TGE RESOURCES, INC.

Environmental Consulting,
Engineering and Industrial Hygiene

Supplemental Phase II Environmental Site Assessment
Proposed Star Lake Hospital
29805 Pacific Highway South
Federal Way, King County, Washington
TGE Project No.: R13411.04

Prepared for:

MultiCare Health System, a Washington nonprofit corporation
315 Martin Luther King Jr. Way
Tacoma, Washington 98415-0299

November 8, 2017

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TGERESOURCES, INC.
Environmental, Engineering, Building Sciences, Industrial Hygiene & Remediation Services

November 8, 2017

MultiCare Health System, a Washington nonprofit corporation
315 Martin Luther King Jr. Way
Tacoma, Washington 98415-0299

RE: Supplemental Phase II Environmental Site Assessment
Proposed Star Lake Hospital
29805 Pacific Highway South
Federal Way, King County, Washington
TGE Project No.: R13411.04

To whomever it may concern,

In accordance with TGE Resources, Inc., ("TGE") Proposal No. P13411.04, dated September 20, 2017, TGE has completed a Supplemental Phase II Environmental Site Assessment (ESA) of the above-referenced Property. The attached report details our scope of services, findings, and conclusions related to this study.

We appreciate the opportunity to provide you with these services. Should you have any questions or comments regarding this report or any related matter, please call us at (713) 744-5800. It has been a pleasure working with you on this project.

Sincerely,

TGE Resources, Inc.

State of Washington
3210
Licensed Geologist
TIMOTHY E. CRUMP
Exp. 02-23-18

Timothy E. Crump, P.G., CPG
Sr. Project Manager

Robin D. Franks, CHMM, RSO
President

enclosure

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EXECUTIVE SUMMARY

TGE Resources, Inc., (“TGE”) has completed a Supplemental Phase II Environmental Site Assessment (ESA) of the Proposed Star Lake Hospital property located at 29805 Pacific Highway South in Federal Way, King County, Washington, hereinafter referred to as the "Site” or “Property", in general compliance with *American Society of Testing Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase II Site Assessment Process (E 1903-11),* published July, 2011, hereinafter “the Practice”. Per the Practice, the stated objective of this characterization assessment (Supplemental Phase II) was to preliminarily investigate the commercial real estate for the presence (or likely presence) of hazardous substances or petroleum products under conditions indicative of a release to the Site; and, to the extent possible as contracted, complete “All Appropriate Inquiry” (or “AAI”) via Site characterization for the presence of Recognized Environmental Conditions, or “RECs”. TGE understands that Client requires knowledge of the environmental condition of the Property prior to a pending property real estate transaction involving its redevelopment for use in providing healthcare to the public.

In undertaking the current Supplemental Phase II assessment as engaged, TGE installed and sampled one temporary screened borehole (designated TSB-1) to a terminal depth of 110 feet below grade (fbg), with the intention of groundwater characterization. However, given poor groundwater production, even this extended depth prohibited groundwater sampling. In consideration of groundwater conditions as described, TGE opted to cancel further groundwater investigation in lieu of groundwater sampling, seven (7) soil borings (designated SB-6 through SB-12) were installed to a depth of 10 fbg to further pre-development soil characterization assessment. Per Client authorization, surface soil was sampled within the proposed building layout to preliminarily characterize Site soils that may require pre-development excavation and off-property removal during earthwork.

Boring locations were selected in consideration of RECs identified in connection with the Property, as per a Phase I ESA (Report No. R13411.01; dated August 17, 2017) and findings from a previous Limited Phase II ESA (Report No. R13411.02, dated September 12, 2017), both completed by TGE. Analytical data was obtained from soil samples with material results/findings from this assessment presented below. A full reporting and account of specific project efforts and results is provided within the attached document.

In consideration of Phase II efforts, gasoline petroleum products (NWTPH-Gx), diesel/residual petroleum products (NWTPH-Dx), volatile organic compounds (VOCs), and/or Resource Conservation and Recovery Act (RCRA) 8 metals in soil samples collected from the Site were reported by the analytical laboratory at concentrations not in excess of laboratory detection limits and/or respective Washington State Department of Ecology (Ecology) screening limits, as set forth within the State of Washington Model Toxics Control Act (MTCA) regulation/statute (as applicable).

Relatively minor concentrations of the VOC analytes acetone, benzene, toluene, n-butylbenzene, cymene, ethyl benzene, methyl ethyl ketone, naphthalene, n-propylbenzene, trimethylbenzene and xylenes were detected within the soil samples collected from SB-6 through SB-12 and TSB-1; however, reported concentrations were well below MTCA regulation/statue requirements.

Additionally, concentrations of petroleum hydrocarbons (gasoline range organics [GRO] and diesel range organics [DRO]/residual oil range organics [RRO]) were detected within all soil samples collected. As previously stated, while DRO/RRO were detected within soil samples collected from borings within the layout of the proposed Site building at concentrations ranging from <1.44 milligrams/kilogram (mg/kg) to 558 mg/kg and 7.84 mg/kg to 1,710 mg/kg, respectively. Such concentrations did not exceed the published MTCA regulation/statute screening limit of 2,000 mg/kg (Method A – Direct Contact) for both constituents.

Recommendations

Based on results of this Site characterization effort, and within stated project limitations and qualifications made part of this work, TGE provides recommendation(s) for Client consideration as itemized below.

Finding	Recommendation
Petroleum hydrocarbons (specifically diesel range and oil range organics) were detected within Site soil.	Given that soil character (as established, geotechnically) is likely "unsuitable" for foundation support, this fill may be recycled and/or shipped to a regulated facility in compliance with applicable federal statute.
Fill material (of unspecified origin) has been identified within the Site limits (including within the proposed re-development area). A geotechnical report (September 29, 2017) completed by others[1] stated such fill "*may not be suitable for foundation support" and may require excavation for "bearing surface preparation*". The soil should be classified as a "non-hazardous" material for off Property transport/disposal management via a licensed transporter.	
Findings and Recommendations were identified within the foregoing Phase II ESA in connection with the Site.	Reference should be made to the foregoing Phase II ESA by TGE (Report. No. R13411.02; dated September 12, 2017) regarding the design (engineer), installation and performance testing (for intrinsic capability) of a vapor mitigation system as well as regulated materials removal (prior to planned demolition and earthwork activities) that remain outstanding in connection with the Property as of the date of this report.

[1] Geotechnical report completed by GeoEngineers, Inc. (File No.: 2868-017-00 dated September 29, 2017) executed in part for PhiloWilke Partnership stated that removal of fill material may be required for re-development of the Site.

1.0 INTRODUCTION

TGE Resources, Inc., ("TGE") has completed a Supplemental Phase II Environmental Site Assessment (ESA) of the Proposed Star Lake Hospital property located at 29805 Pacific Highway South in Federal Way, King County, Washington (**Figure 1 – Site Location Map**) hereinafter referred to as the "Site" or "Property", in general compliance with *American Society of Testing Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase II Site Assessment Process (E 1903-11),* published July, 2011, hereinafter "the Practice". Per the Practice, the stated objective of this characterization assessment (Supplemental Phase II) was to preliminarily investigate the commercial real estate for the presence (or likely presence) of hazardous substances or petroleum products under conditions indicative of a release to the Site; and, to the extent possible as contracted, complete "All Appropriate Inquiry" (or "AAI") via Site characterization for the presence of Recognized Environmental Conditions, or "RECs". TGE understands that Client requires knowledge of the environmental condition of the Property prior to a pending property real estate transaction involving its redevelopment for use in providing healthcare to the public.

According to King County Appraisal District (CAD) information, the Property is comprised of two parcels (referenced herein as Tract A and Tract B) comprising a reported 1.72 acres (74,887 square feet) of land. Site improvements consist of a 6,350 square-foot, partial two-story, commercial office and repair facility that was constructed in 1970. At the time of the Phase I ESA, which was undertaken on July 19, 2017, the Property was in use as improved commercial real estate. Access to portions of the Property (southwestern fenced area and west service bay) were not provided to TGE for inspection during Site reconnissance. Per Site sources, access in this area was controlled by the federal government.

Based upon Findings from the Phase I ESA prepared by (Report No. R13411.01; dated August 17, 2017), the following RECs were identified in connection with the Property:

- *"Historic Site use from the 1920s through the 1990s that involved retail fuel storage and sales; auto repair; equipment rental/repair/service; a greenhouse operation; and on-Site placement of fill of unknown source and character – all of which included either recorded and/or inferred use of hazardous substances and/or petroleum products with the potential to adversely impact the Site;*

- *current Site use with an auto repair/service/vehicle holding operation (from which TGE was partially restricted access for inspection) with the reported use of hazardous substances and/or petroleum products with the potential to adversely impact the Site;*

- *per regulatory records reviewed, adjoining land north has operated as a fueling station since at least the mid-1930s with concurrent use of USTs. In addition, land within 350 feet northwest of the Site has operated as a dry cleaning facility (for at least 13 years); and*

- *historic use of adjoining land west as a gravel pit/quarry from at least the 1940s through the 1980s."*

As such, a Limited Phase II ESA (TGE Report No. R13411.02; dated September 12, 2017) was conducted at the Site to preliminary investigate the Property due to the potential presence of hazardous substances and/or petroleum products under conditions indicative of a release. This investigation included the completion and sampling of five (5) soil borings (designated SB-1 through SB-5) and two temporary vapor monitor points (designated TVMP-1 and TVMP-2) throughout the Property. Laboratory analysis of soil vapor samples reported concentrations of 1,3-butadiene, chloroform and benzene in excess of respective Washington State Department of Ecology (Ecology) screening limits, as set forth within Ecology screening levels as established within the "Draft Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action", dated February 2016. Therefore, the design (engineer), installation and performance testing (for intrinsic capability) of a vapor

mitigation (control) system was recommended in response to Site-specific (soil vapor) findings coincident with repurposing of the property for intended use as a healthcare facility.

In undertaking the current Supplemental Phase II assessment as engaged, TGE installed and sampled one temporary screened borehole (designated TSB-1) to a terminal depth of 110 feet below grade (fbg), with the intention of groundwater characterization (**Figure 2** – Boring Location Map). However, given poor groundwater production, even this extended depth prohibited groundwater sampling. In consideration of groundwater conditions as described, TGE opted to cancel further groundwater investigation in lieu of groundwater sampling, seven (7) soil borings (designated SB-6 through SB-12) were installed to a depth of 10 fbg to further pre-development soil characterization assessment. Per Client authorization, surface soil was sampled within the proposed building layout to preliminarily characterize Site soils that may require pre-development excavation and off-property removal during earthwork.

Boring locations were selected in consideration of RECs identified in connection with the Property, as per a Phase I ESA (Report No. R13411.01; dated August 17, 2017) and findings from a previous Limited Phase II ESA (Report No. R13411.02, dated September 12, 2017). Analytical data was obtained from soil samples with material results/findings from this assessment presented below.

Results of TGE's Supplemental Phase II ESA are provided within the following report sections.

2.0 SUBSURFACE CONDITIONS

PHYSICAL SETTING INFORMATION FOR PROPERTY AND SURROUNDING AREA	
Topography	Published natural surface drainage for the area is toward the northwest.
Property Elevation	Approximately 426 feet above mean sea level.
Closest Surface Water	Per published topographic map information, unnamed creek, located approximately 1,000 feet north of the Property.
Depth to Groundwater	Published as "approximately 45-50 feet"; drilling activities on site suggest a depth to groundwater in excess of 100 fbg.
Soil Characteristics	
Soil Type	Alderwood gravelly sandy loam, 8 to 15 percent (AgC).
Description	Alderwood gravelly sandy loams are moderately well-drained soils that have a substratum of consolidated till at a depth of approximately 24 to 40 inches. They have very gravelly sandy loam A and B horizons about 30 inches thick that overlay an extremely gravelly 2C horizon. Coarse fragments are mostly sub-rounded to rounded pebbles and cobbles of mixed lithology. Permeability is moderately rapid in the A and B horizons, and rapid to very rapid in the 2C horizon. Surface horizons have moderately rapid permeability, but the till substratum is very slowly permeable, creating a high water table in winter. Erosion hazard is slight to moderate. The unconsolidated gravelly and extremely gravelly materials make Alderwood soils very well suited for nearly all buildings: excellent foundation properties and no problems with excess water. Site soil(s) are listed as "hydric soils" within the U.S. Department of Agriculture-Natural Resources Conservation Service Hydric Soils List for King County.
Geology/Hydrogeology	
Formation	The Site appears to overlie the Pleistocene-age younger glacial drift (Qg1).
Description	"Younger glacial drift, undivided. Till, outwash, and associated deposits; sorted and unsorted sand, gravel, silt, and clay. Includes some alluvium."
Primary Aquifer	Vashon recessional outwash unit.
Hydrogeologic Gradient	Based on a review of publicly available and reasonably ascertainable documents (topographic maps, state well reports, and/or subsurface investigations conducted within the Site or immediate vicinity by TGE or others) the known or inferred hydrogeologic gradient is toward the northwest. Known or inferred depth to groundwater is in excess of 100 fbg.

3.0 SOIL BORING AND WELL SCREEN INSTALLATION

On October 25, 2017, TGE Staff Geologist Evan Sitler, operating under the responsible charge of TGE Project Manager Timothy E. Crump, P.G., who meets requirements of the Revised Code of Washington (RCW), Title 18, Chapter 220, §20 (RCW 18.220.020) and the Practice as a Phase II Assessor (as per 3.1.33), mobilized to the Site with a subcontract driller to install and collect samples at locations within the Property as tabulated below.

Borehole Name	Depth (fbg)	Borehole Location
SB-6	10	Within the central portion of the Site, within the footprint of the future healthcare facility.
SB-7		
SB-8		
SB-9		
SB-10		
SB-11		
SB-12		
TSB-1	110	Within the southwestern portion of the Property, adjacent and topographically down-gradient of a former underground petroleum storage tank.

A Sample Location Map is presented as **Figure 2**. Photographs of drilling and sampling activities are contained in **Appendix A**.

Sediments encountered during drilling operations were logged and classified in accordance with the Unified Soil Classification System and the ASTM Standard D 2488-90; the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Boring logs describing sediments encountered are presented in **Appendix B – Soil Boring Logs**. Subsurface strata separation is approximated, as actual transitions may be gradual.

Sampling equipment used during installation of the subject soil borings and temporary screened borehole was properly decontaminated before completing each borehole. Temporary screened boreholes were constructed of two-inch inside diameter (ID), Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slotted PVC screen. The screened interval within the temporary screened borehole was placed at the approximate location tabulated below:

Borehole Name	Screened Interval (fbg)
TSB-1	80 to 110 fbg

Blank PVC riser casing was installed within the temporary screened borehole from the top of the well screen to the ground surface. Following completion of sampling activities on October 27, 2017, PVC casing was removed from the temporary screened borehole by the drilling vendor and disposed off-Site. The annular space of the temporary screened borehole and each soil boring was then filled with sand to a depth of approximately 3 fbg, followed by bentonite (pellets) to 0.5 fbg. The remaining annular space was filled with concrete to grade.

Investigation-derived waste was stored on-Property in six (6) appropriately labeled 55-gallon drums (as tabulated below). Per TGE's scope of work, removal of this material by a transporter and disposal facility is currently underway pending approval of waste profile documentation by the respective disposal facilities.

55-Gallon Drum(s) Contents	Number of Drum(s)	Location Stored
Soil Cuttings	6	Within the south-central portion of site, along the northwestern side of an existing canopy.

4.0 SAMPLING AND LABORATORY ANALYSIS

Samples of Site soil were collected and analyzed during the Supplemental Phase II ESA of the Proposed Star Lake Hospital property located at 29805 Pacific Highway South in Federal Way, King County, Washington. A sample collection matrix and relevant analytical parameters used in laboratory characterization are provided in the table below. All sample containers were labeled according to sample designation, including the date and time sampled, and placed immediately on ice for shipment to ESC Lab Sciences in Mt. Juliet, Tennessee, a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory.

Sample Location	Gasoline/Diesel Petroleum Products (NWTPH-Gx/Dx)	RCRA 8 (EPA 6020/7471)	pH	VOCs (EPA 8260c)	% Moisture
Soil Samples					
SB-6	X	X	–	X	X
SB-7	X	X	X	X	X
SB-8	X	X	–	X	X
SB-9	X	X	–	X	X
SB-10	X	X	–	X	X
SB-11	X	X	–	X	X
SB-12	X	X	–	X	X
TSB-1	X	X	–	X	X

Analytical results of soil samples are summarized in **Table 1**. Laboratory reports and sample chain-of-custody documentation are contained in **Appendix C**. Laboratory quantitation limits for analyzed parameters are included in laboratory reports in **Appendix C** and comply with Environmental Protection Agency (EPA) Solid Waste (SW) 846 and applicable Washington Model Toxics Control Act (MTCA) Cleanup Levels and Risk Calculation (CLARC) criteria.

4.1 Cleanup Goals

The March, 1989 Model Toxics Control Act (MTCA), Chapter 70.105D RCW, mandated the Washington Department of Ecology (Ecology) to establish a program for the identification and remediation of sites with potential contamination by hazardous substances. The “Model Toxics Control Act Cleanup Regulation” (Washington Administrative Code [WAC] 173-340) was adopted in 1990/1991 to detail the legal processes and technical requirements for cleanup of contaminated sites under the MTCA. Under the MTCA program, Ecology requires responsible parties (i.e. the Property owner) to report releases of hazardous substances occurring as consequence of past practices; current/new releases must be reported as follows:

- releases from Underground Storage Tanks (UST) are regulated under Chapter 90.76 RCW and are to be reported within 24 hours of discovery (WAC 173-340-450[2]); and

- hazardous substance releases must be reported within ninety (90) calendar days of discovery (WAC 173-340-300[2]).

Available physical evidence is to be used to determine whether hazardous substances have been released to the environment. If a release is indicated, it must be reported if it may pose a threat to human health or the environment. A release report must be prepared and submitted to Ecology to provide a summary of applicable/available visual observations, readings from field instruments, and laboratory data; however, additional testing is not required at that time to comply with the reporting requirements of MTCA (WAC 173-340-300). Pursuant to WAC 173-340-310, submittal of a release report requires agency evaluation to determine whether an initial investigation is required. Initial investigations are required when there is a release or threatened release to the environment; the release or threatened release is a

hazardous substance; and/or the release or threatened release may pose a threat to human health or the environment. Per Policy 310A ("Initial Investigations"), the initial investigation process (WAC 173-340-310) includes the following:

- determination of the need for an investigation;
- whether another agency or a consultant may conduct the initial investigation;
- tasks to be completed as part of the initial investigation;
- what decisions/notification must be made based on the initial investigation; and
- case tracking process.

4.2 Soil Sample Collection and Analytical Results

4.2.1 Soil Sample Collection

TGE personnel used an organic vapor meter (OVM) to qualitatively identify the presence of total volatile organic compounds (VOCs) in Site sediments. In this field screening method, a portion of the soil sample core is placed into a designated field screening sample jar and aluminum foil immediately placed over the mouth of the jar. The jar is then left under ambient conditions for approximately five to ten minutes to permit volatile gases (if any) present within the soil pore space to equilibrate within the void space of the sample jar. Following this equilibration period, the probe of the OVM is inserted through the aluminum foil into the jar headspace to obtain a qualitative measurement of volatile gases. This method of field screening should not be considered a quantitative analysis, but rather a qualitative indication that VOCs may (or may not) be present. For the current project, OVM readings were recorded in units of parts per million (ppm) total VOCs and are listed on boring logs contained in **Appendix B**. OVM responses were generally absent in ambient air monitored in the work zone during field activities. Appreciable OVM responses and/or physical evidence (i.e., a solvent or hydrocarbon odor or appearance) was not found in soil headspace samples collected from the boreholes with the exception of soil boring SB-11. Minor OVM responses ranging from 0.1 to 53.8 ppm (total VOCs) were recorded for soils collected from the boreholes of SB-6, SB-8, SB-9, SB-10, SB-11 and TSB-1.

In each boring, the soil sample with greatest recognizable environmental impact, if any, was collected for laboratory analysis. Additional (contingency) soil samples were also collected within the upper five feet of each boring or within the subsoil profile to the terminal depth of the borehole; and analysis considered if field conditions warranted and Client authorized additional efforts[2]. TGE's sampling protocol included close adherence to EPA SW 846 guidance as well as TGE's Standard Operating Procedures (SOP). Specifically, soil samples were collected in properly decontaminated samplers and placed into sterile, glass containers in a manner that minimized available "head space" within the container. Laboratory quantitation limits for parameters tested are included on the laboratory reports and comply with EPA SW-846 criteria.

4.2.2 Soil Sample Analytical Results

Gasoline range organics (NWTPH-Gx), diesel/oil range organics (NWTPH-Dx), VOCs, and/or Resource Conservation and Recovery Act (RCRA) 8 metals in soil samples collected from the Site were reported by the analytical laboratory at concentrations not in excess of laboratory detection limits and/or respective Ecology screening limits, as set forth within the MTCA regulation/statute (as applicable).

Relatively minor concentrations of the VOC analytes acetone, benzene, toluene, n-butylbenzene, cymene, ethyl benzene, methyl ethyl ketone, naphthalene, n-propylbenzene, trimethylbenzene and xylenes were detected within the soil samples collected from SB-6 through SB-12 and TSB-1; however, reported concentrations were well below MTCA regulation/statue requirements.

Additionally, concentrations of petroleum hydrocarbons (gasoline range organics [GRO] and diesel range organics [DRO]/residual oil range organics [RRO]) were detected within all soil samples collected. As

[2] Contingency analysis of these soil samples was not performed.

previously stated, while DRO/RRO were detected within soil samples collected from borings within the layout of the proposed Site building at concentrations ranging from <1.44 milligrams/kilogram (mg/kg) to 558 mg/kg and 7.84 mg/kg to 1,710 mg/kg, respectively. Such concentrations did not exceed the published MTCA regulation/statute screening limit of 2,000 mg/kg (Method A – Direct Contact) for both constituents.

For reference, soil laboratory data is summarized in **Table 1**, and laboratory data reports (with chain-of-custody documentation) are provided in **Appendix C**.

4.3 Project Deviations

Per TGE Proposal Number P13411.04 dated September 20, 2017, no deviations from the proposal were realized during performance of the Phase II ESA conducted for the Property by TGE, with the exception of those tasks that are summarized below:

- the proposed location of temporary screened borehole TSB-1 was moved approximately 60 feet due to the presence of overhead power lines;
- groundwater was not encountered within the maximum depth investigated (110 fbg); and
- due to groundwater unavailability, at the Site, TGE modified the scope of work (with Client approval) to advance and sample seven (7) soil borings (designated SB-6 through SB-12) throughout the proposed building layout of the future healthcare facility.

Boring locations, as completed in the field, are provided on **Figure 2** (attached).

4.4 Laboratory Data Validation

TGE reviewed data packages prepared by ESC Lab Sciences in Mt. Juliet, Tennessee relative to soil sample analyses for the Site. The intended use of data generated by the current investigation was to provide Supplemental Site characterization details relative to targeted COCs. Analyses performed were limited to the following:

Analytical Method	Analytical Method Description
SW-846 8260b	VOCs by gas chromatography mass spectroscopy (GC/MS)
NWTPH-Dx	Semi-Volatile Organic Compounds by gas chromatography (GC
NWTPH-Gx	VOCs by gas chromatography (GC)
SM-2540g	moisture/solid percentage by general chemistry
SW-846 7471A	mercury by cold vapor atomic absorption (CVAA)
SW-846 6020/7471A	RCRA-8 Metals by Inductively Coupled Plasma (ICP)
SW-846 9095A	per hydrogen ion (pH)

Qualified Analytical Data

Upon analytical report review, select analytes (refer to **Table 1**) were denoted with a “J” flag. When a sample is denoted with a “J” flag, the analyte is an estimated value between the Reporting Limit (RL) and Method Detection Limit (MDL). Additionally, the pH value from SB-7 (1-2’) is denoted with a “T8” flag. The “T8” flag indicates that a sample was analyzed outside of the holding time for the intended analysis; however, pH is considered an “immediate” test by the contract laboratory and is, therefore, always associated with a “T8” flag.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For laboratory data quality analysis/quality control (QA/QC), the MS/MSD is performed as an indication as to whether there is sample matrix interference specific to the sample selected for the analysis. This test is

"sample-specific" and essentially for informational purposes. Review of the laboratory reports for Site soil samples reported qualifiers associated with certain analytes. However, per laboratory QA/QC documentation, sample detection limits provided were within applicable Ecology guidelines, these qualifiers were associated with "unrelated samples" (i.e., a batch sample not collected from the Property) and/or given that all other quality control (including the laboratory control sample/laboratory control sample duplicate [LCS/LCSD]) met laboratory quality objectives, the data is considered valid.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
LCS/LCSD is used by a laboratory to estimate/check precision and accuracy for each analyte in a method by batch and ensure that the analytical instrument in use is in "control" of any potential matrix interference inherent to the sample. No data qualifiers were listed within the LCS/LCSD data (which supersedes MS/MSD), with the exception of the following:

Reported LCS/LCSD Flags				
Lab Package	**Flag**	**Flag Description**	**Analyte**	**Affected Sample IDs**
L947070	"J4"	Associated batch QC was outside the established quality control range for accuracy	Hexachloro-1,3-butadiene	SB-7 (1-2') SB-8 (0-1') SB-9 (1-2') SB-12 (1-2')

- Within lab package L947070, the "J4" flag for hexachloro-1.3-butadiene, (which is considered a "target compound") represents a slight high bias; however, because this analyte was reported below laboratory detection limits, the data was unaffected and is considered valid as qualified.

Method Blank
A detailed review of corresponding laboratory method blanks established that no analytes were reported at concentrations above method reporting limits. A detailed review of corresponding laboratory method blanks established that no analytes were reported at concentrations above method reporting limits.

Based on the above-referenced review and the project level of required performance (LORP), soil data presented herein was considered valid as qualified.

5.0 FINDINGS AND RECOMMENDATIONS

TGE has completed a Supplemental Phase II ESA of the Proposed Star Lake Hospital property located at 29805 Pacific Highway South in Federal Way, King County, Washington. This assessment was performed to preliminarily investigate the commercial real estate for the presence (or likely presence) of hazardous substances or petroleum products under conditions indicative of a release to the Site, consistent with ASTM Standard Practice for Environmental Site Assessments (E1527-13).

5.1 Findings

NWTPH-Gx, NWTPH-Dx, VOCs, and/or RCRA 8 metals in soil collected from the Site were reported by the analytical laboratory at concentrations not in excess of laboratory limits and/or respective Ecology screening limits, as set forth within the State of Washington MTCA regulation/statute (as applicable).

5.2 Recommendations

Based on results of this Site characterization effort, and within stated project limitations and qualifications made part of this work, TGE provides recommendation(s) for Client consideration as itemized below.

Finding	Recommendation
Petroleum hydrocarbons (specifically diesel range and oil range organics) were detected within Site soil.	Given that soil character (as established, geotechnically) is likely "unsuitable" for foundation support, this fill may be recycled and/or shipped to a regulated facility in compliance with applicable federal statute.
Fill material (of unspecified origin) has been identified within the Site limits (including within the proposed re-development area). A geotechnical report (September 29, 2017) completed by others[3] stated such fill "*may not be suitable for foundation support" and may require excavation for "bearing surface preparation*". The soil should be classified as a "non-hazardous" material for off Property transport/disposal management via a licensed transporter.	
Findings and Recommendations were identified within the foregoing Phase II ESA in connection with the Site.	Reference should be made to the foregoing Phase II ESA by TGE (Report. No. R13411.02; dated September 12, 2017) regarding the design (engineer), installation and performance testing (for intrinsic capability) of a vapor mitigation system as well as regulated materials removal (prior to planned demolition and earthwork activities) that remain outstanding in connection with the Property as of the date of this report.

[3] Geotechnical report completed by GeoEngineers, Inc. (File No.: 2868-017-00 dated September 29, 2017) executed in part for PhiloWilke Partnership stated that removal of fill material may be required for re-development of the Site.

6.0 QUALIFICATIONS

Our professional services have been performed, our findings obtained and our recommendations in accordance with customary principles and practices in the fields of environmental science, geoscience and engineering. This company is not responsible for independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

Work performed in conjunction with this assessment and data developed are intended as a description of available information at the dates and locations given. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

Conclusions presented in this report are professional opinions based solely upon visual observations and preliminary testing of soil at the Site, as described in this report. This report is intended exclusively for the purpose outlined herein and at the Property indicated. This report is intended for the sole use of Client, and their representatives. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or its findings, conclusions, or recommendations presented herein is at the sole risk of said user.

It should be recognized that this study was not intended to be a definitive investigation of contamination across the Property. Although the scope of services for this investigation included exploratory borings and analytical testing of soil, it is possible that currently unrecognized contamination may exist at the Site and that the levels of this potential contamination may vary across the Property.

Opinions and recommendations presented herein apply to Site conditions existing at the time of our investigation and those reasonable foreseeable. They cannot necessarily apply to Site changes of which this company is not aware and has not had the opportunity to evaluate.

7.0 REFERENCES

ASTM Guidance
ASTM Standard Guide for Environmental Site Assessments: Phase II Site Assessment Process (E 1903-11), published July, 2011.

ASTM Standard Guide for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-13).

Topographic Map
USGS 7.5 minute Topographic Map, Poverty Bay, Washington Quadrangle (2014).

Area Soil Map
US Department of Agriculture Soil Conservation Service Soil Survey of King County, Washington.

Geologic Map
U.S. Department of the Interior | U.S. Geological Survey, Ask MRData, Last Modified: 27 October 2015.

CLARC Tables
Model Toxics Control Act (MTCA) Cleanup Levels and Risk Calculation (CLARC) Levels Tables, last revised August, 2015, https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx.

FIGURES

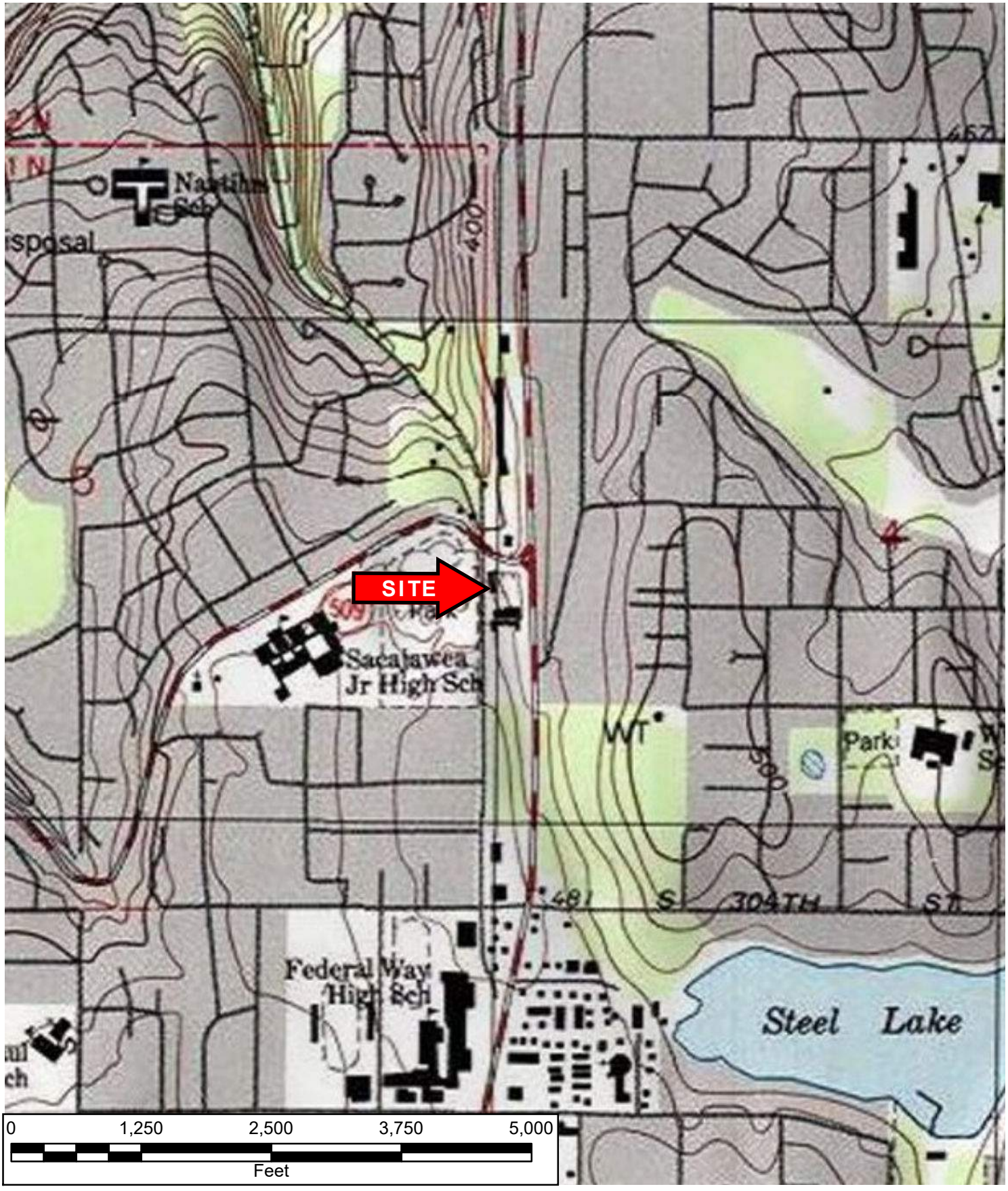
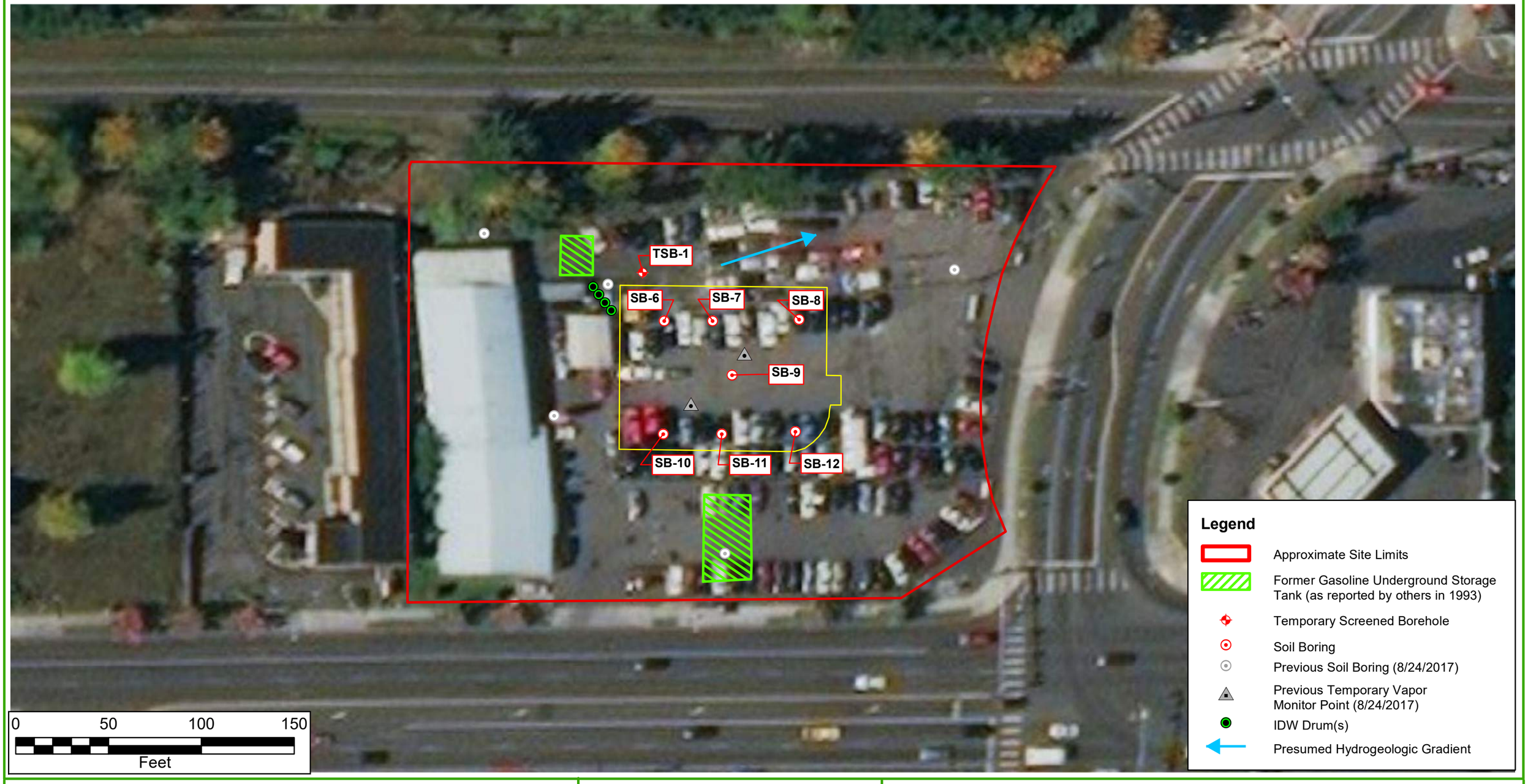


Figure 1
Site Location Map
TGE Project No.: R13411.04

TGE RESOURCES, INC.
8048 Northcourt Road
Houston, Texas 77040

Topographic Map
USGS 7.5 Minute Series Topographic Map
Poverty Bay, Washington Quadrangle
1994



Future Star Lake Hospital
29805 Pacific Highway South
Federal Way, King County, Washington
TGE Project No.: R13411.04

TGE RESOURCES, INC.
8048 Northcourt Road
Houston, Texas 77040

Figure 2
Sample Location Map

Station Name	Method A Cancer Direct Contact	Units	SB6
Laboratory Identification			L946745-01
Sample Date			10/26/2017
Depth Range			1 - 2 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	<1.44
Oil Range Organics	2000	mg/kg	14.3

Station Name	Method A Cancer Direct Contact	Units	TSB1
Laboratory Identification			L946526-01
Sample Date			10/25/2017
Depth Range			4.5 - 5.5 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	<1.42
Oil Range Organics	2000	mg/kg	<3.54

Station Name	Method A Cancer Direct Contact	Units	SB8
Laboratory Identification			L947070-02
Sample Date			10/27/2017
Depth Range			0 - 1 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	109
Oil Range Organics	2000	mg/kg	1430

Station Name	Method A Cancer Direct Contact	Units	SB9
Laboratory Identification			L947070-03
Sample Date			10/27/2017
Depth Range			1 - 2 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	3.09 J
Oil Range Organics	2000	mg/kg	10.2 J

Station Name	Method A Cancer Direct Contact	Units	SB7
Laboratory Identification			L947070-01
Sample Date			10/27/2017
Depth Range			1 - 2 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	3.11 J
Oil Range Organics	2000	mg/kg	7.84 J

Station Name	Method A Cancer Direct Contact	Units	SB12
Laboratory Identification			L947070-04
Sample Date			10/27/2017
Depth Range			1 - 2 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	42.9 J
Oil Range Organics	2000	mg/kg	630

Station Name	Method A Cancer Direct Contact	Units	SB10
Laboratory Identification			L946745-02
Sample Date			10/26/2017
Depth Range			1 - 2 ft
Hydrocarbons			
Diesel range organics	2000	mg/kg	264
Oil Range Organics	2000	mg/kg	1710

Station Name	Method A Cancer Direct Contact	Units	SB11	
Laboratory Identification			L946745-03	L946745-04
Sample Date			10/26/2017	10/26/2017
Depth Range			3 - 4 ft	5 - 6 ft
Hydrocarbons				
Diesel range organics	2000	mg/kg	559	171
Oil Range Organics	2000	mg/kg	136	938

Legend

- Former Fueling Station/Auto Repair (formerly operated with basement; location unreported)
- Approximate Site Limits
- Proposed Healthcare Structure
- Tote(s)
- Drum(s)
- S — Sump (As observed by TGE)
- S — Sump (As reported by others in November 2000)
- Former Greenhouse (as reported by others in 1993)
- Former Gasoline Underground Storage Tank (as reported by others in 1993)
- Soil Boring
- Soil Boring (completed by TGE August 2017)
- Temporary Vapor Monitor Point (completed by TGE August 2017)
- 16.5 — Concentrations in blue indicate levels above method detection limits yet below Ecology screening limits.
- J — Analyte is an estimated value between the Reporting Limit (RL) and Method Detection Limit (MDL) (for organics only)

Future Star Lake Hospital
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Figure 3
Soil Concentration Map

TABLES

Table # 1
SOIL ANALYTICAL RESULTS
Future Star Lake Hospital
Federal Way, WA
TGE Project No.: R13411.04

Station Name	Method A Direct Contact	Method B Cancer Direct Contact*	Simplified Terrestrial Eco Evaluation Unrestricted	Soil Protective of Groundwater Vadose at 13 Deg	Reporting Units	SB6	SB7		SB8	SB9	SB10
Laboratory Identification						L946745-01	L947070-01	L948202-01	L947070-02	L947070-03	L946745-02
Sample Date						10/26/2017	10/27/2017		10/27/2017	10/27/2017	10/26/2017
Depth Range						1 - 2 ft	1 - 2 ft		0 - 1 ft	1 - 2 ft	1 - 2 ft
Hydrocarbon (NWTPHGx and NWTPHDx)											
Gasoline Range organics (Benzene Present)	30	NL	200	NL	mg/kg	**0.0415 J**	**0.0569 J**	NT	**0.0486 J**	**0.0385 J**	**0.057 J**
Gasoline Range Organics (Benzene NonDetect)	100	NL	200	NL	mg/kg	**0.0415 J**	**0.0569 J**	NT	**0.0486 J**	**0.0385 J**	**0.057 J**
Diesel Range Organics	2000	NL	460	NL	mg/kg	<1.44	**3.11 J**	NT	**109**	**3.09 J**	**264**
Residual Range Organics	2000	NL	NL	NL	mg/kg	**14.3**	**7.84 J**	NT	**1430**	**10.2 J**	**1710**
Metals (EPA Method 6010/7471)											
Arsenic	20	0.67	NL	2.92	mg/kg	**2.07 J**	**2.91**	NT	**10.1**	**3.93**	**2.2**
Barium	NL	NL	1320	1650	mg/kg	**59.4**	**138**	NT	**61**	**68.8**	**48.3**
Cadmium	2	NL	NL	0.69	mg/kg	**0.0759 J**	<0.0838	NT	**0.129 J**	**0.115 J**	**0.101 J**
Lead	250	NL	220	3000	mg/kg	**6.49**	**4.03**	NT	**26.6**	**10.5**	**7.75**
Mercury	2	NL	NL	2.09	mg/kg	**0.0244**	**0.0602**	NT	**0.0149 J**	**0.0295**	**0.0171 J**
Selenium	NL	NL	0.8	5.2	mg/kg	<0.798	<0.886	**0.416 J**	<0.771	<0.80	<0.781
Silver	NL	NL	NL	13.6	mg/kg	<0.302	<0.335	NT	<0.292	<0.305	<0.296
Total Chromium	NL	NL	42	NL	mg/kg	**17.3**	**27.3**	NT	**21.5**	**21.2**	**15.8**
Other											
% Moisture	NL	NL	NL	NL	%	**92.7**	**83.5**	**83.5**	**96**	**91.7**	**94.7**
pH	NL	NL	NL	NL	s.u.	NT	**6.68 T8**	NT	NT	NT	NT
VOAs (EPA Method 8260)											
Acetone	NL	NL	NL	28.90	mg/kg	<0.0108	<0.012	NT	<0.0104	**0.0175 J**	**0.0139 J**
Acrylonitrile	NL	1.85	NL	NL	mg/kg	<0.00193	<0.00214	NT	<0.00186	<0.00195	<0.00189
Benzene	0.03	18.18	NL	0.03	mg/kg	<0.000291	**0.00034 J**	NT	**0.000376 J**	<0.000295	<0.000285
Bromobenzene	NL	NL	NL	NL	mg/kg	<0.000306	<0.00034	NT	<0.000296	<0.00031	<0.0003
Bromodichloromethane	NL	16.13	NL	0.04	mg/kg	<0.000274	<0.000304	NT	<0.000265	<0.000277	<0.000268
Bromoform	NL	126.58	NL	0.36	mg/kg	<0.000457	<0.000508	NT	<0.000442	<0.000463	<0.000448
Bromomethane	NL	NL	NL	0.05	mg/kg	<0.00145	<0.0016	NT	<0.0014	<0.00146	<0.00141
Butylbenzene, n-	NL	NL	NL	NL	mg/kg	<0.000278	<0.000309	NT	<0.000269	<0.000281	<0.000272
Butylbenzene, sec-	NL	NL	NL	NL	mg/kg	<0.000217	<0.000241	NT	<0.000209	<0.000219	<0.000212
Butylbenzene, tert-	NL	NL	NL	NL	mg/kg	<0.000222	<0.000247	NT	<0.000215	<0.000225	<0.000218
Carbon tetrachloride	NL	14.29	NL	0.04	mg/kg	<0.000354	<0.000393	NT	<0.000342	<0.000358	<0.000346
Chlorobenzene	NL	NL	NL	0.86	mg/kg	<0.000229	<0.000254	NT	<0.000221	<0.000231	<0.000224
Chloroethane	NL	NL	NL	NL	mg/kg	<0.00102	<0.00113	NT	<0.000985	<0.00103	<0.000999
Chloroform	NL	32.26	NL	0.07	mg/kg	<0.000247	<0.000274	NT	<0.000239	<0.00025	<0.000242
Chloromethane	NL	NL	NL	NL	mg/kg	<0.000405	<0.000449	NT	<0.000391	<0.000409	<0.000396
Chlorotoluene, o-	NL	NL	NL	NL	mg/kg	<0.000325	<0.00036	NT	<0.000313	<0.000328	<0.000318
Chlorotoluene, p-	NL	NL	NL	NL	mg/kg	<0.000259	<0.000287	NT	<0.00025	<0.000262	<0.000253
Cumene	NL	NL	NL	NL	mg/kg	<0.000262	<0.000291	NT	<0.000253	<0.000265	<0.000257
Cymene	NL	NL	NL	NL	mg/kg	<0.00022	<0.000244	NT	<0.000212	<0.000223	<0.000215
Dibromo-3-chloropropane, 1,2-	NL	1.25	NL	NL	mg/kg	<0.00113	<0.00126	NT	<0.00109	<0.00115	<0.00111
Dibromochloromethane	NL	11.90	NL	0.03	mg/kg	<0.000402	<0.000446	NT	<0.000388	<0.000407	<0.000394
Dichlorobenzene, 1,2-	NL	NL	NL	6.98	mg/kg	<0.000329	<0.000365	NT	<0.000318	<0.000333	<0.000322
Dichlorobenzene, 1,3-	NL	NL	NL	NL	mg/kg	<0.000258	<0.000286	NT	<0.000249	<0.000261	<0.000252
Dichlorobenzene, 1,4-	NL	185.19	NL	1.23	mg/kg	<0.000244	<0.000271	NT	<0.000235	<0.000247	<0.000239
Dichlorodifluoromethane	NL	NL	NL	NL	mg/kg	<0.000769	<0.000853	NT	<0.000743	<0.000778	<0.000753
Dichloroethane, 1,1-	NL	175.44	NL	0.04	mg/kg	<0.000215	<0.000238	NT	<0.000207	<0.000217	<0.00021
Dichloroethane, 1,2-	NL	10.99	NL	0.02	mg/kg	<0.000286	<0.000317	NT	<0.000276	<0.000289	<0.00028
Dichloroethylene, 1,1-	NL	NL	NL	0.05	mg/kg	<0.000327	<0.000363	NT	<0.000316	<0.000331	<0.00032
Dichloroethylene, cis-1,2-	NL	NL	NL	0.08	mg/kg	<0.000254	<0.000281	NT	<0.000245	<0.000256	<0.000248
Dichloroethylene, trans-1,2	NL	NL	NL	0.52	mg/kg	<0.000285	<0.000316	NT	<0.000275	<0.000288	<0.000279
Dichloropropane, 1,2-	NL	27.78	NL	0.03	mg/kg	<0.000386	<0.000429	NT	<0.000373	<0.000391	<0.000378
Dichloropropane, 1,3-	NL	NL	NL	NL	mg/kg	<0.000223	<0.000248	NT	<0.000216	<0.000226	<0.000219
Dichloropropane, 2,2-	NL	NL	NL	NL	mg/kg	<0.000301	<0.000334	NT	<0.000291	<0.000304	<0.000295
Dichloropropene, 1,1-	NL	NL	NL	NL	mg/kg	<0.000342	<0.000379	NT	<0.00033	<0.000346	<0.000335
Dichloropropene, cis 1,3-	NL	NL	NL	NL	mg/kg	<0.000283	<0.000314	NT	<0.000273	<0.000286	<0.000277
Dichloropropene, trans 1,3-	NL	NL	NL	NL	mg/kg	<0.000288	<0.00032	NT	<0.000278	<0.000291	<0.000282
Diisopropyl ether	NL	NL	NL	NL	mg/kg	<0.000268	<0.000297	NT	<0.000258	<0.000271	<0.000262
Ethyl benzene	6	NL	NL	NL	mg/kg	<0.00032	<0.000355	NT	<0.000309	<0.000324	<0.000314
Ethylene dibromide	0.005	0.5	NL	NL	mg/kg	<0.00037	<0.000411	NT	<0.000357	<0.000374	<0.000362
Hexachlorobutadiene	NL	12.82	NL	0.61	mg/kg	<0.000369	<0.000409	NT	<0.000356	<0.000373	<0.000361
Methyl ethyl ketone	NL	NL	NL	NL	mg/kg	<0.00505	<0.0056	NT	<0.00487	<0.00511	<0.00494
Methyl isobutyl ketone	NL	NL	NL	NL	mg/kg	<0.00203	<0.00225	NT	<0.00196	<0.00205	<0.00199
Methylene bromide	NL	NL	NL	NL	mg/kg	<0.000412	<0.000457	NT	<0.000398	<0.000417	<0.000403
Methylene chloride	0.02	500	NL	0.02	mg/kg	<0.00108	<0.0012	NT	<0.00104	<0.00109	<0.00106
MTBE	0.1	555.56	NL	0.10	mg/kg	<0.000229	<0.000254	NT	<0.000221	<0.000231	<0.000224
Naphthalene	5	NL	NL	4.45	mg/kg	<0.00108	<0.0012	NT	<0.00104	<0.00109	<0.00106
Propylbenzene, n-	NL	NL	NL	NL	mg/kg	<0.000222	<0.000247	NT	<0.000215	<0.000225	<0.000218
Styrene	NL	NL	NL	2.23	mg/kg	<0.000252	<0.00028	NT	<0.000244	<0.000255	<0.000247
Tetrachloroethane, 1,1,1,2-	NL	38.46	NL	NL	mg/kg	<0.000285	<0.000316	NT	<0.000275	<0.000288	<0.000279
Tetrachloroethane, 1,1,2,2-	NL	5.00	NL	0.00	mg/kg	<0.000394	<0.000437	NT	<0.00038	<0.000398	<0.000385
Tetrachloroethylene	0.05	476.19	NL	0.05	mg/kg	<0.000298	<0.00033	NT	<0.000287	<0.000301	<0.000291
Toluene	7	NL	NL	4.52	mg/kg	<0.000468	<0.000519	NT	<0.000452	<0.000473	**0.000496 J**
Trichloro-1,2,2-trifluoroethane, 1,1,2-	NL	NL	NL	NL	mg/kg	<0.000394	<0.000437	NT	<0.00038	<0.000398	<0.000385
Trichlorobenzene, 1,2,3-	NL	NL	NL	NL	mg/kg	<0.00033	<0.000366	NT	<0.000319	<0.000334	<0.000323
Trichlorobenzene, 1,2,4-	NL	34.48	NL	0.56	mg/kg	<0.000419	<0.000464	NT	<0.000404	<0.000423	<0.00041
Trichloroethane, 1,1,1-	NL	NL	NL	1.49	mg/kg	<0.000309	<0.000342	NT	<0.000298	<0.000312	<0.000302
Trichloroethane, 1,1,2-	NL	17.54	NL	0.03	mg/kg	<0.000299	<0.000332	NT	<0.000288	<0.000302	<0.000292
Trichloroethylene	NL	12.00	NL	0.03	mg/kg	<0.000301	<0.000334	NT	<0.000291	<0.000304	<0.000295
Trichlorofluoromethane	NL	NL	NL	NL	mg/kg	<0.000412	<0.000457	NT	<0.000398	<0.000417	<0.000403
Trichloropropane, 1,2,3-	NL	0.03	NL	NL	mg/kg	<0.000799	<0.000887	NT	<0.000772	<0.000808	<0.000782
Trimethylbenzene, 1,2,3-	NL	NL	NL	NL	mg/kg	<0.00031	<0.000344	NT	<0.000299	<0.000313	<0.000303
Trimethylbenzene, 1,2,4-	NL	NL	NL	NL	mg/kg	<0.000228	<0.000253	NT	<0.00022	<0.00023	<0.000223
Trimethylbenzene, 1,3,5-	NL	NL	NL	NL	mg/kg	<0.000287	<0.000318	NT	<0.000277	<0.00029	<0.000281
Vinyl chloride	NL	NL	NL	0.002	mg/kg	<0.000314	<0.000348	NT	<0.000303	<0.000317	<0.000307
Xylenes	NL	NL	NL	NL	mg/kg	<0.000753	<0.000835	NT	<0.000727	<0.000762	<0.000737

Table # 1
SOIL ANALYTICAL RESULTS
Future Star Lake Hospital
Federal Way, WA
TGE Project No.: R13411.04

Station Name	Method A Direct Contact	Method B Cancer Direct Contact*	Simplified Terrestrial Eco Evaluation Unrestricted	Soil Protective of Groundwater Vadose at 13 Deg	Reporting Units	SB11		SB11		SB12	TSB1
Laboratory Identification						L946745-03	L947689-01	L946745-04	L948202-02	L947070-04	L946526-01
Sample Date						10/26/2017		10/26/2017		10/27/2017	10/25/2017
Depth Range						3 - 4 ft		5 - 6 ft		1 - 2 ft	4.5 - 5.5 ft
Hydrocarbon (NWTPHGx and NWTPHDx)											
Gasoline range organics (Benzene Present)	30	NL	200	NL	mg/kg	**1.48**	NT	**0.322**	NT	**1.56 J**	**0.0423 J**
Gasoline range organics (Benzene NonDetect)	100	NL	200	NL	mg/kg	**1.48**	NT	**0.322**	NT	**1.56 J**	**0.0423 J**
Diesel range organics	2000	NL	460	NL	mg/kg	**559**	NT	**171**	NT	**42.9 J**	<1.42
Oil Range Organics	2000	NL	NL	NL	mg/kg	**136**	NT	**938**	NT	**630**	<3.54
Metals (EPA Method 6010/7471)											
Arsenic	20	0.67	NL	2.92	mg/kg	**2.16 J**	NT	**6.46**	NT	**9.16**	**1.83 J**
Barium	NL	NL	1320	1650	mg/kg	**69.9**	NT	**111**	NT	**59.1**	**44.7**
Cadmium	2	NL	NL	0.69	mg/kg	**0.0853 J**	NT	**0.282 J**	NT	**0.15 J**	**<0.0744**
Lead	250	NL	220	3000	mg/kg	**6.17**	NT	**117**	NT	**64.6**	**1.19**
Mercury	2	NL	NL	2.09	mg/kg	**0.027**	NT	**0.0528**	NT	**0.0277**	**0.0193 J**
Selenium	NL	NL	0.8	5.2	mg/kg	<0.81	**0.244 J**	<0.993	**0.529 J**	<0.795	<0.786
Silver	NL	NL	NL	13.6	mg/kg	<0.306	NT	<0.376	NT	<0.301	<0.297
Total Chromium	NL	NL	42	NL	mg/kg	**28.2**	NT	**29.2**	NT	**26**	**15.9**
Other											
% Moisture	NL	NL	NL	NL	%	**91.4**	**91.4**	**74.6**	**74.6**	**93.1**	**94.1**
pH	NL	NL	NL	NL	s.u.	NT	NT	NT	NT	NT	NT
VOAs (EPA Method 8260)											
Acetone	NL	NL	NL	28.90	mg/kg	**0.051 J**	NT	**0.0698**	NT	<0.373	**0.0183 J**
Acrylonitrile	NL	1.85	NL	NL	mg/kg	<0.00196	NT	<0.0024	NT	<0.0668	<0.0019
Benzene	0.03	18.18	NL	0.03	mg/kg	<0.000296	NT	<0.000362	NT	<0.0101	<0.000287
Bromobenzene	NL	NL	NL	NL	mg/kg	<0.000311	NT	<0.000381	NT	<0.0106	<0.000302
Bromodichloromethane	NL	16.13	NL	0.04	mg/kg	<0.000278	NT	<0.000341	NT	<0.00948	<0.00027
Bromoform	NL	126.58	NL	0.36	mg/kg	<0.000464	NT	<0.000569	NT	<0.0158	<0.00045
Bromomethane	NL	NL	NL	0.05	mg/kg	<0.00147	NT	<0.0018	NT	<0.05	<0.00142
Butylbenzene, n-	NL	NL	NL	NL	mg/kg	**0.00171**	NT	<0.000346	NT	<0.00963	<0.000274
Butylbenzene, sec-	NL	NL	NL	NL	mg/kg	**0.000801 J**	NT	<0.00027	NT	<0.00751	<0.000214
Butylbenzene, tert-	NL	NL	NL	NL	mg/kg	<0.000225	NT	<0.000276	NT	<0.00769	<0.000219
Carbon tetrachloride	NL	14.29	NL	0.04	mg/kg	<0.000359	NT	<0.00044	NT	<0.0122	<0.000348
Chlorobenzene	NL	NL	NL	0.86	mg/kg	<0.000232	NT	<0.000284	NT	<0.00792	<0.000225
Chloroethane	NL	NL	NL	NL	mg/kg	<0.00104	NT	<0.00127	NT	<0.0353	<0.00101
Chloroform	NL	32.26	NL	0.07	mg/kg	<0.000251	NT	<0.000307	NT	<0.00855	<0.000243
Chloromethane	NL	NL	NL	NL	mg/kg	<0.00041	NT	<0.000503	NT	<0.014	<0.000398
Chlorotoluene, o-	NL	NL	NL	NL	mg/kg	<0.000329	NT	<0.000404	NT	<0.0112	<0.00032
Chlorotoluene, p-	NL	NL	NL	NL	mg/kg	<0.000263	NT	<0.000322	NT	<0.00896	<0.000255
Cumene	NL	NL	NL	NL	mg/kg	<0.000266	NT	<0.000326	NT	<0.00907	<0.000258
Cymene	NL	NL	NL	NL	mg/kg	**0.000885 J**	NT	<0.000274	NT	<0.00762	<0.000217
Dibromo-3-chloropropane, 1,2-	NL	1.25	NL	NL	mg/kg	<0.00115	NT	<0.00141	NT	<0.0392	<0.00112
Dibromochloromethane	NL	11.90	NL	0.03	mg/kg	<0.000408	NT	<0.0005	NT	<0.0139	<0.000396
Dichlorobenzene, 1,2-	NL	NL	NL	6.98	mg/kg	<0.000334	NT	<0.000409	NT	<0.0114	<0.000324
Dichlorobenzene, 1,3-	NL	NL	NL	NL	mg/kg	<0.000262	NT	<0.000321	NT	<0.00892	<0.000254
Dichlorobenzene, 1,4-	NL	185.19	NL	1.23	mg/kg	<0.000247	NT	<0.000303	NT	<0.00844	<0.00024
Dichlorodifluoromethane	NL	NL	NL	NL	mg/kg	<0.00078	NT	<0.000956	NT	<0.0266	<0.000758
Dichloroethane, 1,1-	NL	175.44	NL	0.04	mg/kg	<0.000218	NT	<0.000267	NT	<0.00743	<0.000211
Dichloroethane, 1,2-	NL	10.99	NL	0.02	mg/kg	<0.00029	NT	<0.000355	NT	<0.0099	<0.000282
Dichloroethylene, 1,1-	NL	NL	NL	0.05	mg/kg	<0.000332	NT	<0.000406	NT	<0.0113	<0.000322
Dichloroethylene, cis-1,2-	NL	NL	NL	0.08	mg/kg	<0.000257	NT	<0.000315	NT	<0.00878	<0.00025
Dichloroethylene, trans-1,2	NL	NL	NL	0.52	mg/kg	<0.000289	NT	<0.000354	NT	<0.00986	<0.00028
Dichloropropane, 1,2-	NL	27.78	NL	0.03	mg/kg	<0.000392	NT	<0.00048	NT	<0.0134	<0.00038
Dichloropropane, 1,3-	NL	NL	NL	NL	mg/kg	<0.000227	NT	<0.000278	NT	<0.00773	<0.00022
Dichloropropane, 2,2-	NL	NL	NL	NL	mg/kg	<0.000305	NT	<0.000374	NT	<0.0104	<0.000296
Dichloropropene, 1,1-	NL	NL	NL	NL	mg/kg	<0.000347	NT	<0.000425	NT	<0.0118	<0.000337
Dichloropropene, cis 1,3-	NL	NL	NL	NL	mg/kg	<0.000287	NT	<0.000351	NT	<0.00978	<0.000278
Dichloropropene, trans 1,3-	NL	NL	NL	NL	mg/kg	<0.000292	NT	<0.000358	NT	<0.00997	<0.000284
Diisopropyl ether	NL	NL	NL	NL	mg/kg	<0.000271	NT	<0.000333	NT	<0.00926	<0.000263
Ethyl benzene	6	NL	NL	NL	mg/kg	<0.000325	NT	**0.000551 J**	NT	<0.0111	<0.000316
Ethylene dibromide	0.005	0.5	NL	NL	mg/kg	<0.000375	NT	<0.00046	NT	<0.0128	<0.000364
Hexachlorobutadiene	NL	12.82	NL	0.61	mg/kg	<0.000374	NT	<0.000459	NT	<0.0128	<0.000363
Methyl ethyl ketone	NL	NL	NL	NL	mg/kg	**0.00885 J**	NT	**0.0177**	NT	<0.175	**0.00526 J**
Methyl isobutyl ketone	NL	NL	NL	NL	mg/kg	<0.00206	NT	<0.00252	NT	<0.0702	<0.002
Methylene bromide	NL	NL	NL	NL	mg/kg	<0.000418	NT	<0.000512	NT	<0.0143	<0.000406
Methylene chloride	0.02	500	NL	0.02	mg/kg	<0.00109	NT	<0.00134	NT	<0.0373	<0.00106
MTBE	0.1	555.56	NL	0.10	mg/kg	<0.000232	NT	<0.000284	NT	<0.00792	<0.000225
Naphthalene	5	NL	NL	4.45	mg/kg	**0.00779**	NT	<0.00134	NT	<0.0373	<0.00106
Propylbenzene, n-	NL	NL	NL	NL	mg/kg	**0.0011**	NT	**0.000356 J**	NT	<0.00769	<0.000219
Styrene	NL	NL	NL	2.23	mg/kg	<0.000256	NT	<0.000314	NT	<0.00874	<0.000249
Tetrachloroethane, 1,1,1,2-	NL	38.46	NL	NL	mg/kg	<0.000289	NT	<0.000354	NT	<0.00986	<0.00028
Tetrachloroethane, 1,1,2,2-	NL	5.00	NL	0.00	mg/kg	<0.000399	NT	<0.00049	NT	<0.0136	<0.000388
Tetrachloroethylene	0.05	476.19	NL	0.05	mg/kg	<0.000302	NT	<0.00037	NT	<0.0103	<0.000293
Toluene	7	NL	NL	4.52	mg/kg	<0.000475	NT	<0.000582	NT	<0.0162	<0.000461
Trichloro-1,2,2-trifluoroethane, 1,1,2-	NL	NL	NL	NL	mg/kg	<0.000399	NT	<0.00049	NT	<0.0136	<0.000388
Trichlorobenzene, 1,2,3-	NL	NL	NL	NL	mg/kg	<0.000335	NT	<0.00041	NT	<0.0114	<0.000325
Trichlorobenzene, 1,2,4-	NL	34.48	NL	0.56	mg/kg	<0.000425	NT	<0.00052	NT	<0.0145	<0.000412
Trichloroethane, 1,1,1-	NL	NL	NL	1.49	mg/kg	<0.000313	NT	<0.000384	NT	<0.0107	<0.000304
Trichloroethane, 1,1,2-	NL	17.54	NL	0.03	mg/kg	<0.000303	NT	<0.000372	NT	<0.0103	<0.000294
Trichloroethylene	NL	12.00	NL	0.03	mg/kg	<0.000305	NT	<0.000374	NT	<0.0104	<0.000296
Trichlorofluoromethane	NL	NL	NL	NL	mg/kg	<0.000418	NT	<0.000512	NT	<0.0143	<0.000406
Trichloropropane, 1,2,3-	NL	0.03	NL	NL	mg/kg	<0.000811	NT	<0.000994	NT	<0.0277	<0.000787
Trimethylbenzene, 1,2,3-	NL	NL	NL	NL	mg/kg	**0.00186**	NT	**0.00325**	NT	<0.0107	**0.000393 J**
Trimethylbenzene, 1,2,4-	NL	NL	NL	NL	mg/kg	**0.00623**	NT	**0.00567**	NT	<0.00788	**0.00027 J**
Trimethylbenzene, 1,3,5-	NL	NL	NL	NL	mg/kg	**0.00447**	NT	**0.00267**	NT	<0.00993	<0.000283
Vinyl chloride	NL	NL	NL	0.002	mg/kg	<0.000319	NT	<0.00039	NT	<0.0109	<0.000309
Xylenes	NL	NL	NL	NL	mg/kg	<0.000764	NT	**0.00378 J**	NT	<0.0261	<0.000742

Notes:

16.60	Concentrations in blue indicate levels above method detection limits yet below Washington Department of Ecology (Ecology) screening level(s)
NL	No Limit Established
mg/kg	Milligrams per kilogram (parts per million)
J	Analyte is an estimated value between the Reporting Limit (RL) and Method Detection Limit (MDL) (for organics
*	Result Exceeds the Washington Department of Ecology Method B Direct Contact cancer assessment level. This screening level is used upon demonstration that Site groundwater is not impacted.

APPENDIX A

Photograph 1. View of installation activities associated with soil boring TSB-1.

Photograph 2. Installation activities associated with soil boring SB-6, within proposed building footprint.

Photograph 3. Soil lithology as encountered at soil borings SB-6, SB-10 and SB-11.

Photograph 4. Typical soil lithology as encountered at soil boring TSB-1.

Photograph 5. View of typical soil boring plugging capped with concrete patch.

Photograph 6. View of investigation-derived waste storage.

APPENDIX B

TGERESOURCES,INC.

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(713) 744-5800
(713) 744-5888 (fax)

BORING LOG

BOREHOLE NO.: **SB-6**
LATITUDE: **47.33517200**
LONGITUDE: **-122.3129095**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/26/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**

DEPTH (in feet)	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	REMARKS
0					Asphalt		
			0.4		Fill Material: fine to coarse sand, some gravel		
		100	0.0				
			0.0				
			0.0		Gravelly Sand: brown, some silt and clay, large cobbles, poorly sorted, subangular to well-rounded clasts, moist		
5			0.0	SW			
			0.0				
			0.0				
		100	0.0				
			0.0				
			0.0	GM	Silty Gravel: moderate fine sand, gray, dry		
10							

NOTES: - - -

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BORING LOG

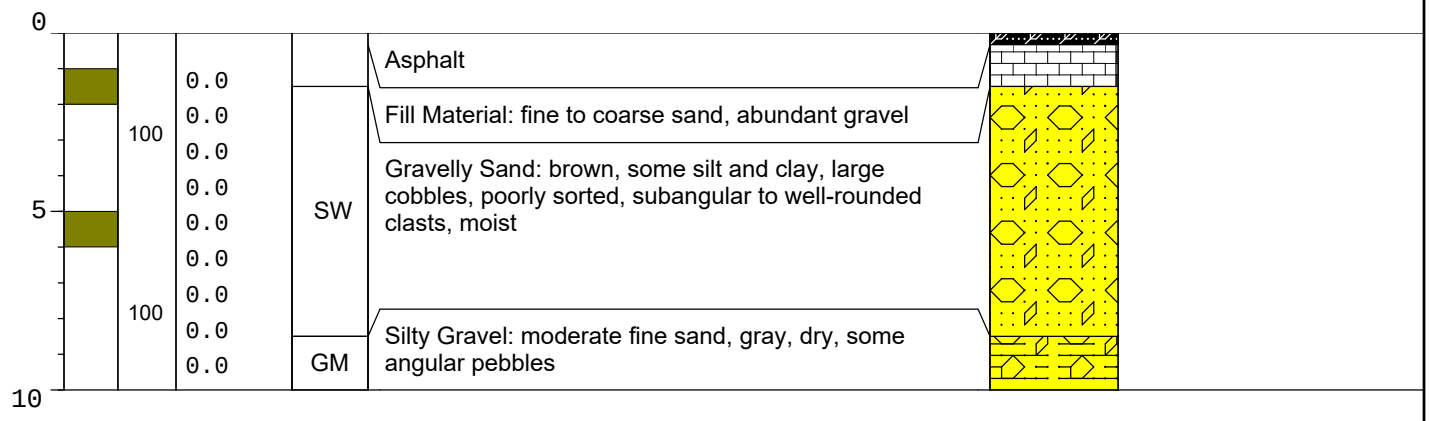
BOREHOLE NO.: **SB-7**
LATITUDE: **47.33524544**
LONGITUDE: **-122.31290766**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/27/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**



NOTES: - - -

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BORING LOG

BOREHOLE NO.: **SB-8**
LATITUDE: **47.33538550**
LONGITUDE: **-122.31291963**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific HWY S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/27/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**

DEPTH (in feet)	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	REMARKS
0			0.5		Asphalt		
		100	0.0	GW	Sandy Gravel: brown, coarse sand to pebble sized, subrounded to rounded clasts, clayey (likely fill material)		
			0.0				
			0.0				
5			0.0		Gravelly Clay: tan/brown, abundant pebbles, heavy iron staining		
			0.0				
		100	0.0	CL			
			0.0				
			0.0				
10							

NOTES: - - -
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BORING LOG

BOREHOLE NO.: **SB-9**
LATITUDE: **47.33527820**
LONGITUDE: **-122.31280500**

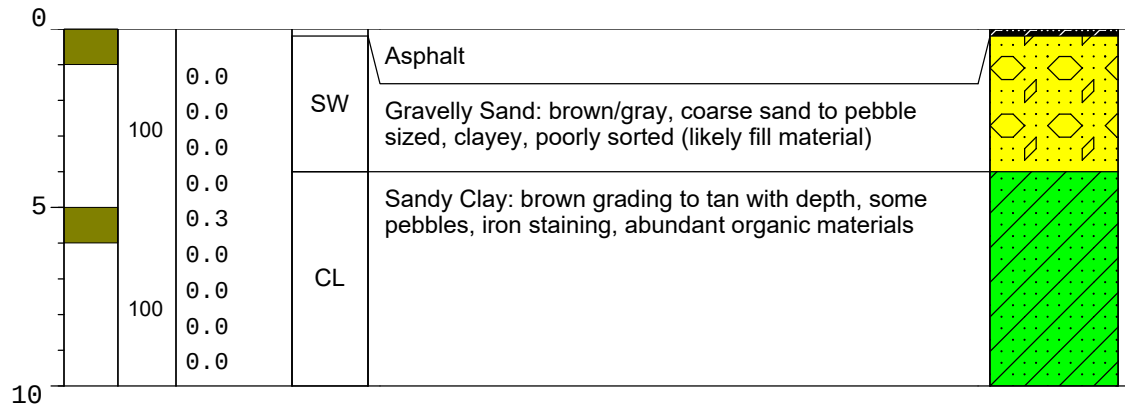
PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific HWY S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/27/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**

DEPTH (in feet)	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	REMARKS
0			0.0	SW	Asphalt		
		100	0.0		Gravelly Sand: brown/gray, coarse sand to pebble sized, clayey, poorly sorted (likely fill material)		
			0.0				
			0.0				
5			0.3	CL	Sandy Clay: brown grading to tan with depth, some pebbles, iron staining, abundant organic materials		
			0.0				
		100	0.0				
			0.0				
10			0.0				



NOTES: - - -
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BORING LOG

BOREHOLE NO.: **SB-10**
LATITUDE: **47.33519192**
LONGITUDE: **-122.31266997**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/26/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**

DEPTH (in feet)	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	REMARKS
0			1.1		Asphalt		
		100	0.0	SW	Gravelly Sand: brown, moist, large cobbles		
			0.0				
			0.0				
5			0.3		Sandy Gravel: dark brown, abundant organic materials, Iron staining, wet		
			0.0				
		100	0.0	GW	- perched zone		
			0.0				
10			0.0		- large chunks of asphalt (indicate fill to at least 10')		

NOTES: - - -

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BORING LOG

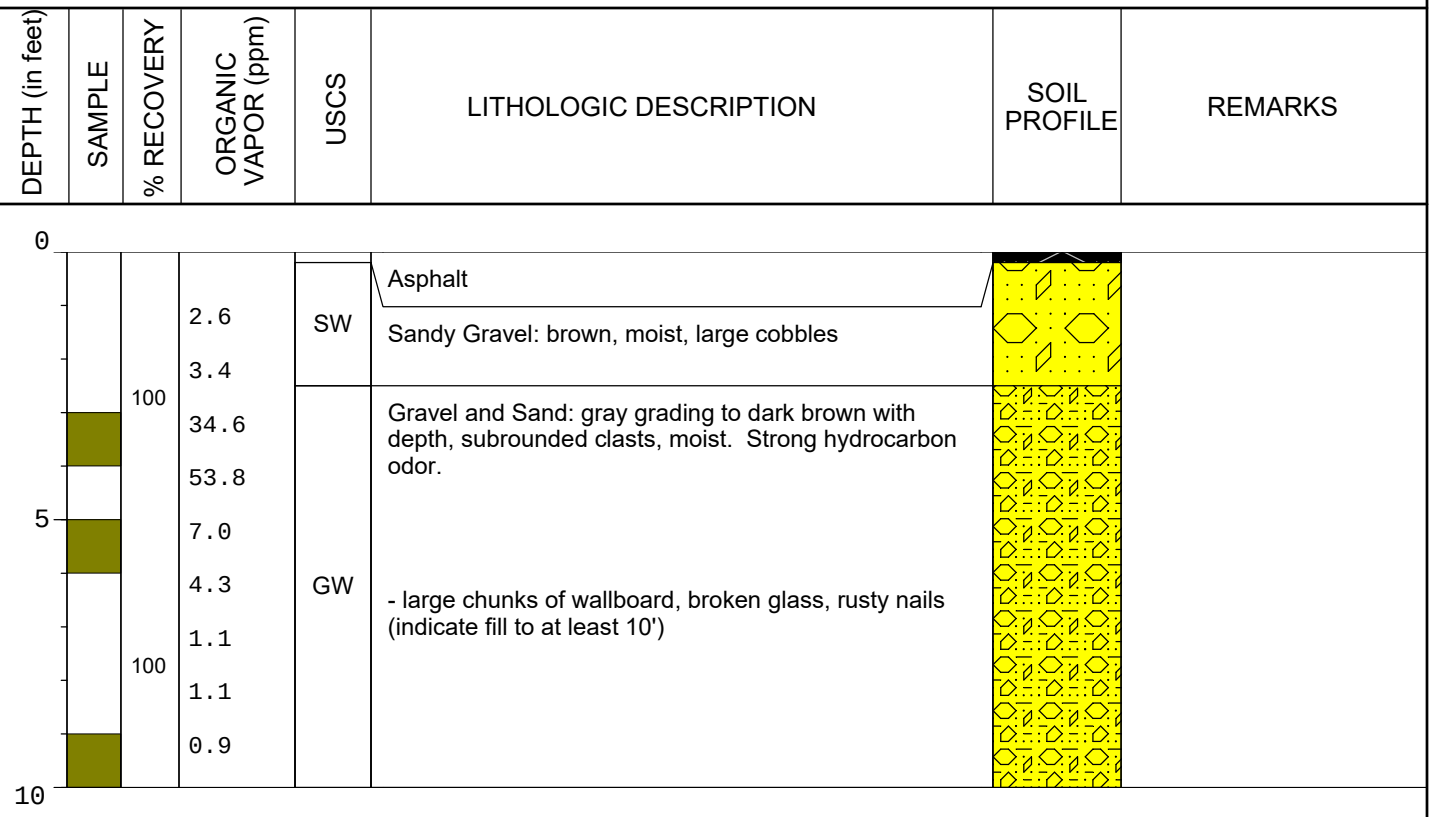
BOREHOLE NO.: **SB-11**
LATITUDE: **47.33526145**
LONGITUDE: **-122.31268611**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/26/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**



NOTES: - - -

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BORING LOG

BOREHOLE NO.: **SB-12**
LATITUDE: **47.33537578**
LONGITUDE: **-122.31269061**

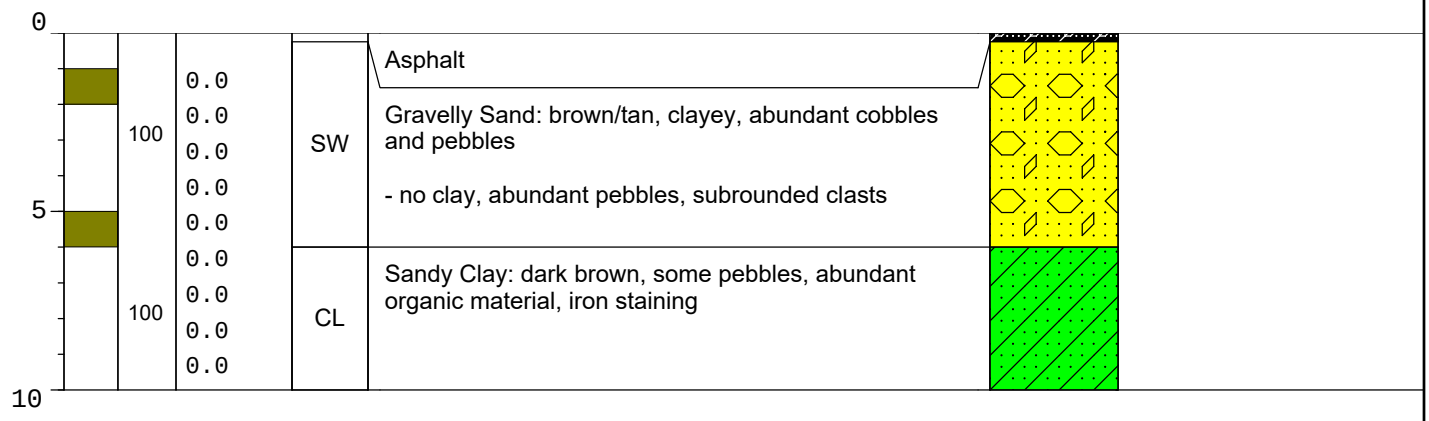
PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/27/2017**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**10**
SURFACE ELEVATION:	**---**

DEPTH (in feet)	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	REMARKS
0			0.0		Asphalt		
		100	0.0	SW	Gravelly Sand: brown/tan, clayey, abundant cobbles and pebbles		
5			0.0		- no clay, abundant pebbles, subrounded clasts		
			0.0				
			0.0				
		100	0.0	CL	Sandy Clay: dark brown, some pebbles, abundant organic material, iron staining		
			0.0				
10			0.0				



NOTES: - - -
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BORING LOG

BOREHOLE NO.: **TSB-1**
LATITUDE: **47.33513700**
LONGITUDE: **-122.31301150**
TOC ELEVATION: **---**

PROJECT INFORMATION

PROJECT NAME:	**Proposed Star Lake Hospital**
SITE LOCATION:	**29805 Pacific Hwy S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/25/17**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrel**
TOTAL DEPTH:	**110**
SURFACE ELEVATION:	**---**

Water level during drilling ▼ Static water level ▼

DEPTH	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	TEMPORARY SOIL BORING WELL CONSTRUCTION
0			0.0		Asphalt		
			0.0	SW	Fill: medium to coarse sand, some pebbles, moist		
		100	0.0		Gravelly Sand: coarse sand, abundant cobbles (2" to 4" diameter), gray-brown, silty, moist		
			0.1				
5			0.6				
			0.2	GC	Clayey Gravel: tannish-brown, moist		
			0.2				
		100	0.2	SW	Sand: coarse sand with abundant pebbles, slightly silty, poorly sorted, coarsening downward, perched zone from 7 to 9.5 fbg		
			0.1				
10			0.1				
			0.5	CL	Gravelly Clay: gray, abundant cobbles, dry, well rounded, poorly sorted		
			0.4				
		100	0.3		Sandy Clay: tan, few cobbles, abundant pebbles, dry, coarsening downward		
			0.3				
15			0.3				
			0.3	CL			
			0.4				
		100	1.1				
			0.4				
20			2.1				
			0.5				
			0.5	SC	Clayey Sand: abundant pebbles/gravel, some cobbles (up to 3" diameter)		
		100	0.3				
			0.2				
25			0.3				
			0.4		Gravelly Sand: gray, medium to coarse sand with abundant pebbles, well rounded, moist, some large cobbles		
			0.3				
		100	0.4				
			1.5				
30							

NOTES: - - -

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TGE RESOURCES, INC.
8048 Northcourt Road
Houston, Texas 77040
(713) 744-5800
(713) 744-5888 (fax)

BORING LOG

BOREHOLE NO.: **TSB-1**
LATITUDE: **47.33513700**
LONGITUDE: **-122.31301150**
TOC ELEVATION: **---**

PROJECT INFORMATION

PROJECT NAME:	**Future Star Lake Hospital**
SITE LOCATION:	**29805 Pacific HWY S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/25/17**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrell**
TOTAL DEPTH:	**110**
SURFACE ELEVATION:	**---**

▼ Water level during drilling ▼ Static water level

DEPTH	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	TEMPORARY SOIL BORING WELL CONSTRUCTION
30			0.3				
			0.3				
		100	0.3				
			0.3				
35			0.3				
			0.3				
			0.9				
		100	0.4				
			0.9				
			0.8				
40			0.7	SW	- silty, dry with intermittent bands of moisture		2 inch diam. Sch. 40 PVC blank well casing
			1.3				
		100	1.6				
			3.5				
			3.8				
45			0.5				
			0.3				
			0.2				
		100	0.3				
			0.3				
50			0.3				
			0.4				
			0.9				
		100	0.5				
			0.3				
55			0.3				
			0.2		Clayey Sand: abundant gravel, perched zone from 55 to 57 fbg then dry		
			0.2	SC			
		100	0.3				
			0.2				
60							

NOTES: - - -

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BORING LOG

BOREHOLE NO.: **TSB-1**
LATITUDE: **47.33513700**
LONGITUDE: **-122.31301150**
TOC ELEVATION: **---**

PROJECT INFORMATION

PROJECT NAME:	**Future Star Lake Hospital**
SITE LOCATION:	**29805 Pacific HWY S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/25/17**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrell**
TOTAL DEPTH:	**110**
SURFACE ELEVATION:	**---**

Water level during drilling ▼ Static water level ▼

DEPTH	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	TEMPORARY SOIL BORING WELL CONSTRUCTION
60			0.3		- large cobbles (~5" diameter)		
			0.3	GC	Clayey Gravel: gray, very moist, silty		
		100	0.3				
			0.3				
			0.5	ML	Silt: gray, few cobbles, dry		
65			0.4		Gravelly Clay: Gray, stiff, low plasticity		
			0.3				
		100	0.3				
			0.3				
			0.2				
70			0.0				
			0.3				
		100	0.2				
			0.2	CL			
			0.2				
75			0.2				
			3.8				
		100	1.7				
			0.3				
			3.2				
80			1.8				
			0.4				
		100	0.0		Sand: tan, well sorted, fine sand, no pebbles/cobbles/gravels		
			0.0				
			0.0	SP			
85			0.0				
			0.0				
		100	0.0				
			0.0				
			0.0				
90			0.0		Gravelly Sand: gray to tan, abundant pebbles, iron		

bentonite chips

NOTES: - - -

Boring logs should not be used separately from the original report.

TGE RESOURCES, INC.
8048 Northcourt Road
Houston, Texas 77040
(713) 744-5800
(713) 744-5888 (fax)

BORING LOG

BOREHOLE NO.: **TSB-1**
LATITUDE: **47.33513700**
LONGITUDE: **-122.31301150**
TOC ELEVATION: **---**

PROJECT INFORMATION

PROJECT NAME:	**Future Star Lake Hospital**
SITE LOCATION:	**29805 Pacific HWY S**
CITY, STATE	**Federal Way, Washington**
TGE PROJECT NO.:	**R13411.04**
LOGGED BY:	**E. Sitler**
CLIENT:	**MultiCare Health System**
DATES DRILLED:	**10/25/17**

DRILLING INFORMATION

DRILLING CO.:	**Cascade Drilling**
DRILLER:	**Z. Shaderick**
RIG TYPE:	**Boart Longyear 200 C**
METHOD OF DRILLING:	**Sonic**
SAMPLING METHOD:	**Sonic Barrell**
TOTAL DEPTH:	**110**
SURFACE ELEVATION:	**---**

Water level during drilling ▼ Static water level ▼

DEPTH	SAMPLE	% RECOVERY	ORGANIC VAPOR (ppm)	USCS	LITHOLOGIC DESCRIPTION	SOIL PROFILE	TEMPORARY SOIL BORING WELL CONSTRUCTION
90			0.0				
			0.0				
		100	0.0				
			0.0				
95			0.0				
			0.0				
			0.0				
		100	0.0	SW	staining, coarsening with depth, well rounded clasts, moderately sorted		10/20 sand filter pack
			0.0				2 inch diam. Sch. 40 PVC 0.01 inch slotted well screen
100			0.0				
			0.0				
			0.0				
		100	0.0				
			0.0				
105			0.0				
			0.0				
			0.0	SP	Sand: coarse sand, moist, some well rounded cobbles, fluvial deposition, no fine sediment		
		100	0.0				
			0.0				
110			0.0				

NOTES: Following completion of boring to 110 fbg, 30 feet of screened PVC was installed within the open borehole and left overnight to account for a slow recharge, however TSB-1 remained dry at the time of plugging on 10/27/2017.

Boring logs should not be used separately from the original report.

APPENDIX C

ANALYTICAL REPORT

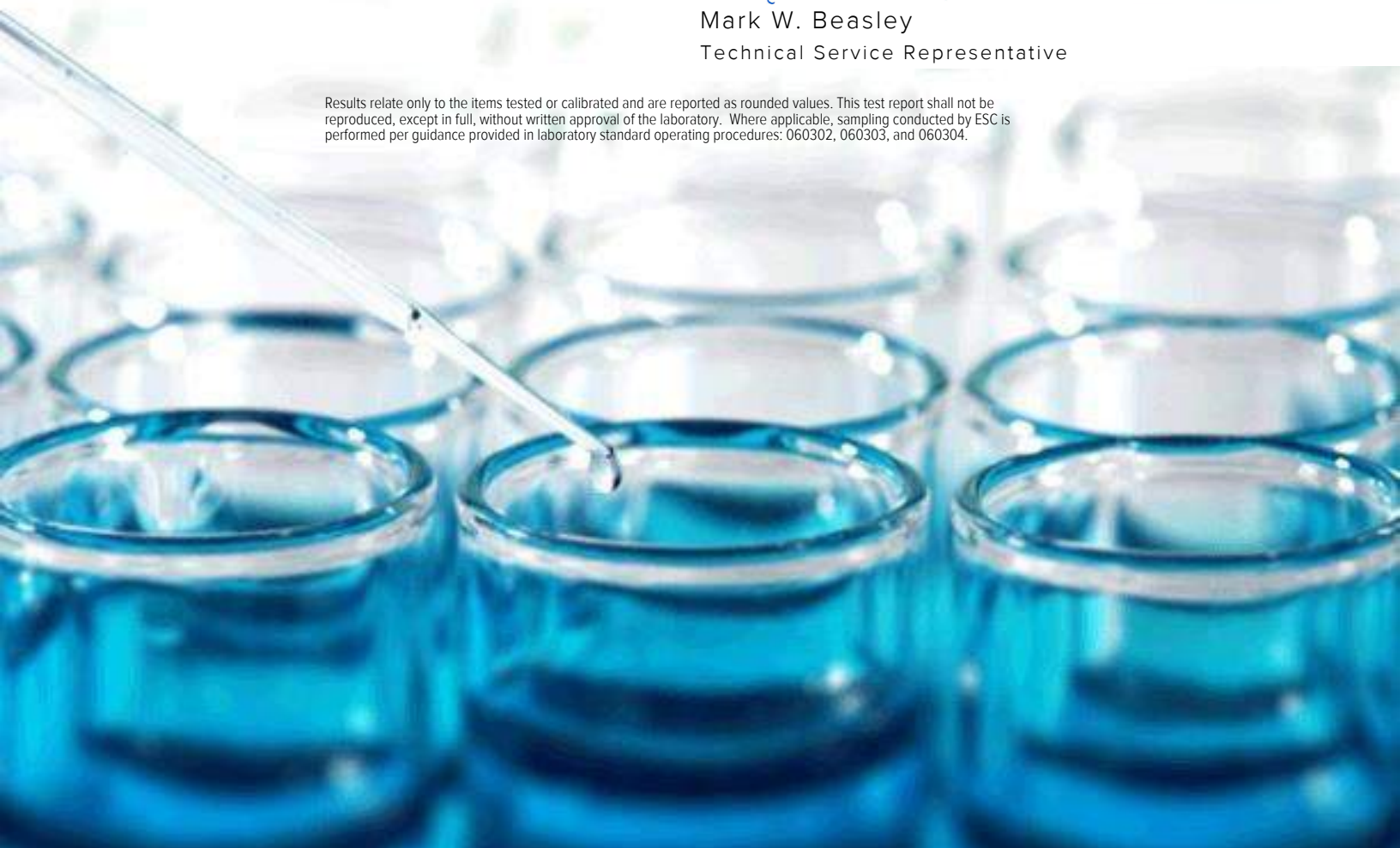
October 31, 2017

TGE Resources

Sample Delivery Group:	L946526
Samples Received:	10/26/2017
Project Number:	R13411.04
Description:	Future Star Lake Hospital
Site:	29805 PACIFIC
Report To:	Kristi Barnette 8048 Northcourt Road Houston, TX 77040

Entire Report Reviewed By:

Mark W. Beasley
Technical Service Representative



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TSB-1 (4.5-5.5) L946526-01 Solid

Collected by	Collected date/time	Received date/time
Evan Sitler	10/25/17 09:15	10/26/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037197	1	10/31/17 08:38	10/31/17 08:48	JD
Mercury by Method 7471A	WG1036762	1	10/30/17 15:17	10/31/17 08:14	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 05:55	10/31/17 09:56	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1035971	1	10/25/17 09:15	10/26/17 23:19	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1035964	1	10/25/17 09:15	10/27/17 01:19	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1035927	1	10/27/17 06:42	10/28/17 00:31	DMG

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Technical Service Representative

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

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

Mark W. Beasley
Technical Service Representative

Laboratory Review Checklist: Reportable Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:21
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946526-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1035964, WG1035971, WG1035927, WG1036762, WG1036378 and WG1037197

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?		X			1
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review Checklist: Supporting Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:21
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946526-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1035964, WG1035971, WG1035927, WG1036762, WG1036378 and WG1037197

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

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

Laboratory Review Checklist: Exception Reports

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:21
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946526-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1035964, WG1035971, WG1035927, WG1036762, WG1036378 and WG1037197

ER #[1]	Description
1	8260C WG1035964 Trichlorofluoromethane: Relative Percent Difference is outside of established control limits.

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	10/31/2017 08:48	WG1037197

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0193	J	0.00297	0.0200	0.0212	1	10/31/2017 08:14	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.83	J	0.691	2.00	2.12	1	10/31/2017 09:56	WG1036378
Barium	44.7		0.181	0.500	0.531	1	10/31/2017 09:56	WG1036378
Cadmium	U		0.0744	0.500	0.531	1	10/31/2017 09:56	WG1036378
Chromium	15.9		0.149	1.00	1.06	1	10/31/2017 09:56	WG1036378
Lead	1.19		0.202	0.500	0.531	1	10/31/2017 09:56	WG1036378
Selenium	U		0.786	2.00	2.12	1	10/31/2017 09:56	WG1036378
Silver	U		0.297	1.00	1.06	1	10/31/2017 09:56	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0423	J	0.0360	0.100	0.106	1	10/26/2017 23:19	WG1035971
(S) a,a,a-Trifluorotoluene(FID)	*98.4*				*77.0-120*		*10/26/2017 23:19*	WG1035971

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0183	J	0.0106	0.0500	0.0531	1	10/27/2017 01:19	WG1035964
Acrylonitrile	U		0.00190	0.0100	0.0106	1	10/27/2017 01:19	WG1035964
Benzene	U		0.000287	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Bromobenzene	U		0.000302	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Bromodichloromethane	U		0.000270	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Bromoform	U		0.000450	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Bromomethane	U		0.00142	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
n-Butylbenzene	U		0.000274	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
sec-Butylbenzene	U		0.000214	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
tert-Butylbenzene	U		0.000219	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Carbon tetrachloride	U		0.000348	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Chlorobenzene	U		0.000225	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Chlorodibromomethane	U		0.000396	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Chloroethane	U		0.00101	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
Chloroform	U		0.000243	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
Chloromethane	U		0.000398	0.00250	0.00266	1	10/27/2017 01:19	WG1035964
2-Chlorotoluene	U		0.000320	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
4-Chlorotoluene	U		0.000255	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2-Dibromo-3-Chloropropane	U		0.00112	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
1,2-Dibromoethane	U		0.000364	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Dibromomethane	U		0.000406	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2-Dichlorobenzene	U		0.000324	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,3-Dichlorobenzene	U		0.000254	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,4-Dichlorobenzene	U		0.000240	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Dichlorodifluoromethane	U		0.000758	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
1,1-Dichloroethane	U		0.000211	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2-Dichloroethane	U		0.000282	0.00100	0.00106	1	10/27/2017 01:19	WG1035964

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000322	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
cis-1,2-Dichloroethene	U		0.000250	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
trans-1,2-Dichloroethene	U		0.000280	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2-Dichloropropane	U		0.000380	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1-Dichloropropene	U		0.000337	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,3-Dichloropropane	U		0.000220	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
cis-1,3-Dichloropropene	U		0.000278	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
trans-1,3-Dichloropropene	U		0.000284	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
2,2-Dichloropropane	U		0.000296	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Di-isopropyl ether	U		0.000263	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Ethylbenzene	U		0.000316	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Hexachloro-1,3-butadiene	U		0.000363	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Isopropylbenzene	U		0.000258	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
p-Isopropyltoluene	U		0.000217	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
2-Butanone (MEK)	0.00526	J	0.00497	0.0100	0.0106	1	10/27/2017 01:19	WG1035964
Methylene Chloride	U		0.00106	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
4-Methyl-2-pentanone (MIBK)	U		0.00200	0.0100	0.0106	1	10/27/2017 01:19	WG1035964
Methyl tert-butyl ether	U		0.000225	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Naphthalene	U		0.00106	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
n-Propylbenzene	U		0.000219	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Styrene	U		0.000249	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1,1,2-Tetrachloroethane	U		0.000280	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1,2,2-Tetrachloroethane	U		0.000388	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1,2-Trichlorotrifluoroethane	U		0.000388	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Tetrachloroethene	U		0.000293	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Toluene	U		0.000461	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
1,2,3-Trichlorobenzene	U		0.000325	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2,4-Trichlorobenzene	U		0.000412	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1,1-Trichloroethane	U		0.000304	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,1,2-Trichloroethane	U		0.000294	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Trichloroethene	U		0.000296	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Trichlorofluoromethane	U		0.000406	0.00500	0.00531	1	10/27/2017 01:19	WG1035964
1,2,3-Trichloropropane	U		0.000787	0.00250	0.00266	1	10/27/2017 01:19	WG1035964
1,2,4-Trimethylbenzene	0.000270	J	0.000224	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,2,3-Trimethylbenzene	0.000393	J	0.000305	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Vinyl chloride	U		0.000309	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
1,3,5-Trimethylbenzene	U		0.000283	0.00100	0.00106	1	10/27/2017 01:19	WG1035964
Xylenes, Total	U		0.000742	0.00300	0.00319	1	10/27/2017 01:19	WG1035964
(S) Toluene-d8	*98.8*				*80.0-120*		*10/27/2017 01:19*	WG1035964
(S) Dibromofluoromethane	*105*				*74.0-131*		*10/27/2017 01:19*	WG1035964
(S) 4-Bromofluorobenzene	*105*				*64.0-132*		*10/27/2017 01:19*	WG1035964

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.42	4.00	4.25	1	10/28/2017 00:31	WG1035927
Residual Range Organics (RRO)	U		3.54	10.0	10.6	1	10/28/2017 00:31	WG1035927
(S) o-Terphenyl	*85.0*				*18.0-148*		*10/28/2017 00:31*	WG1035927

Method Blank (MB)

(MB) R3261869-1 10/31/17 08:48

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0			

L946526-01 Original Sample (OS) • Duplicate (DUP)

(OS) L946526-01 10/31/17 08:48 • (DUP) R3261869-3 10/31/17 08:48

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.1	93.8	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3261869-2 10/31/17 08:48

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3261787-1 10/31/17 07:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0028	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261787-2 10/31/17 08:01 • (LCSD) R3261787-3 10/31/17 08:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.289	0.294	96	98	80-120			2	20

L946745-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946745-01 10/31/17 08:05 • (MS) R3261787-4 10/31/17 08:07 • (MSD) R3261787-5 10/31/17 08:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.0226	0.301	0.309	93	95	1	75-125			2	20

Method Blank (MB)

(MB) R3261798-1 10/31/17 09:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Lead	U		0.19	0.500
Selenium	U		0.74	2.00
Silver	U		0.28	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261798-2 10/31/17 09:04 • (LCSD) R3261798-3 10/31/17 09:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	99.0	97.8	99	98	80-120			1	20
Barium	100	104	103	104	103	80-120			1	20
Cadmium	100	98.8	97.7	99	98	80-120			1	20
Chromium	100	99.5	98.7	99	99	80-120			1	20
Lead	100	100	99.5	100	100	80-120			1	20
Selenium	100	99.1	98.6	99	99	80-120			0	20
Silver	20.0	18.4	18.3	92	91	80-120			1	20

L945976-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L945976-21 10/31/17 09:10 • (MS) R3261798-6 10/31/17 09:19 • (MSD) R3261798-7 10/31/17 09:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	20.0	118	117	98	96	1	75-125			1	20
Barium	100	117	215	212	97	95	1	75-125			1	20
Cadmium	100	ND	98.4	97.3	98	97	1	75-125			1	20
Chromium	100	14.3	108	108	93	93	1	75-125			0	20
Lead	100	6.41	107	107	101	101	1	75-125			0	20
Selenium	100	ND	97.0	96.9	97	97	1	75-125			0	20
Silver	20.0	ND	18.6	18.2	93	91	1	75-125			2	20

Method Blank (MB)

(MB) R3260991-3 10/26/17 17:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3260991-1 10/26/17 16:30 • (LCSD) R3260991-2 10/26/17 16:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	4.97	5.26	90.4	95.6	70.0-133			5.61	20
(S) a,a,a-Trifluorotoluene(FID)				*103*	*103*	*77.0-120*				

L946432-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946432-01 10/27/17 00:03 • (MS) R3260991-4 10/27/17 00:25 • (MSD) R3260991-5 10/27/17 00:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	196	566	562	67.3	66.5	100	10.0-146			0.750	30
(S) a,a,a-Trifluorotoluene(FID)					*101*	*101*		*77.0-120*				

Method Blank (MB)

(MB) R3260989-3 10/26/17 23:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100

Method Blank (MB)

(MB) R3260989-3 10/26/17 23:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*99.6*			*74.0-131*
(S) 4-Bromofluorobenzene	*105*			*64.0-132*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3260989-1 10/26/17 21:02 • (LCSD) R3260989-2 10/26/17 22:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.150	0.172	120	138	11.0-160			14.2	23
Acrylonitrile	0.125	0.137	0.138	110	110	61.0-143			0.530	20
Benzene	0.0250	0.0240	0.0235	96.1	93.9	71.0-124			2.33	20
Bromobenzene	0.0250	0.0241	0.0242	96.3	96.6	78.0-120			0.330	20
Bromodichloromethane	0.0250	0.0238	0.0240	95.2	96.1	75.0-120			0.960	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3260989-1 10/26/17 21:02 • (LCSD) R3260989-2 10/26/17 22:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.0250	0.0243	0.0254	97.2	102	65.0-133			4.56	20
Bromomethane	0.0250	0.0265	0.0262	106	105	26.0-160			1.36	20
n-Butylbenzene	0.0250	0.0287	0.0286	115	115	73.0-126			0.0400	20
sec-Butylbenzene	0.0250	0.0276	0.0274	110	110	75.0-121			0.590	20
tert-Butylbenzene	0.0250	0.0267	0.0258	107	103	74.0-122			3.48	20
Carbon tetrachloride	0.0250	0.0233	0.0228	93.1	91.3	66.0-123			1.94	20
Chlorobenzene	0.0250	0.0250	0.0246	100	98.5	79.0-121			1.54	20
Chlorodibromomethane	0.0250	0.0247	0.0257	98.8	103	74.0-128			3.99	20
Chloroethane	0.0250	0.0261	0.0255	105	102	51.0-147			2.34	20
Chloroform	0.0250	0.0241	0.0239	96.6	95.4	73.0-123			1.20	20
Chloromethane	0.0250	0.0239	0.0241	95.6	96.5	51.0-138			0.890	20
2-Chlorotoluene	0.0250	0.0276	0.0275	111	110	72.0-124			0.540	20
4-Chlorotoluene	0.0250	0.0255	0.0258	102	103	78.0-120			0.940	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0249	0.0267	99.6	107	65.0-126			7.07	20
1,2-Dibromoethane	0.0250	0.0240	0.0248	96.1	99.1	78.0-122			3.09	20
Dibromomethane	0.0250	0.0231	0.0235	92.5	94.0	79.0-120			1.54	20
1,2-Dichlorobenzene	0.0250	0.0263	0.0261	105	105	80.0-120			0.710	20
1,3-Dichlorobenzene	0.0250	0.0266	0.0271	106	108	72.0-123			1.65	20
1,4-Dichlorobenzene	0.0250	0.0247	0.0254	98.9	101	77.0-120			2.52	20
Dichlorodifluoromethane	0.0250	0.0213	0.0245	85.4	97.9	49.0-155			13.6	20
1,1-Dichloroethane	0.0250	0.0246	0.0243	98.3	97.3	70.0-128			0.980	20
1,2-Dichloroethane	0.0250	0.0252	0.0250	101	100	69.0-128			0.680	20
1,1-Dichloroethene	0.0250	0.0247	0.0238	98.8	95.3	63.0-131			3.52	20
cis-1,2-Dichloroethene	0.0250	0.0246	0.0231	98.6	92.6	74.0-123			6.29	20
trans-1,2-Dichloroethene	0.0250	0.0238	0.0231	95.1	92.5	72.0-122			2.87	20
1,2-Dichloropropane	0.0250	0.0252	0.0255	101	102	75.0-126			1.16	20
1,1-Dichloropropene	0.0250	0.0250	0.0239	99.8	95.8	72.0-130			4.15	20
1,3-Dichloropropane	0.0250	0.0247	0.0249	98.7	99.5	80.0-121			0.760	20
cis-1,3-Dichloropropene	0.0250	0.0254	0.0254	101	102	80.0-125			0.230	20
trans-1,3-Dichloropropene	0.0250	0.0236	0.0236	94.3	94.4	75.0-129			0.180	20
2,2-Dichloropropane	0.0250	0.0240	0.0234	96.0	93.8	60.0-129			2.32	20
Di-isopropyl ether	0.0250	0.0259	0.0259	104	103	62.0-133			0.0900	20
Ethylbenzene	0.0250	0.0263	0.0262	105	105	77.0-120			0.600	20
Hexachloro-1,3-butadiene	0.0250	0.0300	0.0296	120	118	68.0-128			1.28	20
Isopropylbenzene	0.0250	0.0260	0.0255	104	102	75.0-120			2.06	20
p-Isopropyltoluene	0.0250	0.0280	0.0274	112	110	74.0-125			2.19	20
2-Butanone (MEK)	0.125	0.123	0.142	98.5	114	37.0-159			14.5	20
Methylene Chloride	0.0250	0.0228	0.0224	91.2	89.4	67.0-123			2.00	20
4-Methyl-2-pentanone (MIBK)	0.125	0.138	0.153	111	122	60.0-144			9.84	20
Methyl tert-butyl ether	0.0250	0.0259	0.0267	104	107	66.0-125			3.23	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3260989-1 10/26/17 21:02 • (LCSD) R3260989-2 10/26/17 22:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0250	0.0262	0.0273	105	109	64.0-125			4.17	20
n-Propylbenzene	0.0250	0.0264	0.0263	106	105	78.0-120			0.260	20
Styrene	0.0250	0.0265	0.0262	106	105	78.0-124			1.16	20
1,1,1,2-Tetrachloroethane	0.0250	0.0248	0.0241	99.1	96.2	74.0-124			2.97	20
1,1,2,2-Tetrachloroethane	0.0250	0.0229	0.0245	91.5	98.0	73.0-120			6.85	20
Tetrachloroethene	0.0250	0.0255	0.0248	102	99.1	70.0-127			2.73	20
Toluene	0.0250	0.0236	0.0233	94.6	93.0	77.0-120			1.65	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0252	0.0245	101	98.1	64.0-135			2.76	20
1,2,3-Trichlorobenzene	0.0250	0.0256	0.0259	102	104	68.0-126			1.40	20
1,2,4-Trichlorobenzene	0.0250	0.0277	0.0291	111	117	70.0-127			4.89	20
1,1,1-Trichloroethane	0.0250	0.0244	0.0235	97.6	94.0	69.0-125			3.76	20
1,1,2-Trichloroethane	0.0250	0.0238	0.0247	95.0	98.6	78.0-120			3.70	20
Trichloroethene	0.0250	0.0246	0.0241	98.5	96.4	79.0-120			2.18	20
Trichlorofluoromethane	0.0250	0.0256	0.0257	102	103	59.0-136			0.370	20
1,2,3-Trichloropropane	0.0250	0.0253	0.0274	101	109	73.0-124			7.94	20
1,2,3-Trimethylbenzene	0.0250	0.0259	0.0256	103	103	76.0-120			0.920	20
1,2,4-Trimethylbenzene	0.0250	0.0260	0.0259	104	104	75.0-120			0.380	20
1,3,5-Trimethylbenzene	0.0250	0.0281	0.0275	113	110	75.0-120			2.10	20
Vinyl chloride	0.0250	0.0256	0.0255	102	102	63.0-134			0.580	20
Xylenes, Total	0.0750	0.0767	0.0757	102	101	77.0-120			1.31	20
(S) Toluene-d8				*102*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*101*	*99.5*	*74.0-131*				
(S) 4-Bromofluorobenzene				*98.4*	*100*	*64.0-132*				

L946205-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946205-08 10/27/17 04:27 • (MS) R3260989-4 10/27/17 07:36 • (MSD) R3260989-5 10/27/17 07:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	ND	2.55	3.19	81.4	102	25	10.0-160			22.4	36
Acrylonitrile	0.125	ND	3.09	3.52	98.9	112	25	14.0-160			12.8	33
Benzene	0.0250	ND	0.539	0.575	86.2	92.0	25	13.0-146			6.52	27
Bromobenzene	0.0250	ND	0.505	0.533	80.8	85.2	25	10.0-149			5.31	33
Bromodichloromethane	0.0250	ND	0.510	0.539	81.6	86.3	25	15.0-142			5.60	28
Bromoform	0.0250	ND	0.454	0.499	72.7	79.8	25	10.0-147			9.42	31
Bromomethane	0.0250	ND	0.393	0.395	62.8	63.2	25	10.0-160			0.620	32
n-Butylbenzene	0.0250	ND	0.619	0.627	96.1	97.4	25	10.0-154			1.34	37
sec-Butylbenzene	0.0250	0.0254	0.623	0.656	95.6	101	25	10.0-151			5.28	36
tert-Butylbenzene	0.0250	ND	0.587	0.616	93.9	98.6	25	10.0-152			4.95	35

L946205-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946205-08 10/27/17 04:27 • (MS) R3260989-4 10/27/17 07:36 • (MSD) R3260989-5 10/27/17 07:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.0250	ND	0.498	0.538	79.6	86.1	25	13.0-140			7.82	30
Chlorobenzene	0.0250	ND	0.547	0.572	87.5	91.6	25	10.0-149			4.52	31
Chlorodibromomethane	0.0250	ND	0.503	0.546	80.5	87.4	25	12.0-147			8.12	29
Chloroethane	0.0250	ND	0.119	0.144	19.0	23.0	25	10.0-159			19.0	33
Chloroform	0.0250	ND	0.534	0.574	85.4	91.9	25	18.0-148			7.32	28
Chloromethane	0.0250	ND	0.446	0.486	71.3	77.8	25	10.0-146			8.74	29
2-Chlorotoluene	0.0250	ND	0.611	0.639	97.8	102	25	10.0-151			4.54	35
4-Chlorotoluene	0.0250	ND	0.583	0.601	93.2	96.2	25	10.0-150			3.14	35
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.487	0.511	78.0	81.8	25	10.0-149			4.72	34
1,2-Dibromoethane	0.0250	ND	0.507	0.547	81.1	87.5	25	14.0-145			7.60	28
Dibromomethane	0.0250	ND	0.499	0.539	79.8	86.2	25	18.0-144			7.78	27
1,2-Dichlorobenzene	0.0250	ND	0.567	0.581	90.7	92.9	25	10.0-153			2.32	34
1,3-Dichlorobenzene	0.0250	ND	0.563	0.585	90.1	93.6	25	10.0-150			3.86	35
1,4-Dichlorobenzene	0.0250	ND	0.533	0.534	85.3	85.4	25	10.0-148			0.0900	34
Dichlorodifluoromethane	0.0250	ND	0.397	0.426	63.5	68.1	25	10.0-160			6.99	30
1,1-Dichloroethane	0.0250	ND	0.544	0.586	87.1	93.8	25	19.0-148			7.43	28
1,2-Dichloroethane	0.0250	ND	0.547	0.581	87.4	93.0	25	17.0-147			6.14	27
1,1-Dichloroethene	0.0250	ND	0.415	0.447	66.3	71.6	25	10.0-150			7.62	31
cis-1,2-Dichloroethene	0.0250	ND	0.556	0.594	88.9	95.0	25	16.0-145			6.63	28
trans-1,2-Dichloroethene	0.0250	ND	0.530	0.563	84.8	90.1	25	11.0-142			6.07	29
1,2-Dichloropropane	0.0250	ND	0.542	0.569	86.7	91.1	25	17.0-148			4.99	28
1,1-Dichloropropene	0.0250	ND	0.564	0.600	90.2	95.9	25	10.0-150			6.15	30
1,3-Dichloropropane	0.0250	ND	0.530	0.569	84.8	91.0	25	16.0-148			7.06	27
cis-1,3-Dichloropropene	0.0250	ND	0.545	0.583	87.1	93.3	25	13.0-150			6.84	28
trans-1,3-Dichloropropene	0.0250	ND	0.505	0.539	80.8	86.2	25	10.0-152			6.45	29
2,2-Dichloropropane	0.0250	ND	0.448	0.468	71.7	74.8	25	16.0-143			4.31	30
Di-isopropyl ether	0.0250	ND	0.562	0.613	89.9	98.1	25	16.0-149			8.74	28
Ethylbenzene	0.0250	ND	0.583	0.606	93.2	96.9	25	10.0-147			3.91	31
Hexachloro-1,3-butadiene	0.0250	ND	0.566	0.552	90.5	88.3	25	10.0-154			2.41	40
Isopropylbenzene	0.0250	ND	0.575	0.602	90.1	94.4	25	10.0-147			4.57	33
p-Isopropyltoluene	0.0250	ND	0.610	0.631	96.5	99.9	25	10.0-156			3.40	37
2-Butanone (MEK)	0.125	ND	3.44	3.75	110	120	25	10.0-160			8.74	33
Methylene Chloride	0.0250	ND	0.525	0.557	83.9	89.2	25	16.0-139			6.09	29
4-Methyl-2-pentanone (MIBK)	0.125	ND	4.47	4.72	143	151	25	12.0-160			5.38	32
Methyl tert-butyl ether	0.0250	ND	0.540	0.586	86.4	93.8	25	21.0-145			8.21	29
Naphthalene	0.0250	ND	0.539	0.507	86.3	81.1	25	10.0-153			6.22	36
n-Propylbenzene	0.0250	0.0688	0.630	0.651	89.7	93.2	25	10.0-151			3.39	34
Styrene	0.0250	ND	0.588	0.631	94.1	101	25	10.0-155			7.03	34
1,1,1,2-Tetrachloroethane	0.0250	ND	0.517	0.547	82.7	87.5	25	10.0-147			5.71	30
1,1,2,2-Tetrachloroethane	0.0250	ND	0.675	0.694	108	111	25	10.0-155			2.81	31

L946205-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946205-08 10/27/17 04:27 • (MS) R3260989-4 10/27/17 07:36 • (MSD) R3260989-5 10/27/17 07:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Tetrachloroethene	0.0250	ND	0.527	0.567	84.4	90.7	25	10.0-144			7.23	32
Toluene	0.0250	ND	0.527	0.559	84.3	89.4	25	10.0-144			5.88	28
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.452	0.477	72.4	76.2	25	10.0-153			5.17	33
1,2,3-Trichlorobenzene	0.0250	ND	0.529	0.505	84.7	80.9	25	10.0-153			4.62	40
1,2,4-Trichlorobenzene	0.0250	ND	0.587	0.546	93.9	87.4	25	10.0-156			7.11	40
1,1,1-Trichloroethane	0.0250	ND	0.505	0.528	80.8	84.5	25	18.0-145			4.49	29
1,1,2-Trichloroethane	0.0250	ND	0.724	0.733	116	117	25	12.0-151			1.32	28
Trichloroethene	0.0250	ND	0.534	0.577	85.4	92.3	25	11.0-148			7.69	29
Trichlorofluoromethane	0.0250	ND	0.177	0.399	28.4	63.9	25	10.0-157		J3	77.0	34
1,2,3-Trichloropropane	0.0250	ND	0.573	0.646	91.7	103	25	10.0-154			11.9	32
1,2,3-Trimethylbenzene	0.0250	ND	0.619	0.635	95.4	98.0	25	10.0-150			2.58	33
1,2,4-Trimethylbenzene	0.0250	0.177	0.734	0.757	89.3	92.8	25	10.0-151			3.00	34
1,3,5-Trimethylbenzene	0.0250	0.0421	0.648	0.673	96.9	101	25	10.0-150			3.84	33
Vinyl chloride	0.0250	ND	0.483	0.520	77.2	83.2	25	10.0-150			7.46	29
Xylenes, Total	0.0750	ND	1.69	1.77	89.9	94.2	25	10.0-150			4.75	31
(S) Toluene-d8					*101*	*99.1*		*80.0-120*				
(S) Dibromofluoromethane					*97.3*	*95.0*		*74.0-131*				
(S) 4-Bromofluorobenzene					*109*	*105*		*64.0-132*				

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.

Method Blank (MB)

(MB) R3261130-1 10/27/17 10:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*90.6*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261130-2 10/27/17 10:38 • (LCSD) R3261130-3 10/27/17 10:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.0	23.3	22.6	77.5	75.3	50.0-150			2.94	20
Residual Range Organics (RRO)	30.0	23.1	22.5	77.1	74.9	50.0-150			2.86	20
(S) o-Terphenyl				*80.0*	*75.2*	*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

TGE Resources
8040 Northcourt Rd.
Houston, TX 77040

Billing Information:
Account Payable
8040 Northcourt Rd.
Houston, TX 77040

Pres Chk

Report to: **Kristi Banette, Evan Sitler**

Email To: Kristi@TGEresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: 713-744-5800
Fax:

Client Project # R13411.04

Lab Project # TGERESHTX-R13411

Collected by (print): Evan Sitler

Site/Facility ID # 29805 Pacific Hwy South

P.O. # 7759

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 194524
10-144

Acctnum: TGERESHTX
Template:
Prelogin:
TSR: Mark Beasley
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH, GRO	V8260	MRCRA8	HOLD	pH	Remarks	Sample # (lab only)
TSB-1 (4.5-5.5)	Grab	SS	4.5-5.5'	10/25/17	0915	6	✓	✓	✓	✓	✓	✓			-01
TSB-1 (10.5-11.5)	Grab	SS	10.5-11.5'	10/25/17	0930	6	✓	✓	✓	✓	✓	✓	✓		
TSB-1 (20-21)	Grab	SS	20-21'	10/25/17	0945	6	✓	✓	✓	✓	✓	✓			
TSB-1 (38-39)	Grab	SS	38-39'	10/25/17	1000	6	✓	✓	✓	✓	✓	✓			
TSB-1 (52-53)	Grab	SS	52-53'	10/25/17	1120	6	✓	✓	✓	✓	✓	✓			

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Hold all Soil Samples

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No, HCL / MeoH, TBR
	10/25/17	1700		1
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				1.2 30
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				10/26/17 0845

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

MW 11

Susan Peach

From: Jason Romer
Sent: Thursday, October 26, 2017 3:05 PM
To: Reporting
Cc: Olivia Studebaker; Mark Beasley
Subject: FW: *TGERESHTX* rush arrived today, 10/26

Please scan this email with the COC.

1 SS for V8260C, NWTPHGX, NWTPHDXNOSGT, MRCRA8 and TS. Due 10/31.

Logged to L946526.

From: Jason Romer
Sent: Thursday, October 26, 2017 2:13 PM
To: Login; Due SVOC; Due Metals; Due VOC
Cc: Mark Beasley
Subject: *TGERESHTX* rush arrived today, 10/26

1 SS for V8260C, NWTPHGX, NWTPHDXNOSGT, MRCRA8 and TS. **Log as R1 due 10/31.**

Thanks,

Jason Romer
Project Manager

ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
800.767.5859 Ext. 9713| Direct 615.773.9713
jromer@esclabsciences.com | www.esclabsciences.com

Susan Peach

From: Jason Romer
Sent: Thursday, October 26, 2017 3:05 PM
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Please scan this email with the COC.

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Thanks,

Jason Romer
Project Manager

ESC Lab Sciences-a subsidiary of Pace Analytical
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800.767.5859 Ext. 9713| Direct 615.773.9713
jromer@esclabsciences.com | www.esclabsciences.com

ANALYTICAL REPORT

October 31, 2017

TGE Resources

Sample Delivery Group:	L946745
Samples Received:	10/27/2017
Project Number:	R13411.04
Description:	Future Star Lake Hospital
Site:	29805 PACIFIC HWY
Report To:	Kristi Barnette 8048 Northcourt Road Houston, TX 77040

Entire Report Reviewed By:

Mark W. Beasley
Technical Service Representative

TABLE OF CONTENTS

SB-6 1-2 L946745-01 Solid

Collected by: Evan Sitler
Collected date/time: 10/26/17 14:45
Received date/time: 10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037198	1	10/31/17 08:23	10/31/17 08:32	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:17	10/31/17 08:05	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 05:55	10/31/17 09:59	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036348	1	10/27/17 11:59	10/27/17 13:55	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036523	1	10/27/17 11:59	10/27/17 23:36	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036907	1	10/31/17 02:05	10/31/17 10:42	ACM

SB-10 1-2 L946745-02 Solid

Collected by: Evan Sitler
Collected date/time: 10/26/17 15:45
Received date/time: 10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037198	1	10/31/17 08:23	10/31/17 08:32	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:17	10/31/17 08:16	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 05:55	10/31/17 10:02	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036348	1	10/27/17 11:59	10/27/17 14:19	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036523	1	10/27/17 11:59	10/27/17 23:57	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036907	10	10/31/17 02:05	10/31/17 11:25	ACM

SB-11 3-4 L946745-03 Solid

Collected by: Evan Sitler
Collected date/time: 10/26/17 15:30
Received date/time: 10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037198	1	10/31/17 08:23	10/31/17 08:32	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:17	10/31/17 08:18	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 05:55	10/31/17 10:05	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036348	1	10/27/17 11:59	10/27/17 14:43	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036523	1	10/27/17 11:59	10/28/17 00:18	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036907	1	10/31/17 02:05	10/31/17 10:57	ACM
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036907	10	10/31/17 02:05	10/31/17 11:53	ACM

SB-11 5-6 L946745-04 Solid

Collected by: Evan Sitler
Collected date/time: 10/26/17 15:35
Received date/time: 10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037199	1	10/31/17 08:51	10/31/17 09:02	JD
Mercury by Method 7471A	WG1036762	1	10/30/17 15:17	10/31/17 08:25	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 05:55	10/31/17 10:09	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036348	1	10/27/17 11:59	10/27/17 15:06	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036523	1	10/27/17 11:59	10/28/17 00:39	DWR
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036907	10	10/31/17 02:05	10/31/17 11:11	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Technical Service Representative

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

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

Mark W. Beasley
Technical Service Representative

Laboratory Review Checklist: Reportable Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:35
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946745-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036348, WG1036523, WG1036907, WG1036762, WG1036378, WG1037198 and WG1037199

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review Checklist: Supporting Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:35
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946745-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036348, WG1036523, WG1036907, WG1036762, WG1036378, WG1037198 and WG1037199

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

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

Laboratory Review Checklist: Exception Reports

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 15:35
Project Name: Future Star Lake Hospital	Laboratory Job Number: L946745-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036348, WG1036523, WG1036907, WG1036762, WG1036378, WG1037198 and WG1037199

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	10/31/2017 08:32	WG1037198

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0244		0.00302	0.0200	0.0216	1	10/31/2017 08:05	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	2.07	J	0.701	2.00	2.16	1	10/31/2017 09:59	WG1036378
Barium	59.4		0.183	0.500	0.539	1	10/31/2017 09:59	WG1036378
Cadmium	0.0759	J	0.0755	0.500	0.539	1	10/31/2017 09:59	WG1036378
Chromium	17.3		0.151	1.00	1.08	1	10/31/2017 09:59	WG1036378
Lead	6.49		0.205	0.500	0.539	1	10/31/2017 09:59	WG1036378
Selenium	U		0.798	2.00	2.16	1	10/31/2017 09:59	WG1036378
Silver	U		0.302	1.00	1.08	1	10/31/2017 09:59	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0415	J	0.0366	0.100	0.108	1	10/27/2017 13:55	WG1036348
(S) a,a,a-Trifluorotoluene(FID)	*94.7*				*77.0-120*		*10/27/2017 13:55*	WG1036348

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0108	0.0500	0.0539	1	10/27/2017 23:36	WG1036523
Acrylonitrile	U		0.00193	0.0100	0.0108	1	10/27/2017 23:36	WG1036523
Benzene	U		0.000291	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Bromobenzene	U		0.000306	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Bromodichloromethane	U		0.000274	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Bromoform	U		0.000457	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Bromomethane	U		0.00145	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
n-Butylbenzene	U		0.000278	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
sec-Butylbenzene	U		0.000217	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
tert-Butylbenzene	U		0.000222	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Carbon tetrachloride	U		0.000354	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Chlorobenzene	U		0.000229	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Chlorodibromomethane	U		0.000402	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Chloroethane	U		0.00102	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
Chloroform	U		0.000247	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
Chloromethane	U		0.000405	0.00250	0.00270	1	10/27/2017 23:36	WG1036523
2-Chlorotoluene	U		0.000325	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
4-Chlorotoluene	U		0.000259	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2-Dibromo-3-Chloropropane	U		0.00113	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
1,2-Dibromoethane	U		0.000370	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Dibromomethane	U		0.000412	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2-Dichlorobenzene	U		0.000329	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,3-Dichlorobenzene	U		0.000258	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,4-Dichlorobenzene	U		0.000244	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Dichlorodifluoromethane	U		0.000769	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
1,1-Dichloroethane	U		0.000215	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2-Dichloroethane	U		0.000286	0.00100	0.00108	1	10/27/2017 23:36	WG1036523

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000327	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
cis-1,2-Dichloroethene	U		0.000254	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
trans-1,2-Dichloroethene	U		0.000285	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2-Dichloropropane	U		0.000386	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1-Dichloropropene	U		0.000342	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,3-Dichloropropane	U		0.000223	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
cis-1,3-Dichloropropene	U		0.000283	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
trans-1,3-Dichloropropene	U		0.000288	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
2,2-Dichloropropane	U		0.000301	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Di-isopropyl ether	U		0.000268	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Ethylbenzene	U		0.000320	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Hexachloro-1,3-butadiene	U		0.000369	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Isopropylbenzene	U		0.000262	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
p-Isopropyltoluene	U		0.000220	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
2-Butanone (MEK)	U		0.00505	0.0100	0.0108	1	10/27/2017 23:36	WG1036523
Methylene Chloride	U		0.00108	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
4-Methyl-2-pentanone (MIBK)	U		0.00203	0.0100	0.0108	1	10/27/2017 23:36	WG1036523
Methyl tert-butyl ether	U		0.000229	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Naphthalene	U		0.00108	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
n-Propylbenzene	U		0.000222	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Styrene	U		0.000252	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1,1,2-Tetrachloroethane	U		0.000285	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1,2,2-Tetrachloroethane	U		0.000394	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1,2-Trichlorotrifluoroethane	U		0.000394	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Tetrachloroethene	U		0.000298	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Toluene	U		0.000468	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
1,2,3-Trichlorobenzene	U		0.000330	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2,4-Trichlorobenzene	U		0.000419	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1,1-Trichloroethane	U		0.000309	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,1,2-Trichloroethane	U		0.000299	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Trichloroethene	U		0.000301	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Trichlorofluoromethane	U		0.000412	0.00500	0.00539	1	10/27/2017 23:36	WG1036523
1,2,3-Trichloropropane	U		0.000799	0.00250	0.00270	1	10/27/2017 23:36	WG1036523
1,2,4-Trimethylbenzene	U		0.000228	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,2,3-Trimethylbenzene	U		0.000310	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Vinyl chloride	U		0.000314	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
1,3,5-Trimethylbenzene	U		0.000287	0.00100	0.00108	1	10/27/2017 23:36	WG1036523
Xylenes, Total	U		0.000753	0.00300	0.00324	1	10/27/2017 23:36	WG1036523
(S) Toluene-d8	*98.0*				*80.0-120*		*10/27/2017 23:36*	WG1036523
(S) Dibromofluoromethane	*107*				*74.0-131*		*10/27/2017 23:36*	WG1036523
(S) 4-Bromofluorobenzene	*95.5*				*64.0-132*		*10/27/2017 23:36*	WG1036523

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.44	4.00	4.31	1	10/31/2017 10:42	WG1036907
Residual Range Organics (RRO)	14.3		3.60	10.0	10.8	1	10/31/2017 10:42	WG1036907
(S) o-Terphenyl	*59.8*				*18.0-148*		*10/31/2017 10:42*	WG1036907

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.7		1	10/31/2017 08:32	WG1037198

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0171	J	0.00296	0.0200	0.0211	1	10/31/2017 08:16	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	2.20		0.686	2.00	2.11	1	10/31/2017 10:02	WG1036378
Barium	48.3		0.180	0.500	0.528	1	10/31/2017 10:02	WG1036378
Cadmium	0.101	J	0.0739	0.500	0.528	1	10/31/2017 10:02	WG1036378
Chromium	15.8		0.148	1.00	1.06	1	10/31/2017 10:02	WG1036378
Lead	7.75		0.201	0.500	0.528	1	10/31/2017 10:02	WG1036378
Selenium	U		0.781	2.00	2.11	1	10/31/2017 10:02	WG1036378
Silver	U		0.296	1.00	1.06	1	10/31/2017 10:02	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0570	J	0.0358	0.100	0.106	1	10/27/2017 14:19	WG1036348
(S) a,a,a-Trifluorotoluene(FID)	*92.7*				*77.0-120*		*10/27/2017 14:19*	WG1036348

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0139	J	0.0106	0.0500	0.0528	1	10/27/2017 23:57	WG1036523
Acrylonitrile	U		0.00189	0.0100	0.0106	1	10/27/2017 23:57	WG1036523
Benzene	U		0.000285	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Bromobenzene	U		0.000300	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Bromodichloromethane	U		0.000268	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Bromoform	U		0.000448	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Bromomethane	U		0.00141	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
n-Butylbenzene	U		0.000272	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
sec-Butylbenzene	U		0.000212	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
tert-Butylbenzene	U		0.000218	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Carbon tetrachloride	U		0.000346	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Chlorobenzene	U		0.000224	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Chlorodibromomethane	U		0.000394	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Chloroethane	U		0.000999	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
Chloroform	U		0.000242	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
Chloromethane	U		0.000396	0.00250	0.00264	1	10/27/2017 23:57	WG1036523
2-Chlorotoluene	U		0.000318	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
4-Chlorotoluene	U		0.000253	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2-Dibromo-3-Chloropropane	U		0.00111	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
1,2-Dibromoethane	U		0.000362	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Dibromomethane	U		0.000403	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2-Dichlorobenzene	U		0.000322	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,3-Dichlorobenzene	U		0.000252	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,4-Dichlorobenzene	U		0.000239	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Dichlorodifluoromethane	U		0.000753	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
1,1-Dichloroethane	U		0.000210	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2-Dichloroethane	U		0.000280	0.00100	0.00106	1	10/27/2017 23:57	WG1036523

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000320	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
cis-1,2-Dichloroethene	U		0.000248	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
trans-1,2-Dichloroethene	U		0.000279	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2-Dichloropropane	U		0.000378	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1-Dichloropropene	U		0.000335	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,3-Dichloropropane	U		0.000219	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
cis-1,3-Dichloropropene	U		0.000277	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
trans-1,3-Dichloropropene	U		0.000282	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
2,2-Dichloropropane	U		0.000295	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Di-isopropyl ether	U		0.000262	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Ethylbenzene	U		0.000314	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Hexachloro-1,3-butadiene	U		0.000361	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Isopropylbenzene	U		0.000257	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
p-Isopropyltoluene	U		0.000215	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
2-Butanone (MEK)	U		0.00494	0.0100	0.0106	1	10/27/2017 23:57	WG1036523
Methylene Chloride	U		0.00106	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
4-Methyl-2-pentanone (MIBK)	U		0.00199	0.0100	0.0106	1	10/27/2017 23:57	WG1036523
Methyl tert-butyl ether	U		0.000224	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Naphthalene	U		0.00106	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
n-Propylbenzene	U		0.000218	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Styrene	U		0.000247	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1,1,2-Tetrachloroethane	U		0.000279	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1,2,2-Tetrachloroethane	U		0.000385	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1,2-Trichlorotrifluoroethane	U		0.000385	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Tetrachloroethene	U		0.000291	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Toluene	0.000496	J	0.000458	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
1,2,3-Trichlorobenzene	U		0.000323	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2,4-Trichlorobenzene	U		0.000410	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1,1-Trichloroethane	U		0.000302	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,1,2-Trichloroethane	U		0.000292	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Trichloroethene	U		0.000295	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Trichlorofluoromethane	U		0.000403	0.00500	0.00528	1	10/27/2017 23:57	WG1036523
1,2,3-Trichloropropane	U		0.000782	0.00250	0.00264	1	10/27/2017 23:57	WG1036523
1,2,4-Trimethylbenzene	U		0.000223	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,2,3-Trimethylbenzene	U		0.000303	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Vinyl chloride	U		0.000307	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
1,3,5-Trimethylbenzene	U		0.000281	0.00100	0.00106	1	10/27/2017 23:57	WG1036523
Xylenes, Total	U		0.000737	0.00300	0.00317	1	10/27/2017 23:57	WG1036523
(S) Toluene-d8	*97.3*				*80.0-120*		*10/27/2017 23:57*	WG1036523
(S) Dibromofluoromethane	*109*				*74.0-131*		*10/27/2017 23:57*	WG1036523
(S) 4-Bromofluorobenzene	*97.3*				*64.0-132*		*10/27/2017 23:57*	WG1036523

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	264		14.1	4.00	42.2	10	10/31/2017 11:25	WG1036907
Residual Range Organics (RRO)	1710		35.2	10.0	106	10	10/31/2017 11:25	WG1036907
(S) o-Terphenyl	*72.4*				*18.0-148*		*10/31/2017 11:25*	WG1036907

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	10/31/2017 08:32	WG1037198

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0270		0.00306	0.0200	0.0219	1	10/31/2017 08:18	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	2.16	J	0.711	2.00	2.19	1	10/31/2017 10:05	WG1036378
Barium	69.9		0.186	0.500	0.547	1	10/31/2017 10:05	WG1036378
Cadmium	0.0853	J	0.0766	0.500	0.547	1	10/31/2017 10:05	WG1036378
Chromium	28.2		0.153	1.00	1.09	1	10/31/2017 10:05	WG1036378
Lead	6.17		0.208	0.500	0.547	1	10/31/2017 10:05	WG1036378
Selenium	U		0.810	2.00	2.19	1	10/31/2017 10:05	WG1036378
Silver	U		0.306	1.00	1.09	1	10/31/2017 10:05	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.48		0.0371	0.100	0.109	1	10/27/2017 14:43	WG1036348
(S) a,a,a-Trifluorotoluene(FID)	*92.7*				*77.0-120*		*10/27/2017 14:43*	WG1036348

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0510	J	0.0109	0.0500	0.0547	1	10/28/2017 00:18	WG1036523
Acrylonitrile	U		0.00196	0.0100	0.0109	1	10/28/2017 00:18	WG1036523
Benzene	U		0.000296	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Bromobenzene	U		0.000311	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Bromodichloromethane	U		0.000278	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Bromoform	U		0.000464	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Bromomethane	U		0.00147	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
n-Butylbenzene	0.00171		0.000282	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
sec-Butylbenzene	0.000801	J	0.000220	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
tert-Butylbenzene	U		0.000225	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Carbon tetrachloride	U		0.000359	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Chlorobenzene	U		0.000232	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Chlorodibromomethane	U		0.000408	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Chloroethane	U		0.00104	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
Chloroform	U		0.000251	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
Chloromethane	U		0.000410	0.00250	0.00274	1	10/28/2017 00:18	WG1036523
2-Chlorotoluene	U		0.000329	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
4-Chlorotoluene	U		0.000263	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2-Dibromo-3-Chloropropane	U		0.00115	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
1,2-Dibromoethane	U		0.000375	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Dibromomethane	U		0.000418	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2-Dichlorobenzene	U		0.000334	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,3-Dichlorobenzene	U		0.000262	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,4-Dichlorobenzene	U		0.000247	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Dichlorodifluoromethane	U		0.000780	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
1,1-Dichloroethane	U		0.000218	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2-Dichloroethane	U		0.000290	0.00100	0.00109	1	10/28/2017 00:18	WG1036523

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000332	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
cis-1,2-Dichloroethene	U		0.000257	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
trans-1,2-Dichloroethene	U		0.000289	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2-Dichloropropane	U		0.000392	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1-Dichloropropene	U		0.000347	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,3-Dichloropropane	U		0.000227	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
cis-1,3-Dichloropropene	U		0.000287	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
trans-1,3-Dichloropropene	U		0.000292	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
2,2-Dichloropropane	U		0.000305	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Di-isopropyl ether	U		0.000271	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Ethylbenzene	U		0.000325	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Hexachloro-1,3-butadiene	U		0.000374	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Isopropylbenzene	U		0.000266	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
p-Isopropyltoluene	0.000885	J	0.000223	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
2-Butanone (MEK)	0.00885	J	0.00512	0.0100	0.0109	1	10/28/2017 00:18	WG1036523
Methylene Chloride	U		0.00109	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
4-Methyl-2-pentanone (MIBK)	U		0.00206	0.0100	0.0109	1	10/28/2017 00:18	WG1036523
Methyl tert-butyl ether	U		0.000232	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Naphthalene	0.00779		0.00109	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
n-Propylbenzene	0.00110		0.000225	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Styrene	U		0.000256	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1,1,2-Tetrachloroethane	U		0.000289	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1,2,2-Tetrachloroethane	U		0.000399	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1,2-Trichlorotrifluoroethane	U		0.000399	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Tetrachloroethene	U		0.000302	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Toluene	U		0.000475	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
1,2,3-Trichlorobenzene	U		0.000335	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2,4-Trichlorobenzene	U		0.000425	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1,1-Trichloroethane	U		0.000313	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,1,2-Trichloroethane	U		0.000303	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Trichloroethene	U		0.000305	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Trichlorofluoromethane	U		0.000418	0.00500	0.00547	1	10/28/2017 00:18	WG1036523
1,2,3-Trichloropropane	U		0.000811	0.00250	0.00274	1	10/28/2017 00:18	WG1036523
1,2,4-Trimethylbenzene	0.00623		0.000231	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,2,3-Trimethylbenzene	0.00186		0.000314	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Vinyl chloride	U		0.000319	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
1,3,5-Trimethylbenzene	0.00447		0.000291	0.00100	0.00109	1	10/28/2017 00:18	WG1036523
Xylenes, Total	U		0.000764	0.00300	0.00328	1	10/28/2017 00:18	WG1036523
(S) Toluene-d8	*98.1*				*80.0-120*		*10/28/2017 00:18*	WG1036523
(S) Dibromofluoromethane	*110*				*74.0-131*		*10/28/2017 00:18*	WG1036523
(S) 4-Bromofluorobenzene	*98.7*				*64.0-132*		*10/28/2017 00:18*	WG1036523

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	559		14.6	4.00	4.00	10	10/31/2017 11:53	WG1036907
Residual Range Organics (RRO)	136		3.65	10.0	10.9	1	10/31/2017 10:57	WG1036907
(S) o-Terphenyl	*82.2*				*18.0-148*		*10/31/2017 10:57*	WG1036907
(S) o-Terphenyl	*88.9*				*18.0-148*		*10/31/2017 11:53*	WG1036907

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.6		1	10/31/2017 09:02	WG1037199

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0528		0.00376	0.0200	0.0268	1	10/31/2017 08:25	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	6.46		0.872	2.00	2.68	1	10/31/2017 10:09	WG1036378
Barium	111		0.228	0.500	0.671	1	10/31/2017 10:09	WG1036378
Cadmium	0.282	J	0.0939	0.500	0.671	1	10/31/2017 10:09	WG1036378
Chromium	29.2		0.188	1.00	1.34	1	10/31/2017 10:09	WG1036378
Lead	117		0.255	0.500	0.671	1	10/31/2017 10:09	WG1036378
Selenium	U		0.993	2.00	2.68	1	10/31/2017 10:09	WG1036378
Silver	U		0.376	1.00	1.34	1	10/31/2017 10:09	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.322		0.0455	0.100	0.134	1	10/27/2017 15:06	WG1036348
(S) a,a,a-Trifluorotoluene(FID)	*92.3*				*77.0-120*		*10/27/2017 15:06*	WG1036348

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0698		0.0134	0.0500	0.0671	1	10/28/2017 00:39	WG1036523
Acrylonitrile	U		0.00240	0.0100	0.0134	1	10/28/2017 00:39	WG1036523
Benzene	U		0.000362	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Bromobenzene	U		0.000381	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Bromodichloromethane	U		0.000341	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Bromoform	U		0.000569	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Bromomethane	U		0.00180	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
n-Butylbenzene	U		0.000346	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
sec-Butylbenzene	U		0.000270	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
tert-Butylbenzene	U		0.000276	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Carbon tetrachloride	U		0.000440	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Chlorobenzene	U		0.000284	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Chlorodibromomethane	U		0.000500	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Chloroethane	U		0.00127	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
Chloroform	U		0.000307	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
Chloromethane	U		0.000503	0.00250	0.00335	1	10/28/2017 00:39	WG1036523
2-Chlorotoluene	U		0.000404	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
4-Chlorotoluene	U		0.000322	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2-Dibromo-3-Chloropropane	U		0.00141	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
1,2-Dibromoethane	U		0.000460	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Dibromomethane	U		0.000512	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2-Dichlorobenzene	U		0.000409	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,3-Dichlorobenzene	U		0.000321	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,4-Dichlorobenzene	U		0.000303	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Dichlorodifluoromethane	U		0.000956	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
1,1-Dichloroethane	U		0.000267	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2-Dichloroethane	U		0.000355	0.00100	0.00134	1	10/28/2017 00:39	WG1036523

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000406	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
cis-1,2-Dichloroethene	U		0.000315	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
trans-1,2-Dichloroethene	U		0.000354	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2-Dichloropropane	U		0.000480	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1-Dichloropropene	U		0.000425	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,3-Dichloropropane	U		0.000278	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
cis-1,3-Dichloropropene	U		0.000351	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
trans-1,3-Dichloropropene	U		0.000358	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
2,2-Dichloropropane	U		0.000374	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Di-isopropyl ether	U		0.000333	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Ethylbenzene	0.000551	J	0.000398	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Hexachloro-1,3-butadiene	U		0.000459	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Isopropylbenzene	U		0.000326	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
p-Isopropyltoluene	U		0.000274	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
2-Butanone (MEK)	0.0177		0.00628	0.0100	0.0134	1	10/28/2017 00:39	WG1036523
Methylene Chloride	U		0.00134	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
4-Methyl-2-pentanone (MIBK)	U		0.00252	0.0100	0.0134	1	10/28/2017 00:39	WG1036523
Methyl tert-butyl ether	U		0.000284	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Naphthalene	U		0.00134	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
n-Propylbenzene	0.000356	J	0.000276	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Styrene	U		0.000314	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1,1,2-Tetrachloroethane	U		0.000354	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1,2,2-Tetrachloroethane	U		0.000490	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1,2-Trichlorotrifluoroethane	U		0.000490	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Tetrachloroethene	U		0.000370	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Toluene	U		0.000582	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
1,2,3-Trichlorobenzene	U		0.000410	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2,4-Trichlorobenzene	U		0.000520	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1,1-Trichloroethane	U		0.000384	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,1,2-Trichloroethane	U		0.000372	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Trichloroethene	U		0.000374	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Trichlorofluoromethane	U		0.000512	0.00500	0.00671	1	10/28/2017 00:39	WG1036523
1,2,3-Trichloropropane	U		0.000994	0.00250	0.00335	1	10/28/2017 00:39	WG1036523
1,2,4-Trimethylbenzene	0.00567		0.000283	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,2,3-Trimethylbenzene	0.00325		0.000385	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Vinyl chloride	U		0.000390	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
1,3,5-Trimethylbenzene	0.00267		0.000357	0.00100	0.00134	1	10/28/2017 00:39	WG1036523
Xylenes, Total	0.00378	J	0.000936	0.00300	0.00402	1	10/28/2017 00:39	WG1036523
(S) Toluene-d8	*99.2*				*80.0-120*		*10/28/2017 00:39*	WG1036523
(S) Dibromofluoromethane	*105*				*74.0-131*		*10/28/2017 00:39*	WG1036523
(S) 4-Bromofluorobenzene	*97.0*				*64.0-132*		*10/28/2017 00:39*	WG1036523

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	171		17.9	4.00	53.7	10	10/31/2017 11:11	WG1036907
Residual Range Organics (RRO)	938		44.7	10.0	134	10	10/31/2017 11:11	WG1036907
(S) o-Terphenyl	*65.2*				*18.0-148*		*10/31/2017 11:11*	WG1036907

Method Blank (MB)

(MB) R3261860-1 10/31/17 08:32

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L946745-01 Original Sample (OS) • Duplicate (DUP)

(OS) L946745-01 10/31/17 08:32 • (DUP) R3261860-3 10/31/17 08:32

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.7	91.2	1	2		5

Laboratory Control Sample (LCS)

(LCS) R3261860-2 10/31/17 08:32

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3261873-1 10/31/17 09:02

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0			

L946769-01 Original Sample (OS) • Duplicate (DUP)

(OS) L946769-01 10/31/17 09:02 • (DUP) R3261873-3 10/31/17 09:02

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	80.4	80.8	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3261873-2 10/31/17 09:02

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3261787-1 10/31/17 07:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0028	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261787-2 10/31/17 08:01 • (LCSD) R3261787-3 10/31/17 08:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.289	0.294	96	98	80-120			2	20

L946745-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946745-01 10/31/17 08:05 • (MS) R3261787-4 10/31/17 08:07 • (MSD) R3261787-5 10/31/17 08:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.324	0.0244	0.325	0.333	93	95	1	75-125			2	20

Method Blank (MB)

(MB) R3261798-1 10/31/17 09:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Lead	U		0.19	0.500
Selenium	U		0.74	2.00
Silver	U		0.28	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261798-2 10/31/17 09:04 • (LCSD) R3261798-3 10/31/17 09:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	99.0	97.8	99	98	80-120			1	20
Barium	100	104	103	104	103	80-120			1	20
Cadmium	100	98.8	97.7	99	98	80-120			1	20
Chromium	100	99.5	98.7	99	99	80-120			1	20
Lead	100	100	99.5	100	100	80-120			1	20
Selenium	100	99.1	98.6	99	99	80-120			0	20
Silver	20.0	18.4	18.3	92	91	80-120			1	20

L945976-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L945976-21 10/31/17 09:10 • (MS) R3261798-6 10/31/17 09:19 • (MSD) R3261798-7 10/31/17 09:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	20.0	118	117	98	96	1	75-125			1	20
Barium	100	117	215	212	97	95	1	75-125			1	20
Cadmium	100	ND	98.4	97.3	98	97	1	75-125			1	20
Chromium	100	14.3	108	108	93	93	1	75-125			0	20
Lead	100	6.41	107	107	101	101	1	75-125			0	20
Selenium	100	ND	97.0	96.9	97	97	1	75-125			0	20
Silver	20.0	ND	18.6	18.2	93	91	1	75-125			2	20

Method Blank (MB)

(MB) R3261264-3 10/27/17 11:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*77.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261264-1 10/27/17 10:47 • (LCSD) R3261264-2 10/27/17 11:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.14	5.23	93.5	95.1	70.0-133			1.73	20
(S) a,a,a-Trifluorotoluene(FID)				*108*	*108*	*77.0-120*				

L946520-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946520-01 10/27/17 15:54 • (MS) R3261264-4 10/27/17 21:33 • (MSD) R3261264-5 10/27/17 21:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	ND	113	115	82.1	83.3	25	10.0-146			1.44	30
(S) a,a,a-Trifluorotoluene(FID)					*110*	*110*		*77.0-120*				

Method Blank (MB)

(MB) R3261465-3 10/27/17 12:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100

Method Blank (MB)

(MB) R3261465-3 10/27/17 12:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	0.000357	J	0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*105*			*74.0-131*
(S) 4-Bromofluorobenzene	*94.5*			*64.0-132*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261465-1 10/27/17 11:05 • (LCSD) R3261465-2 10/27/17 11:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.153	0.156	122	125	11.0-160			2.17	23
Acrylonitrile	0.125	0.163	0.167	131	133	61.0-143			1.95	20
Benzene	0.0250	0.0259	0.0259	103	103	71.0-124			0.0600	20
Bromobenzene	0.0250	0.0250	0.0249	100	99.5	78.0-120			0.510	20
Bromodichloromethane	0.0250	0.0243	0.0244	97.3	97.5	75.0-120			0.200	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261465-1 10/27/17 11:05 • (LCSD) R3261465-2 10/27/17 11:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.0250	0.0237	0.0234	94.8	93.7	65.0-133			1.16	20
Bromomethane	0.0250	0.0289	0.0305	116	122	26.0-160			5.48	20
n-Butylbenzene	0.0250	0.0309	0.0311	124	124	73.0-126			0.680	20
sec-Butylbenzene	0.0250	0.0284	0.0289	114	116	75.0-121			1.68	20
tert-Butylbenzene	0.0250	0.0273	0.0275	109	110	74.0-122			0.970	20
Carbon tetrachloride	0.0250	0.0234	0.0237	93.6	94.8	66.0-123			1.32	20
Chlorobenzene	0.0250	0.0270	0.0272	108	109	79.0-121			0.890	20
Chlorodibromomethane	0.0250	0.0247	0.0249	98.8	99.6	74.0-128			0.810	20
Chloroethane	0.0250	0.0284	0.0294	114	117	51.0-147			3.43	20
Chloroform	0.0250	0.0259	0.0261	104	104	73.0-123			0.490	20
Chloromethane	0.0250	0.0321	0.0322	129	129	51.0-138			0.300	20
2-Chlorotoluene	0.0250	0.0265	0.0265	106	106	72.0-124			0.250	20
4-Chlorotoluene	0.0250	0.0270	0.0267	108	107	78.0-120			1.06	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0255	0.0249	102	99.7	65.0-126			2.15	20
1,2-Dibromoethane	0.0250	0.0252	0.0257	101	103	78.0-122			1.69	20
Dibromomethane	0.0250	0.0255	0.0258	102	103	79.0-120			1.34	20
1,2-Dichlorobenzene	0.0250	0.0273	0.0276	109	110	80.0-120			1.07	20
1,3-Dichlorobenzene	0.0250	0.0272	0.0274	109	110	72.0-123			1.01	20
1,4-Dichlorobenzene	0.0250	0.0274	0.0272	110	109	77.0-120			0.960	20
Dichlorodifluoromethane	0.0250	0.0288	0.0289	115	115	49.0-155			0.330	20
1,1-Dichloroethane	0.0250	0.0280	0.0281	112	112	70.0-128			0.490	20
1,2-Dichloroethane	0.0250	0.0276	0.0272	110	109	69.0-128			1.45	20
1,1-Dichloroethene	0.0250	0.0255	0.0254	102	102	63.0-131			0.600	20
cis-1,2-Dichloroethene	0.0250	0.0270	0.0267	108	107	74.0-123			1.03	20
trans-1,2-Dichloroethene	0.0250	0.0267	0.0268	107	107	72.0-122			0.120	20
1,2-Dichloropropane	0.0250	0.0281	0.0278	112	111	75.0-126			1.05	20
1,1-Dichloropropene	0.0250	0.0258	0.0261	103	104	72.0-130			1.04	20
1,3-Dichloropropane	0.0250	0.0262	0.0259	105	104	80.0-121			1.16	20
cis-1,3-Dichloropropene	0.0250	0.0251	0.0246	100	98.3	80.0-125			1.98	20
trans-1,3-Dichloropropene	0.0250	0.0251	0.0249	100	99.7	75.0-129			0.620	20
2,2-Dichloropropane	0.0250	0.0229	0.0240	91.7	96.0	60.0-129			4.59	20
Di-isopropyl ether	0.0250	0.0283	0.0283	113	113	62.0-133			0.0800	20
Ethylbenzene	0.0250	0.0259	0.0262	104	105	77.0-120			1.04	20
Hexachloro-1,3-butadiene	0.0250	0.0290	0.0297	116	119	68.0-128			2.21	20
Isopropylbenzene	0.0250	0.0284	0.0287	113	115	75.0-120			1.12	20
p-Isopropyltoluene	0.0250	0.0288	0.0291	115	116	74.0-125			1.16	20
2-Butanone (MEK)	0.125	0.147	0.148	117	118	37.0-159			0.800	20
Methylene Chloride	0.0250	0.0255	0.0257	102	103	67.0-123			0.890	20
4-Methyl-2-pentanone (MIBK)	0.125	0.140	0.144	112	115	60.0-144			3.21	20
Methyl tert-butyl ether	0.0250	0.0275	0.0279	110	112	66.0-125			1.43	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261465-1 10/27/17 11:05 • (LCSD) R3261465-2 10/27/17 11:26

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0250	0.0280	0.0289	112	116	64.0-125			2.96	20
n-Propylbenzene	0.0250	0.0276	0.0279	110	112	78.0-120			1.29	20
Styrene	0.0250	0.0248	0.0244	99.0	97.7	78.0-124			1.32	20
1,1,1,2-Tetrachloroethane	0.0250	0.0253	0.0258	101	103	74.0-124			1.99	20
1,1,2,2-Tetrachloroethane	0.0250	0.0267	0.0274	107	109	73.0-120			2.38	20
Tetrachloroethene	0.0250	0.0251	0.0253	100	101	70.0-127			0.740	20
Toluene	0.0250	0.0247	0.0247	98.8	98.8	77.0-120			0.0200	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0251	0.0251	100	100	64.0-135			0.0100	20
1,2,3-Trichlorobenzene	0.0250	0.0269	0.0271	108	108	68.0-126			0.720	20
1,2,4-Trichlorobenzene	0.0250	0.0277	0.0269	111	108	70.0-127			2.69	20
1,1,1-Trichloroethane	0.0250	0.0248	0.0253	99.0	101	69.0-125			2.08	20
1,1,2-Trichloroethane	0.0250	0.0253	0.0258	101	103	78.0-120			1.73	20
Trichloroethene	0.0250	0.0255	0.0262	102	105	79.0-120			2.75	20
Trichlorofluoromethane	0.0250	0.0264	0.0277	106	111	59.0-136			4.83	20
1,2,3-Trichloropropane	0.0250	0.0243	0.0250	97.1	100	73.0-124			2.96	20
1,2,3-Trimethylbenzene	0.0250	0.0269	0.0272	108	109	76.0-120			0.980	20
1,2,4-Trimethylbenzene	0.0250	0.0271	0.0275	109	110	75.0-120			1.14	20
1,3,5-Trimethylbenzene	0.0250	0.0270	0.0273	108	109	75.0-120			1.10	20
Vinyl chloride	0.0250	0.0304	0.0307	122	123	63.0-134			0.920	20
Xylenes, Total	0.0750	0.0779	0.0791	104	105	77.0-120			1.53	20
(S) Toluene-d8				*100*	*100*	*80.0-120*				
(S) Dibromofluoromethane				*104*	*105*	*74.0-131*				
(S) 4-Bromofluorobenzene				*95.3*	*94.5*	*64.0-132*				

Method Blank (MB)

(MB) R3261760-1 10/31/17 09:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*53.7*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261760-2 10/31/17 09:44 • (LCSD) R3261760-3 10/31/17 09:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.0	23.1	21.0	77.1	70.0	50.0-150			9.59	20
Residual Range Organics (RRO)	30.0	23.5	21.2	78.3	70.5	50.0-150			10.4	20
(S) o-Terphenyl				*61.1*	*53.0*	*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

TGE Resources
8040 Northcourt Rd.
Houston, TX 77040

Billing Information:
Account Payable
8040 Northcourt Rd.
Houston, TX 77040

Pres Chk

Report to: **Kristi Barnette, Evan Sitler**

Email To: kristi.b@tgeresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: **713-744-5800**
Fax:

Client Project # R13411.04

Lab Project # TGERESHTX-R13411

Collected by (print): E. Sitler

Site/Facility ID # 29805 Pacific HWY

P.O. # 7759

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH, GRO	V8260	MRCRA8	HOLD	pH					Remarks	Sample # (lab only)
SB-6 (1-2)	Grab	SS	1-2'	10/26/17	1445	5	✓	✓	✓	✓	✓								-01
SB-6 (5-6)	Grab	SS	5-6'	10/26/17	1455	5	✓	✓	✓	✓	✓	✓							
SB-10 (1-2)	Grab	SS	1-2'	10/26/17	1545	6	✓	✓	✓	✓	✓								02
SB-10 (5-6)	Grab	SS	5-6'	10/26/17	1555	6	✓	✓	✓	✓	✓	✓							
SB-11 (3-4)	Grab	SS	3-4'	10/26/17	1530	6	✓	✓	✓	✓	✓								03
SB-11 (5-6)	Grab	SS	5-6'	10/26/17	1535	6	✓	✓	✓	✓	✓								04

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
a subsidiary of ...
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L446745
F044

Acctnum: **TGERESHTX**
Template:
Prelogin:
TSR: **Mark Beasley**
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 7474 0933 2547

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/26/17	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			834

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 3.5 °C Bottles Received: 33

If preservation required by Login: Date/Time

Date: 10-27-17 Time: 0845

10-155

Condition: NCF / (OK)

ANALYTICAL REPORT

October 31, 2017

TGE Resources

Sample Delivery Group:	L947070
Samples Received:	10/28/2017
Project Number:	R13411.04
Description:	Future Star Lake Hospital
Site:	29805 PACIFIC HWY S
Report To:	Kristi Barnette 8048 Northcourt Road Houston, TX 77040

Entire Report Reviewed By:

Mark W. Beasley
Technical Service Representative

TABLE OF CONTENTS

SB-7 (1-2) L947070-01 Solid

Collected by: Evan Sutler | Collected date/time: 10/27/17 09:40 | Received date/time: 10/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037200	1	10/31/17 08:10	10/31/17 08:19	KDW
Wet Chemistry by Method 9045D	WG1036680	1	10/31/17 13:50	10/31/17 14:35	GB
Mercury by Method 7471A	WG1036762	1	10/30/17 15:18	10/31/17 08:29	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 06:24	10/31/17 10:18	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036707	1.2	10/27/17 09:40	10/29/17 19:22	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036732	1	10/27/17 09:40	10/31/17 12:23	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036831	1	10/29/17 20:35	10/31/17 10:14	ACM

SB-8 (0-1) L947070-02 Solid

Collected by: Evan Sutler | Collected date/time: 10/27/17 08:30 | Received date/time: 10/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037200	1	10/31/17 08:10	10/31/17 08:19	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:18	10/31/17 08:31	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 06:24	10/31/17 10:22	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036707	1	10/27/17 08:30	10/29/17 19:44	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036732	1	10/27/17 08:30	10/31/17 12:43	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036831	10	10/29/17 20:35	10/30/17 14:58	ACM

SB-9 (1-2) L947070-03 Solid

Collected by: Evan Sutler | Collected date/time: 10/27/17 08:50 | Received date/time: 10/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037200	1	10/31/17 08:10	10/31/17 08:19	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:18	10/31/17 08:34	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 06:24	10/31/17 10:25	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036707	1	10/27/17 08:50	10/29/17 20:07	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036732	1	10/27/17 08:50	10/31/17 13:03	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036831	1	10/29/17 20:35	10/31/17 10:28	ACM

SB-12 (1-2) L947070-04 Solid

Collected by: Evan Sutler | Collected date/time: 10/27/17 09:10 | Received date/time: 10/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037200	1	10/31/17 08:10	10/31/17 08:19	KDW
Mercury by Method 7471A	WG1036762	1	10/30/17 15:18	10/31/17 08:36	ABL
Metals (ICP) by Method 6010C	WG1036378	1	10/31/17 06:24	10/31/17 10:28	CCE
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1036707	34.75	10/27/17 09:10	10/31/17 00:36	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1036732	34.75	10/27/17 09:10	10/31/17 13:23	BMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1036831	10	10/29/17 20:35	10/30/17 16:00	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Technical Service Representative

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

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

Mark W. Beasley
Technical Service Representative

Laboratory Review Checklist: Reportable Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 17:16
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947070-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036707, WG1036831, WG1036762, WG1036378, WG1036732, WG1037200 and WG1036680

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?		X			1
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review Checklist: Supporting Data

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 17:16
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947070-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036707, WG1036831, WG1036762, WG1036378, WG1036732, WG1037200 and WG1036680

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

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

Laboratory Review Checklist: Exception Reports

Laboratory Name: ESC Lab Sciences	LRC Date: 10/31/2017 17:16
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947070-01, 02, 03 and 04
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1036707, WG1036831, WG1036762, WG1036378, WG1036732, WG1037200 and WG1036680

ER #[1]	Description
1	9045D WG1036680 L947070-01: Prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
2	8260C WG1036732 Hexachloro-1,3-butadiene: Percent Recovery is outside of established control limits.

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.5		1	10/31/2017 08:19	WG1037200

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.68	T8	1	10/31/2017 14:35	WG1036680

Sample Narrative:

L947070-01 WG1036680: 6.68 at 17.2C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0602		0.00335	0.0200	0.0239	1	10/31/2017 08:29	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	2.91		0.778	2.00	2.39	1	10/31/2017 10:18	WG1036378
Barium	138		0.203	0.500	0.598	1	10/31/2017 10:18	WG1036378
Cadmium	U		0.0838	0.500	0.598	1	10/31/2017 10:18	WG1036378
Chromium	27.3		0.168	1.00	1.20	1	10/31/2017 10:18	WG1036378
Lead	4.03		0.227	0.500	0.598	1	10/31/2017 10:18	WG1036378
Selenium	U		0.886	2.00	2.39	1	10/31/2017 10:18	WG1036378
Silver	U		0.335	1.00	1.20	1	10/31/2017 10:18	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0569	J	0.0487	0.100	0.144	1.2	10/29/2017 19:22	WG1036707
(S) a,a,a-Trifluorotoluene(FID)	*97.7*				*77.0-120*		*10/29/2017 19:22*	WG1036707

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0120	0.0500	0.0598	1	10/31/2017 12:23	WG1036732
Acrylonitrile	U		0.00214	0.0100	0.0120	1	10/31/2017 12:23	WG1036732
Benzene	0.000340	J	0.000323	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Bromobenzene	U		0.000340	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Bromodichloromethane	U		0.000304	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Bromoform	U		0.000508	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Bromomethane	U		0.00160	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
n-Butylbenzene	U		0.000309	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
sec-Butylbenzene	U		0.000241	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
tert-Butylbenzene	U		0.000247	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Carbon tetrachloride	U		0.000393	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Chlorobenzene	U		0.000254	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Chlorodibromomethane	U		0.000446	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Chloroethane	U		0.00113	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
Chloroform	U		0.000274	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
Chloromethane	U		0.000449	0.00250	0.00299	1	10/31/2017 12:23	WG1036732
2-Chlorotoluene	U		0.000360	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
4-Chlorotoluene	U		0.000287	0.00100	0.00120	1	10/31/2017 12:23	WG1036732

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U		0.00126	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
1,2-Dibromoethane	U		0.000411	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Dibromomethane	U		0.000457	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,2-Dichlorobenzene	U		0.000365	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,3-Dichlorobenzene	U		0.000286	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,4-Dichlorobenzene	U		0.000271	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Dichlorodifluoromethane	U		0.000853	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
1,1-Dichloroethane	U		0.000238	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,2-Dichloroethane	U		0.000317	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1-Dichloroethene	U		0.000363	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
cis-1,2-Dichloroethene	U		0.000281	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
trans-1,2-Dichloroethene	U		0.000316	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,2-Dichloropropane	U		0.000429	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1-Dichloropropene	U		0.000379	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,3-Dichloropropane	U		0.000248	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
cis-1,3-Dichloropropene	U		0.000314	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
trans-1,3-Dichloropropene	U		0.000320	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
2,2-Dichloropropane	U		0.000334	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Di-isopropyl ether	U		0.000297	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Ethylbenzene	U		0.000355	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Hexachloro-1,3-butadiene	U	J4	0.000409	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Isopropylbenzene	U		0.000291	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
p-Isopropyltoluene	U		0.000244	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
2-Butanone (MEK)	U		0.00560	0.0100	0.0120	1	10/31/2017 12:23	WG1036732
Methylene Chloride	U		0.00120	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
4-Methyl-2-pentanone (MIBK)	U		0.00225	0.0100	0.0120	1	10/31/2017 12:23	WG1036732
Methyl tert-butyl ether	U		0.000254	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Naphthalene	U		0.00120	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
n-Propylbenzene	U		0.000247	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Styrene	U		0.000280	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1,1,2-Tetrachloroethane	U		0.000316	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1,2,2-Tetrachloroethane	U		0.000437	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1,2-Trichlorotrifluoroethane	U		0.000437	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Tetrachloroethene	U		0.000330	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Toluene	U		0.000519	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
1,2,3-Trichlorobenzene	U		0.000366	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,2,4-Trichlorobenzene	U		0.000464	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1,1-Trichloroethane	U		0.000342	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,1,2-Trichloroethane	U		0.000332	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Trichloroethene	U		0.000334	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Trichlorofluoromethane	U		0.000457	0.00500	0.00598	1	10/31/2017 12:23	WG1036732
1,2,3-Trichloropropane	U		0.000887	0.00250	0.00299	1	10/31/2017 12:23	WG1036732
1,2,4-Trimethylbenzene	U		0.000253	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,2,3-Trimethylbenzene	U		0.000344	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Vinyl chloride	U		0.000348	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
1,3,5-Trimethylbenzene	U		0.000318	0.00100	0.00120	1	10/31/2017 12:23	WG1036732
Xylenes, Total	U		0.000835	0.00300	0.00359	1	10/31/2017 12:23	WG1036732
(S) Toluene-d8	*92.6*				*80.0-120*		*10/31/2017 12:23*	WG1036732
(S) Dibromofluoromethane	*111*				*74.0-131*		*10/31/2017 12:23*	WG1036732
(S) 4-Bromofluorobenzene	*97.2*				*64.0-132*		*10/31/2017 12:23*	WG1036732

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.11	J	1.60	4.00	4.79	1	10/31/2017 10:14	WG1036831
Residual Range Organics (RRO)	7.84	J	3.99	10.0	12.0	1	10/31/2017 10:14	WG1036831

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	*86.0*				*18.0-148*		*10/31/2017 10:14*	WG1036831

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.0		1	10/31/2017 08:19	WG1037200

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0149	J	0.00292	0.0200	0.0208	1	10/31/2017 08:31	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	10.1		0.677	2.00	2.08	1	10/31/2017 10:22	WG1036378
Barium	61.0		0.177	0.500	0.521	1	10/31/2017 10:22	WG1036378
Cadmium	0.129	J	0.0729	0.500	0.521	1	10/31/2017 10:22	WG1036378
Chromium	21.5		0.146	1.00	1.04	1	10/31/2017 10:22	WG1036378
Lead	26.6		0.198	0.500	0.521	1	10/31/2017 10:22	WG1036378
Selenium	U		0.771	2.00	2.08	1	10/31/2017 10:22	WG1036378
Silver	U		0.292	1.00	1.04	1	10/31/2017 10:22	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0486	J	0.0353	0.100	0.104	1	10/29/2017 19:44	WG1036707
(S) a,a,a-Trifluorotoluene(FID)	*96.6*				*77.0-120*		*10/29/2017 19:44*	WG1036707

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0104	0.0500	0.0521	1	10/31/2017 12:43	WG1036732
Acrylonitrile	U		0.00186	0.0100	0.0104	1	10/31/2017 12:43	WG1036732
Benzene	0.000376	J	0.000281	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Bromobenzene	U		0.000296	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Bromodichloromethane	U		0.000265	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Bromoform	U		0.000442	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Bromomethane	U		0.00140	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
n-Butylbenzene	U		0.000269	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
sec-Butylbenzene	U		0.000209	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
tert-Butylbenzene	U		0.000215	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Carbon tetrachloride	U		0.000342	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Chlorobenzene	U		0.000221	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Chlorodibromomethane	U		0.000388	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Chloroethane	U		0.000985	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
Chloroform	U		0.000239	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
Chloromethane	U		0.000391	0.00250	0.00260	1	10/31/2017 12:43	WG1036732
2-Chlorotoluene	U		0.000313	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
4-Chlorotoluene	U		0.000250	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2-Dibromo-3-Chloropropane	U		0.00109	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
1,2-Dibromoethane	U		0.000357	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Dibromomethane	U		0.000398	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2-Dichlorobenzene	U		0.000318	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,3-Dichlorobenzene	U		0.000249	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,4-Dichlorobenzene	U		0.000235	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Dichlorodifluoromethane	U		0.000743	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
1,1-Dichloroethane	U		0.000207	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2-Dichloroethane	U		0.000276	0.00100	0.00104	1	10/31/2017 12:43	WG1036732

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000316	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
cis-1,2-Dichloroethene	U		0.000245	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
trans-1,2-Dichloroethene	U		0.000275	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2-Dichloropropane	U		0.000373	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1-Dichloropropene	U		0.000330	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,3-Dichloropropane	U		0.000216	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
cis-1,3-Dichloropropene	U		0.000273	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
trans-1,3-Dichloropropene	U		0.000278	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
2,2-Dichloropropane	U		0.000291	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Di-isopropyl ether	U		0.000258	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Ethylbenzene	U		0.000309	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Hexachloro-1,3-butadiene	U	J4	0.000356	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Isopropylbenzene	U		0.000253	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
p-Isopropyltoluene	U		0.000212	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
2-Butanone (MEK)	U		0.00487	0.0100	0.0104	1	10/31/2017 12:43	WG1036732
Methylene Chloride	U		0.00104	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
4-Methyl-2-pentanone (MIBK)	U		0.00196	0.0100	0.0104	1	10/31/2017 12:43	WG1036732
Methyl tert-butyl ether	U		0.000221	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Naphthalene	U		0.00104	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
n-Propylbenzene	U		0.000215	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Styrene	U		0.000244	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1,1,2-Tetrachloroethane	U		0.000275	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1,2,2-Tetrachloroethane	U		0.000380	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1,2-Trichlorotrifluoroethane	U		0.000380	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Tetrachloroethene	U		0.000287	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Toluene	U		0.000452	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
1,2,3-Trichlorobenzene	U		0.000319	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2,4-Trichlorobenzene	U		0.000404	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1,1-Trichloroethane	U		0.000298	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,1,2-Trichloroethane	U		0.000288	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Trichloroethene	U		0.000291	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Trichlorofluoromethane	U		0.000398	0.00500	0.00521	1	10/31/2017 12:43	WG1036732
1,2,3-Trichloropropane	U		0.000772	0.00250	0.00260	1	10/31/2017 12:43	WG1036732
1,2,4-Trimethylbenzene	U		0.000220	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,2,3-Trimethylbenzene	U		0.000299	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Vinyl chloride	U		0.000303	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
1,3,5-Trimethylbenzene	U		0.000277	0.00100	0.00104	1	10/31/2017 12:43	WG1036732
Xylenes, Total	U		0.000727	0.00300	0.00312	1	10/31/2017 12:43	WG1036732
(S) Toluene-d8	*94.3*				*80.0-120*		*10/31/2017 12:43*	WG1036732
(S) Dibromofluoromethane	*109*				*74.0-131*		*10/31/2017 12:43*	WG1036732
(S) 4-Bromofluorobenzene	*93.2*				*64.0-132*		*10/31/2017 12:43*	WG1036732

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	109		13.9	4.00	41.7	10	10/30/2017 14:58	WG1036831
Residual Range Organics (RRO)	1430		34.7	10.0	104	10	10/30/2017 14:58	WG1036831
(S) o-Terphenyl	*106*				*18.0-148*		*10/30/2017 14:58*	WG1036831

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	10/31/2017 08:19	WG1037200

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0295		0.00305	0.0200	0.0218	1	10/31/2017 08:34	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	3.93		0.709	2.00	2.18	1	10/31/2017 10:25	WG1036378
Barium	68.8		0.185	0.500	0.545	1	10/31/2017 10:25	WG1036378
Cadmium	0.115	J	0.0764	0.500	0.545	1	10/31/2017 10:25	WG1036378
Chromium	21.2		0.153	1.00	1.09	1	10/31/2017 10:25	WG1036378
Lead	10.5		0.207	0.500	0.545	1	10/31/2017 10:25	WG1036378
Selenium	U		0.807	2.00	2.18	1	10/31/2017 10:25	WG1036378
Silver	U		0.305	1.00	1.09	1	10/31/2017 10:25	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	0.0385	J	0.0370	0.100	0.109	1	10/29/2017 20:07	WG1036707
(S) a,a,a-Trifluorotoluene(FID)	*96.8*				*77.0-120*		*10/29/2017 20:07*	WG1036707

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0175	J	0.0109	0.0500	0.0545	1	10/31/2017 13:03	WG1036732
Acrylonitrile	U		0.00195	0.0100	0.0109	1	10/31/2017 13:03	WG1036732
Benzene	U		0.000295	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Bromobenzene	U		0.000310	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Bromodichloromethane	U		0.000277	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Bromoform	U		0.000463	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Bromomethane	U		0.00146	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
n-Butylbenzene	U		0.000281	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
sec-Butylbenzene	U		0.000219	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
tert-Butylbenzene	U		0.000225	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Carbon tetrachloride	U		0.000358	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Chlorobenzene	U		0.000231	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Chlorodibromomethane	U		0.000407	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Chloroethane	U		0.00103	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
Chloroform	U		0.000250	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
Chloromethane	U		0.000409	0.00250	0.00273	1	10/31/2017 13:03	WG1036732
2-Chlorotoluene	U		0.000328	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
4-Chlorotoluene	U		0.000262	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2-Dibromo-3-Chloropropane	U		0.00115	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
1,2-Dibromoethane	U		0.000374	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Dibromomethane	U		0.000417	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2-Dichlorobenzene	U		0.000333	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,3-Dichlorobenzene	U		0.000261	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,4-Dichlorobenzene	U		0.000247	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Dichlorodifluoromethane	U		0.000778	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
1,1-Dichloroethane	U		0.000217	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2-Dichloroethane	U		0.000289	0.00100	0.00109	1	10/31/2017 13:03	WG1036732

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000331	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
cis-1,2-Dichloroethene	U		0.000256	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
trans-1,2-Dichloroethene	U		0.000288	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2-Dichloropropane	U		0.000391	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1-Dichloropropene	U		0.000346	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,3-Dichloropropane	U		0.000226	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
cis-1,3-Dichloropropene	U		0.000286	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
trans-1,3-Dichloropropene	U		0.000291	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
2,2-Dichloropropane	U		0.000304	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Di-isopropyl ether	U		0.000271	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Ethylbenzene	U		0.000324	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Hexachloro-1,3-butadiene	U	J4	0.000373	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Isopropylbenzene	U		0.000265	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
p-Isopropyltoluene	U		0.000223	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
2-Butanone (MEK)	U		0.00511	0.0100	0.0109	1	10/31/2017 13:03	WG1036732
Methylene Chloride	U		0.00109	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
4-Methyl-2-pentanone (MIBK)	U		0.00205	0.0100	0.0109	1	10/31/2017 13:03	WG1036732
Methyl tert-butyl ether	U		0.000231	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Naphthalene	U		0.00109	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
n-Propylbenzene	U		0.000225	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Styrene	U		0.000255	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1,1,2-Tetrachloroethane	U		0.000288	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1,2,2-Tetrachloroethane	U		0.000398	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1,2-Trichlorotrifluoroethane	U		0.000398	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Tetrachloroethene	U		0.000301	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Toluene	U		0.000473	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
1,2,3-Trichlorobenzene	U		0.000334	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2,4-Trichlorobenzene	U		0.000423	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1,1-Trichloroethane	U		0.000312	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,1,2-Trichloroethane	U		0.000302	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Trichloroethene	U		0.000304	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Trichlorofluoromethane	U		0.000417	0.00500	0.00545	1	10/31/2017 13:03	WG1036732
1,2,3-Trichloropropane	U		0.000808	0.00250	0.00273	1	10/31/2017 13:03	WG1036732
1,2,4-Trimethylbenzene	U		0.000230	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,2,3-Trimethylbenzene	U		0.000313	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Vinyl chloride	U		0.000317	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
1,3,5-Trimethylbenzene	U		0.000290	0.00100	0.00109	1	10/31/2017 13:03	WG1036732
Xylenes, Total	U		0.000762	0.00300	0.00327	1	10/31/2017 13:03	WG1036732
(S) Toluene-d8	*93.7*				*80.0-120*		*10/31/2017 13:03*	WG1036732
(S) Dibromofluoromethane	*113*				*74.0-131*		*10/31/2017 13:03*	WG1036732
(S) 4-Bromofluorobenzene	*95.0*				*64.0-132*		*10/31/2017 13:03*	WG1036732

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.09	J	1.45	4.00	4.36	1	10/31/2017 10:28	WG1036831
Residual Range Organics (RRO)	10.2	J	3.64	10.0	10.9	1	10/31/2017 10:28	WG1036831
(S) o-Terphenyl	*82.1*				*18.0-148*		*10/31/2017 10:28*	WG1036831

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.1		1	10/31/2017 08:19	WG1037200

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0277		0.00301	0.0200	0.0215	1	10/31/2017 08:36	WG1036762

Metals (ICP) by Method 6010C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	9.16		0.698	2.00	2.15	1	10/31/2017 10:28	WG1036378
Barium	59.1		0.183	0.500	0.537	1	10/31/2017 10:28	WG1036378
Cadmium	0.150	J	0.0752	0.500	0.537	1	10/31/2017 10:28	WG1036378
Chromium	26.0		0.150	1.00	1.07	1	10/31/2017 10:28	WG1036378
Lead	64.6		0.204	0.500	0.537	1	10/31/2017 10:28	WG1036378
Selenium	U		0.795	2.00	2.15	1	10/31/2017 10:28	WG1036378
Silver	U		0.301	1.00	1.07	1	10/31/2017 10:28	WG1036378

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.56	J	1.27	0.100	3.73	34.75	10/31/2017 00:36	WG1036707
(S) a,a,a-Trifluorotoluene(FID)	*101*				*77.0-120*		*10/31/2017 00:36*	WG1036707

Sample Narrative:

L947070-04 WG1036707: No stir bars remain for analysis.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.373	0.0500	1.87	34.75	10/31/2017 13:23	WG1036732
Acrylonitrile	U		0.0668	0.0100	0.373	34.75	10/31/2017 13:23	WG1036732
Benzene	U		0.0101	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Bromobenzene	U		0.0106	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Bromodichloromethane	U		0.00948	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Bromoform	U		0.0158	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Bromomethane	U		0.0500	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
n-Butylbenzene	U		0.00963	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
sec-Butylbenzene	U		0.00751	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
tert-Butylbenzene	U		0.00769	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Carbon tetrachloride	U		0.0122	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Chlorobenzene	U		0.00792	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Chlorodibromomethane	U		0.0139	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Chloroethane	U		0.0353	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
Chloroform	U		0.00855	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
Chloromethane	U		0.0140	0.00250	0.0934	34.75	10/31/2017 13:23	WG1036732
2-Chlorotoluene	U		0.0112	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
4-Chlorotoluene	U		0.00896	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2-Dibromo-3-Chloropropane	U		0.0392	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
1,2-Dibromoethane	U		0.0128	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Dibromomethane	U		0.0143	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2-Dichlorobenzene	U		0.0114	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,3-Dichlorobenzene	U		0.00892	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,4-Dichlorobenzene	U		0.00844	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0266	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
1,1-Dichloroethane	U		0.00743	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2-Dichloroethane	U		0.00990	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1-Dichloroethene	U		0.0113	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
cis-1,2-Dichloroethene	U		0.00878	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
trans-1,2-Dichloroethene	U		0.00986	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2-Dichloropropane	U		0.0134	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1-Dichloropropene	U		0.0118	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,3-Dichloropropane	U		0.00773	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
cis-1,3-Dichloropropene	U		0.00978	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
trans-1,3-Dichloropropene	U		0.00997	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
2,2-Dichloropropane	U		0.0104	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Di-isopropyl ether	U		0.00926	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Ethylbenzene	U		0.0111	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Hexachloro-1,3-butadiene	U	J4	0.0128	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Isopropylbenzene	U		0.00907	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
p-Isopropyltoluene	U		0.00762	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
2-Butanone (MEK)	U		0.175	0.0100	0.373	34.75	10/31/2017 13:23	WG1036732
Methylene Chloride	U		0.0373	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
4-Methyl-2-pentanone (MIBK)	U		0.0702	0.0100	0.373	34.75	10/31/2017 13:23	WG1036732
Methyl tert-butyl ether	U		0.00792	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Naphthalene	U		0.0373	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
n-Propylbenzene	U		0.00769	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Styrene	U		0.00874	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1,1,2-Tetrachloroethane	U		0.00986	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1,2,2-Tetrachloroethane	U		0.0136	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1,2-Trichlorotrifluoroethane	U		0.0136	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Tetrachloroethene	U		0.0103	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Toluene	U		0.0162	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
1,2,3-Trichlorobenzene	U		0.0114	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2,4-Trichlorobenzene	U		0.0145	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1,1-Trichloroethane	U		0.0107	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,1,2-Trichloroethane	U		0.0103	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Trichloroethene	U		0.0104	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Trichlorofluoromethane	U		0.0143	0.00500	0.187	34.75	10/31/2017 13:23	WG1036732
1,2,3-Trichloropropane	U		0.0277	0.00250	0.0934	34.75	10/31/2017 13:23	WG1036732
1,2,4-Trimethylbenzene	U		0.00788	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,2,3-Trimethylbenzene	U		0.0107	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Vinyl chloride	U		0.0109	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
1,3,5-Trimethylbenzene	U		0.00993	0.00100	0.0373	34.75	10/31/2017 13:23	WG1036732
Xylenes, Total	U		0.0261	0.00300	0.112	34.75	10/31/2017 13:23	WG1036732
(S) Toluene-d8	*104*				*80.0-120*		*10/31/2017 13:23*	WG1036732
(S) Dibromofluoromethane	*97.7*				*74.0-131*		*10/31/2017 13:23*	WG1036732
(S) 4-Bromofluorobenzene	*98.6*				*64.0-132*		*10/31/2017 13:23*	WG1036732

Sample Narrative:

L947070-04 WG1036732: Lowest possible dilution. No stir bars remain for analysis.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	42.9	J	14.3	4.00	43.0	10	10/30/2017 16:00	WG1036831
Residual Range Organics (RRO)	630		35.8	10.0	107	10	10/30/2017 16:00	WG1036831
(S) o-Terphenyl	*91.0*				*18.0-148*		*10/30/2017 16:00*	WG1036831

Sample Narrative:

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch

L947070-04 WG1036831: Dilution due to matrix impact during extract concentration procedure

Method Blank (MB)

(MB) R3261855-1 10/31/17 08:19

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L947070-01 Original Sample (OS) • Duplicate (DUP)

(OS) L947070-01 10/31/17 08:19 • (DUP) R3261855-3 10/31/17 08:19

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.5	86.4	1	3		5

Laboratory Control Sample (LCS)

(LCS) R3261855-2 10/31/17 08:19

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

L947070-01 Original Sample (OS) • Duplicate (DUP)

(OS) L947070-01 10/31/17 14:35 • (DUP) R3261913-4 10/31/17 14:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.68	6.69	1	0.150		1

Sample Narrative:

OS: 6.68 at 17.2C

DUP: 6.69 at 17.2C

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261913-1 10/31/17 14:35 • (LCSD) R3261913-2 10/31/17 14:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	5.96	6.02	6.02	101	101	98.3-102			0.000	1

Sample Narrative:

LCS: 6.02 at 18.6C

LCSD: 6.02 at 18.6C

Method Blank (MB)

(MB) R3261787-1 10/31/17 07:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0028	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261787-2 10/31/17 08:01 • (LCSD) R3261787-3 10/31/17 08:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.289	0.294	96	98	80-120			2	20

L946745-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946745-01 10/31/17 08:05 • (MS) R3261787-4 10/31/17 08:07 • (MSD) R3261787-5 10/31/17 08:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.324	0.0244	0.325	0.333	93	95	1	75-125			2	20

Method Blank (MB)

(MB) R3261798-1 10/31/17 09:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Barium	U		0.17	0.500
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Lead	U		0.19	0.500
Selenium	U		0.74	2.00
Silver	U		0.28	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261798-2 10/31/17 09:04 • (LCSD) R3261798-3 10/31/17 09:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	99.0	97.8	99	98	80-120			1	20
Barium	100	104	103	104	103	80-120			1	20
Cadmium	100	98.8	97.7	99	98	80-120			1	20
Chromium	100	99.5	98.7	99	99	80-120			1	20
Lead	100	100	99.5	100	100	80-120			1	20
Selenium	100	99.1	98.6	99	99	80-120			0	20
Silver	20.0	18.4	18.3	92	91	80-120			1	20

L945976-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L945976-21 10/31/17 09:10 • (MS) R3261798-6 10/31/17 09:19 • (MSD) R3261798-7 10/31/17 09:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	20.0	118	117	98	96	1	75-125			1	20
Barium	100	117	215	212	97	95	1	75-125			1	20
Cadmium	100	ND	98.4	97.3	98	97	1	75-125			1	20
Chromium	100	14.3	108	108	93	93	1	75-125			0	20
Lead	100	6.41	107	107	101	101	1	75-125			0	20
Selenium	100	ND	97.0	96.9	97	97	1	75-125			0	20
Silver	20.0	ND	18.6	18.2	93	91	1	75-125			2	20

Method Blank (MB)

(MB) R3261585-3 10/29/17 18:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261585-1 10/29/17 17:17 • (LCSD) R3261585-2 10/29/17 17:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.45	5.40	99.1	98.2	70.0-133			0.840	20
(S) a,a,a-Trifluorotoluene(FID)				*101*	*100*	*77.0-120*				

L946607-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L946607-15 10/30/17 02:47 • (MS) R3261585-4 10/30/17 03:10 • (MSD) R3261585-5 10/30/17 03:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	0.125	2.58	2.40	44.7	41.3	1	10.0-146			7.52	30
(S) a,a,a-Trifluorotoluene(FID)					*92.0*	*91.1*		*77.0-120*				

Method Blank (MB)

(MB) R3261837-3 10/31/17 11:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100

Method Blank (MB)

(MB) R3261837-3 10/31/17 11:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	*102*			*80.0-120*
(S) Dibromofluoromethane	*102*			*74.0-131*
(S) 4-Bromofluorobenzene	*91.6*			*64.0-132*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261837-1 10/31/17 10:14 • (LCSD) R3261837-2 10/31/17 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.127	0.135	101	108	11.0-160			6.15	23
Acrylonitrile	0.125	0.119	0.123	95.0	98.5	61.0-143			3.64	20
Benzene	0.0250	0.0265	0.0262	106	105	71.0-124			1.12	20
Bromobenzene	0.0250	0.0253	0.0248	101	99.4	78.0-120			1.70	20
Bromodichloromethane	0.0250	0.0243	0.0245	97.3	97.9	75.0-120			0.600	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261837-1 10/31/17 10:14 • (LCSD) R3261837-2 10/31/17 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.0250	0.0264	0.0272	105	109	65.0-133			3.17	20
Bromomethane	0.0250	0.0310	0.0308	124	123	26.0-160			0.540	20
n-Butylbenzene	0.0250	0.0311	0.0302	124	121	73.0-126			2.98	20
sec-Butylbenzene	0.0250	0.0290	0.0288	116	115	75.0-121			0.920	20
tert-Butylbenzene	0.0250	0.0271	0.0272	108	109	74.0-122			0.430	20
Carbon tetrachloride	0.0250	0.0258	0.0254	103	102	66.0-123			1.56	20
Chlorobenzene	0.0250	0.0269	0.0266	108	106	79.0-121			1.04	20
Chlorodibromomethane	0.0250	0.0261	0.0269	104	108	74.0-128			2.93	20
Chloroethane	0.0250	0.0277	0.0274	111	110	51.0-147			0.870	20
Chloroform	0.0250	0.0259	0.0255	104	102	73.0-123			1.52	20
Chloromethane	0.0250	0.0304	0.0299	122	119	51.0-138			1.81	20
2-Chlorotoluene	0.0250	0.0268	0.0264	107	105	72.0-124			1.64	20
4-Chlorotoluene	0.0250	0.0261	0.0255	104	102	78.0-120			2.12	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0243	0.0250	97.1	100	65.0-126			3.00	20
1,2-Dibromoethane	0.0250	0.0238	0.0242	95.1	96.7	78.0-122			1.62	20
Dibromomethane	0.0250	0.0237	0.0246	94.9	98.5	79.0-120			3.67	20
1,2-Dichlorobenzene	0.0250	0.0268	0.0264	107	106	80.0-120			1.42	20
1,3-Dichlorobenzene	0.0250	0.0268	0.0262	107	105	72.0-123			2.30	20
1,4-Dichlorobenzene	0.0250	0.0275	0.0267	110	107	77.0-120			2.72	20
Dichlorodifluoromethane	0.0250	0.0284	0.0282	114	113	49.0-155			0.820	20
1,1-Dichloroethane	0.0250	0.0276	0.0268	110	107	70.0-128			2.81	20
1,2-Dichloroethane	0.0250	0.0239	0.0241	95.7	96.5	69.0-128			0.790	20
1,1-Dichloroethene	0.0250	0.0262	0.0261	105	104	63.0-131			0.370	20
cis-1,2-Dichloroethene	0.0250	0.0257	0.0257	103	103	74.0-123			0.120	20
trans-1,2-Dichloroethene	0.0250	0.0256	0.0255	102	102	72.0-122			0.370	20
1,2-Dichloropropane	0.0250	0.0280	0.0279	112	112	75.0-126			0.0600	20
1,1-Dichloropropene	0.0250	0.0262	0.0262	105	105	72.0-130			0.160	20
1,3-Dichloropropane	0.0250	0.0246	0.0252	98.5	101	80.0-121			2.43	20
cis-1,3-Dichloropropene	0.0250	0.0270	0.0267	108	107	80.0-125			1.01	20
trans-1,3-Dichloropropene	0.0250	0.0256	0.0256	102	102	75.0-129			0.0500	20
2,2-Dichloropropane	0.0250	0.0284	0.0280	114	112	60.0-129			1.41	20
Di-isopropyl ether	0.0250	0.0291	0.0279	116	112	62.0-133			4.34	20
Ethylbenzene	0.0250	0.0267	0.0263	107	105	77.0-120			1.72	20
Hexachloro-1,3-butadiene	0.0250	0.0347	0.0336	139	135	68.0-128	J4	J4	3.16	20
Isopropylbenzene	0.0250	0.0265	0.0262	106	105	75.0-120			0.900	20
p-Isopropyltoluene	0.0250	0.0306	0.0299	122	120	74.0-125			2.21	20
2-Butanone (MEK)	0.125	0.129	0.139	103	111	37.0-159			7.69	20
Methylene Chloride	0.0250	0.0260	0.0255	104	102	67.0-123			1.90	20
4-Methyl-2-pentanone (MIBK)	0.125	0.128	0.137	102	110	60.0-144			6.84	20
Methyl tert-butyl ether	0.0250	0.0251	0.0244	100	97.6	66.0-125			2.71	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261837-1 10/31/17 10:14 • (LCSD) R3261837-2 10/31/17 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0250	0.0231	0.0241	92.4	96.5	64.0-125			4.29	20
n-Propylbenzene	0.0250	0.0292	0.0288	117	115	78.0-120			1.34	20
Styrene	0.0250	0.0269	0.0265	108	106	78.0-124			1.28	20
1,1,1,2-Tetrachloroethane	0.0250	0.0257	0.0257	103	103	74.0-124			0.270	20
1,1,2,2-Tetrachloroethane	0.0250	0.0247	0.0261	98.8	104	73.0-120			5.37	20
Tetrachloroethene	0.0250	0.0268	0.0268	107	107	70.0-127			0.110	20
Toluene	0.0250	0.0249	0.0248	99.7	99.1	77.0-120			0.580	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0276	0.0273	110	109	64.0-135			1.03	20
1,2,3-Trichlorobenzene	0.0250	0.0262	0.0264	105	106	68.0-126			0.990	20
1,2,4-Trichlorobenzene	0.0250	0.0273	0.0268	109	107	70.0-127			2.12	20
1,1,1-Trichloroethane	0.0250	0.0259	0.0259	103	104	69.0-125			0.260	20
1,1,2-Trichloroethane	0.0250	0.0242	0.0247	96.6	98.7	78.0-120			2.18	20
Trichloroethene	0.0250	0.0258	0.0258	103	103	79.0-120			0.110	20
Trichlorofluoromethane	0.0250	0.0280	0.0281	112	112	59.0-136			0.350	20
1,2,3-Trichloropropane	0.0250	0.0252	0.0259	101	103	73.0-124			2.70	20
1,2,3-Trimethylbenzene	0.0250	0.0247	0.0243	98.8	97.0	76.0-120			1.83	20
1,2,4-Trimethylbenzene	0.0250	0.0270	0.0265	108	106	75.0-120			2.00	20
1,3,5-Trimethylbenzene	0.0250	0.0271	0.0268	109	107	75.0-120			1.21	20
Vinyl chloride	0.0250	0.0283	0.0284	113	114	63.0-134			0.370	20
Xylenes, Total	0.0750	0.0803	0.0791	107	105	77.0-120			1.51	20
(S) Toluene-d8				*99.9*	*99.1*	*80.0-120*				
(S) Dibromofluoromethane				*103*	*102*	*74.0-131*				
(S) 4-Bromofluorobenzene				*92.9*	*94.0*	*64.0-132*				

Method Blank (MB)

(MB) R3261633-1 10/30/17 12:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*65.8*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3261633-2 10/30/17 12:31 • (LCSD) R3261633-3 10/30/17 12:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	30.0	23.9	24.5	79.6	81.8	50.0-150			2.74	20
Residual Range Organics (RRO)	30.0	23.2	24.1	77.3	80.5	50.0-150			4.08	20
(S) o-Terphenyl				*67.3*	*67.6*	*18.0-148*				

L945596-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L945596-07 10/30/17 13:43 • (MS) R3261633-4 10/30/17 13:57 • (MSD) R3261633-5 10/30/17 14:12

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	61.2	6.18	40.9	43.9	56.8	61.6	1	50.0-150			6.93	20
Residual Range Organics (RRO)	61.2	41.4	72.8	85.1	51.3	71.4	1	50.0-150			15.5	20
(S) o-Terphenyl					*66.4*	*64.6*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

Company Name/Address:
TGE RESOURCES
8040 Northcourt Rd.
Houston, TX 77040

Billing Information:
Accounts Payable
8040 Northcourt Rd.
Houston, TX 77040

Report to: Kristi Barnette

Email To: kristib@tgeresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: 713-744-5812
Fax:

Client Project # R13411.04

Lab Project # TGERESHTX-R13111

Collected by (print): Evan Sitler

Site/Facility ID # 29805 Pacific Hwy S

P.O. # 7759

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed 10/30/17

Email? ___No ✓Yes
FAX? ___No ___Yes

Immediately Packed on Ice N___ Y✓

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L947070

H240

Acctnum: TGERESHTX
Template:
Prelogin:
TSR:
Cooler:
Shipped Via: HTX Delivery

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH GRO	VOC 8260	MRCRA 8	pH	Hold	TCLP	HOLD	Always QCTX-S, EDD	Rem./Contaminant	Sample # (lab only)
SB-11 (9-10)	Grab	SS	9-10'	10/27/17	0940	6	✓	✓	✓	✓	✓		✓		✓			-01
SB-7 (1-2)	Grab	SS	1-2	10/27/17	0815	6	✓	✓	✓	✓	✓	✓						-02
SB-7 (5-6)	Grab	SS	5-6	10/27/17	0820	6	✓	✓	✓	✓	✓		✓		✓			-03
SB-8 (0-1)	Grab	SS	0-1	10/27/17	0830	6	✓	✓	✓	✓	✓							-04
SB-8 (5-6)	Grab	SS	5-6	10/27/17	0840	6	✓	✓	✓	✓	✓		✓		✓			-05
SB-9 (1-2)	Grab	SS	1-2	10/27/17	0850	6	✓	✓	✓	✓	✓							-06
SB-9 (5-6)	Grab	SS	5-6	10/27/17	0900	6	✓	✓	✓	✓	✓		✓		✓			-07
IDW	Comp	SS	—	10/27/17	1000	2	✓	✓					✓	✓	✓			-08/09
SB-12 (1-2)	Grab	SS	1-2	10/27/17	0910	5	✓	✓	✓	✓	✓						-84	-09-10
SB-12 (5-6)	Grab	SS	5-6	10/27/17	0920	5	✓	✓	✓	✓	✓		✓		✓			-10-11

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: 7474 09332558 Don't run

pH ✓ Temp

Flow Other

Hold # 10-168

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/27/17	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Jennifer Royal 836

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____

Temp: 1-3 °C Bottles Received: 53

Date: 10-28-17 Time: 8:45

Condition: (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

ESC LAB SCIENCES
Cooler Receipt Form

Client: TGERESHTX		SDG#	L947070
Cooler Received/Opened On: 10/28/17	Temperature:	1.3	
Received By: Jennifer Royal			
Signature: Jennifer Royal			

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

ANALYTICAL REPORT

November 02, 2017

TGE Resources

Sample Delivery Group:	L947689
Samples Received:	10/27/2017
Project Number:	R13411.04
Description:	Future Star Lake Hospital
Site:	29805 PACIFIC HWY
Report To:	Kristi Barnette 8048 Northcourt Road Houston, TX 77040

Entire Report Reviewed By:

Mark W. Beasley
Technical Service Representative

TABLE OF CONTENTS

SB-11 3-4 L947689-01 Solid

Collected by	Collected date/time	Received date/time
Evan Sitler	10/26/17 15:30	10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037198	1	10/31/17 08:23	10/31/17 08:32	KDW
Metals (ICPMS) by Method 6020A	WG1038207	5	11/02/17 08:56	11/02/17 11:26	JPD

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Technical Service Representative

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

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

Mark W. Beasley
Technical Service Representative

Laboratory Review Checklist: Reportable Data

Laboratory Name: ESC Lab Sciences	LRC Date: 11/02/2017 13:41
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947689-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037198 and WG1038207

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review Checklist: Supporting Data

Laboratory Name: ESC Lab Sciences	LRC Date: 11/02/2017 13:41
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947689-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037198 and WG1038207

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

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

Laboratory Review Checklist: Exception Reports

Laboratory Name: ESC Lab Sciences	LRC Date: 11/02/2017 13:41
Project Name: Future Star Lake Hospital	Laboratory Job Number: L947689-01
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037198 and WG1038207

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	10/31/2017 08:32	WG1037198

Metals (ICPMS) by Method 6020A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Selenium	0.244	J	0.208	0.100	0.547	5	11/02/2017 11:26	WG1038207

Method Blank (MB)

(MB) R3261860-1 10/31/17 08:32

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L946745-01 Original Sample (OS) • Duplicate (DUP)

(OS) L946745-01 10/31/17 08:32 • (DUP) R3261860-3 10/31/17 08:32

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.7	91.2	1	2		5

Laboratory Control Sample (LCS)

(LCS) R3261860-2 10/31/17 08:32

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3262488-1 11/02/17 11:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Selenium	U		0.19	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3262488-2 11/02/17 11:19 • (LCSD) R3262488-3 11/02/17 11:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Selenium	100	92.3	92.3	92	92	80-120			0	20

L947689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L947689-01 11/02/17 11:26 • (MS) R3262488-6 11/02/17 11:37 • (MSD) R3262488-7 11/02/17 11:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	21.9	0.244	101	104	92	94	5	75-125			3	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L947689
F044 947689

Acctnum: TGERESHTX
Template:
Prelogin:
TSR: Mark Beasley
PB:
Shipped Via:

TGE Resources
8040 Northcourt Rd.
Houston, TX 77040

Billing Information:
Account Payable
8040 Northcourt Rd.
Houston, TX 77040

Pres Chk

Report to: **Kristi Barnette, Evan Sitler**

Email To: Kristi.b@tgeresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: **713-744-5800**
Fax:

Client Project # R13411.04

Lab Project # TGERESHTX-R13411

Collected by (print): E. Sitler

Site/Facility ID # 29805 Pacific HWY

P.O. # 7759

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH, GRO	V8260	MRCRA8	HOLD pH					Remarks	Sample # (lab only)
SB-6 (1-2)	Grab	SS	1-2'	10/26/17	1445	5	✓	✓	✓	✓	✓							01
SB-6 (5-6)	Grab	SS	5-6'	10/26/17	1455	5	✓	✓	✓	✓	✓	✓						
SB-10 (1-2)	Grab	SS	1-2'	10/26/17	1545	6	✓	✓	✓	✓	✓							02
SB-10 (5-6)	Grab	SS	5-6'	10/26/17	1555	6	✓	✓	✓	✓	✓	✓						
SB-11 (3-4)	Grab	SS	3-4'	10/26/17	1530	6	✓	✓	✓	✓	✓							03
SB-11 (5-6)	Grab	SS	5-6'	10/26/17	1535	6	✓	✓	✓	✓	✓							04

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier __ ____

Tracking # 7474 0933 2547

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N

	Date:	Time:		
Relinquished by: (Signature)	10/26/17	1700	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.5 °C Bottles Received: 33
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-27-17 Time: 0845

If preservation required by Login: Date/Time

10-155

Condition: NCF OK

Matt Shacklock

From: Mark Beasley
Sent: Wednesday, November 01, 2017 1:46 PM
To: Login; Sample Storage; Due Metals
Cc: Jeremy Gupton
Subject: L946745-03 *TGERESHTX* rush relog

Importance: High

Relog L946745-03 for SEG. Transfer TS. Log as R2 due 11/2.

Mark Beasley
National Account Manager

ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9672 | Cell 615.330.1602
mbeasley@esclabsciences.com | www.esclabsciences.com

ANALYTICAL REPORT

November 06, 2017

TGE Resources

Sample Delivery Group:	L948202
Samples Received:	10/27/2017
Project Number:	R13411.04
Description:	Future Star Lake Hospital
Site:	29805 PACIFIC HWY S
Report To:	Kristi Barnette 8048 Northcourt Road Houston, TX 77040

Entire Report Reviewed By:

Mark W. Beasley
Technical Service Representative

TABLE OF CONTENTS

SB-7 (1-2) L948202-01 Solid

			Collected by	Collected date/time	Received date/time
			Evan Sutler	10/27/17 08:15	10/28/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037200	1	10/31/17 08:10	10/31/17 08:19	KDW
Metals (ICPMS) by Method 6020A	WG1039112	5	11/04/17 08:32	11/05/17 18:56	LAT

SB-11 (5-6) L948202-02 Solid

			Collected by	Collected date/time	Received date/time
			Evan Sutler	10/26/17 15:35	10/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1037199	1	10/31/17 08:51	10/31/17 09:02	JD
Metals (ICPMS) by Method 6020A	WG1039112	5	11/04/17 08:32	11/05/17 19:00	LAT

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Technical Service Representative

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

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

Mark W. Beasley
Technical Service Representative

Laboratory Review Checklist: Reportable Data

Laboratory Name: ESC Lab Sciences	LRC Date: 11/06/2017 13:59
Project Name: Future Star Lake Hospital	Laboratory Job Number: L948202-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037200, WG1037199 and WG1039112

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review Checklist: Supporting Data

Laboratory Name: ESC Lab Sciences	LRC Date: 11/06/2017 13:59
Project Name: Future Star Lake Hospital	Laboratory Job Number: L948202-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037200, WG1037199 and WG1039112

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

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

Laboratory Review Checklist: Exception Reports

Laboratory Name: ESC Lab Sciences	LRC Date: 11/06/2017 13:59
Project Name: Future Star Lake Hospital	Laboratory Job Number: L948202-01 and 02
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1037200, WG1037199 and WG1039112

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.5		1	10/31/2017 08:19	WG1037200

Metals (ICPMS) by Method 6020A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Selenium	0.416	J	0.228	0.100	0.599	5	11/05/2017 18:56	WG1039112

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.6		1	10/31/2017 09:02	WG1037199

Metals (ICPMS) by Method 6020A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Selenium	0.529	J	0.255	0.100	0.670	5	11/05/2017 19:00	WG1039112

Method Blank (MB)

(MB) R3261873-1 10/31/17 09:02

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0			

L946769-01 Original Sample (OS) • Duplicate (DUP)

(OS) L946769-01 10/31/17 09:02 • (DUP) R3261873-3 10/31/17 09:02

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	80.4	80.8	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3261873-2 10/31/17 09:02

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3261855-1 10/31/17 08:19

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L947070-01 Original Sample (OS) • Duplicate (DUP)

(OS) L947070-01 10/31/17 08:19 • (DUP) R3261855-3 10/31/17 08:19

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.5	86.4	1	3		5

Laboratory Control Sample (LCS)

(LCS) R3261855-2 10/31/17 08:19

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3263242-1 11/05/17 17:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Selenium	U		0.19	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3263242-2 11/05/17 17:45 • (LCSD) R3263242-3 11/05/17 17:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Selenium	100	109	115	109	115	80-120			5	20

L947673-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L947673-01 11/05/17 17:55 • (MS) R3263242-6 11/05/17 18:06 • (MSD) R3263242-7 11/05/17 18:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Selenium	20.0	0.542	110	124	109	124	5	75-125			12	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA-LAP,LLC	100789
DOD	1461.01
USDA	S-67674

[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

Company Name/Address:

TGE RESOURCES

8040 Northcourt Rd.
Houston, TX 77040

Billing Information:

Accounts Payable
8040 Northcourt Rd.
Houston, TX 77040

Chain of Custody Page 1 of 1

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Kristi Barnette

Email To: Kristib@tgeresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: 713-744-5812

Fax:

Client Project #: R13411.04

Lab Project #: TGERESHTX-R13411

L#: ~~1947070~~ H240 94822

Collected by (print): Evan Sitler

Site/Facility ID #: 29805 Pacific Hwy S

P.O. #: 7759

Collected by (signature): [signature]

Immediately Packed on Ice N___ Y ✓

Rush? (Lab MUST Be Notified)
✓ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: 10/30/17

Email? ___No ✓ Yes

FAX? ___No ___Yes

Acctnum: TGERESHTX

Template:

Prelogin:

TSR:

Cooler:

Shipped Via: HTX Delivery

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH GRO	V8260	MRCRA 8	pH	Hold	TCLP	HOLD	Always QCTX-S, EDD	Item/Contaminant	Sample # (lab only)
SB-11 (9-10)	Grab	SS	9-10'	10/27/17	0940	6	✓	✓	✓	✓	✓		✓		✓			~~-01~~
SB-7 (1-2)	Grab	SS	1-2	10/27/17	0815	6	✓	✓	✓	✓	✓	✓					01	~~-01~~ -02
SB-7 (5-6)	Grab	SS	5-6	10/27/17	0820	6	✓	✓	✓	✓	✓		✓		✓			-03
SB-8 (0-1)	Grab	SS	0-1	10/27/17	0830	6	✓	✓	✓	✓	✓							-52 -04
SB-8 (5-6)	Grab	SS	5-6	10/27/17	0840	6	✓	✓	✓	✓	✓		✓		✓			-05
SB-9 (1-2)	Grab	SS	1-2	10/27/17	0850	6	✓	✓	✓	✓	✓							-53 -06
SB-9 (5-6)	Grab	SS	5-6	10/27/17	0900	6	X	✓	✓	✓	✓		✓		✓			-07
IDW	Comp	SS	—	10/27/17	1000	10	(X)	✓	✓				✓	✓	✓			-08/09
SB-12 (1-2)	Grab	SS	1-2	10/27/17	0910	5	✓	✓	✓	✓	✓						-54	~~-09~~ -10
SB-12 (5-6)	Grab	SS	5-6	10/27/17	0920	5	✓	✓	✓	✓	✓		✓		✓			-10 -11

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other________

Don't run

pH ✓ Temp________

Flow________ Other________

Hold #: 10-168

Remarks: 7474 0933 2558

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____	Condition: (lab use only)
[signature]	10/27/17	1200			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1-3 °C Bottles Received: 53	COC Seal Intact: ✓ Y ___ N ___ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature] 836	Date: 10-28-17 Time: 8:45	pH Checked: NCF:

TGE Resources
8040 Northcourt Rd.
Houston, TX 77040

Billing Information:
Account Payable
8040 Northcourt Rd.
Houston, TX 77040

Pres Chk

Report to: **Kristi Barnette, Evan Sitler**

Email To: kristi.b@tgeresources.com

Project Description: Future Star Lake Hospital

City/State Collected: Federal Way, WA

Phone: **713-744-5800**
Fax:

Client Project # R13411.04

Lab Project # TGERESHTX-R13411

Collected by (print): E. Sitler

Site/Facility ID # 29805 Pacific Hwy

P.O. # 7759

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPH DRO, RRO	TS	NWTPH, GRO	V8260	MRCRA8	HOLD	pH						Remarks	Sample # (lab only)
SB-6 (1-2)	Grab	SS	1-2'	10/26/17	1445	5	✓	✓	✓	✓	✓									-01
SB-6 (5-6)	Grab	SS	5-6'	10/26/17	1455	5	✓	✓	✓	✓	✓	✓								
SB-10 (1-2)	Grab	SS	1-2'	10/26/17	1545	6	✓	✓	✓	✓	✓									02
SB-10 (5-6)	Grab	SS	5-6'	10/26/17	1555	5 6	✓	✓	✓	✓	✓	✓								
SB-11 (3-4)	Grab	SS	3-4'	10/26/17	1530	6	✓	✓	✓	✓	✓									03
SB-11 (5-6)	Grab	SS	5-6'	10/26/17	1535	6	✓	✓	✓	✓	✓									04

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ___ Temp ___
Flow ___ Other ___

Samples returned via:
___ UPS ___ FedEx ___ Courier ___

Tracking # 7474 0933 2547

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	10/26/17	1700	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			R Pos 834

Trip Blank Received: Yes (No) HCL / MeoH TSR

Temp: 3.5 °C corr -0.2 Bottles Received: 33

Date: 10-27-17 Time: 0845

If preservation required by Login: Date/Time

10-155

Condition: NCF (OK)

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient Volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
a subsidiary of Mustang

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L940945

F044

Acctnum: TGERESHTX
Template:
Prelogin:
TSR: Mark Beasley
PB:
Shipped Via:

Matt Shacklock

From: Mark Beasley
Sent: Friday, November 03, 2017 11:16 AM
To: Login; Due Metals
Cc: Jeremy Gupton
Subject: L947070 & L946745 *TGERESHTX* rush relog

Importance: High

Relog L947070-01 and L946745-04 for SEG. Transfer TS results. Log as R2 due 11/6.

Mark Beasley
National Account Manager

ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9672 | Cell 615.330.1602
mbeasley@esclabsciences.com | www.esclabsciences.com

APPENDIX D

Robin D. Franks, P.G. - President

Ms. Franks holds dual BS degrees in Geology and Biology; and a MS in Geology. She is a TX- Licensed PG (TX 875), a CHMM (3725) with multiple other credentials and qualifications all in good standing. Her experience spans more than twenty-five years in assessment of commercial real estate; as well as characterization, clean-up and closure within the commercial, industrial, oil and gas and healthcare industries, to name a few. Her experience encompasses compliance auditing, oil and gas real estate assessment and remediation, underground storage tank project management, asbestos consulting, lead-based paint management and industrial hygiene/indoor environmental quality consulting including mold/fungus assessment, testing and remediation. Additional expertise includes litigation support and client representation with regard to environmental matters.

***Tim E Crump, CPG, P.G.* – Senior Project Manager**

Mr. Crump holds BS degree in Geological Sciences and a MS in Environmental Management. He is a WA- Licensed PG (WA 3210) with multiple other credentials and qualifications all in good standing. His experience spans more than twenty years in assessment of commercial real estate; as well as characterization, clean-up and closure within the commercial, industrial, oil and gas and healthcare industries, to name a few. His experience encompasses compliance auditing, oil and gas real estate assessment and remediation, underground storage tank project management, asbestos consulting, lead-based paint management and industrial hygiene/indoor environmental quality consulting including mold/fungus assessment, testing and remediation.