium | | 1600 | mg/kg | 5.0 | 106 | 70 | 130 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T16010028

Login completed by:

Date Received: 1/8/2016

Reviewed by: BL2000\kmharrison

Received by: am1

Reviewed Date: 1/12/2016

Carrier name: Fed Ex Express

| | | | |
|--|---|-----------------------------|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all sample bottles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Container/Temp Blank temperature: | °C Soils. | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. Changed sample due date to Rush per an email from Dane Wacasey. See Comm Log. ADG 160108 11:58



ALS Environmental

CHAIN OF CUSTODY RECORD

Page 1 of 1

Date: 6 Jan 2016
COC ID: 4042
Due date: 27 JAN 16

| | |
|---|--|
| Subcontractor | |
| Energy Laboratories, Inc. 415 Graham Road College Station, TX 77845 | Phone 9796902217 Fax 9796902045 |

| Customer Information | | Project Information | |
|----------------------|------------|---------------------|------------|
| PO | HS16010093 | Project Name | HS16010093 |

| | | | |
|--------------|-----------------------------|--------------|-----------------------------|
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Stancliff Rd. Ste 210 | Address | 10450 Stancliff Rd. Ste 210 |
| | Houston, TX 77099 | | Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasey@alsglobal.com | Email2 | jumoke.lawal@alsglobal.com |

T16010028

| Lab ID | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|--------------------|----------------|--------------------|--------|------------------------------------|
| -001 HS16010093-02 | A - 0-6" | 05-Jan-16 12:20 pm | Soil | TCEQ Soil Nutrients (See attached) |
| -002 HS16010093-04 | A - 6-24" | 05-Jan-16 12:52 pm | Soil | TCEQ Soil Nutrients (See attached) |
| -003 HS16010093-05 | B - 0-6" | 05-Jan-16 04:55 pm | Soil | TCEQ Soil Nutrients (See attached) |
| -004 HS16010093-07 | B - 6-24" | 05-Jan-16 05:15 pm | Soil | TCEQ Soil Nutrients (See attached) |

Comments: Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler Cst: | Report/QC Level |
|------------------|-------------|-------------------------|----------------|-------------|-----------------|
| <i>CC</i> | 1/6/16 1800 | | | | STD |
| | | <i>Alida D. Griffin</i> | 01/08/16 10:35 | 5070 | |

SOILS.

FED Ex EXPRESS: TEMP BLANK = NO | NO ICE | COOLER CSV SIGN MP
BOTTLE CSV / UNOTT



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS16010148**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 7 sample(s) on Jan 07, 2016 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read 'Dane Wacasey', with a stylized flourish at the end.

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010148

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|-------------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS16010148-01 | Trip Blank | Water | | 06-Jan-2016 00:00 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-02 | C - 0-6" | Soil | | 06-Jan-2016 11:40 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-03 | C - 6-12" | Soil | | 06-Jan-2016 11:50 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-04 | C - 6-24" | Soil | | 06-Jan-2016 11:55 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-05 | Suspect Grit Trap Waste | Soil | | 06-Jan-2016 12:58 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-06 | H - 0-6" | Soil | | 06-Jan-2016 16:10 | 07-Jan-2016 08:15 | <input type="checkbox"/> |
| HS16010148-07 | H - 6-12" | Soil | | 06-Jan-2016 16:25 | 07-Jan-2016 08:15 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010148

CASE NARRATIVE

Work Order Comments

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is appended

GC Semivolatiles by Method TX1005

Batch ID: 100405

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R267400,R267411

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 100463

- Sample ID: HS16010174-01
- MS/MSD and DUP are for an unrelated sample.

Metals by Method SW7471A

Batch ID: 100431

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW3550

Batch ID: R267450

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B

Batch ID: R267395

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Trip Blank
 Collection Date: 06-Jan-2016 00:00

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|-----------------------|--------------|--------------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method: SW8260 | | Analyst: AKP | | |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 12:20 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 12:20 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 12:20 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 08-Jan-2016 12:20 |
| Surr: 1,2-Dichloroethane-d4 | 90.2 | | 71-125 | %REC | 1 | 08-Jan-2016 12:20 |
| Surr: 4-Bromofluorobenzene | 110 | | 70-125 | %REC | 1 | 08-Jan-2016 12:20 |
| Surr: Dibromofluoromethane | 98.1 | | 74-125 | %REC | 1 | 08-Jan-2016 12:20 |
| Surr: Toluene-d8 | 113 | | 75-125 | %REC | 1 | 08-Jan-2016 12:20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: C - 0-6"
 Collection Date: 06-Jan-2016 11:40

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 12-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.05 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Cadmium | < 0.575 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Chromium | 2.09 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Copper | 1.33 | | 0.230 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Lead | 4.62 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Molybdenum | < 0.575 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Nickel | 0.808 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Selenium | < 0.575 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| Zinc | 5.12 | | 0.575 | mg/Kg-dry | 1 | 13-Jan-2016 13:59 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| Ethylbenzene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| m,p-Xylene | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| Methyl tert-butyl ether | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| o-Xylene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| Toluene | < 0.0056 | | 0.0056 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| Xylenes, Total | < 0.011 | | 0.011 | mg/Kg-dry | 1 | 08-Jan-2016 09:39 |
| Surr: 1,2-Dichloroethane-d4 | 86.9 | | 70-128 | %REC | 1 | 08-Jan-2016 09:39 |
| Surr: 4-Bromofluorobenzene | 94.9 | | 73-126 | %REC | 1 | 08-Jan-2016 09:39 |
| Surr: Dibromofluoromethane | 95.3 | | 71-128 | %REC | 1 | 08-Jan-2016 09:39 |
| Surr: Toluene-d8 | 99.2 | | 73-127 | %REC | 1 | 08-Jan-2016 09:39 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0129 | | 0.00437 | mg/Kg-dry | 1 | 11-Jan-2016 15:01 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 08-Jan-2016 19:35 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 08-Jan-2016 19:35 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 08-Jan-2016 19:35 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 08-Jan-2016 19:35 |
| Surr: 2-Fluorobiphenyl | 113 | | 70-130 | %REC | 1 | 08-Jan-2016 19:35 |
| Surr: Trifluoromethyl benzene | 107 | | 70-130 | %REC | 1 | 08-Jan-2016 19:35 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.6 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 5.96 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 21.0 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: C - 6-12"
 Collection Date: 06-Jan-2016 11:50

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|------|----------------------|-----------|--|-------------------|
| VOLATILES BY SW8260C | | | Method:SW8260 | | Analyst: WLR | |
| Benzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| Ethylbenzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| Methyl tert-butyl ether | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| o-Xylene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| Toluene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:02 |
| Surr: 1,2-Dichloroethane-d4 | 84.4 | | 70-128 | %REC | 1 | 08-Jan-2016 10:02 |
| Surr: 4-Bromofluorobenzene | 94.5 | | 73-126 | %REC | 1 | 08-Jan-2016 10:02 |
| Surr: Dibromofluoromethane | 93.6 | | 71-128 | %REC | 1 | 08-Jan-2016 10:02 |
| Surr: Toluene-d8 | 101 | | 73-127 | %REC | 1 | 08-Jan-2016 10:02 |
| TEXAS TPH BY TX1005 | | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 Analyst: KHT | |
| nC6 to nC12 | < 63 | | 63 | mg/Kg-dry | 1 | 09-Jan-2016 04:18 |
| >nC12 to nC28 | < 63 | | 63 | mg/Kg-dry | 1 | 09-Jan-2016 04:18 |
| >nC28 to nC35 | < 63 | | 63 | mg/Kg-dry | 1 | 09-Jan-2016 04:18 |
| Total Petroleum Hydrocarbon | < 63 | | 63 | mg/Kg-dry | 1 | 09-Jan-2016 04:18 |
| Surr: 2-Fluorobiphenyl | 110 | | 70-130 | %REC | 1 | 09-Jan-2016 04:18 |
| Surr: Trifluoromethyl benzene | 98.9 | | 70-130 | %REC | 1 | 09-Jan-2016 04:18 |
| MOISTURE | | | Method:SW3550 | | Analyst: DFF | |
| Percent Moisture | 20.5 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: C - 6-24"
 Collection Date: 06-Jan-2016 11:55

ANALYTICAL REPORT

WorkOrder:HS16010148
 Lab ID:HS16010148-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.7 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.23 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 21.2 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Suspect Grit Trap Waste
 Collection Date: 06-Jan-2016 12:58

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-05
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 12-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.39 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Cadmium | < 0.718 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Chromium | 11.4 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Copper | 383 | | 2.87 | mg/Kg-dry | 10 | 13-Jan-2016 03:26 |
| Lead | 14.4 | | 7.18 | mg/Kg-dry | 10 | 13-Jan-2016 03:26 |
| Molybdenum | 2.04 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Nickel | 7.78 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Selenium | 3.02 | | 0.718 | mg/Kg-dry | 1 | 13-Jan-2016 14:03 |
| Zinc | 673 | | 7.18 | mg/Kg-dry | 10 | 13-Jan-2016 03:26 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0072 | | 0.0072 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| Ethylbenzene | < 0.0072 | | 0.0072 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| m,p-Xylene | < 0.014 | | 0.014 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| Methyl tert-butyl ether | < 0.0072 | | 0.0072 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| o-Xylene | < 0.0072 | | 0.0072 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| Toluene | < 0.0072 | | 0.0072 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| Xylenes, Total | < 0.014 | | 0.014 | mg/Kg-dry | 1 | 08-Jan-2016 11:12 |
| Surr: 1,2-Dichloroethane-d4 | 97.5 | | 70-128 | %REC | 1 | 08-Jan-2016 11:12 |
| Surr: 4-Bromofluorobenzene | 96.9 | | 73-126 | %REC | 1 | 08-Jan-2016 11:12 |
| Surr: Dibromofluoromethane | 107 | | 71-128 | %REC | 1 | 08-Jan-2016 11:12 |
| Surr: Toluene-d8 | 111 | | 73-127 | %REC | 1 | 08-Jan-2016 11:12 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0731 | | 0.00521 | mg/Kg-dry | 1 | 11-Jan-2016 15:03 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 73 | | 73 | mg/Kg-dry | 1 | 09-Jan-2016 04:47 |
| >nC12 to nC28 | < 73 | | 73 | mg/Kg-dry | 1 | 09-Jan-2016 04:47 |
| >nC28 to nC35 | < 73 | | 73 | mg/Kg-dry | 1 | 09-Jan-2016 04:47 |
| Total Petroleum Hydrocarbon | < 73 | | 73 | mg/Kg-dry | 1 | 09-Jan-2016 04:47 |
| Surr: 2-Fluorobiphenyl | 122 | | 70-130 | %REC | 1 | 09-Jan-2016 04:47 |
| Surr: Trifluoromethyl benzene | 111 | | 70-130 | %REC | 1 | 09-Jan-2016 04:47 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 32.0 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.52 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 21.1 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: H - 0-6"
 Collection Date: 06-Jan-2016 16:10

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-06
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 12-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.72 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Cadmium | < 0.554 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Chromium | 3.92 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Copper | 12.5 | | 0.222 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Lead | 7.82 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Molybdenum | < 0.554 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Nickel | 1.68 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Selenium | < 0.554 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| Zinc | 19.6 | | 0.554 | mg/Kg-dry | 1 | 13-Jan-2016 14:07 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| Ethylbenzene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| Methyl tert-butyl ether | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| o-Xylene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| Toluene | < 0.0058 | | 0.0058 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:26 |
| Surr: 1,2-Dichloroethane-d4 | 83.8 | | 70-128 | %REC | 1 | 08-Jan-2016 10:26 |
| Surr: 4-Bromofluorobenzene | 95.3 | | 73-126 | %REC | 1 | 08-Jan-2016 10:26 |
| Surr: Dibromofluoromethane | 96.5 | | 71-128 | %REC | 1 | 08-Jan-2016 10:26 |
| Surr: Toluene-d8 | 101 | | 73-127 | %REC | 1 | 08-Jan-2016 10:26 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0227 | | 0.00424 | mg/Kg-dry | 1 | 11-Jan-2016 15:05 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 59 | | 59 | mg/Kg-dry | 1 | 09-Jan-2016 05:16 |
| >nC12 to nC28 | < 59 | | 59 | mg/Kg-dry | 1 | 09-Jan-2016 05:16 |
| >nC28 to nC35 | < 59 | | 59 | mg/Kg-dry | 1 | 09-Jan-2016 05:16 |
| Total Petroleum Hydrocarbon | < 59 | | 59 | mg/Kg-dry | 1 | 09-Jan-2016 05:16 |
| Surr: 2-Fluorobiphenyl | 113 | | 70-130 | %REC | 1 | 09-Jan-2016 05:16 |
| Surr: Trifluoromethyl benzene | 106 | | 70-130 | %REC | 1 | 09-Jan-2016 05:16 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 15.9 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 6.96 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 21.1 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: H - 6-12"
 Collection Date: 06-Jan-2016 16:25

ANALYTICAL REPORT
 WorkOrder:HS16010148
 Lab ID:HS16010148-07
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|----------------------|--------------|-----------|-----------------------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| Ethylbenzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| Methyl tert-butyl ether | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| o-Xylene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| Toluene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 10:49 |
| Surr: 1,2-Dichloroethane-d4 | 94.8 | | 70-128 | %REC | 1 | 08-Jan-2016 10:49 |
| Surr: 4-Bromofluorobenzene | 99.5 | | 73-126 | %REC | 1 | 08-Jan-2016 10:49 |
| Surr: Dibromofluoromethane | 110 | | 71-128 | %REC | 1 | 08-Jan-2016 10:49 |
| Surr: Toluene-d8 | 108 | | 73-127 | %REC | 1 | 08-Jan-2016 10:49 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | | Prep:TX1005PR / 08-Jan-2016 | Analyst: KHT |
| nC6 to nC12 | < 60 | | 60 | mg/Kg-dry | 1 | 09-Jan-2016 05:45 |
| >nC12 to nC28 | < 60 | | 60 | mg/Kg-dry | 1 | 09-Jan-2016 05:45 |
| >nC28 to nC35 | < 60 | | 60 | mg/Kg-dry | 1 | 09-Jan-2016 05:45 |
| Total Petroleum Hydrocarbon | < 60 | | 60 | mg/Kg-dry | 1 | 09-Jan-2016 05:45 |
| Surr: 2-Fluorobiphenyl | 99.6 | | 70-130 | %REC | 1 | 09-Jan-2016 05:45 |
| Surr: Trifluoromethyl benzene | 94.2 | | 70-130 | %REC | 1 | 09-Jan-2016 05:45 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 17.3 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality

Project: 800 Acre Tract Soil Project

WorkOrder: HS16010148

Batch ID: 726 Method: VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS16010148-02 | 1 | 5.275 (g) | 5 (mL) | 0.95 | Bulk (5030B) |
| HS16010148-03 | 1 | 5.246 (g) | 5 (mL) | 0.95 | Bulk (5030B) |
| HS16010148-05 | 1 | 5.11 (g) | 5 (mL) | 0.98 | Bulk (5030B) |
| HS16010148-06 | 1 | 5.139 (g) | 5 (mL) | 0.97 | Bulk (5030B) |
| HS16010148-07 | 1 | 5.021 (g) | 5 (mL) | 1 | Bulk (5030B) |

Batch ID: 100400 Method: TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D Prep: TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010148-02 | 1 | 1.0554 | 50 (mL) | 47.38 |
| HS16010148-04 | 1 | 1.0424 | 50 (mL) | 47.97 |
| HS16010148-05 | 1 | 1.0604 | 50 (mL) | 47.15 |
| HS16010148-06 | 1 | 1.2676 | 50 (mL) | 39.44 |

Batch ID: 100405 Method: TEXAS TPH BY TX1005 Prep: TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010148-02 | 1 | 10.08 | 10 (mL) | 0.9921 |
| HS16010148-03 | 1 | 10.06 | 10 (mL) | 0.994 |
| HS16010148-05 | 1 | 10.08 | 10 (mL) | 0.9921 |
| HS16010148-06 | 1 | 10.03 | 10 (mL) | 0.997 |
| HS16010148-07 | 1 | 10.1 | 10 (mL) | 0.9901 |

Batch ID: 100431 Method: MERCURY BY SW7471B Prep: HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010148-02 | 1 | 0.5408 | 40 (mL) | 73.96 |
| HS16010148-05 | 1 | 0.5636 | 40 (mL) | 70.97 |
| HS16010148-06 | 1 | 0.5591 | 40 (mL) | 71.54 |

Batch ID: 100463 Method: METALS BY SW6020A Prep: 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010148-02 | 1 | 0.5148 | 50 (mL) | 97.13 |
| HS16010148-05 | 1 | 0.5124 | 50 (mL) | 97.58 |
| HS16010148-06 | 1 | 0.5365 | 50 (mL) | 93.2 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|---|-------------------------|-------------------|-----------|-------------------|-------------------|----|
| Batch ID 100400 Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | 08 Jan 2016 10:04 | 08 Jan 2016 17:17 | 1 |
| HS16010148-04 | C - 6-24" | 06 Jan 2016 11:55 | | 08 Jan 2016 10:04 | 08 Jan 2016 17:17 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | 08 Jan 2016 10:04 | 08 Jan 2016 17:17 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | 08 Jan 2016 10:04 | 08 Jan 2016 17:17 | 1 |
| Batch ID 100405 Test Name : TEXAS TPH BY TX1005 Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | 08 Jan 2016 11:38 | 08 Jan 2016 19:35 | 1 |
| HS16010148-03 | C - 6-12" | 06 Jan 2016 11:50 | | 08 Jan 2016 11:38 | 09 Jan 2016 04:18 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | 08 Jan 2016 11:38 | 09 Jan 2016 04:47 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | 08 Jan 2016 11:38 | 09 Jan 2016 05:16 | 1 |
| HS16010148-07 | H - 6-12" | 06 Jan 2016 16:25 | | 08 Jan 2016 11:38 | 09 Jan 2016 05:45 | 1 |
| Batch ID 100431 Test Name : MERCURY BY SW7471B Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | 11 Jan 2016 09:51 | 11 Jan 2016 15:01 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | 11 Jan 2016 09:51 | 11 Jan 2016 15:03 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | 11 Jan 2016 09:51 | 11 Jan 2016 15:05 | 1 |
| Batch ID 100463 Test Name : METALS BY SW6020A Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | 12 Jan 2016 12:21 | 13 Jan 2016 13:59 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | 12 Jan 2016 12:21 | 13 Jan 2016 14:03 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | 12 Jan 2016 12:21 | 13 Jan 2016 03:26 | 10 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | 12 Jan 2016 12:21 | 13 Jan 2016 14:07 | 1 |
| Batch ID R267395 Test Name : PH SOIL BY SW9045D Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | | 08 Jan 2016 12:17 | 1 |
| HS16010148-04 | C - 6-24" | 06 Jan 2016 11:55 | | | 08 Jan 2016 12:17 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | | 08 Jan 2016 12:17 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | | 08 Jan 2016 12:17 | 1 |
| Batch ID R267400 Test Name : VOLATILES BY SW8260C Matrix: Soil | | | | | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | | 08 Jan 2016 09:39 | 1 |
| HS16010148-03 | C - 6-12" | 06 Jan 2016 11:50 | | | 08 Jan 2016 10:02 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | | 08 Jan 2016 11:12 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | | 08 Jan 2016 10:26 | 1 |
| HS16010148-07 | H - 6-12" | 06 Jan 2016 16:25 | | | 08 Jan 2016 10:49 | 1 |
| Batch ID R267411 Test Name : LOW LEVEL VOLATILES BY SW8260C Matrix: Water | | | | | | |
| HS16010148-01 | Trip Blank | 06 Jan 2016 00:00 | | | 08 Jan 2016 12:20 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|-------------------------|---|-----------|---------------------|-------------------|----|
| Batch ID R267450 | | Test Name : MOISTURE | | Matrix: Soil | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | | 08 Jan 2016 11:08 | 1 |
| HS16010148-03 | C - 6-12" | 06 Jan 2016 11:50 | | | 08 Jan 2016 11:08 | 1 |
| HS16010148-04 | C - 6-24" | 06 Jan 2016 11:55 | | | 08 Jan 2016 11:08 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | | 08 Jan 2016 11:08 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | | 08 Jan 2016 11:08 | 1 |
| HS16010148-07 | H - 6-12" | 06 Jan 2016 16:25 | | | 08 Jan 2016 11:08 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | Matrix: Soil | | |
| HS16010148-02 | C - 0-6" | 06 Jan 2016 11:40 | | | 15 Jan 2016 16:37 | 1 |
| HS16010148-04 | C - 6-24" | 06 Jan 2016 11:55 | | | 15 Jan 2016 16:37 | 1 |
| HS16010148-05 | Suspect Grit Trap Waste | 06 Jan 2016 12:58 | | | 15 Jan 2016 16:37 | 1 |
| HS16010148-06 | H - 0-6" | 06 Jan 2016 16:10 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

| Batch ID: 100405 | | Instrument: FID-10 | | Method: TX1005 | | | | | |
|-------------------------------|-----------------------------------|------------------------------|---------|---|------------------------------|---------------|---------------|-------|----------------|
| MBLK | Sample ID: MBLK-100405 | Units: mg/Kg | | Analysis Date: 08-Jan-2016 18:07 | | | | | |
| Client ID: | | Run ID: FID-10_267509 | | SeqNo: 3549033 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | < 50 | 50 | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | |
| Surr: 2-Fluorobiphenyl | 29.09 | 0 | 25 | 0 | 116 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 26.52 | 0 | 25 | 0 | 106 | 70 - 130 | | | |
| LCS | Sample ID: LCS-100405 | Units: mg/Kg | | Analysis Date: 08-Jan-2016 18:36 | | | | | |
| Client ID: | | Run ID: FID-10_267509 | | SeqNo: 3549034 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 223.6 | 50 | 250 | 0 | 89.4 | 75 - 125 | | | |
| >nC12 to nC28 | 245.6 | 50 | 250 | 0 | 98.2 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 27.97 | 0 | 25 | 0 | 112 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 26.95 | 0 | 25 | 0 | 108 | 70 - 130 | | | |
| LCSD | Sample ID: LCSD-100405 | Units: mg/Kg | | Analysis Date: 08-Jan-2016 19:06 | | | | | |
| Client ID: | | Run ID: FID-10_267509 | | SeqNo: 3549035 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 205.9 | 50 | 250 | 0 | 82.4 | 75 - 125 | 223.6 | 8.23 | 20 |
| >nC12 to nC28 | 237.8 | 50 | 250 | 0 | 95.1 | 75 - 125 | 245.6 | 3.23 | 20 |
| Surr: 2-Fluorobiphenyl | 28.14 | 0 | 25 | 0 | 113 | 70 - 130 | 27.97 | 0.605 | 20 |
| Surr: Trifluoromethyl benzene | 26.55 | 0 | 25 | 0 | 106 | 70 - 130 | 26.95 | 1.49 | 20 |
| MS | Sample ID: HS16010148-02MS | Units: mg/Kg | | Analysis Date: 08-Jan-2016 20:04 | | | | | |
| Client ID: C - 0-6" | | Run ID: FID-10_267509 | | SeqNo: 3549037 | PrepDate: 08-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| nC6 to nC12 | 230.7 | 50 | 248.5 | 0 | 92.8 | 75 - 125 | | | |
| >nC12 to nC28 | 284.7 | 50 | 248.5 | 0 | 115 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 30.33 | 0 | 24.85 | 0 | 122 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 28.37 | 0 | 24.85 | 0 | 114 | 70 - 130 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: 100405 Instrument: FID-10 Method: TX1005

MSD Sample ID: HS16010148-02MSD Units: mg/Kg Analysis Date: 08-Jan-2016 20:33
 Client ID: C - 0-6" Run ID: FID-10_267509 SeqNo: 3549038 PrepDate: 08-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----------|-----------|------|

| | | | | | | | | | | |
|-------------------------------|-------|----|-------|---|------|----------|-------|------|----|--|
| nC6 to nC12 | 212.7 | 50 | 247.8 | 0 | 85.8 | 75 - 125 | 230.7 | 8.14 | 20 | |
| >nC12 to nC28 | 236.8 | 50 | 247.8 | 0 | 95.6 | 75 - 125 | 284.7 | 18.4 | 20 | |
| Surr: 2-Fluorobiphenyl | 26.38 | 0 | 24.78 | 0 | 106 | 70 - 130 | 30.33 | 13.9 | 20 | |
| Surr: Trifluoromethyl benzene | 24.49 | 0 | 24.78 | 0 | 98.8 | 70 - 130 | 28.37 | 14.7 | 20 | |

The following samples were analyzed in this batch: HS16010148-02 HS16010148-03 HS16010148-05 HS16010148-06
 HS16010148-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

| Batch ID: 100431 | | Instrument: HG02 | | Method: SW7471A | | | | | |
|------------------|-----------------------------|---------------------|---------|-----------------|----------------------------------|---------------|---------------|----------------|--|
| MBLK | Sample ID: MBLK-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:24 | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548754 | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual | |
| Mercury | < 3.32 | 3.32 | | | | | | | |
| LCS | Sample ID: LCS-100431 | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:26 | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548755 | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual | |
| Mercury | 372.7 | 3.32 | 333.3 | 0 | 112 | 85 - 115 | | | |
| MS | Sample ID: HS15121095-03MS | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:32 | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548757 | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual | |
| Mercury | 380.9 | 3.73 | 374.2 | 11.43 | 98.7 | 85 - 115 | | | |
| MSD | Sample ID: HS15121095-03MSD | Units: ug/Kg | | | Analysis Date: 11-Jan-2016 14:34 | | | | |
| Client ID: | | Run ID: HG02_267495 | | SeqNo: 3548758 | PrepDate: 11-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD Limit Qual | |
| Mercury | 399.9 | 3.71 | 372.3 | 11.43 | 104 | 85 - 115 | 380.9 | 4.85 20 | |

The following samples were analyzed in this batch: HS16010148-02 HS16010148-05 HS16010148-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: 100463 **Instrument:** ICPMS04 **Method:** SW6020

MBLK Sample ID: **MBLK-100463** Units: **mg/Kg** Analysis Date: **13-Jan-2016 00:35**
 Client ID: Run ID: **ICPMS04_267525** SeqNo: **3550281** PrepDate: **12-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|------------|---------|-------|--|--|--|--|--|--|--|--|
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

LCS Sample ID: **MLCS-100463** Units: **mg/Kg** Analysis Date: **13-Jan-2016 00:40**
 Client ID: Run ID: **ICPMS04_267525** SeqNo: **3550282** PrepDate: **12-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

| | | | | | | | | | | |
|------------|-------|-------|----|---|------|----------|--|--|--|--|
| Arsenic | 9.244 | 0.500 | 10 | 0 | 92.4 | 80 - 120 | | | | |
| Cadmium | 9.456 | 0.500 | 10 | 0 | 94.6 | 80 - 120 | | | | |
| Chromium | 9.574 | 0.500 | 10 | 0 | 95.7 | 80 - 120 | | | | |
| Copper | 9.684 | 0.200 | 10 | 0 | 96.8 | 80 - 120 | | | | |
| Lead | 9.213 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Molybdenum | 9.209 | 0.500 | 10 | 0 | 92.1 | 80 - 120 | | | | |
| Nickel | 9.664 | 0.500 | 10 | 0 | 96.6 | 80 - 120 | | | | |
| Selenium | 9.27 | 0.500 | 10 | 0 | 92.7 | 80 - 120 | | | | |
| Zinc | 9.433 | 0.500 | 10 | 0 | 94.3 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

| Batch ID: 100463 | | Instrument: ICPMS04 | | Method: SW6020 | | | | | | |
|------------------|----------------------------|---------------------|---------|----------------------------------|-------|---------------|---------------|------|-----------|------|
| MS | Sample ID: HS16010174-01MS | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:53 | | | | | | |
| Client ID: | Run ID: ICPMS04_267525 | SeqNo: 3550285 | | PrepDate: 12-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 12.08 | 0.478 | 9.569 | 3.778 | 86.7 | 75 - 125 | | | | |
| Cadmium | 9.008 | 0.478 | 9.569 | 0.09814 | 93.1 | 75 - 125 | | | | |
| Chromium | 55.63 | 0.478 | 9.569 | 59.42 | -39.6 | 75 - 125 | | | | SO |
| Copper | 26.84 | 0.191 | 9.569 | 23.14 | 38.7 | 75 - 125 | | | | S |
| Lead | 86.97 | 0.478 | 9.569 | 102.8 | -166 | 75 - 125 | | | | SO |
| Molybdenum | 12.08 | 0.478 | 9.569 | 4.251 | 81.9 | 75 - 125 | | | | |
| Nickel | 20.57 | 0.478 | 9.569 | 13.71 | 71.7 | 75 - 125 | | | | S |
| Selenium | 9.328 | 0.478 | 9.569 | 0.8115 | 89.0 | 75 - 125 | | | | |
| Zinc | 36.04 | 0.478 | 9.569 | 30.68 | 56.0 | 75 - 125 | | | | S |

| MSD | | Sample ID: HS16010174-01MSD | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 00:57 | | | | |
|------------|------------------------|-----------------------------|---------|-----------------------|-------|----------------------------------|---------------|-------|-----------|------|
| Client ID: | Run ID: ICPMS04_267525 | SeqNo: 3550286 | | PrepDate: 12-Jan-2016 | DF: 1 | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 11.86 | 0.476 | 9.527 | 3.778 | 84.9 | 75 - 125 | 12.08 | 1.79 | 20 | |
| Cadmium | 8.865 | 0.476 | 9.527 | 0.09814 | 92.0 | 75 - 125 | 9.008 | 1.6 | 20 | |
| Chromium | 60.34 | 0.476 | 9.527 | 59.42 | 9.64 | 75 - 125 | 55.63 | 8.11 | 20 | SO |
| Copper | 26.79 | 0.191 | 9.527 | 23.14 | 38.3 | 75 - 125 | 26.84 | 0.181 | 20 | S |
| Lead | 85.51 | 0.476 | 9.527 | 102.8 | -182 | 75 - 125 | 86.97 | 1.69 | 20 | SO |
| Molybdenum | 12.06 | 0.476 | 9.527 | 4.251 | 82.0 | 75 - 125 | 12.08 | 0.204 | 20 | |
| Nickel | 21.46 | 0.476 | 9.527 | 13.71 | 81.3 | 75 - 125 | 20.57 | 4.24 | 20 | |
| Selenium | 9.217 | 0.476 | 9.527 | 0.8115 | 88.2 | 75 - 125 | 9.328 | 1.2 | 20 | |
| Zinc | 34.43 | 0.476 | 9.527 | 30.68 | 39.3 | 75 - 125 | 36.04 | 4.57 | 20 | S |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: 100463 **Instrument:** ICPMS04 **Method:** SW6020

PDS Sample ID: HS16010174-01BS Units: mg/Kg Analysis Date: 13-Jan-2016 01:02

Client ID: Run ID: ICPMS04_267525 SeqNo: 3550287 PrepDate: 12-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|-------|-------|-------|---------|------|----------|--|--|--|----|
| Arsenic | 12.12 | 0.470 | 9.391 | 3.778 | 88.8 | 75 - 125 | | | | |
| Cadmium | 8.528 | 0.470 | 9.391 | 0.09814 | 89.8 | 75 - 125 | | | | |
| Chromium | 65.91 | 0.470 | 9.391 | 59.42 | 69.1 | 75 - 125 | | | | SO |
| Copper | 30.1 | 0.188 | 9.391 | 23.14 | 74.0 | 75 - 125 | | | | S |
| Lead | 108.1 | 0.470 | 9.391 | 102.8 | 56.3 | 75 - 125 | | | | SO |
| Molybdenum | 12.16 | 0.470 | 9.391 | 4.251 | 84.2 | 75 - 125 | | | | |
| Nickel | 21.3 | 0.470 | 9.391 | 13.71 | 80.8 | 75 - 125 | | | | |
| Selenium | 9.019 | 0.470 | 9.391 | 0.8115 | 87.4 | 75 - 125 | | | | |
| Zinc | 37.03 | 0.470 | 9.391 | 30.68 | 67.6 | 75 - 125 | | | | S |

SD Sample ID: HS16010174-01 DIL SX Units: mg/Kg Analysis Date: 13-Jan-2016 00:49

Client ID: Run ID: ICPMS04_267525 SeqNo: 3550284 PrepDate: 12-Jan-2016 DF: 5

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|----------|------|

| | | | | | | | | | | |
|------------|--------|-------|--|--|--|--|---------|-------|----|--|
| Arsenic | 3.995 | 2.35 | | | | | 3.778 | 5.73 | 10 | |
| Cadmium | < 2.35 | 2.35 | | | | | 0.09814 | 0 | 10 | |
| Chromium | 59.55 | 2.35 | | | | | 59.42 | 0.219 | 10 | |
| Copper | 25.24 | 0.939 | | | | | 23.14 | 9.07 | 10 | |
| Lead | 109.6 | 2.35 | | | | | 102.8 | 6.55 | 10 | |
| Molybdenum | 4.397 | 2.35 | | | | | 4.251 | 3.43 | 10 | |
| Nickel | 14.65 | 2.35 | | | | | 13.71 | 6.82 | 10 | |
| Selenium | < 2.35 | 2.35 | | | | | 0.8115 | 0 | 10 | |
| Zinc | 32.91 | 2.35 | | | | | 30.68 | 7.25 | 10 | |

The following samples were analyzed in this batch: HS16010148-02 HS16010148-05 HS16010148-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

| | | |
|--------------------------|-------------------------|-----------------------|
| Batch ID: R267400 | Instrument: VOA5 | Method: SW8260 |
|--------------------------|-------------------------|-----------------------|

| MBLK | Sample ID: VBLKS1-010816 | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 09:16 | | | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547186 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 41.96 | 0 | 50 | 0 | 83.9 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 47.13 | 0 | 50 | 0 | 94.3 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 46.84 | 0 | 50 | 0 | 93.7 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.21 | 0 | 50 | 0 | 100 | 73 - 127 | | | | |

| LCS | Sample ID: VLCSS1-010816 | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 08:06 | | | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547185 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 49.08 | 5.0 | 50 | 0 | 98.2 | 79 - 122 | | | | |
| Ethylbenzene | 52.14 | 5.0 | 50 | 0 | 104 | 80 - 122 | | | | |
| m,p-Xylene | 103.1 | 10 | 100 | 0 | 103 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 47.25 | 5.0 | 50 | 0 | 94.5 | 76 - 124 | | | | |
| o-Xylene | 51.22 | 5.0 | 50 | 0 | 102 | 80 - 123 | | | | |
| Toluene | 49.95 | 5.0 | 50 | 0 | 99.9 | 79 - 120 | | | | |
| Xylenes, Total | 154.3 | 10 | 150 | 0 | 103 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 45.37 | 0 | 50 | 0 | 90.7 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.8 | 0 | 50 | 0 | 97.6 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 47.49 | 0 | 50 | 0 | 95.0 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 48.74 | 0 | 50 | 0 | 97.5 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: R267400 Instrument: VOA5 Method: SW8260

| MS | | Sample ID: HS16010148-02MS | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 11:36 | | | | |
|-----------------------------|--------|----------------------------|----------------|---------------|-----------|----------------------------------|---------------|------|-----------|------|
| Client ID: C - 0-6" | | Run ID: VOA5_267400 | SeqNo: 3547192 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 48.83 | 4.9 | 49 | 0 | 99.7 | 79 - 122 | | | | |
| Ethylbenzene | 51.32 | 4.9 | 49 | 0 | 105 | 80 - 122 | | | | |
| m,p-Xylene | 100.6 | 9.8 | 98 | 0 | 103 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 42.89 | 4.9 | 49 | 0 | 87.5 | 76 - 124 | | | | |
| o-Xylene | 49.49 | 4.9 | 49 | 0 | 101 | 80 - 123 | | | | |
| Toluene | 50.05 | 4.9 | 49 | 0 | 102 | 79 - 120 | | | | |
| Xylenes, Total | 150.1 | 9.8 | 147 | 0 | 102 | 80 - 120 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.29 | 0 | 49 | 0 | 96.5 | 70 - 128 | | | | |
| Surr: 4-Bromofluorobenzene | 50.26 | 0 | 49 | 0 | 103 | 73 - 126 | | | | |
| Surr: Dibromofluoromethane | 50.57 | 0 | 49 | 0 | 103 | 71 - 128 | | | | |
| Surr: Toluene-d8 | 52.71 | 0 | 49 | 0 | 108 | 73 - 127 | | | | |

| MSD | | Sample ID: HS16010148-02MSD | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 11:59 | | | | |
|-----------------------------|--------|-----------------------------|----------------|---------------|-----------|----------------------------------|---------------|------|-----------|------|
| Client ID: C - 0-6" | | Run ID: VOA5_267400 | SeqNo: 3547193 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.05 | 4.9 | 49 | 0 | 89.9 | 79 - 122 | 48.83 | 10.3 | 30 | |
| Ethylbenzene | 45.96 | 4.9 | 49 | 0 | 93.8 | 80 - 122 | 51.32 | 11 | 30 | |
| m,p-Xylene | 90.32 | 9.8 | 98 | 0 | 92.2 | 79 - 122 | 100.6 | 10.8 | 30 | |
| Methyl tert-butyl ether | 41.23 | 4.9 | 49 | 0 | 84.1 | 76 - 124 | 42.89 | 3.96 | 30 | |
| o-Xylene | 44.62 | 4.9 | 49 | 0 | 91.1 | 80 - 123 | 49.49 | 10.4 | 30 | |
| Toluene | 45.19 | 4.9 | 49 | 0 | 92.2 | 79 - 120 | 50.05 | 10.2 | 30 | |
| Xylenes, Total | 134.9 | 9.8 | 147 | 0 | 91.8 | 80 - 120 | 150.1 | 10.7 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 48.42 | 0 | 49 | 0 | 98.8 | 70 - 128 | 47.29 | 2.35 | 30 | |
| Surr: 4-Bromofluorobenzene | 50.78 | 0 | 49 | 0 | 104 | 73 - 126 | 50.26 | 1.02 | 30 | |
| Surr: Dibromofluoromethane | 51.29 | 0 | 49 | 0 | 105 | 71 - 128 | 50.57 | 1.43 | 30 | |
| Surr: Toluene-d8 | 53.51 | 0 | 49 | 0 | 109 | 73 - 127 | 52.71 | 1.5 | 30 | |

The following samples were analyzed in this batch: HS16010148-02 HS16010148-03 HS16010148-05 HS16010148-06
 HS16010148-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: R267411 **Instrument:** VOA2 **Method:** SW8260

| MBLK | Sample ID: VBLKW-160108 | Units: ug/L | | | Analysis Date: 08-Jan-2016 10:39 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267411 | SeqNo: 3547368 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 46.12 | 1.0 | 50 | 0 | 92.2 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 54.7 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 52.16 | 1.0 | 50 | 0 | 104 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 55.41 | 1.0 | 50 | 0 | 111 | 75 - 125 | | | | |

| LCS | Sample ID: VLCSW-160108 | Units: ug/L | | | Analysis Date: 08-Jan-2016 09:49 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267411 | SeqNo: 3547367 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 50.86 | 1.0 | 50 | 0 | 102 | 75 - 122 | | | | |
| Ethylbenzene | 48.52 | 1.0 | 50 | 0 | 97.0 | 80 - 120 | | | | |
| Toluene | 45.16 | 1.0 | 50 | 0 | 90.3 | 75 - 121 | | | | |
| Xylenes, Total | 140.2 | 3.0 | 150 | 0 | 93.4 | 79 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 48.64 | 1.0 | 50 | 0 | 97.3 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 56.29 | 1.0 | 50 | 0 | 113 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 50.64 | 1.0 | 50 | 0 | 101 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.39 | 1.0 | 50 | 0 | 107 | 75 - 125 | | | | |

| MS | Sample ID: HS16010173-02MS | Units: ug/L | | | Analysis Date: 08-Jan-2016 13:10 | | | | | |
|-----------------------------|----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267411 | SeqNo: 3547374 | PrepDate: | DF: 50 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 2663 | 50 | 2500 | 0 | 107 | 75 - 122 | | | | |
| Ethylbenzene | 2587 | 50 | 2500 | 162.8 | 97.0 | 80 - 120 | | | | |
| Toluene | 2347 | 50 | 2500 | 0 | 93.9 | 75 - 121 | | | | |
| Xylenes, Total | 7874 | 150 | 7500 | 882.8 | 93.2 | 80 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 2501 | 50 | 2500 | 0 | 100 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 2810 | 50 | 2500 | 0 | 112 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 2606 | 50 | 2500 | 0 | 104 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 2720 | 50 | 2500 | 0 | 109 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: R267411 Instrument: VOA2 Method: SWS260

| MSD | Sample ID: HS16010173-02MSD | Units: ug/L | | | Analysis Date: 08-Jan-2016 13:35 | | | | | |
|------------------------------------|-----------------------------|----------------|-------------|---------------|----------------------------------|-----------------|---------------|--------------|-----------|------|
| Client ID: | Run ID: VOA2_267411 | SeqNo: 3547375 | PrepDate: | DF: 50 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 2616 | 50 | 2500 | 0 | 105 | 75 - 122 | 2663 | 1.76 | 20 | |
| Ethylbenzene | 2566 | 50 | 2500 | 162.8 | 96.1 | 80 - 120 | 2587 | 0.81 | 20 | |
| Toluene | 2301 | 50 | 2500 | 0 | 92.0 | 75 - 121 | 2347 | 2 | 20 | |
| Xylenes, Total | 7838 | 150 | 7500 | 882.8 | 92.7 | 80 - 124 | 7874 | 0.453 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>2444</i> | <i>50</i> | <i>2500</i> | <i>0</i> | <i>97.8</i> | <i>71 - 125</i> | <i>2501</i> | <i>2.31</i> | <i>20</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>2820</i> | <i>50</i> | <i>2500</i> | <i>0</i> | <i>113</i> | <i>70 - 125</i> | <i>2810</i> | <i>0.322</i> | <i>20</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>2479</i> | <i>50</i> | <i>2500</i> | <i>0</i> | <i>99.2</i> | <i>74 - 125</i> | <i>2606</i> | <i>4.99</i> | <i>20</i> | |
| <i>Surr: Toluene-d8</i> | <i>2727</i> | <i>50</i> | <i>2500</i> | <i>0</i> | <i>109</i> | <i>75 - 125</i> | <i>2720</i> | <i>0.25</i> | <i>20</i> | |

The following samples were analyzed in this batch: HS16010148-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: R267395 **Instrument:** WetChem_HS **Method:** SW9045B

| | | | | | | | |
|-------------------|----------------------------------|------------------------|----------------|---|-------------|----------------------|--|
| LCS | Sample ID: LCS-267395 | Units: pH Units | | Analysis Date: 08-Jan-2016 12:17 | | | |
| Client ID: | Run ID: WetChem_HS_267395 | SeqNo: 3547064 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value RPD Limit Qual |

| | | | | | | | |
|----|------|-------|---|---|-----|----------|--|
| pH | 6.02 | 0.100 | 6 | 0 | 100 | 97 - 103 | |
|----|------|-------|---|---|-----|----------|--|

| | | | | | | | |
|-------------------|------------------------------------|------------------------|----------------|---|-------------|----------------------|--|
| DUP | Sample ID: HS16010133-03DUP | Units: pH Units | | Analysis Date: 08-Jan-2016 12:17 | | | |
| Client ID: | Run ID: WetChem_HS_267395 | SeqNo: 3547065 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value RPD Limit Qual |

| | | | | | | | |
|----------------|------|-------|--|--|--|--|---------------------|
| pH | 7.29 | 0.100 | | | | | 7.34 0.684 10 |
| Temp Deg C @pH | 21 | 0 | | | | | 20.9 0.477 10 |

The following samples were analyzed in this batch: HS16010148-02 HS16010148-04 HS16010148-05 HS16010148-06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

QC BATCH REPORT

Batch ID: R267450 Instrument: Balance1 Method: SW3550

| | | | | | | | | | | |
|------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|----------|-----------|------|
| DUP | Sample ID: HS16010186-04DUP | Units: wt% | Analysis Date: 08-Jan-2016 11:08 | | | | | | | |
| Client ID: | Run ID: Balance1_267450 | SeqNo: 3548021 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |

| | | | | | | | | | |
|------------------|------|--------|--|--|--|--|------|------|----|
| Percent Moisture | 16.8 | 0.0100 | | | | | 19.2 | 13.3 | 20 |
|------------------|------|--------|--|--|--|--|------|------|----|

The following samples were analyzed in this batch:

| | | | |
|---------------|---------------|---------------|---------------|
| HS16010148-02 | HS16010148-03 | HS16010148-04 | HS16010148-05 |
| HS16010148-06 | HS16010148-07 | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010148

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010148

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|-------------------------|--------|-----------------------|--------|--------------|
| HS16010148-01 | Trip Blank | Login | 1/7/2016 1:57:12 PM | RPG | VW-3 |
| HS16010148-02 | C - 0-6" | Login | 1/7/2016 1:57:12 PM | RPG | LF-23 |
| HS16010148-02 | C - 0-6" | Login | 1/7/2016 1:57:12 PM | RPG | VW-2 |
| HS16010148-02 | C - 0-6" | Login | 1/7/2016 1:57:12 PM | RPG | 2D |
| HS16010148-02 | C - 0-6" | Login | 1/7/2016 1:57:12 PM | RPG | Sub |
| HS16010148-03 | C - 6-12" | Login | 1/7/2016 1:57:12 PM | RPG | LF-23 |
| HS16010148-03 | C - 6-12" | Login | 1/7/2016 1:57:12 PM | RPG | VW-2 |
| HS16010148-04 | C - 6-24" | Login | 1/7/2016 1:57:12 PM | RPG | 2D |
| HS16010148-04 | C - 6-24" | Login | 1/7/2016 1:57:12 PM | RPG | Sub |
| HS16010148-05 | Suspect Grit Trap Waste | Login | 1/7/2016 1:57:12 PM | RPG | LF-23 |
| HS16010148-05 | Suspect Grit Trap Waste | Login | 1/7/2016 1:57:12 PM | RPG | VW-2 |
| HS16010148-05 | Suspect Grit Trap Waste | Login | 1/7/2016 1:57:12 PM | RPG | 2D |
| HS16010148-05 | Suspect Grit Trap Waste | Login | 1/7/2016 1:57:12 PM | RPG | Sub |
| HS16010148-06 | H - 0-6" | Login | 1/7/2016 2:14:05 PM | RPG | LF-23 |
| HS16010148-06 | H - 0-6" | Login | 1/7/2016 2:14:05 PM | RPG | VW-2 |
| HS16010148-06 | H - 0-6" | Login | 1/7/2016 2:14:05 PM | RPG | 2D |
| HS16010148-06 | H - 0-6" | Login | 1/7/2016 2:14:05 PM | RPG | Sub |
| HS16010148-07 | H - 6-12" | Login | 1/7/2016 2:14:52 PM | RPG | LF-23 |
| HS16010148-07 | H - 6-12" | Login | 1/7/2016 2:14:52 PM | RPG | VW-2 |
| HS16010148-02 | C - 0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010148-05 | Suspect Grit Trap Waste | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010148-06 | H - 0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010148-02 | C - 0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |
| HS16010148-05 | Suspect Grit Trap Waste | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |
| HS16010148-06 | H - 0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 2D |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS16010148

Date/Time Received: **07-Jan-2016 08:15**
 Received by: **RPG**

Checklist completed by: Raegen Giga 7-Jan-2016
 eSignature Date

Reviewed by: Dane J. Wacasey 11-Jan-2016
 eSignature Date

Matrices: Water/Soil

Carrier name: Client

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 5.3c/5.5c uc/c IR 4

Cooler(s)/Kit(s): RED

Date/Time sample(s) sent to storage: 01/07/2016 14:10

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 135941

Environmental

| Customer Information | | | | Project Information | | | |
|----------------------|-----------------------------------|-----------------|-----------------------------------|---------------------|--|--|--|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract-Soil Project | A | SUB (No line item - Nutrients (Energy Labs)) | | |
| Work Order | | Project Number | | B | TKN_S 4500NH3 D (Group E - TKN) | | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental | C | PH_S (Group _ pH) | | |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger - AJP | D | ICP_S_Low (Group B Total Metals 6020/7470 (10 w/Hg)) | | |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 | E | 8260_S (Group B BTEX+MTBE 8260) | | |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin, TX 78711 | F | TX1005_S_REV3 (Group B TPH TX1005) | | |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 | G | ICP_TW (Group B Total Metals 6020/7470 (10 w/Hg) EBLK) | | |
| Fax | (361) 825-3101 | Fax | | H | 8260_LL_W (Group B BTEX/MTBE 8260 EBLK) | | |
| e-Mail Address | | e-Mail Address | | I | TX1005_W_Low (Group B-TPH TX1005 EBLK) | | |
| | | | | J | | | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|-----|-------------------------|--------|-------|--------|-------|-----------|---|---|---|---|---|---|---|---|---|---|------|
| 1 | Trip Blank | 1/6/16 | | W | ICE | 2 | X | | | | X | | | | | | |
| 2 | C-0-6" | 1/6/16 | 11:40 | SS | ICE | 6 | X | X | X | X | X | X | | | | | |
| 3 | C-6"-12" | 1/6/16 | 11:56 | SS | ICE | 2 | X | | | | X | X | | | | | |
| 4 | C-6"-24" | 1/6/16 | 11:55 | SS | ICE | 3 | X | X | X | | X | X | | | | | |
| 5 | Suspect Grit Trap Water | 1/6/16 | 12:58 | SS | ICE | 6 | X | X | X | X | X | X | | | | | |
| 6 | H-0-6" | 1/6/16 | 16:10 | SS | ICE | 6 | X | X | X | X | X | X | | | | | |
| 7 | H-6"-12" | 1/6/16 | 16:25 | SS | ICE | 2 | X | | | | X | X | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | | | | |
|--------------------------------|---|---------------------------------------|--------|---------|-----------------------------------|-------------------|
| Sampler(s) Please Print & Sign | Robert King | Required Turnaround Time: (Check Box) | TAT | 15 days | Other | Results Due Date: |
| Received by: | Julie Steger | Shipment Method | | | | |
| Relinquished by: | Robert King | Received at Laboratory: | WED | 1-14-16 | QC Level | STD |
| Logged by (Laboratory): | | Checked by (Laboratory): | | | QC Package: (Check One Box Below) | |
| Preservative Key: | 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other | 8-C | 9-5035 | 10-8°C | 11-5-3 | Other: |

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

| CUSTODY SEAL | | Seal Broken By: |
|------------------------|------------|--------------------|
| Date: 1/7/16 | Time: 6:10 | <i>[Signature]</i> |
| Name: Robert Ring | | Date: 1/7/16 |
| Company: ALS Env Serv. | | |



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T16010029 Quote ID: T2980 - TCEQ Soil Analysis
Project Name: HS16010148

Energy Laboratories Inc. College Station TX received the following 4 samples for ALS - Houston on 1/8/2016 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|----------------------|----------------|--------------|--------|---|
| T16010029-001 | HS16010148-02 [0-6] | 01/06/16 11:40 | 01/08/16 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T16010029-002 | HS16010148-04 [6-24] | 01/06/16 11:55 | 01/08/16 | Soil | Same As Above |
| T16010029-003 | HS16010148-05 | 01/06/16 12:58 | 01/08/16 | Soil | Same As Above |
| T16010029-004 | HS16010148-06 [0-6] | 01/06/16 16:10 | 01/08/16 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:

Digitally signed by
Amanda Myatt
Date: 2016.01.20 17:04:15 -06:00



CLIENT: ALS - Houston
Project: HS16010148
Work Order: T16010029

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

Revised report issued to correct the conductivity results for sample T16010029-003A (HS16010093-05). The original report applied a preparation factor of "2" to the result, when a factor of "1" should have been applied. SAS 1/19/2016

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010148
Lab ID: T16010029-001
Client Sample ID: HS16010148-02 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/06/16 11:40
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 9.7 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:08 / eli-h |
| Ammonia as N, KCL Extract | 7.6 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:08 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:46 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:52 / dmp |
| Total Kjeldahl Nitrogen | 686 | mg/kg | D‡ | 30 | | ASA31-3 | 01/14/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 766 | mg/kg | | 5 | | SW6010B | 01/13/16 13:42 / jtr |
| Magnesium | 156 | mg/kg | | 5 | | SW6010B | 01/13/16 13:42 / jtr |
| Phosphorus | 10 | mg/kg | | 5 | | SW6010B | 01/13/16 11:36 / jtr |
| Potassium | 39 | mg/kg | | 5 | | SW6010B | 01/13/16 13:42 / jtr |
| Sodium | 82 | mg/kg | | 5 | | SW6010B | 01/13/16 13:42 / jtr |

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010148
Lab ID: T16010029-002
Client Sample ID: HS16010148-04 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/06/16 11:55
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 5.9 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:09 / eli-h |
| Ammonia as N, KCL Extract | 4.6 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:09 / eli-h |
| Conductivity, 1:2 | 0.5 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:47 / cc |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:54 / dmp |
| Total Kjeldahl Nitrogen | 583 | mg/kg | D‡ | 30 | | ASA31-3 | 01/14/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 2610 | mg/kg | | 5 | | SW6010B | 01/13/16 13:50 / jtr |
| Magnesium | 558 | mg/kg | | 5 | | SW6010B | 01/13/16 13:50 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 11:45 / jtr |
| Potassium | 106 | mg/kg | | 5 | | SW6010B | 01/13/16 13:50 / jtr |
| Sodium | 539 | mg/kg | | 5 | | SW6010B | 01/13/16 13:50 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
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LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010148
Lab ID: T16010029-003
Client Sample ID: HS16010148-05

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/06/16 12:58
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 66 | mg/kg | D‡ | 3 | | ASA33-7 | 01/13/16 13:10 / eli-h |
| Ammonia as N, KCL Extract | 51 | mg/kg | D‡ | 2 | | ASA33-7 | 01/13/16 13:10 / eli-h |
| Conductivity, 1:2 | 0.9 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:47 / cc |
| Nitrate+Nitrite as N, KCl Extract | 9.7 | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:56 / dmp |
| Total Kjeldahl Nitrogen | 14400 | mg/kg | D‡ | 30 | | ASA31-3 | 01/14/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 5390 | mg/kg | D | 10 | | SW6010B | 01/13/16 14:13 / jtr |
| Magnesium | 376 | mg/kg | | 5 | | SW6010B | 01/13/16 13:54 / jtr |
| Phosphorus | 1240 | mg/kg | D | 50 | | SW6010B | 01/13/16 12:20 / jtr |
| Potassium | 149 | mg/kg | | 5 | | SW6010B | 01/13/16 13:54 / jtr |
| Sodium | 72 | mg/kg | | 5 | | SW6010B | 01/13/16 13:54 / jtr |

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: HS16010148
Lab ID: T16010029-004
Client Sample ID: HS16010148-06 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/06/16 16:10
Date Received: 01/08/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 14.4 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:12 / eli-h |
| Ammonia as N, KCL Extract | 11.3 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:12 / eli-h |
| Conductivity, 1:2 | 0.4 | mmhos/cm | | 0.1 | | A2510 B | 01/14/16 10:48 / cc |
| Nitrate+Nitrite as N, KCl Extract | 2.9 | mg/kg | | 1.0 | | E353.2 | 01/13/16 09:57 / dmp |
| Total Kjeldahl Nitrogen | 1220 | mg/kg | D‡ | 30 | | ASA31-3 | 01/14/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1790 | mg/kg | | 5 | | SW6010B | 01/13/16 13:56 / jtr |
| Magnesium | 160 | mg/kg | | 5 | | SW6010B | 01/13/16 13:56 / jtr |
| Phosphorus | 60 | mg/kg | | 5 | | SW6010B | 01/13/16 11:53 / jtr |
| Potassium | 53 | mg/kg | | 5 | | SW6010B | 01/13/16 13:56 / jtr |
| Sodium | 41 | mg/kg | | 5 | | SW6010B | 01/13/16 13:56 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|---------------------------|-------|--|----------|------|------|-----------|------------|-------------------------------|----------|----------------|--|
| Method: A2510 B | | | | | | | | Analytical Run: COND3_160114A | | | |
| Lab ID: COND 100 | | Continuing Calibration Verification Standard | | | | | | | | 01/14/16 10:38 | |
| Conductivity, 1:2 | | 0.0948 | mmhos/cm | 0.10 | 95 | 90 | 110 | | | | |
| Lab ID: COND 2000 | | Continuing Calibration Verification Standard | | | | | | | | 01/14/16 10:39 | |
| Conductivity, 1:2 | | 1.89 | mmhos/cm | 0.10 | 95 | 90 | 110 | | | | |
| Lab ID: ICV-1413 | | Initial Calibration Verification Standard | | | | | | | | 01/14/16 10:40 | |
| Conductivity, 1:2 | | 1.38 | mmhos/cm | 0.10 | 98 | 90 | 110 | | | | |
| Method: A2510 B | | | | | | | | Batch: 160114A-COND-S-SM2510 | | | |
| Lab ID: COND 7000 | | Continuing Calibration Verification Standard | | | | | | Run: COND3_160114A | | 01/14/16 10:39 | |
| Conductivity, 1:2 | | 6.79 | mmhos/cm | 0.10 | 97 | 90 | 110 | | | | |
| Method: A2510 B | | | | | | | | Batch: 24683 | | | |
| Lab ID: LCS-24683 | | Laboratory Control Sample | | | | | | Run: COND3_160114A | | 01/14/16 10:41 | |
| Conductivity, 1:2 | | 1.06 | mmhos/cm | 0.10 | 94 | 80 | 120 | | | | |
| Lab ID: MB-24683 | | Method Blank | | | | | | Run: COND3_160114A | | 01/14/16 10:41 | |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | | |
| Lab ID: T16010029-001ADUP | | Sample Duplicate | | | | | | Run: COND3_160114A | | 01/14/16 10:46 | |
| Conductivity, 1:2 | | 0.194 | mmhos/cm | 0.10 | | | | 2.1 | 10 | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------|-------|-------------------------------|-------|----|------|-----------|------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31712 |
| Lab ID: LCS-31712 | | Laboratory Control Sample | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | 952 | mg/kg | 30 | 102 | 70 | 130 | | | |
| Run: SUB-H112263 | | | | | | | | | | |
| Lab ID: MB-31712 | | Method Blank | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | |
| Run: SUB-H112263 | | | | | | | | | | |
| Lab ID: H16010127-001BMS | | Sample Matrix Spike | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | 2070 | mg/kg | 30 | 69 | 50 | 150 | | | |
| Run: SUB-H112263 | | | | | | | | | | |
| Lab ID: H16010127-001BMSD | | Sample Matrix Spike Duplicate | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | 2180 | mg/kg | 30 | 75 | 50 | 150 | 5.3 | 30 | |
| Run: SUB-H112263 | | | | | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------------|---|--------|-------|------|------|-----------|------------|-----------------------------|----------|------------------------------------|
| Method: ASA33-7 | | | | | | | | Analytical Run: SUB-H112246 | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | | | |
| Ammonia as N, KCL Extract | | 9.26 | mg/kg | 1.2 | 100 | 90 | 110 | | | 01/13/16 12:54 |
| Method: ASA33-7 | | | | | | | | Batch: H_31706 | | |
| Lab ID: LCS-31706 | Laboratory Control Sample | | | | | | | | | |
| Ammonia as N, KCL Extract | | 2.78 | mg/kg | 0.50 | 94 | 70 | 130 | | | Run: SUB-H112246 01/13/16 12:58 |
| Lab ID: MB-31706 | Method Blank | | | | | | | | | |
| Ammonia as N, KCL Extract | | 0.1 | mg/kg | 0.1 | | | | | | Run: SUB-H112246 01/13/16 13:00 |
| Lab ID: H16010126-001BMS | Sample Matrix Spike | | | | | | | | | |
| Ammonia as N, KCL Extract | | 16.0 | mg/kg | 0.55 | 94 | 90 | 110 | | | Run: SUB-H112246 01/13/16 13:03 |
| Lab ID: T16010030-002B | Sample Duplicate | | | | | | | | | |
| Ammonia as N, KCL Extract | | 4.05 | mg/kg | 0.50 | | | | 0.5 | 20 | Run: SUB-H112246 01/13/16 13:15 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|------------------------------------|---|---|-------|------|------|-----------|------------|---|----------|----------------|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113A | | |
| Lab ID: Initial Calib Verif | Initial Calibration Verification Standard | | | | | | | | | |
| Phosphorus | | 5.01 | mg/L | 0.10 | 100 | 95 | 105 | | | 01/13/16 10:42 |
| Lab ID: Initial Calib Blank | | | | | | | | Initial Calibration Blank, Instrument Blank | | |
| Phosphorus | | -0.00428 | mg/L | 0.10 | | 0 | 0 | | | 01/13/16 10:44 |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113B | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | |
| Calcium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | 01/13/16 12:55 |
| Magnesium | | 50.5 | mg/L | 1.0 | 101 | 95 | 105 | | | |
| Potassium | | 49.9 | mg/L | 1.0 | 100 | 95 | 105 | | | |
| Sodium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | |
| Calcium | | -0.260 | mg/L | 1.0 | | | | | | 01/13/16 12:56 |
| Magnesium | | 0.0140 | mg/L | 1.0 | | | | | | |
| Potassium | | -0.0108 | mg/L | 1.0 | | | | | | |
| Sodium | | 0.140 | mg/L | 1.0 | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|---|----------|-------|------|------|-----------|------------|---|----------|---|
| Method: E353.2 | | | | | | | | Analytical Run: FIA1_160113A | | |
| Lab ID: ICV-160113C | Initial Calibration Verification Standard | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 1.56 | mg/kg | 1.0 | 104 | 90 | 110 | | | 01/13/16 09:18 |
| Lab ID: ICB2-160113C | | | | | | | | Initial Calibration Blank, Instrument Blank | | |
| Nitrate+Nitrite as N, KCl Extract | | -0.00800 | mg/kg | 1.0 | | 0 | 0 | | | 01/13/16 09:21 |
| Method: E353.2 | | | | | | | | Batch: 24668 | | |
| Lab ID: LCS-24668 | Laboratory Control Sample | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 9.90 | mg/kg | 1.0 | 109 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 09:26 |
| Lab ID: MB-24668 | Method Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.1 | mg/kg | 0.08 | | | | | | Run: FIA1_160113A 01/13/16 09:28 |
| Lab ID: T16010028-003APDS | Post Digestion/Distillation Spike | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 10.6 | mg/kg | 1.0 | 103 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 09:50 |
| Lab ID: T16010029-001ADUP | Sample Duplicate | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.290 | mg/kg | 1.0 | | | | | | Run: FIA1_160113A 01/13/16 09:53 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010029

Client: ALS - Houston

Project: HS16010148

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|--|-------|---------------------------|-------|-------|------|-----------|------------------------|-----|----------|----------------|
| Method: SW6010B Batch: 24669 | | | | | | | | | | |
| Lab ID: LCS-24669 | | Laboratory Control Sample | | | | | Run: ICP102-CS_160113A | | | 01/13/16 10:54 |
| Phosphorus | | 13.7 | mg/kg | 5.0 | 100 | 80 | 120 | | | |
| Lab ID: MB-24669 | | Method Blank | | | | | Run: ICP102-CS_160113A | | | 01/13/16 10:57 |
| Phosphorus | | 0.08 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010029-001ADUP | | Sample Duplicate | | | | | Run: ICP102-CS_160113A | | | 01/13/16 11:38 |
| Phosphorus | | 10.3 | mg/kg | 5.0 | | | | 0.9 | 20 | |
| Lab ID: T16010029-002AMS | | Sample Matrix Spike | | | | | Run: ICP102-CS_160113A | | | 01/13/16 11:48 |
| Phosphorus | | 22.3 | mg/kg | 5.0 | 99 | 70 | 130 | | | |
| Method: SW6010B Batch: 24669 | | | | | | | | | | |
| Lab ID: LCS-24669 | 4 | Laboratory Control Sample | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:09 |
| Calcium | | 2600 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Magnesium | | 311 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Potassium | | 77.2 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Sodium | | 120 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Lab ID: MB-24669 | 4 | Method Blank | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:11 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | 0.03 | mg/kg | 0.007 | | | | | | |
| Potassium | | 0.3 | mg/kg | 0.008 | | | | | | |
| Sodium | | 4 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010029-001ADUP | 4 | Sample Duplicate | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:44 |
| Calcium | | 708 | mg/kg | 5.0 | | | | 7.9 | 20 | |
| Magnesium | | 138 | mg/kg | 5.0 | | | | 12 | 20 | |
| Potassium | | 35.6 | mg/kg | 5.0 | | | | 9.0 | 20 | |
| Sodium | | 66.6 | mg/kg | 5.0 | | | | 21 | 20 | |
| Lab ID: T16010029-002AMS | 4 | Sample Matrix Spike | | | | | Run: ICP102-CS_160113B | | | 01/13/16 13:52 |
| Calcium | | 3530 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Magnesium | | 1430 | mg/kg | 5.0 | 87 | 70 | 130 | | | |
| Potassium | | 1140 | mg/kg | 5.0 | 103 | 70 | 130 | | | |
| Sodium | | 1600 | mg/kg | 5.0 | 106 | 70 | 130 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T16010029

Login completed by:

Date Received: 1/8/2016

Reviewed by: BL2000\kmharrison

Received by: am1

Reviewed Date: 1/14/2016

Carrier name: Fed Ex Express

| | | | |
|---|---|-----------------------------|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on all sample bottles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received in all shipping container(s)/cooler(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input type="checkbox"/> |
| Container/Temp Blank temperature: | 1.2°C On Ice | | |
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. Receipt temperature checked with Thermo 1211: read temperature = 1.2°C; no corrections. Sample 003 logged in under schedule 1, no depth recorded per bottle. Okay to login accordingly per email from Dane Wacasey. Changed sample due date to Rush per an email from Dane Wacasey. See Comm Log. ADG 160108 15:00



ESTABLISHED 1982

CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 7 Jan 2016

COC ID 4052

Due date 28 JAN 16

Subcontractor

Energy Laboratories, Inc.
415 Graham Road
College Station, TX 77845

Phone
9796902217
Fax
9796902045

| Customer Information | | Project Information | |
|----------------------|-----------------------------|---------------------|-----------------------------|
| PO | HS16010148 | Project Name | HS16010148 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attr | Accounts Payable |
| Address | 10450 Stancliff Rd, Ste 210 | Address | 10450 Stancliff Rd, Ste 210 |
| | Houston, TX 77099 | | Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasey@aisglobal.com | Email2 | jumokey.lawal@aisglobal.com |

T16010029
Lab ID

| Lab ID | Client Samp ID | Collection Date | Matrix | Analysis Requested |
|--------------------|-------------------------|--------------------|--------|------------------------------------|
| -001 HS16010148-02 | C - 0-6" | 06-Jan-16 11:40 am | Soil | TCEQ Soil Nutrients (See attached) |
| -002 HS16010148-04 | C - 6-24" | 06-Jan-16 11:55 am | Soil | TCEQ Soil Nutrients (See attached) |
| -003 HS16010148-05 | Suspect Grit Trap Waste | 06-Jan-16 12:58 pm | Soil | TCEQ Soil Nutrients (See attached) |
| -004 HS16010148-06 | H - 0-6" | 06-Jan-16 04:10 pm | Soil | TCEQ Soil Nutrients (See attached) |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler IDs: | Report/QC Level |
|--------------------|---------------|----------------------|----------------|-------------|-----------------|
| <i>[Signature]</i> | 11/7/16 18:55 | <i>Alisha Duffin</i> | 01/08/16 10:35 | 2442 | STD |

SOILS.

| | | | | |
|----------------|-----------------------|--------|-------------|---------------|
| FED Ex | • TEMP BLANK ✓ | ON ICE | COOLER CS ✓ | SIGN MATCH ✓ |
| EXPRESS | • THERMO 1211 ; 1.2°C | | BOTTLE CS ✓ | (KNOTTED BAG) |
| NO CORRECTIONS | | | | |



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

January 21, 2016

Bill Ross
Texas Commission on Environmental Quality
6300 Ocean Drive Unit 5839
NRC Building Suite 1200
Corpus Christi, TX 78412

Work Order: **HS16010186**

Revision: **1**

Laboratory Results for: **800 Acre Tract Soil Project**

Dear Bill,

ALS Environmental received 5 sample(s) on Jan 08, 2016 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Dane.Wacasey
Dane J. Wacasey

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010186

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------|--------|-----------|-------------------|-------------------|--------------------------|
| HS16010186-01 | Trip Blank | Water | 120915-33 | 07-Jan-2016 00:00 | 08-Jan-2016 09:50 | <input type="checkbox"/> |
| HS16010186-02 | F- 0-6" | Soil | | 07-Jan-2016 11:50 | 08-Jan-2016 09:50 | <input type="checkbox"/> |
| HS16010186-03 | F- 6"-12" | Soil | | 07-Jan-2016 12:05 | 08-Jan-2016 09:50 | <input type="checkbox"/> |
| HS16010186-04 | F- 6"-24" | Soil | | 07-Jan-2016 12:15 | 08-Jan-2016 09:50 | <input type="checkbox"/> |
| HS16010186-05 | Equipment Blank | Water | | 07-Jan-2016 12:28 | 08-Jan-2016 09:50 | <input type="checkbox"/> |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010186

CASE NARRATIVE**Work Order Comments**

- Samples received for the analysis of metals by method SW6020A were extracted using method SW3050B.
- This report was revised January 21, 2016 in order to include revised report for subcontracted analyses.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analysis for TCEQ Soil Nutrients was subcontracted to Energy Laboratories in College Station TX. Final Report is appended

GC Semivolatiles by Method TX1005**Batch ID: 100404,100420**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R267400,R267447**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020**Batch ID: 100489**

Sample ID: **HS16010139-01**
• MS and MSD are for an unrelated sample.

Batch ID: 100498

Sample ID: **HS16010218-04**
• MS and MSD are for an unrelated sample.

Metals by Method SW7470**Batch ID: 100458**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7471A**Batch ID: 100431**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW3550**Batch ID: R267450**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW9045B**Batch ID: R267395**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Trip Blank
 Collection Date: 07-Jan-2016 00:00

ANALYTICAL REPORT
 WorkOrder:HS16010186
 Lab ID:HS16010186-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|----------|----------------------|--------------|-------|-----------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:13 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:13 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:13 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 08-Jan-2016 23:13 |
| Surr: 1,2-Dichloroethane-d4 | 97.2 | | 71-125 | %REC | 1 | 08-Jan-2016 23:13 |
| Surr: 4-Bromofluorobenzene | 111 | | 70-125 | %REC | 1 | 08-Jan-2016 23:13 |
| Surr: Dibromofluoromethane | 108 | | 74-125 | %REC | 1 | 08-Jan-2016 23:13 |
| Surr: Toluene-d8 | 111 | | 75-125 | %REC | 1 | 08-Jan-2016 23:13 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: F- 0-6"
 Collection Date: 07-Jan-2016 11:50

ANALYTICAL REPORT
 WorkOrder:HS16010186
 Lab ID:HS16010186-02
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|-----------------------------|-----------------|-------------------|
| METALS BY SW6020A | | Method:SW6020 | | Prep:SW3050A / 13-Jan-2016 | | Analyst: JDE |
| Arsenic | 1.19 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Cadmium | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Chromium | 2.80 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Copper | 1.56 | | 0.224 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Lead | 5.28 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Molybdenum | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Nickel | 1.06 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Selenium | < 0.559 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| Zinc | 4.63 | | 0.559 | mg/Kg-dry | 1 | 13-Jan-2016 18:46 |
| VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: WLR |
| Benzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| Ethylbenzene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| Methyl tert-butyl ether | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| o-Xylene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| Toluene | < 0.0060 | | 0.0060 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 15:06 |
| Surr: 1,2-Dichloroethane-d4 | 90.2 | | 70-128 | %REC | 1 | 08-Jan-2016 15:06 |
| Surr: 4-Bromofluorobenzene | 102 | | 73-126 | %REC | 1 | 08-Jan-2016 15:06 |
| Surr: Dibromofluoromethane | 104 | | 71-128 | %REC | 1 | 08-Jan-2016 15:06 |
| Surr: Toluene-d8 | 112 | | 73-127 | %REC | 1 | 08-Jan-2016 15:06 |
| MERCURY BY SW7471B | | Method:SW7471A | | Prep:SW7471A / 11-Jan-2016 | | Analyst: JCJ |
| Mercury | 0.0102 | | 0.00439 | mg/Kg-dry | 1 | 11-Jan-2016 15:09 |
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 09-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 60 | | 60 | mg/Kg-dry | 1 | 11-Jan-2016 00:10 |
| >nC12 to nC28 | < 60 | | 60 | mg/Kg-dry | 1 | 11-Jan-2016 00:10 |
| >nC28 to nC35 | < 60 | | 60 | mg/Kg-dry | 1 | 11-Jan-2016 00:10 |
| Total Petroleum Hydrocarbon | < 60 | | 60 | mg/Kg-dry | 1 | 11-Jan-2016 00:10 |
| Surr: 2-Fluorobiphenyl | 108 | | 70-130 | %REC | 1 | 11-Jan-2016 00:10 |
| Surr: Trifluoromethyl benzene | 101 | | 70-130 | %REC | 1 | 11-Jan-2016 00:10 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 16.6 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 7.13 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 22.1 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: F- 6"-12"
 Collection Date: 07-Jan-2016 12:05

ANALYTICAL REPORT
 WorkOrder:HS16010186
 Lab ID:HS16010186-03
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|----------|----------------------|--------------|--|-----------------|-------------------|
| VOLATILES BY SW8260C | | Method:SW8260 | | Analyst: WLR | | |
| Benzene | < 0.0061 | | 0.0061 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| Ethylbenzene | < 0.0061 | | 0.0061 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| m,p-Xylene | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| Methyl tert-butyl ether | < 0.0061 | | 0.0061 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| o-Xylene | < 0.0061 | | 0.0061 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| Toluene | < 0.0061 | | 0.0061 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| Xylenes, Total | < 0.012 | | 0.012 | mg/Kg-dry | 1 | 08-Jan-2016 15:30 |
| Surr: 1,2-Dichloroethane-d4 | 94.9 | | 70-128 | %REC | 1 | 08-Jan-2016 15:30 |
| Surr: 4-Bromofluorobenzene | 101 | | 73-126 | %REC | 1 | 08-Jan-2016 15:30 |
| Surr: Dibromofluoromethane | 106 | | 71-128 | %REC | 1 | 08-Jan-2016 15:30 |
| Surr: Toluene-d8 | 110 | | 73-127 | %REC | 1 | 08-Jan-2016 15:30 |
| TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 09-Jan-2016 Analyst: KHT | | |
| nC6 to nC12 | < 61 | | 61 | mg/Kg-dry | 1 | 11-Jan-2016 00:38 |
| >nC12 to nC28 | < 61 | | 61 | mg/Kg-dry | 1 | 11-Jan-2016 00:38 |
| >nC28 to nC35 | < 61 | | 61 | mg/Kg-dry | 1 | 11-Jan-2016 00:38 |
| Total Petroleum Hydrocarbon | < 61 | | 61 | mg/Kg-dry | 1 | 11-Jan-2016 00:38 |
| Surr: 2-Fluorobiphenyl | 109 | | 70-130 | %REC | 1 | 11-Jan-2016 00:38 |
| Surr: Trifluoromethyl benzene | 101 | | 70-130 | %REC | 1 | 11-Jan-2016 00:38 |
| MOISTURE | | Method:SW3550 | | Analyst: DFF | | |
| Percent Moisture | 19.0 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: F- 6"-24"
 Collection Date: 07-Jan-2016 12:15

ANALYTICAL REPORT
 WorkOrder:HS16010186
 Lab ID:HS16010186-04
 Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|-------------------------------|--------------|-----------------------|--------------|----------|-----------------|-------------------|
| SUBCONTRACTED ANALYSIS | | Method:NA | | | | Analyst: SUB |
| Miscellaneous Analysis | See Attached | | | | 1 | 15-Jan-2016 16:37 |
| MOISTURE | | Method:SW3550 | | | | Analyst: DFF |
| Percent Moisture | 19.2 | | 0.0100 | wt% | 1 | 08-Jan-2016 11:08 |
| PH SOIL BY SW9045D | | Method:SW9045B | | | | Analyst: AP |
| pH | 5.91 | H | 0.100 | pH Units | 1 | 08-Jan-2016 12:17 |
| Temp Deg C @pH | 22.2 | H | 0 | °C | 1 | 08-Jan-2016 12:17 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
 Project: 800 Acre Tract Soil Project
 Sample ID: Equipment Blank
 Collection Date: 07-Jan-2016 12:28

ANALYTICAL REPORT
 WorkOrder:HS16010186
 Lab ID:HS16010186-05
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---------------------------------------|------------|----------------------|--------------|-----------------------------|-----------------|-------------------|
| ICP-MS METALS BY SW6020A | | Method:SW6020 | | Prep:SW3010A / 13-Jan-2016 | | Analyst: RPM |
| Arsenic | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Cadmium | < 0.00200 | | 0.00200 | mg/L | 1 | 14-Jan-2016 13:02 |
| Chromium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Copper | < 0.00200 | | 0.00200 | mg/L | 1 | 14-Jan-2016 13:02 |
| Lead | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Molybdenum | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Nickel | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Selenium | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| Zinc | < 0.00500 | | 0.00500 | mg/L | 1 | 14-Jan-2016 13:02 |
| LOW LEVEL VOLATILES BY SW8260C | | Method:SW8260 | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:38 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:38 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 08-Jan-2016 23:38 |
| Xylenes, Total | < 0.0030 | | 0.0030 | mg/L | 1 | 08-Jan-2016 23:38 |
| Surr: 1,2-Dichloroethane-d4 | 93.8 | | 71-125 | %REC | 1 | 08-Jan-2016 23:38 |
| Surr: 4-Bromofluorobenzene | 111 | | 70-125 | %REC | 1 | 08-Jan-2016 23:38 |
| Surr: Dibromofluoromethane | 102 | | 74-125 | %REC | 1 | 08-Jan-2016 23:38 |
| Surr: Toluene-d8 | 110 | | 75-125 | %REC | 1 | 08-Jan-2016 23:38 |
| MERCURY BY SW7470A | | Method:SW7470 | | Prep:SW7470 / 12-Jan-2016 | | Analyst: JCJ |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 12-Jan-2016 15:08 |
| LOW-LEVEL TEXAS TPH BY TX1005 | | Method:TX1005 | | Prep:TX1005PR / 08-Jan-2016 | | Analyst: KHT |
| nC6 to nC12 | < 0.51 | | 0.51 | mg/L | 1 | 12-Jan-2016 13:32 |
| >nC12 to nC28 | < 0.51 | | 0.51 | mg/L | 1 | 12-Jan-2016 13:32 |
| >nC28 to nC35 | < 0.51 | | 0.51 | mg/L | 1 | 12-Jan-2016 13:32 |
| Total Petroleum Hydrocarbon | < 0.51 | | 0.51 | mg/L | 1 | 12-Jan-2016 13:32 |
| Surr: 2-Fluorobiphenyl | 108 | | 70-130 | %REC | 1 | 12-Jan-2016 13:32 |
| Surr: Trifluoromethyl benzene | 106 | | 70-130 | %REC | 1 | 12-Jan-2016 13:32 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision:1

WEIGHT LOG

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

Batch ID: 727 **Method:** VOLATILES BY SW8260C

| SampleID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---------------|-----------|---------------|--------------|---------------|----------------|
| HS16010186-02 | 1 | 5.016 (g) | 5 (mL) | 1 | Bulk (5030B) |
| HS16010186-03 | 1 | 5.031 (g) | 5 (mL) | 0.99 | Bulk (5030B) |

Batch ID: 100404 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-05 | 1 | 29.16 | 3 (mL) | 0.1029 |

Batch ID: 100420 **Method:** TEXAS TPH BY TX1005 **Prep:** TX 1005_S PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-02 | 1 | 10.02 | 10 (mL) | 0.998 |
| HS16010186-03 | 1 | 10.1 | 10 (mL) | 0.9901 |

Batch ID: 100431 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-02 | 1 | 0.5452 | 40 (mL) | 73.37 |

Batch ID: 100458 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-05 | 1 | 40 | 40 (mL) | 1 |

Batch ID: 100489 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-05 | 1 | 50 | 50 (mL) | 1 |

Batch ID: 100498 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-02 | 1 | 0.5359 | 50 (mL) | 93.3 |

Batch ID: 100549 **Method:** TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D **Prep:** TKN_S_PR

| SampleID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---------------|-----------|---------------|--------------|-------------|
| HS16010186-02 | 1 | 1.0054 | 50 (mL) | 49.73 |
| HS16010186-04 | 1 | 1.1181 | 50 (mL) | 44.72 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | TCLP Date | Prep Date | Analysis Date | DF |
|-------------------------|-----------------|--|-----------|-------------------|----------------------|----|
| Batch ID 100404 | | Test Name : LOW-LEVEL TEXAS TPH BY TX1005 | | | Matrix: Water | |
| HS16010186-05 | Equipment Blank | 07 Jan 2016 12:28 | | 08 Jan 2016 11:31 | 12 Jan 2016 13:32 | 1 |
| Batch ID 100420 | | Test Name : TEXAS TPH BY TX1005 | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | 09 Jan 2016 12:30 | 11 Jan 2016 00:10 | 1 |
| HS16010186-03 | F- 6"-12" | 07 Jan 2016 12:05 | | 09 Jan 2016 12:30 | 11 Jan 2016 00:38 | 1 |
| Batch ID 100431 | | Test Name : MERCURY BY SW7471B | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | 11 Jan 2016 09:51 | 11 Jan 2016 15:09 | 1 |
| Batch ID 100458 | | Test Name : MERCURY BY SW7470A | | | Matrix: Water | |
| HS16010186-05 | Equipment Blank | 07 Jan 2016 12:28 | | 12 Jan 2016 11:10 | 12 Jan 2016 15:08 | 1 |
| Batch ID 100489 | | Test Name : ICP-MS METALS BY SW6020A | | | Matrix: Water | |
| HS16010186-05 | Equipment Blank | 07 Jan 2016 12:28 | | 13 Jan 2016 08:48 | 14 Jan 2016 13:02 | 1 |
| Batch ID 100498 | | Test Name : METALS BY SW6020A | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | 13 Jan 2016 10:59 | 13 Jan 2016 18:46 | 1 |
| Batch ID 100549 | | Test Name : TOTAL KJELDAHL NITROGEN BY SM4500 NH3 D | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | 14 Jan 2016 19:10 | 15 Jan 2016 15:00 | 1 |
| HS16010186-04 | F- 6"-24" | 07 Jan 2016 12:15 | | 14 Jan 2016 19:10 | 15 Jan 2016 15:00 | 1 |
| Batch ID R267395 | | Test Name : PH SOIL BY SW9045D | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | | 08 Jan 2016 12:17 | 1 |
| HS16010186-04 | F- 6"-24" | 07 Jan 2016 12:15 | | | 08 Jan 2016 12:17 | 1 |
| Batch ID R267400 | | Test Name : VOLATILES BY SW8260C | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | | 08 Jan 2016 15:06 | 1 |
| HS16010186-03 | F- 6"-12" | 07 Jan 2016 12:05 | | | 08 Jan 2016 15:30 | 1 |
| Batch ID R267447 | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | | Matrix: Water | |
| HS16010186-01 | Trip Blank | 07 Jan 2016 00:00 | | | 08 Jan 2016 23:13 | 1 |
| HS16010186-05 | Equipment Blank | 07 Jan 2016 12:28 | | | 08 Jan 2016 23:38 | 1 |
| Batch ID R267450 | | Test Name : MOISTURE | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | | 08 Jan 2016 11:08 | 1 |
| HS16010186-03 | F- 6"-12" | 07 Jan 2016 12:05 | | | 08 Jan 2016 11:08 | 1 |
| HS16010186-04 | F- 6"-24" | 07 Jan 2016 12:15 | | | 08 Jan 2016 11:08 | 1 |
| Batch ID R267736 | | Test Name : SUBCONTRACTED ANALYSIS | | | Matrix: Soil | |
| HS16010186-02 | F- 0-6" | 07 Jan 2016 11:50 | | | 15 Jan 2016 16:37 | 1 |
| HS16010186-04 | F- 6"-24" | 07 Jan 2016 12:15 | | | 15 Jan 2016 16:37 | 1 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100404 Instrument: FID-11 Method: TX1005

MBLK Sample ID: **MBLK-100404** Units: **mg/L** Analysis Date: **08-Jan-2016 18:07**

Client ID: Run ID: **FID-11_267528** SeqNo: **3549413** PrepDate: **08-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|

| | | | | | | | | | | |
|-------------------------------|--------|------|-----|---|------|----------|--|--|--|--|
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 2.334 | 0 | 2.5 | 0 | 93.4 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.452 | 0 | 2.5 | 0 | 98.1 | 70 - 130 | | | | |

LCS Sample ID: **LCS-100404** Units: **mg/L** Analysis Date: **08-Jan-2016 18:36**

Client ID: Run ID: **FID-11_267528** SeqNo: **3549414** PrepDate: **08-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|

| | | | | | | | | | | |
|-------------------------------|-------|------|-----|---|------|----------|--|--|--|--|
| nC6 to nC12 | 24.46 | 0.50 | 25 | 0 | 97.8 | 75 - 125 | | | | |
| >nC12 to nC28 | 24.39 | 0.50 | 25 | 0 | 97.6 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 2.965 | 0 | 2.5 | 0 | 119 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.787 | 0 | 2.5 | 0 | 111 | 70 - 130 | | | | |

LCSD Sample ID: **LCSD-100404** Units: **mg/L** Analysis Date: **08-Jan-2016 19:06**

Client ID: Run ID: **FID-11_267528** SeqNo: **3549415** PrepDate: **08-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|

| | | | | | | | | | | |
|-------------------------------|-------|------|-----|---|------|----------|-------|------|----|--|
| nC6 to nC12 | 25.16 | 0.50 | 25 | 0 | 101 | 75 - 125 | 24.46 | 2.84 | 20 | |
| >nC12 to nC28 | 23.34 | 0.50 | 25 | 0 | 93.3 | 75 - 125 | 24.39 | 4.42 | 20 | |
| Surr: 2-Fluorobiphenyl | 2.912 | 0 | 2.5 | 0 | 116 | 70 - 130 | 2.965 | 1.8 | 20 | |
| Surr: Trifluoromethyl benzene | 2.756 | 0 | 2.5 | 0 | 110 | 70 - 130 | 2.787 | 1.1 | 20 | |

MS Sample ID: **HS16010183-02MS** Units: **mg/L** Analysis Date: **08-Jan-2016 20:04**

Client ID: Run ID: **FID-11_267528** SeqNo: **3549417** PrepDate: **08-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | RPD Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|----------|

| | | | | | | | | | | |
|-------------------------------|-------|------|-------|---|------|----------|--|--|--|--|
| nC6 to nC12 | 28.96 | 0.50 | 24.95 | 0 | 116 | 75 - 125 | | | | |
| >nC12 to nC28 | 23.07 | 0.50 | 24.95 | 0 | 92.5 | 75 - 125 | | | | |
| Surr: 2-Fluorobiphenyl | 3.174 | 0 | 2.495 | 0 | 127 | 70 - 130 | | | | |
| Surr: Trifluoromethyl benzene | 2.765 | 0 | 2.495 | 0 | 111 | 70 - 130 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100404 Instrument: FID-11 Method: TX1005

| MSD | Sample ID: HS16010183-02MSD | Units: mg/L | | | Analysis Date: 08-Jan-2016 20:33 | | | | | |
|--------------------------------------|-----------------------------|----------------|-----------------------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: FID-11_267528 | SeqNo: 3549418 | PrepDate: 08-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 26.2 | 0.49 | 24.45 | 0 | 107 | 75 - 125 | 28.96 | 10 | 20 | |
| >nC12 to nC28 | 24.53 | 0.49 | 24.45 | 0 | 100 | 75 - 125 | 23.07 | 6.13 | 20 | |
| <i>Surr: 2-Fluorobiphenyl</i> | 2.818 | 0 | 2.445 | 0 | 115 | 70 - 130 | 3.174 | 11.9 | 20 | |
| <i>Surr: Trifluoromethyl benzene</i> | 2.666 | 0 | 2.445 | 0 | 109 | 70 - 130 | 2.765 | 3.64 | 20 | |

The following samples were analyzed in this batch: HS16010186-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100420 **Instrument:** FID-10 **Method:** TX1005

| MBLK | | Sample ID: MBLK-100420 | Units: mg/Kg | | | Analysis Date: 10-Jan-2016 20:54 | | | |
|-------------------------------|--------|------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|----------|----------------|
| Client ID: | | Run ID: FID-10_267463 | SeqNo: 3548219 | | PrepDate: 09-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| nC6 to nC12 | < 50 | 50 | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | |
| Surr: 2-Fluorobiphenyl | 29.22 | 0 | 25 | 0 | 117 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 27.27 | 0 | 25 | 0 | 109 | 70 - 130 | | | |

| LCS | | Sample ID: LCS-100420 | Units: mg/Kg | | | Analysis Date: 10-Jan-2016 21:22 | | | |
|-------------------------------|--------|-----------------------|----------------|---------------|-----------------------|----------------------------------|---------------|----------|----------------|
| Client ID: | | Run ID: FID-10_267463 | SeqNo: 3548220 | | PrepDate: 09-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| nC6 to nC12 | 209.6 | 50 | 250 | 0 | 83.9 | 75 - 125 | | | |
| >nC12 to nC28 | 256.4 | 50 | 250 | 0 | 103 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 28.98 | 0 | 25 | 0 | 116 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 24.49 | 0 | 25 | 0 | 97.9 | 70 - 130 | | | |

| LCSD | | Sample ID: LCSD-100420 | Units: mg/Kg | | | Analysis Date: 10-Jan-2016 21:50 | | | |
|-------------------------------|--------|------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|----------|----------------|
| Client ID: | | Run ID: FID-10_267463 | SeqNo: 3548221 | | PrepDate: 09-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| nC6 to nC12 | 223.8 | 50 | 250 | 0 | 89.5 | 75 - 125 | 209.6 | 6.53 | 20 |
| >nC12 to nC28 | 293.2 | 50 | 250 | 0 | 117 | 75 - 125 | 256.4 | 13.4 | 20 |
| Surr: 2-Fluorobiphenyl | 30.08 | 0 | 25 | 0 | 120 | 70 - 130 | 28.98 | 3.72 | 20 |
| Surr: Trifluoromethyl benzene | 27.64 | 0 | 25 | 0 | 111 | 70 - 130 | 24.49 | 12.1 | 20 |

| MS | | Sample ID: HS16010186-03MS | Units: mg/Kg | | | Analysis Date: 11-Jan-2016 01:06 | | | |
|-------------------------------|--------|----------------------------|----------------|---------------|-----------------------|----------------------------------|---------------|----------|----------------|
| Client ID: F- 6"-12" | | Run ID: FID-10_267463 | SeqNo: 3548225 | | PrepDate: 09-Jan-2016 | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit Qual |
| nC6 to nC12 | 232.7 | 50 | 247.8 | 0 | 93.9 | 75 - 125 | | | |
| >nC12 to nC28 | 273.5 | 50 | 247.8 | 0 | 110 | 75 - 125 | | | |
| Surr: 2-Fluorobiphenyl | 30.07 | 0 | 24.78 | 0 | 121 | 70 - 130 | | | |
| Surr: Trifluoromethyl benzene | 27.29 | 0 | 24.78 | 0 | 110 | 70 - 130 | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100420 **Instrument:** FID-10 **Method:** TX1005

| MSD | | Sample ID: HS16010186-03MSD | | Units: mg/Kg | | Analysis Date: 11-Jan-2016 01:35 | | | | |
|-------------------------------|--------|-----------------------------|---------|----------------|------|----------------------------------|---------------|-------|-----------|------|
| Client ID: F-6"-12" | | Run ID: FID-10_267463 | | SeqNo: 3548226 | | PrepDate: 09-Jan-2016 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| nC6 to nC12 | 213.8 | 50 | 247.5 | 0 | 86.4 | 75 - 125 | 232.7 | 8.47 | 20 | |
| >nC12 to nC28 | 263.3 | 50 | 247.5 | 0 | 106 | 75 - 125 | 273.5 | 3.79 | 20 | |
| Surr: 2-Fluorobiphenyl | 30.81 | 0 | 24.75 | 0 | 124 | 70 - 130 | 30.07 | 2.46 | 20 | |
| Surr: Trifluoromethyl benzene | 25.88 | 0 | 24.75 | 0 | 105 | 70 - 130 | 27.29 | 5.32 | 20 | |

The following samples were analyzed in this batch: HS16010186-02 HS16010186-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100431 Instrument: HG02 Method: SW7471A

MBLK Sample ID: **MBLK-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:24**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548754** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury < 3.32 3.32

LCS Sample ID: **LCS-100431** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:26**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548755** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 372.7 3.32 333.3 0 112 85 - 115

MS Sample ID: **HS15121095-03MS** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:32**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548757** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 380.9 3.73 374.2 11.43 98.7 85 - 115

MSD Sample ID: **HS15121095-03MSD** Units: **ug/Kg** Analysis Date: **11-Jan-2016 14:34**
 Client ID: Run ID: **HG02_267495** SeqNo: **3548758** PrepDate: **11-Jan-2016** DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Mercury 399.9 3.71 372.3 11.43 104 85 - 115 380.9 4.85 20

The following samples were analyzed in this batch: HS16010186-02

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

| Batch ID: 100458 | | Instrument: HG03 | | Method: SW7470 | | | | | | |
|------------------|------------------------------------|------------------|---------|----------------------------------|------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: MBLK-100458 | Units: mg/L | | Analysis Date: 12-Jan-2016 14:35 | | | | | | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549968 | | PrepDate: 12-Jan-2016 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Mercury | < 0.000200 | 0.000200 | | | | | | | | |
| LCS | Sample ID: LCS-100458 | Units: mg/L | | Analysis Date: 12-Jan-2016 14:37 | | | | | | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549969 | | PrepDate: 12-Jan-2016 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Mercury | 0.00527 | 0.000200 | 0.005 | 0 | 105 | 80 - 124 | | | | |
| MS | Sample ID: HS16010271-01MS | Units: mg/L | | Analysis Date: 12-Jan-2016 15:26 | | | | | | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549992 | | PrepDate: 12-Jan-2016 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Mercury | 0.00531 | 0.000200 | 0.005 | -0.000012 | 106 | 80 - 124 | | | | |
| MSD | Sample ID: HS16010271-01MSD | Units: mg/L | | Analysis Date: 12-Jan-2016 15:27 | | | | | | |
| Client ID: | Run ID: HG03_267551 | SeqNo: 3549993 | | PrepDate: 12-Jan-2016 | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Mercury | 0.00516 | 0.000200 | 0.005 | -0.000012 | 103 | 80 - 124 | 0.00531 | 2.87 | 20 | |

The following samples were analyzed in this batch: HS16010186-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100489 **Instrument:** ICPMS05 **Method:** SW6020

MBLK Sample ID: **MBLK-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 12:05**

Client ID: Run ID: **ICPMS05_267626** SeqNo: **3551800** PrepDate: **13-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|-----------|---------|--|--|--|--|--|--|--|--|
| Arsenic | < 0.00500 | 0.00500 | | | | | | | | |
| Cadmium | < 0.00200 | 0.00200 | | | | | | | | |
| Chromium | < 0.00500 | 0.00500 | | | | | | | | |
| Copper | < 0.00200 | 0.00200 | | | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | | | |
| Molybdenum | < 0.00500 | 0.00500 | | | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | | | |
| Zinc | < 0.00500 | 0.00500 | | | | | | | | |

LCS Sample ID: **MLCS-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 12:08**

Client ID: Run ID: **ICPMS05_267626** SeqNo: **3551801** PrepDate: **13-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|----------|---------|---------|------|---|------|----------|--|--|--|--|
| Arsenic | 0.0456 | 0.00500 | 0.05 | 0 | 91.2 | 80 - 120 | | | | |
| Cadmium | 0.04508 | 0.00200 | 0.05 | 0 | 90.2 | 80 - 120 | | | | |
| Chromium | 0.0445 | 0.00500 | 0.05 | 0 | 89.0 | 80 - 120 | | | | |
| Copper | 0.04377 | 0.00200 | 0.05 | 0 | 87.5 | 80 - 120 | | | | |
| Lead | 0.04355 | 0.00500 | 0.05 | 0 | 87.1 | 80 - 120 | | | | |
| Nickel | 0.04453 | 0.00500 | 0.05 | 0 | 89.1 | 80 - 120 | | | | |
| Selenium | 0.0444 | 0.00500 | 0.05 | 0 | 88.8 | 80 - 120 | | | | |
| Zinc | 0.04662 | 0.00500 | 0.05 | 0 | 93.2 | 80 - 120 | | | | |

LCS Sample ID: **MLCS-100489** Units: **mg/L** Analysis Date: **14-Jan-2016 13:18**

Client ID: Run ID: **ICPMS04_267636** SeqNo: **3551862** PrepDate: **13-Jan-2016** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|---------|---------|------|---|------|----------|--|--|--|--|
| Molybdenum | 0.04194 | 0.00500 | 0.05 | 0 | 83.9 | 80 - 120 | | | | |
|------------|---------|---------|------|---|------|----------|--|--|--|--|

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100489 Instrument: ICPMS05 Method: SW6020

| MS | | Sample ID: HS16010139-01MS | | | Units: mg/L | | Analysis Date: 14-Jan-2016 12:32 | | | |
|------------|---------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS05_267626 | | | SeqNo: 3551815 | | PrepDate: 13-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 0.09857 | 0.00500 | 0.05 | 0.0488 | 99.5 | 80 - 120 | | | | |
| Cadmium | 0.04515 | 0.00200 | 0.05 | -0.000026 | 90.3 | 80 - 120 | | | | |
| Chromium | 0.04542 | 0.00500 | 0.05 | 0.000192 | 90.4 | 80 - 120 | | | | |
| Copper | 0.04136 | 0.00200 | 0.05 | -0.000482 | 83.7 | 80 - 120 | | | | |
| Lead | 0.04484 | 0.00500 | 0.05 | 0.000066 | 89.5 | 80 - 120 | | | | |
| Molybdenum | 0.04906 | 0.00500 | 0.05 | 0.007823 | 82.5 | 80 - 120 | | | | |
| Nickel | 0.04219 | 0.00500 | 0.05 | -0.000263 | 84.9 | 80 - 120 | | | | |
| Selenium | 0.04799 | 0.00500 | 0.05 | 0.000321 | 95.3 | 80 - 120 | | | | |
| Zinc | 0.04696 | 0.00500 | 0.05 | 0.001606 | 90.7 | 80 - 120 | | | | |

| MSD | | Sample ID: HS16010139-01MSD | | | Units: mg/L | | Analysis Date: 14-Jan-2016 12:35 | | | |
|------------|---------|-----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS05_267626 | | | SeqNo: 3551816 | | PrepDate: 13-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 0.09453 | 0.00500 | 0.05 | 0.0488 | 91.5 | 80 - 120 | 0.09857 | 4.19 | 20 | |
| Cadmium | 0.04468 | 0.00200 | 0.05 | -0.000026 | 89.4 | 80 - 120 | 0.04515 | 1.04 | 20 | |
| Chromium | 0.04357 | 0.00500 | 0.05 | 0.000192 | 86.8 | 80 - 120 | 0.04542 | 4.14 | 20 | |
| Copper | 0.03952 | 0.00200 | 0.05 | -0.000482 | 80.0 | 80 - 120 | 0.04136 | 4.54 | 20 | |
| Lead | 0.04379 | 0.00500 | 0.05 | 0.000066 | 87.4 | 80 - 120 | 0.04484 | 2.37 | 20 | |
| Molybdenum | 0.05051 | 0.00500 | 0.05 | 0.007823 | 85.4 | 80 - 120 | 0.04906 | 2.93 | 20 | |
| Nickel | 0.03943 | 0.00500 | 0.05 | -0.000263 | 79.4 | 80 - 120 | 0.04219 | 6.76 | 20 | S |
| Selenium | 0.04654 | 0.00500 | 0.05 | 0.000321 | 92.4 | 80 - 120 | 0.04799 | 3.08 | 20 | |
| Zinc | 0.0448 | 0.00500 | 0.05 | 0.001606 | 86.4 | 80 - 120 | 0.04696 | 4.7 | 20 | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100489 **Instrument:** ICPMS05 **Method:** SW6020

PDS Sample ID: HS16010139-01BS Units: mg/L Analysis Date: 14-Jan-2016 12:38

Client ID: Run ID: ICPMS05_267626 SeqNo: 3551817 PrepDate: 13-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|----------------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|----------------|

| | | | | | | | | | |
|------------|---------|---------|-----|-----------|------|----------|--|--|--|
| Arsenic | 0.1377 | 0.00500 | 0.1 | 0.0488 | 88.9 | 75 - 125 | | | |
| Cadmium | 0.08708 | 0.00200 | 0.1 | -0.000026 | 87.1 | 75 - 125 | | | |
| Chromium | 0.08404 | 0.00500 | 0.1 | 0.000192 | 83.9 | 75 - 125 | | | |
| Copper | 0.07625 | 0.00200 | 0.1 | -0.000482 | 76.7 | 75 - 125 | | | |
| Lead | 0.08657 | 0.00500 | 0.1 | 0.000066 | 86.5 | 75 - 125 | | | |
| Molybdenum | 0.08918 | 0.00500 | 0.1 | 0.007823 | 81.4 | 75 - 125 | | | |
| Nickel | 0.07689 | 0.00500 | 0.1 | -0.000263 | 77.2 | 75 - 125 | | | |
| Selenium | 0.0929 | 0.00500 | 0.1 | 0.000321 | 92.6 | 75 - 125 | | | |
| Zinc | 0.08318 | 0.00500 | 0.1 | 0.001606 | 81.6 | 75 - 125 | | | |

SD Sample ID: HS16010139-01 DIL SX Units: mg/L Analysis Date: 14-Jan-2016 12:29

Client ID: Run ID: ICPMS05_267626 SeqNo: 3551814 PrepDate: 13-Jan-2016 DF: 5

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|---------------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|----|---------------|

| | | | | | | | | | |
|------------|----------|--------|--|--|--|--|-----------|------|----|
| Arsenic | 0.04941 | 0.0250 | | | | | 0.0488 | 1.25 | 10 |
| Cadmium | < 0.0100 | 0.0100 | | | | | -0.000026 | 0 | 10 |
| Chromium | < 0.0250 | 0.0250 | | | | | 0.000192 | 0 | 10 |
| Copper | < 0.0100 | 0.0100 | | | | | -0.000482 | 0 | 10 |
| Lead | < 0.0250 | 0.0250 | | | | | 0.000066 | 0 | 10 |
| Molybdenum | 0.007455 | 0.0250 | | | | | 0.007823 | 0 | 10 |
| Nickel | < 0.0250 | 0.0250 | | | | | -0.000263 | 0 | 10 |
| Selenium | < 0.0250 | 0.0250 | | | | | 0.000321 | 0 | 10 |
| Zinc | < 0.0250 | 0.0250 | | | | | 0.001606 | 0 | 10 |

The following samples were analyzed in this batch: HS16010186-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100498 instrument: ICPMS04 Method: SW6020

MBLK Sample ID: MBLK-100498 Units: mg/Kg Analysis Date: 13-Jan-2016 16:28

Client ID: Run ID: ICPMS04_267589 SeqNo: 3551375 PrepDate: 13-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|---------|-------|--|--|--|--|--|--|--|--|
| Arsenic | < 0.500 | 0.500 | | | | | | | | |
| Cadmium | < 0.500 | 0.500 | | | | | | | | |
| Chromium | < 0.500 | 0.500 | | | | | | | | |
| Copper | < 0.200 | 0.200 | | | | | | | | |
| Lead | < 0.500 | 0.500 | | | | | | | | |
| Molybdenum | < 0.500 | 0.500 | | | | | | | | |
| Nickel | < 0.500 | 0.500 | | | | | | | | |
| Selenium | < 0.500 | 0.500 | | | | | | | | |
| Zinc | < 0.500 | 0.500 | | | | | | | | |

LCS Sample ID: MLCS-100498 Units: mg/Kg Analysis Date: 13-Jan-2016 16:33

Client ID: Run ID: ICPMS04_267589 SeqNo: 3551376 PrepDate: 13-Jan-2016 DF: 1

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|
|---------|--------|-----|---------|---------------|------|---------------|---------------|------|-----------|------|

| | | | | | | | | | | |
|------------|-------|-------|----|---|------|----------|--|--|--|--|
| Arsenic | 8.959 | 0.500 | 10 | 0 | 89.6 | 80 - 120 | | | | |
| Cadmium | 8.668 | 0.500 | 10 | 0 | 86.7 | 80 - 120 | | | | |
| Chromium | 9.239 | 0.500 | 10 | 0 | 92.4 | 80 - 120 | | | | |
| Copper | 8.939 | 0.200 | 10 | 0 | 89.4 | 80 - 120 | | | | |
| Lead | 9.284 | 0.500 | 10 | 0 | 92.8 | 80 - 120 | | | | |
| Molybdenum | 8.598 | 0.500 | 10 | 0 | 86.0 | 80 - 120 | | | | |
| Nickel | 9.284 | 0.500 | 10 | 0 | 92.8 | 80 - 120 | | | | |
| Selenium | 8.517 | 0.500 | 10 | 0 | 85.2 | 80 - 120 | | | | |
| Zinc | 9.19 | 0.500 | 10 | 0 | 91.9 | 80 - 120 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100498 Instrument: ICPMS04 Method: SW6020

| | | | | | | | | | | |
|------------|----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| MS | Sample ID: HS16010218-04MS | Units: mg/Kg | Analysis Date: 13-Jan-2016 19:20 | | | | | | | |
| Client ID: | Run ID: ICPMS04_267589 | SeqNo: 3551414 | PrepDate: 13-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

| | | | | | | | | | | |
|------------|-------|-------|-------|--------|------|----------|--|--|--|-----|
| Arsenic | 15.33 | 0.481 | 9.614 | 6.314 | 93.8 | 75 - 125 | | | | |
| Cadmium | 11.26 | 0.481 | 9.614 | 2.674 | 89.3 | 75 - 125 | | | | |
| Chromium | 24.26 | 0.481 | 9.614 | 11.24 | 135 | 75 - 125 | | | | S |
| Copper | 20.36 | 0.192 | 9.614 | 10.73 | 100 | 75 - 125 | | | | |
| Lead | 71.78 | 0.481 | 9.614 | 54.8 | 177 | 75 - 125 | | | | SO |
| Molybdenum | 8.248 | 0.481 | 9.614 | 0.5419 | 80.2 | 75 - 125 | | | | |
| Nickel | 16.59 | 0.481 | 9.614 | 6.725 | 103 | 75 - 125 | | | | |
| Selenium | 9.04 | 0.481 | 9.614 | 1.009 | 83.5 | 75 - 125 | | | | |
| Zinc | 389.4 | 0.481 | 9.614 | 332.3 | 594 | 75 - 125 | | | | SEO |

| | | | | | | | | | | |
|------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| MSD | Sample ID: HS16010218-04MSD | Units: mg/Kg | Analysis Date: 13-Jan-2016 19:25 | | | | | | | |
| Client ID: | Run ID: ICPMS04_267589 | SeqNo: 3551415 | PrepDate: 13-Jan-2016 | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |

| | | | | | | | | | | |
|------------|-------|-------|-------|--------|------|----------|-------|-------|----|-----|
| Arsenic | 16.04 | 0.477 | 9.547 | 6.314 | 102 | 75 - 125 | 15.33 | 4.55 | 20 | |
| Cadmium | 11.65 | 0.477 | 9.547 | 2.674 | 94.0 | 75 - 125 | 11.26 | 3.42 | 20 | |
| Chromium | 24.3 | 0.477 | 9.547 | 11.24 | 137 | 75 - 125 | 24.26 | 0.177 | 20 | S |
| Copper | 20.28 | 0.191 | 9.547 | 10.73 | 100 | 75 - 125 | 20.36 | 0.39 | 20 | |
| Lead | 83.55 | 0.477 | 9.547 | 54.8 | 301 | 75 - 125 | 71.78 | 15.2 | 20 | SO |
| Molybdenum | 8.357 | 0.477 | 9.547 | 0.5419 | 81.9 | 75 - 125 | 8.248 | 1.32 | 20 | |
| Nickel | 17.36 | 0.477 | 9.547 | 6.725 | 111 | 75 - 125 | 16.59 | 4.5 | 20 | |
| Selenium | 9.036 | 0.477 | 9.547 | 1.009 | 84.1 | 75 - 125 | 9.04 | 0.04 | 20 | |
| Zinc | 406 | 0.477 | 9.547 | 332.3 | 772 | 75 - 125 | 389.4 | 4.18 | 20 | SEO |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: 100498 **Instrument:** ICPMS04 **Method:** SW6020

| PDS | | Sample ID: HS16010218-04BS | | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 19:29 | | | |
|------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267589 | | | SeqNo: 3551416 | | PrepDate: 13-Jan-2016 | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Arsenic | 14.71 | 0.486 | 9.724 | 6.314 | 86.3 | 75 - 125 | | | | |
| Cadmium | 11.21 | 0.486 | 9.724 | 2.674 | 87.8 | 75 - 125 | | | | |
| Chromium | 19.58 | 0.486 | 9.724 | 11.24 | 85.7 | 75 - 125 | | | | |
| Copper | 19.34 | 0.194 | 9.724 | 10.73 | 88.5 | 75 - 125 | | | | |
| Lead | 63.9 | 0.486 | 9.724 | 54.8 | 93.5 | 75 - 125 | | | | O |
| Molybdenum | 8.721 | 0.486 | 9.724 | 0.5419 | 84.1 | 75 - 125 | | | | |
| Nickel | 14.93 | 0.486 | 9.724 | 6.725 | 84.4 | 75 - 125 | | | | |
| Selenium | 9.669 | 0.486 | 9.724 | 1.009 | 89.1 | 75 - 125 | | | | |

| PDS | | Sample ID: HS16010218-04BS | | | Units: mg/Kg | | Analysis Date: 14-Jan-2016 11:53 | | | |
|------------|--------|----------------------------|---------|---------------|----------------|---------------|----------------------------------|------|-----------|------|
| Client ID: | | Run ID: ICPMS04_267636 | | | SeqNo: 3551761 | | PrepDate: 13-Jan-2016 | | DF: 10 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Zinc | 417.2 | 4.86 | 97.24 | 333.4 | 86.1 | 75 - 125 | | | | |

| SD | | Sample ID: HS16010218-04 DIL SX | | | Units: mg/Kg | | Analysis Date: 13-Jan-2016 19:16 | | | |
|------------|--------|---------------------------------|---------|---------------|----------------|---------------|----------------------------------|-------|----------|------|
| Client ID: | | Run ID: ICPMS04_267589 | | | SeqNo: 3551413 | | PrepDate: 13-Jan-2016 | | DF: 5 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
| Arsenic | 6.744 | 2.43 | | | | | 6.314 | 6.8 | 10 | |
| Cadmium | 2.835 | 2.43 | | | | | 2.674 | 5.99 | 10 | |
| Chromium | 11.34 | 2.43 | | | | | 11.24 | 0.866 | 10 | |
| Copper | 11.72 | 0.972 | | | | | 10.73 | 9.2 | 10 | |
| Lead | 58.15 | 2.43 | | | | | 54.8 | 6.1 | 10 | |
| Molybdenum | < 2.43 | 2.43 | | | | | 0.5419 | 0 | 10 | |
| Nickel | 7.288 | 2.43 | | | | | 6.725 | 8.37 | 10 | |
| Selenium | 1.162 | 2.43 | | | | | 1.009 | 0 | 10 | J |

| SD | | Sample ID: HS16010218-04 DIL SX | | | Units: mg/Kg | | Analysis Date: 14-Jan-2016 11:49 | | | |
|------------|--------|---------------------------------|---------|---------------|----------------|---------------|----------------------------------|------|----------|------|
| Client ID: | | Run ID: ICPMS04_267636 | | | SeqNo: 3551760 | | PrepDate: 13-Jan-2016 | | DF: 50 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
| Zinc | 316.1 | 24.3 | | | | | 333.4 | 5.19 | 10 | |

The following samples were analyzed in this batch: HS16010186-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: R267400 Instrument: VOA5 Method: SW8260

| MBLK | Sample ID: VBLKS1-010816 | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 09:16 | | | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547186 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 10 | 10 | | | | | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 41.96 | 0 | 50 | 0 | 83.9 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 47.13 | 0 | 50 | 0 | 94.3 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 46.84 | 0 | 50 | 0 | 93.7 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 50.21 | 0 | 50 | 0 | 100 | 73 - 127 | | | | |

| LCS | Sample ID: VLCSS1-010816 | Units: ug/Kg | | | Analysis Date: 08-Jan-2016 08:06 | | | | | |
|------------------------------------|--------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547185 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 49.08 | 5.0 | 50 | 0 | 98.2 | 79 - 122 | | | | |
| Ethylbenzene | 52.14 | 5.0 | 50 | 0 | 104 | 80 - 122 | | | | |
| m,p-Xylene | 103.1 | 10 | 100 | 0 | 103 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 47.25 | 5.0 | 50 | 0 | 94.5 | 76 - 124 | | | | |
| o-Xylene | 51.22 | 5.0 | 50 | 0 | 102 | 80 - 123 | | | | |
| Toluene | 49.95 | 5.0 | 50 | 0 | 99.9 | 79 - 120 | | | | |
| Xylenes, Total | 154.3 | 10 | 150 | 0 | 103 | 80 - 120 | | | | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | 45.37 | 0 | 50 | 0 | 90.7 | 70 - 128 | | | | |
| <i>Surr: 4-Bromofluorobenzene</i> | 48.8 | 0 | 50 | 0 | 97.6 | 73 - 126 | | | | |
| <i>Surr: Dibromofluoromethane</i> | 47.49 | 0 | 50 | 0 | 95.0 | 71 - 128 | | | | |
| <i>Surr: Toluene-d8</i> | 48.74 | 0 | 50 | 0 | 97.5 | 73 - 127 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

| Batch ID: R267400 | | Instrument: VOA5 | | Method: SW8260 | | | | | | |
|-----------------------------|----------------------------|------------------|---------|----------------------------------|------|---------------|---------------|------|-----------|------|
| MS | Sample ID: HS16010148-02MS | Units: ug/Kg | | Analysis Date: 08-Jan-2016 11:36 | | | | | | |
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547192 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 48.83 | 4.9 | 49 | 0 | 99.7 | 79 - 122 | | | | |
| Ethylbenzene | 51.32 | 4.9 | 49 | 0 | 105 | 80 - 122 | | | | |
| m,p-Xylene | 100.6 | 9.8 | 98 | 0 | 103 | 79 - 122 | | | | |
| Methyl tert-butyl ether | 42.89 | 4.9 | 49 | 0 | 87.5 | 76 - 124 | | | | |
| o-Xylene | 49.49 | 4.9 | 49 | 0 | 101 | 80 - 123 | | | | |
| Toluene | 50.05 | 4.9 | 49 | 0 | 102 | 79 - 120 | | | | |
| Xylenes, Total | 150.1 | 9.8 | 147 | 0 | 102 | 80 - 120 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.29 | 0 | 49 | 0 | 96.5 | 70 - 128 | | | | |
| Surr: 4-Bromofluorobenzene | 50.26 | 0 | 49 | 0 | 103 | 73 - 126 | | | | |
| Surr: Dibromofluoromethane | 50.57 | 0 | 49 | 0 | 103 | 71 - 128 | | | | |
| Surr: Toluene-d8 | 52.71 | 0 | 49 | 0 | 108 | 73 - 127 | | | | |

| MSD | Sample ID: HS16010148-02MSD | Units: ug/Kg | | Analysis Date: 08-Jan-2016 11:59 | | | | | | |
|-----------------------------|-----------------------------|----------------|---------|----------------------------------|------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA5_267400 | SeqNo: 3547193 | | PrepDate: DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 44.05 | 4.9 | 49 | 0 | 89.9 | 79 - 122 | 48.83 | 10.3 | 30 | |
| Ethylbenzene | 45.96 | 4.9 | 49 | 0 | 93.8 | 80 - 122 | 51.32 | 11 | 30 | |
| m,p-Xylene | 90.32 | 9.8 | 98 | 0 | 92.2 | 79 - 122 | 100.6 | 10.8 | 30 | |
| Methyl tert-butyl ether | 41.23 | 4.9 | 49 | 0 | 84.1 | 76 - 124 | 42.89 | 3.96 | 30 | |
| o-Xylene | 44.62 | 4.9 | 49 | 0 | 91.1 | 80 - 123 | 49.49 | 10.4 | 30 | |
| Toluene | 45.19 | 4.9 | 49 | 0 | 92.2 | 79 - 120 | 50.05 | 10.2 | 30 | |
| Xylenes, Total | 134.9 | 9.8 | 147 | 0 | 91.8 | 80 - 120 | 150.1 | 10.7 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 48.42 | 0 | 49 | 0 | 98.8 | 70 - 128 | 47.29 | 2.35 | 30 | |
| Surr: 4-Bromofluorobenzene | 50.78 | 0 | 49 | 0 | 104 | 73 - 126 | 50.26 | 1.02 | 30 | |
| Surr: Dibromofluoromethane | 51.29 | 0 | 49 | 0 | 105 | 71 - 128 | 50.57 | 1.43 | 30 | |
| Surr: Toluene-d8 | 53.51 | 0 | 49 | 0 | 109 | 73 - 127 | 52.71 | 1.5 | 30 | |

The following samples were analyzed in this batch: HS16010186-02 HS16010186-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: R267447 Instrument: VOA2 Method: SW8260

| MBLK | Sample ID: VBLKW-160108 | Units: ug/L | | | Analysis Date: 08-Jan-2016 22:48 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267447 | SeqNo: 3547953 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 3.0 | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.75 | 1.0 | 50 | 0 | 95.5 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 54.43 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 52.31 | 1.0 | 50 | 0 | 105 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 55.42 | 1.0 | 50 | 0 | 111 | 75 - 125 | | | | |

| LCS | Sample ID: VLCSW-160108 | Units: ug/L | | | Analysis Date: 08-Jan-2016 21:58 | | | | | |
|-----------------------------|-------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267447 | SeqNo: 3547952 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 42.17 | 1.0 | 50 | 0 | 84.3 | 75 - 122 | | | | |
| Ethylbenzene | 47.62 | 1.0 | 50 | 0 | 95.2 | 80 - 120 | | | | |
| Toluene | 44.59 | 1.0 | 50 | 0 | 89.2 | 75 - 121 | | | | |
| Xylenes, Total | 138 | 3.0 | 150 | 0 | 92.0 | 79 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.6 | 1.0 | 50 | 0 | 99.2 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 56.44 | 1.0 | 50 | 0 | 113 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 50.15 | 1.0 | 50 | 0 | 100 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.8 | 1.0 | 50 | 0 | 108 | 75 - 125 | | | | |

| MS | Sample ID: HS16010196-01MS | Units: ug/L | | | Analysis Date: 09-Jan-2016 00:54 | | | | | |
|-----------------------------|----------------------------|----------------|-----------|---------------|----------------------------------|---------------|---------------|------|-----------|------|
| Client ID: | Run ID: VOA2_267447 | SeqNo: 3547958 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 53.15 | 1.0 | 50 | 0 | 106 | 75 - 122 | | | | |
| Ethylbenzene | 58.2 | 1.0 | 50 | 0 | 116 | 80 - 120 | | | | |
| Toluene | 55.27 | 1.0 | 50 | 0 | 111 | 75 - 121 | | | | |
| Xylenes, Total | 161.5 | 3.0 | 150 | 0 | 108 | 80 - 124 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.82 | 1.0 | 50 | 0 | 99.6 | 71 - 125 | | | | |
| Surr: 4-Bromofluorobenzene | 54.67 | 1.0 | 50 | 0 | 109 | 70 - 125 | | | | |
| Surr: Dibromofluoromethane | 49.9 | 1.0 | 50 | 0 | 99.8 | 74 - 125 | | | | |
| Surr: Toluene-d8 | 53.53 | 1.0 | 50 | 0 | 107 | 75 - 125 | | | | |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: R267447 **Instrument:** VOA2 **Method:** SW8260

| MSD | Sample ID: HS16010196-01MSD | Units: ug/L | | | Analysis Date: 09-Jan-2016 01:19 | | | | | |
|------------------------------------|-----------------------------|----------------|-----------|---------------|----------------------------------|-----------------|---------------|---------------|-----------|------|
| Client ID: | Run ID: VOA2_267447 | SeqNo: 3547959 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Benzene | 51.74 | 1.0 | 50 | 0 | 103 | 75 - 122 | 53.15 | 2.68 | 20 | |
| Ethylbenzene | 59.96 | 1.0 | 50 | 0 | 120 | 80 - 120 | 58.2 | 2.97 | 20 | |
| Toluene | 54.75 | 1.0 | 50 | 0 | 110 | 75 - 121 | 55.27 | 0.949 | 20 | |
| Xylenes, Total | 162.8 | 3.0 | 150 | 0 | 109 | 80 - 124 | 161.5 | 0.784 | 20 | |
| <i>Surr: 1,2-Dichloroethane-d4</i> | <i>49.81</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>99.6</i> | <i>71 - 125</i> | <i>49.82</i> | <i>0.0276</i> | <i>20</i> | |
| <i>Surr: 4-Bromofluorobenzene</i> | <i>56.53</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>113</i> | <i>70 - 125</i> | <i>54.67</i> | <i>3.34</i> | <i>20</i> | |
| <i>Surr: Dibromofluoromethane</i> | <i>51.49</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>103</i> | <i>74 - 125</i> | <i>49.9</i> | <i>3.14</i> | <i>20</i> | |
| <i>Surr: Toluene-d8</i> | <i>54.59</i> | <i>1.0</i> | <i>50</i> | <i>0</i> | <i>109</i> | <i>75 - 125</i> | <i>53.53</i> | <i>1.96</i> | <i>20</i> | |

The following samples were analyzed in this batch: HS16010186-01 HS16010186-05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: R267395 Instrument: WetChem_HS Method: SW9045B

LCS Sample ID: LCS-267395 Units: pH Units Analysis Date: 08-Jan-2016 12:17
 Client ID: Run ID: WetChem_HS_267395 SeqNo: 3547064 PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

pH 6.02 0.100 6 0 100 97 - 103

DUP Sample ID: HS16010133-03DUP Units: pH Units Analysis Date: 08-Jan-2016 12:17
 Client ID: Run ID: WetChem_HS_267395 SeqNo: 3547065 PrepDate: DF: 1
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

pH 7.29 0.100 7.34 0.684 10
 Temp Deg C @pH 21 0 20.9 0.477 10

The following samples were analyzed in this batch: HS16010186-02 HS16010186-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

QC BATCH REPORT

Batch ID: R267450 **Instrument:** Balance1 **Method:** SW3550

| | | | | | | | | | | |
|----------------------|-----------------------------|----------------|----------------------------------|---------------|------|---------------|---------------|------|-----------|------|
| DUP | Sample ID: HS16010186-04DUP | Units: wt% | Analysis Date: 08-Jan-2016 11:08 | | | | | | | |
| Client ID: F- 6"-24" | Run ID: Balance1_267450 | SeqNo: 3548021 | PrepDate: | DF: 1 | | | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Percent Moisture | 16.8 | 0.0100 | | | | | 19.2 | 13.3 | 20 | |

The following samples were analyzed in this batch: HS16010186-02 HS16010186-03 HS16010186-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
WorkOrder: HS16010186

**QUALIFIERS,
ACRONYMS, UNITS**

| <u>Qualifier</u> | <u>Description</u> |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| <u>Acronym</u> | <u>Description</u> |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| <u>Unit Reported</u> | <u>Description</u> |
|----------------------|---|
| mg/Kg-dry | Milligrams per Kilogram- Dry weight corrected |
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|----------------|-------------------|-------------|
| Arkansas | 15-024-0 | 27-Mar-2016 |
| California | 2919 | 31-Jul-2016 |
| Illinois | 003622 | 09-May-2016 |
| Kansas | E-10352 2014-2015 | 31-Jan-2016 |
| Kentucky | KY 2015-2016 | 30-Apr-2016 |
| Louisiana | 03087 2015/2016 | 30-Jun-2016 |
| North Carolina | 624 - 2016 | 31-Dec-2016 |
| North Dakota | R-193 2015-2016 | 30-Apr-2016 |
| Oklahoma | 2015-047 | 31-Aug-2016 |
| Texas | T104704231-15-15 | 30-Apr-2016 |

Client: Texas Commission on Environmental Quality
Project: 800 Acre Tract Soil Project
Work Order: HS16010186

SAMPLE TRACKING

| Lab Samp ID | Client Sample ID | Action | Date | Person | New Location |
|---------------|------------------|--------|-----------------------|--------|--------------|
| HS16010186-01 | Trip Blank | Login | 1/8/2016 11:02:28 AM | CGG | VW-3 |
| HS16010186-02 | F- 0-6" | Login | 1/8/2016 11:02:28 AM | CGG | LF-23 |
| HS16010186-02 | F- 0-6" | Login | 1/8/2016 11:02:28 AM | CGG | VW-2 |
| HS16010186-02 | F- 0-6" | Login | 1/8/2016 11:02:28 AM | CGG | Sub |
| HS16010186-02 | F- 0-6" | Login | 1/8/2016 11:02:28 AM | CGG | 4D |
| HS16010186-03 | F- 6"-12" | Login | 1/8/2016 11:02:28 AM | CGG | LF-23 |
| HS16010186-03 | F- 6"-12" | Login | 1/8/2016 11:02:28 AM | CGG | VW-2 |
| HS16010186-04 | F- 6"-24" | Login | 1/8/2016 11:02:28 AM | CGG | 4D |
| HS16010186-04 | F- 6"-24" | Login | 1/8/2016 11:02:28 AM | CGG | Sub |
| HS16010186-05 | Equipment Blank | Login | 1/8/2016 11:02:28 AM | CGG | 4C |
| HS16010186-05 | Equipment Blank | Login | 1/8/2016 11:02:28 AM | CGG | VW-3 |
| HS16010186-05 | Equipment Blank | Login | 1/8/2016 11:02:28 AM | CGG | TPH C1 |
| HS16010186-02 | F- 0-6" | Out | 1/11/2016 11:07:18 AM | JCJ | METPREP |
| HS16010186-02 | F- 0-6" | Return | 1/11/2016 11:07:35 AM | JCJ | 4D |
| HS16010186-05 | Equipment Blank | Out | 1/12/2016 11:13:44 AM | JCJ | METPREP |
| HS16010186-05 | Equipment Blank | Return | 1/12/2016 11:13:58 AM | JCJ | 4C |

Sample Receipt Checklist

Client Name: TCEQ Corpus Christi
 Work Order: HS16010186

Date/Time Received: 08-Jan-2016 09:50
 Received by: PMG

Checklist completed by: Corey Grandits 8-Jan-2016 Reviewed by: _____
 eSignature Date eSignature Date

Matrices: Water/Soil Carrier name: FedEx Priority Overnight

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 2.8c/3.0c uc/c IR#4
 Cooler(s)/Kit(s): Lg Red
 Date/Time sample(s) sent to storage: 01/08/2016 11:15

- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No N/A
- pH adjusted? Yes No N/A

pH adjusted by: _____

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: 0 Regarding: _____

Comments: _____

Corrective Action: _____



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Everett, WA
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Holland, MI
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Chain of Custody Form

HS16010186

Texas Commission on Environmental Quality
800 Acre Tract Soil Project

Environmental

Page 1 of 1
COC ID: 135359



ALS Project Manager:

| Customer Information | | | | Project Information | | | | | | | | | | | | | |
|----------------------|-----------------------------------|-----------------|-----------------------------------|---------------------|--|-----------|---|---|---|---|---|---|---|---|---|---|------|
| Purchase Order | 582-14-42744 | Project Name | 800 Acre Tract Soil Project | A | SUB (No line item - Nutrients (Energy Labs)) | | | | | | | | | | | | |
| Work Order | | Project Number | | B | TKN_S_4500NH3 D (Group E - TKN) | | | | | | | | | | | | |
| Company Name | Texas Commission on Environmental | Bill To Company | Texas Commission on Environmental | C | PH_S (Group _ pH) | | | | | | | | | | | | |
| Send Report To | Bill Ross | Invoice Attn | Julie Steger - A/P | D | ICP_S_Low (Group B Total Metals 6020/7470 (10 w/Hg)) | | | | | | | | | | | | |
| Address | 6300 Ocean Drive Unit 5839 | Address | P.O. Box 13087 | E | 8260_S (Group B BTEX+MTBE 8260) | | | | | | | | | | | | |
| City/State/Zip | NRC Building Suite 1200 | City/State/Zip | Austin, TX 78711 | F | TX1005_S_REV3 (Group B TPH TX1005) | | | | | | | | | | | | |
| Phone | (361) 825-3100 | Phone | (512) 239-5725 | G | ICP_TW (Group B Total Metals 6020/7470 (10 w/Hg) EBLK) | | | | | | | | | | | | |
| Fax | (361) 825-3101 | Fax | | H | 8260_LL_W (Group B BTEX/MTBE 8260 EBLK) | | | | | | | | | | | | |
| e-Mail Address | | e-Mail Address | | I | TX1005_W_Low (Group B-TPH TX1005 EBLK) | | | | | | | | | | | | |
| | | | | J | | | | | | | | | | | | | |
| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
| 1 | Trip Blank | 1/7/16 | | W | ICE | 2 | | | | | X | | | | | | |
| 2 | F - 6" - 6" | 1/7/16 | 11:50 | SS | ICE | 6 | X | X | X | X | X | | | | | | |
| 3 | F - 6" - 12" | 1/7/16 | 12:05 | SS | ICE | 2 | | | | | X | X | | | | | |
| 4 | F - 6" - 24" | 1/7/16 | 12:15 | SS | ICE | 3 | X | X | X | | X | X | | | | | |
| 5 | Equipment Blank | 1/7/16 | 12:28 | W | ICE/HEX | 7 | | | | | | | X | X | X | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sample(s) Please Print & Sign: *Robert King*
 Received by: *Julie Steger*
 Date: *1/8/16*
 Time: *9:55*
 Checked by (Laboratory):
 Date: *1/8/16*
 Time: *9:55*

Required Turnaround Time: (Check Box)
 TAT: 15 days
 Notes:
 Cooler ID: PO
 Cooler Temp: 3.80
 QC Level: STD
 Other: CLP-20

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035
 Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.
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ALS Environmental
 10450 Stanciliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

CUSTODY SEAL

Date: 1/17/16
 Name: Royce King
 Company: JES FAK JKS

Time: 6:45

Seal No. 119



ANALYTICAL SUMMARY REPORT

January 20, 2016

ALS - Houston
10450 Stancliff Rd
Houston, TX 77099

Work Order: T16010030 Quote ID: T2980

Project Name: TCEQ Soil Analysis

Energy Laboratories Inc. College Station TX received the following 2 samples for ALS - Houston on 1/11/2016 for analysis.

| Lab ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|----------------------|----------------|--------------|--------|---|
| T16010030-001 | HS16010186-02 [0-6] | 01/07/16 11:50 | 01/11/16 | Soil | Conductivity Metals, Mehlich 3 Extraction Ammonia as N, KCL Extract Nitrate as N, Extractable by KCL Total Kjeldahl Nitrogen DI Water Soil Extract KCL Soil Extract Mehlich 3 Soil Extraction Digestion, TKN Soil Soil Preparation to 10 mesh Soil Preparation to 60 mesh Soil Sterilization - USDA Required |
| T16010030-002 | HS16010186-04 [6-24] | 01/07/16 12:15 | 01/11/16 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 415 Graham Rd., College Station, TX 77845-9660, unless otherwise noted.

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:



Trust our People. Trust our Data.
www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 888.235.0515
College Station, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: ALS - Houston
Project: TCEQ Soil Analysis
Work Order: T16010030

Revised Date: 01/20/16

Report Date: 01/15/16

CASE NARRATIVE

ENERGY LABORATORIES, INC. certifies that certain method selections contained in this report meet requirements as set forth by NELAC except as noted below. The laboratory ensures that the required testing meets accreditation requirements where needed.

The following analytes are not available for accreditation through the TCEQ.

Total Kjeldahl Nitrogen by ASA31-3

Ammonia as N, KCL Extract by ASA33-7

Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: TCEQ Soil Analysis
Lab ID: T16010030-001
Client Sample ID: HS16010186-02 [0-6]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/07/16 11:50
Date Received: 01/11/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 9.2 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:13 / eli-h |
| Ammonia as N, KCL Extract | 7.2 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:13 / eli-h |
| Conductivity, 1:2 | 0.1 | mmhos/cm | | 0.1 | | A2510 B | 01/13/16 09:11 / rap |
| Nitrate+Nitrite as N, KCl Extract | ND | mg/kg | | 1.0 | | E353.2 | 01/13/16 10:08 / dmp |
| Total Kjeldahl Nitrogen | 714 | mg/kg | D‡ | 30 | | ASA31-3 | 01/14/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1050 | mg/kg | | 5 | | SW6010B | 01/13/16 13:58 / jtr |
| Magnesium | 226 | mg/kg | | 5 | | SW6010B | 01/13/16 13:58 / jtr |
| Phosphorus | 6 | mg/kg | | 5 | | SW6010B | 01/13/16 11:55 / jtr |
| Potassium | 37 | mg/kg | | 5 | | SW6010B | 01/13/16 13:58 / jtr |
| Sodium | 71 | mg/kg | | 5 | | SW6010B | 01/13/16 13:58 / jtr |

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



LABORATORY ANALYTICAL REPORT

Prepared by College Station, TX Branch

Client: ALS - Houston
Project: TCEQ Soil Analysis
Lab ID: T16010030-002
Client Sample ID: HS16010186-04 [6-24]

Revised Date: 01/20/16
Report Date: 01/15/16
Collection Date: 01/07/16 12:15
Date Received: 01/11/16
Matrix: Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|-----------------------------------|--------|----------|------------|-----|-------------|---------|------------------------|
| CHEMICAL CHARACTERISTICS | | | | | | | |
| Ammonia as NH4 | 5.2 | mg/kg | ‡ | 0.6 | | ASA33-7 | 01/13/16 13:14 / eli-h |
| Ammonia as N, KCL Extract | 4.1 | mg/kg | ‡ | 0.5 | | ASA33-7 | 01/13/16 13:14 / eli-h |
| Conductivity, 1:2 | 0.2 | mmhos/cm | | 0.1 | | A2510 B | 01/13/16 09:13 / rap |
| Nitrate+Nitrite as N, KCl Extract | 1.5 | mg/kg | | 1.0 | | E353.2 | 01/13/16 10:12 / dmp |
| Total Kjeldahl Nitrogen | 896 | mg/kg | D‡ | 30 | | ASA31-3 | 01/15/16 14:00 / eli-h |
| MEHLICH3 EXTRACTABLE | | | | | | | |
| Calcium | 1910 | mg/kg | | 5 | | SW6010B | 01/13/16 14:02 / jtr |
| Magnesium | 430 | mg/kg | | 5 | | SW6010B | 01/13/16 14:02 / jtr |
| Phosphorus | ND | mg/kg | | 5 | | SW6010B | 01/13/16 12:00 / jtr |
| Potassium | 65 | mg/kg | | 5 | | SW6010B | 01/13/16 14:02 / jtr |
| Sodium | 309 | mg/kg | | 5 | | SW6010B | 01/13/16 14:02 / jtr |

Report Definitions:
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QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
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‡ - Analytes in this report, except for those noted by ‡, are accredited under the National Environmental Laboratory Accreditation Program (NELAP).



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010030

Client: ALS - Houston
Project: TCEQ Soil Analysis

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual | |
|----------------------------------|--|--------|----------|------|------|-----------|------------|--|----------|--------------------------------------|--|
| Method: A2510 B | | | | | | | | Analytical Run: COND3_160113A | | | |
| Lab ID: COND 100 | Continuing Calibration Verification Standard | | | | | | | | | | |
| Conductivity, 1:2 | | 0.0983 | mmhos/cm | 0.10 | 98 | 90 | 110 | | | 01/13/16 09:04 | |
| Lab ID: COND 2000 | | | | | | | | Continuing Calibration Verification Standard | | | |
| Conductivity, 1:2 | | 2.00 | mmhos/cm | 0.10 | 100 | 90 | 110 | | | 01/13/16 09:05 | |
| Lab ID: ICV-1413 | | | | | | | | Initial Calibration Verification Standard | | | |
| Conductivity, 1:2 | | 1.45 | mmhos/cm | 0.10 | 103 | 90 | 110 | | | 01/13/16 09:06 | |
| Method: A2510 B | | | | | | | | Batch: 160113A-COND-S-SM2510 | | | |
| Lab ID: COND 7000 | Continuing Calibration Verification Standard | | | | | | | | | | |
| Conductivity, 1:2 | | 6.95 | mmhos/cm | 0.10 | 99 | 90 | 110 | | | Run: COND3_160113A 01/13/16 09:05 | |
| Method: A2510 B | | | | | | | | Batch: 24690 | | | |
| Lab ID: LCS-24690 | Laboratory Control Sample | | | | | | | | | | |
| Conductivity, 1:2 | | 1.08 | mmhos/cm | 0.10 | 95 | 80 | 120 | | | Run: COND3_160113A 01/13/16 09:08 | |
| Lab ID: MB-24690 | Method Blank | | | | | | | | | | |
| Conductivity, 1:2 | | 0.01 | mmhos/cm | 0.01 | | | | | | Run: COND3_160113A 01/13/16 09:10 | |
| Lab ID: T16010030-001ADUP | Sample Duplicate | | | | | | | | | | |
| Conductivity, 1:2 | | 0.113 | mmhos/cm | 0.10 | | | | 4.4 | 10 | Run: COND3_160113A 01/13/16 09:12 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010030

Client: ALS - Houston
Project: TCEQ Soil Analysis

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|---------------------------|--------|-------|----|------|-----------|------------|-----|----------|----------------|
| Method: ASA31-3 | | | | | | | | | | Batch: H_31712 |
| Lab ID: LCS-31712 | Laboratory Control Sample | | | | | | | | | |
| Total Kjeldahl Nitrogen | | 952 | mg/kg | 30 | 102 | 70 | 130 | | | 01/14/16 14:00 |
| Lab ID: MB-31712 | | | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | 01/14/16 14:00 |
| Lab ID: H16010127-001BMS | | | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | 2070 | mg/kg | 30 | 69 | 50 | 150 | | | 01/14/16 14:00 |
| Lab ID: H16010127-001BMSD | | | | | | | | | | 01/14/16 14:00 |
| Total Kjeldahl Nitrogen | | 2180 | mg/kg | 30 | 75 | 50 | 150 | 5.3 | 30 | 01/14/16 14:00 |
| Method: ASA31-3 | | | | | | | | | | Batch: H_31724 |
| Lab ID: LCS-31712 | Laboratory Control Sample | | | | | | | | | |
| Total Kjeldahl Nitrogen | | 896 | mg/kg | 30 | 96 | 70 | 130 | | | 01/15/16 14:00 |
| Lab ID: MB-31712 | | | | | | | | | | 01/15/16 14:00 |
| Total Kjeldahl Nitrogen | | ND | mg/kg | 30 | | | | | | 01/15/16 14:00 |
| Lab ID: T16010030-002B | | | | | | | | | | 01/15/16 14:00 |
| Total Kjeldahl Nitrogen | | 3970 | mg/kg | 30 | 154 | 50 | 150 | | | S |
| Lab ID: T16010030-002B | | | | | | | | | | 01/15/16 14:00 |
| Total Kjeldahl Nitrogen | | 3700 | mg/kg | 30 | 140 | 50 | 150 | 7.1 | 30 | 01/15/16 14:00 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: TCEQ Soil Analysis

Work Order: T16010030

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---------------------------------|---|--------|-------|------|------|-----------|------------|---------------------------------|----------|------|
| Method: ASA33-7 | | | | | | | | Analytical Run: SUB-H112246 | | |
| Lab ID: ICV | Initial Calibration Verification Standard | | | | | | | 01/13/16 12:54 | | |
| Ammonia as N, KCL Extract | | 9.26 | mg/kg | 1.2 | 100 | 90 | 110 | | | |
| Method: ASA33-7 | | | | | | | | Batch: H_31706 | | |
| Lab ID: LCS-31706 | Laboratory Control Sample | | | | | | | Run: SUB-H112246 01/13/16 12:58 | | |
| Ammonia as N, KCL Extract | | 2.78 | mg/kg | 0.50 | 94 | 70 | 130 | | | |
| Lab ID: MB-31706 | Method Blank | | | | | | | Run: SUB-H112246 01/13/16 13:00 | | |
| Ammonia as N, KCL Extract | | 0.1 | mg/kg | 0.1 | | | | | | |
| Lab ID: H16010126-001BMS | Sample Matrix Spike | | | | | | | Run: SUB-H112246 01/13/16 13:03 | | |
| Ammonia as N, KCL Extract | | 16.0 | mg/kg | 0.55 | 94 | 90 | 110 | | | |
| Lab ID: T16010030-002B | Sample Duplicate | | | | | | | Run: SUB-H112246 01/13/16 13:15 | | |
| Ammonia as N, KCL Extract | | 4.05 | mg/kg | 0.50 | | | | 0.5 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010030

Client: ALS - Houston

Project: TCEQ Soil Analysis

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|------------------------------------|---|---|-------|------|------|-----------|------------|-----------------------------------|----------|----------------|
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113A | | |
| Lab ID: Initial Calib Verif | Initial Calibration Verification Standard | | | | | | | | | |
| Phosphorus | | 5.01 | mg/L | 0.10 | 100 | 95 | 105 | | | 01/13/16 10:42 |
| Lab ID: Initial Calib Blank | Initial Calibration Blank, Instrument Blank | | | | | | | | | |
| Phosphorus | | -0.00428 | mg/L | 0.10 | | 0 | 0 | | | 01/13/16 10:44 |
| Method: E200.7 | | | | | | | | Analytical Run: ICP102-CS_160113B | | |
| Lab ID: Initial Calib Verif | 4 | Initial Calibration Verification Standard | | | | | | | | |
| Calcium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Magnesium | | 50.5 | mg/L | 1.0 | 101 | 95 | 105 | | | |
| Potassium | | 49.9 | mg/L | 1.0 | 100 | 95 | 105 | | | |
| Sodium | | 51.4 | mg/L | 1.0 | 103 | 95 | 105 | | | |
| Lab ID: Cont Calib Blank | 4 | Continuing Calibration Blank | | | | | | | | |
| Calcium | | -0.260 | mg/L | 1.0 | | | | | | 01/13/16 12:56 |
| Magnesium | | 0.0140 | mg/L | 1.0 | | | | | | |
| Potassium | | -0.0108 | mg/L | 1.0 | | | | | | |
| Sodium | | 0.140 | mg/L | 1.0 | | | | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Work Order: T16010030

Client: ALS - Houston
Project: TCEQ Soil Analysis

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-----------------------------------|---|----------|-------|------|------|-----------|------------|------------------------------|----------|---|
| Method: E353.2 | | | | | | | | Analytical Run: FIA1_160113A | | |
| Lab ID: ICV-160113C | Initial Calibration Verification Standard | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 1.56 | mg/kg | 1.0 | 104 | 90 | 110 | | | 01/13/16 09:18 |
| Lab ID: ICB2-160113C | Initial Calibration Blank, Instrument Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | -0.00800 | mg/kg | 1.0 | | 0 | 0 | | | 01/13/16 09:21 |
| Method: E353.2 | | | | | | | | Batch: 24689 | | |
| Lab ID: LCS-24689 | Laboratory Control Sample | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 9.28 | mg/kg | 1.0 | 102 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 10:00 |
| Lab ID: MB-24689 | Method Blank | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.1 | mg/kg | 0.08 | | | | | | Run: FIA1_160113A 01/13/16 10:01 |
| Lab ID: T16010030-001APDS | Post Digestion/Distillation Spike | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 10.5 | mg/kg | 1.0 | 103 | 80 | 120 | | | Run: FIA1_160113A 01/13/16 10:10 |
| Lab ID: T16010030-001ADUP | Sample Duplicate | | | | | | | | | |
| Nitrate+Nitrite as N, KCl Extract | | 0.170 | mg/kg | 1.0 | | | | | | Run: FIA1_160113A 01/13/16 10:11 20 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by College Station, TX Branch

Revised Date: 01/20/16

Report Date: 01/15/16

Client: ALS - Houston

Project: TCEQ Soil Analysis

Work Order: T16010030

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|----------------------------------|-------|---------------------------|-------|-------|------|-----------|------------|-----|----------|--|
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:54 |
| Phosphorus | | 13.7 | mg/kg | 5.0 | 100 | 80 | 120 | | | |
| Lab ID: MB-24669 | | Method Blank | | | | | | | | Run: ICP102-CS_160113A 01/13/16 10:57 |
| Phosphorus | | 0.08 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010029-002AMS | | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:48 |
| Phosphorus | | 22.3 | mg/kg | 5.0 | 99 | 70 | 130 | | | |
| Lab ID: T16010030-001ADUP | | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113A 01/13/16 11:58 |
| Phosphorus | | 5.02 | mg/kg | 5.0 | | | | 14 | 20 | |
| Method: SW6010B | | | | | | | | | | Batch: 24669 |
| Lab ID: LCS-24669 | 4 | Laboratory Control Sample | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:09 |
| Calcium | | 2600 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Magnesium | | 311 | mg/kg | 5.0 | 87 | 80 | 120 | | | |
| Potassium | | 77.2 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Sodium | | 120 | mg/kg | 5.0 | 90 | 80 | 120 | | | |
| Lab ID: MB-24669 | 4 | Method Blank | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:11 |
| Calcium | | ND | mg/kg | 0.02 | | | | | | |
| Magnesium | | 0.03 | mg/kg | 0.007 | | | | | | |
| Potassium | | 0.3 | mg/kg | 0.008 | | | | | | |
| Sodium | | 4 | mg/kg | 0.004 | | | | | | |
| Lab ID: T16010029-002AMS | 4 | Sample Matrix Spike | | | | | | | | Run: ICP102-CS_160113B 01/13/16 13:52 |
| Calcium | | 3530 | mg/kg | 5.0 | 92 | 70 | 130 | | | |
| Magnesium | | 1430 | mg/kg | 5.0 | 87 | 70 | 130 | | | |
| Potassium | | 1140 | mg/kg | 5.0 | 103 | 70 | 130 | | | |
| Sodium | | 1600 | mg/kg | 5.0 | 106 | 70 | 130 | | | |
| Lab ID: T16010030-001ADUP | 4 | Sample Duplicate | | | | | | | | Run: ICP102-CS_160113B 01/13/16 14:00 |
| Calcium | | 1040 | mg/kg | 5.0 | | | | 1.2 | 20 | |
| Magnesium | | 228 | mg/kg | 5.0 | | | | 1.0 | 20 | |
| Potassium | | 37.8 | mg/kg | 5.0 | | | | 3.2 | 20 | |
| Sodium | | 70.5 | mg/kg | 5.0 | | | | 0.9 | 20 | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Work Order Receipt Checklist

ALS - Houston

T16010030

Login completed by:

Date Received: 1/11/2016

Reviewed by: BL2000\ssuchar

Received by: am1

Reviewed Date: 1/15/2016

Carrier name: Fed Ex Express

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on all shipping container(s)/cooler(s)? Yes No Not Present
- Custody seals intact on all sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time?
(Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes No
- Temp Blank received in all shipping container(s)/cooler(s)? Yes No Not Applicable
- Container/Temp Blank temperature: °C Soils.
- Water - VOA vials have zero headspace? Yes No Not Applicable
- Water - pH acceptable upon receipt? Yes No Not Applicable

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Soils. ADG 160111 12:49



Environmental

CHAIN OF CUSTODY RECORD

Page 1 of 1

Date 8 Jan 2016

COI ID 4053

Due date 29 JAN 16

| | | | |
|---------------|---------------------------|-------|------------|
| Subcontractor | Energy Laboratories, Inc. | Phone | 9796902217 |
| | 415 Graham Road | Fax | 9796902045 |
| | College Station, TX 77845 | | |

| Customer Information | | Project Information | |
|----------------------|-----------------------------|---------------------|-----------------------------|
| PO | HS16010186 | Project Name | HS16010186 |
| Company Name | ALS Houston | Company Name | ALS Houston |
| | | Inv Attn | Accounts Payable |
| Address | 10450 Standliff Rd, Ste 210 | Address | 10450 Standliff Rd, Ste 210 |
| | Houston, TX 77099 | | Houston, TX 77099 |
| Phone | 281-530-5656 | Phone | 281-530-5656 |
| Email1 | Dane.Wacasev@alsglobal.com | Email2 | jumoke.lawal@alsglobal.com |

T16010030
Lab ID

| | Client Samp ID | Collection Date | Matrix | Analysis Requested | |
|------|----------------|-----------------|--------------------|--------------------|------------------------------------|
| -001 | HS16010186-02 | F- 0-6" | 07-Jan-16 11:50 am | Soil | TCEQ Soil Nutrients (See attached) |
| -002 | HS16010186-04 | F- 6"-24" | 07-Jan-16 12:15 pm | Soil | TCEQ Soil Nutrients (See attached) |

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

| Relinquished by: | Date/Time: | Received by: | Date/Time: | Cooler IDs: | Report/QC Level |
|--------------------|-------------|--------------------------|----------------|-------------|-----------------|
| <i>[Signature]</i> | 1/8/16 1300 | | | | STD |
| | | <i>Alisha D. Bluffin</i> | 01/11/16 12:35 | 24851 | |

FedEx / Soils: BTL CS ✓
 Express / T: N/A / COOLER CS ✓
 NO TEMP / NECESSARY / SIGN MATCH ✓
 NO ICE

TCEQ Complaint Report

04/27/2016
2:11:59PM

Incident No: 232060

Media Type: WATER

Start Date: Unknown

Received Date: 09/04/2015

Method : PHONE

Staff Member: BROSS

Status: Closed

Status Date: 04/27/2016

Priority: Within 30 Calendar Days

Regulated Entity: ARENOSA CREEK RANCH

RN103911889

Address:

VICTORIA County

Physical Location: TEN MI NW OF THE CITY OF INEZ, ON FM 444 AND 2.5 MI NE OF INTERSECTION OF KARNES RD AND FM 444 IN VICTORIA COUNTY

Responsible Party: BENEFICIAL LAND MANAGEMENT
LLC

Title:

Address: PO Box 6870, SAN ANTONIO, TX 78209

Number Complaining: 1

Frequency: CURRENT

Alleged Source: ARENOSA CREEK RANCH

Program Group: WATER
QUALITY - HIGH LEVEL

Nature: WSQ

Effect: ENVIRONMENTAL

Initial Problem

The complainant alleged groundwater and surface water contamination from the land application of waste.

Action Taken

This complaint has been assigned and will be further investigated by an Environmental Investigator.

Closure Comments

More information will be available upon approval of the investigation report.

Investigation Number: 1329480