

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 Poyntz Avenue
Manhattan, Kansas**

**EPA COOPERATIVE AGREEMENT No. BF-97766001-0
EPA ACRES No. 250587**



Prepared for:
Flint Hills Regional Council
P.O. Box 514
Ogden, KS 66517

Prepared by:
Stantec Consulting Services Inc.
8200 East 34th Street Circle North Suite 1201
Wichita, KS 67226

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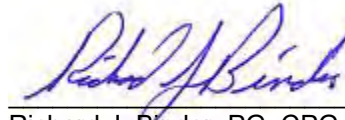
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AUTHOR



Richard J. Binder, PG, CPG
Principal

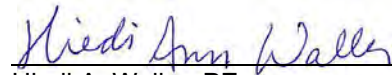
QUALITY ASSURANCE REVIEW

Technical Reviewer



Erin N. Gross, PG
Senior Geologist

Independent Reviewer



Hiedi A. Waller, PE
Senior Environmental Engineer



1.0 EXECUTIVE SUMMARY

Stantec Consulting Services Inc. (Stantec) prepared this Phase II Environmental Site Assessment (ESA) report on behalf of Flint Hills Regional Council (hereinafter referred to as the "FHRC"). The report documents field sampling and associated laboratory analyses performed at the 0.35-acre parcel located at 1026 Poyntz Avenue in Manhattan, Kansas (the "Property") to evaluate recognized environmental conditions (RECs) identified as part of a Phase I ESA of the Property (Solid Ground Environmental, 2021). The report also assesses the potential for hazardous building materials to be present which could impact planned redevelopment. Soil borings, sub-slab vapor points, and a groundwater monitoring well were installed to facilitate sampling. Soil, groundwater and soil vapor samples were collected and submitted for laboratory analysis. A hazardous building materials survey was also performed to assess the potential for asbestos containing materials (ACM), lead-bearing paint (LBP), and other restricted wastes to be present in the Property building. The Phase II ESA scope of work was completed in accordance with the United States Environmental Protection Agency (USEPA)-approved Quality Assurance Project Plan (QAPP; Stantec, 2019) and Site-Specific Sampling and Analysis Plan (SSSAP; Stantec, 2021).

The work was funded through a USEPA Brownfields Coalition Assessment Grant awarded to the FHRC in 2018 (Cooperative Agreement No. BF-97766001-0). The work was completed using hazardous substances funding. The eligibility for use of funding was approved by USEPA on September 10, 2021. The USEPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) number for the parcel/Property is 250587.

Based on the results of the Phase II ESA, the following conclusions and recommendations are made:

1.1 CONCLUSIONS

Soil

Materials encountered at the Property include concrete pavement or gravel underlain by silty clay fill containing brick fragments to a depth of approximately 5-6 feet below ground surface (ft bgs). Fill is generally underlain by native clay and silty clay to a depth of approximately 26 ft bgs. Silty sand was encountered at a depth of approximately 26 ft bgs to the maximum depth of boring (30 ft bgs). Analyzed constituents were not detected in site soil samples at concentrations exceeding applicable Kansas Department of Health and Environment (KDHE) non-residential risk-based screening levels (RBSLs).

Groundwater

Apparent light non-aqueous phase liquid (LNAPL) was measured at a depth of 23.41 ft bgs (3.01 ft thick) in monitoring well TW-2. The depth to apparent groundwater measured in TW-2 was 26.42 ft bgs. Select petroleum volatile organic compounds (VOCs), low-range hydrocarbons (LRHs) and mid-range hydrocarbons (MRHs) were detected above their respective KDHE residential and/or non-residential RBSLs. The reported values may be affected by the presence of LNAPL observed in the well prior to purging and sampling or turbidity in the sample. The petroleum release appears to be related to the identified leaking underground storage tank (LUST) release at the site, which is currently managed by KDHE (Project No. U5-081-14689).

Soil Vapor

VOCs were not detected above residential vapor risk screening levels (VRSLs) in the two sub-slab vapor samples collected at the Property.

ACM

Asbestos was not detected at concentrations >1%, which is the KDHE and USEPA threshold concentration. However, three samples had asbestos detected at <1% which is regulated by the US Occupational Safety and Health Administration (OSHA).

LBP

All X-Ray Fluorescence (XRF) measurements were below the KDHE and USEPA threshold concentration of 1.0 milligram per square centimeter (mg/cm²) and therefore, are not considered to be lead-bearing.



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Other Restricted Wastes

The waste inventory included miscellaneous liquid containers, mercury containing equipment, and fluorescent light ballasts and lights.

1.2 RECOMMENDATIONS

Based on the results of the Phase II ESA, identified petroleum impacts including the presence of LNAPL and petroleum impacted groundwater appear to be related to the LUST release currently managed by KDHE (Project No. U5-081-14689). No significant releases for non-LUST constituents were identified. The regulated hazardous building materials and other restricted wastes identified in the building should be managed in accordance with applicable federal, state, and local regulations. No other actions appear to be warranted.

Per Kansas Administrative Regulations (KAR) KAR 28-48-2, any substance that contaminated groundwater or soil must be reported to KDHE. As such, a copy of this report should be submitted to both KDHE and USEPA.



2.0 INTRODUCTION

Stantec prepared this Phase II ESA report on behalf of FHRC. The report documents field sampling and associated laboratory analyses, which were performed to evaluate RECs identified as part of a Phase I ESA of the Property (Solid Ground Environmental, 2021) and assess the potential for hazardous building materials to be present. Soil borings, sub-slab vapor points, and a groundwater monitoring well were installed to facilitate sampling. Soil, groundwater and soil vapor samples were collected and submitted for laboratory analysis. A hazardous building materials survey was also performed to assess the potential for ACMs, LBP, and other restricted wastes to be present in the Property building. The Phase II ESA scope of work was completed in accordance with the USEPA-approved QAPP (Stantec, 2019) and SSSAP (Stantec, 2021).

The work was funded through a USEPA Brownfields Coalition Assessment Grant awarded to the FHRC in 2018 (Cooperative Agreement No. BF-97766001-0). The work was completed using hazardous substances funding. The eligibility for use of funding was approved by USEPA on September 10, 2021. The USEPA ACRES number for the parcel/Property is 250587. Further detail is provided in the following sections.

2.1 PROPERTY DESCRIPTION/BACKGROUND

The Property consists of one parcel of land in Manhattan, Kansas totaling approximately 0.35 acre. The Property location is illustrated on **Figure 1**. A Property map illustrating the main features of the Property is provided as **Figure 2**.

Parcel information is summarized below:

<u>Parcel Name</u>	<u>Tax Parcel Identification Number (ID)</u>	<u>EPA ACRES ID</u>	<u>Owner / Occupant</u>	<u>Buildings / Structures</u>	<u>Size (acre)</u>	<u>Zoning</u>
1026 Poyntz Avenue	081-204-18-2-70-05-009.00-0	250587	Phyllis Pease	• 1,700 square foot (ft²) former auto gas/service station building • 1,800 ft² canopy space for former gas/service station • 7,820 ft² paved concrete area for parking	0.35	Commercial & Industrial

Surrounding land use is a mixture of commercial and residential properties. Manhattan City Park is located directly west of the Property, across North 11th Street. The Property is currently unoccupied and is used for general storage. Historic use of the Property includes a gas station/service station under multiple owners/operators.

Underground storage tanks (USTs) were installed at the Property in 1966. According to KDHE records, one 500-gallon steel UST containing used oil was removed in February 1999. When the previous owner purchased the Property in 2014, the remaining USTs (two 3,000-gallon and two 6,000-gallon USTs containing gasoline) were removed as land use changed to a retail tire store (Facility ID No. 01498). The KDHE Bureau of Environmental Remediation (BER) Facility Compliance Checklist comment from the 2014 UST removal stated that the “tanks had numerous holes in them due to past corrosion”. As a result, multiple soil samples were collected and monitoring wells were installed at the Property.

According to a groundwater monitoring report from August 12, 2021, the groundwater flow direction at the Property is to the south/southeast and generally measured approximately 20-25 ft bgs (KDHE, 2021a). LNAPL was detected in monitoring wells north and west of the Property building. Significant petroleum impacts to groundwater are present. The petroleum release is currently managed by KDHE (Project No. U5-081-14689).

2.2 ENVIRONMENTAL CONCERNS

As described above, a Phase I ESA of the Property was completed by Solid Ground Environmental on July 31, 2021, and several RECs were found in connection with the Property (Solid Ground Environmental, 2021).



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The RECs included:

- *The historical use of the Property as an automobile repair facility;*
- *The presence of in-ground hydraulic lifts;*
- *The former filling station/former gasoline USTs with an active LUST investigation.*

Common contaminants related with the RECs include VOCs, polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons, LRHs, MRHs, high range hydrocarbons (HRH), polychlorinated biphenyls (PCBs), and Resource Conservation and Recovery Act (RCRA) metals. Given the likely and known presence of VOCs below the Property, vapor intrusion was also a concern. Based on the results of the Phase I ESA, appropriate investigation was recommended to further assess the identified RECs and to determine whether it has resulted in impacts to soil, groundwater, or vapor at the Property.

Based upon additional discussions with the Property owner and representatives, there is a potential for ACMs, LBP, and other restricted wastes to be present on the Property. The materials, if present, may need to be managed as part of building renovation/redevelopment.

The currently identified petroleum releases are managed by KDHE (Project No. U5-081-14689). As such, this assessment generally focused on non-LUST release concerns and hazardous building materials.



3.0 DESCRIPTION OF INVESTIGATION

Field activities completed in accordance with the QAPP (Stantec, 2019) and SSSAP (Stantec, 2021) are summarized in the following subsections.

3.1 GEOPHYSICAL SURVEY

Stantec retained Ground Penetrating Radar Systems, Inc. (GPRS) to conduct a geophysical survey to clear utilities at each borehole location. An attempt was also made to assess below grade structures in the area of the hydraulic lifts and an apparent drain pit in the building. Due to the presence of multiple anomalies immediately adjacent to the hydraulic lifts in the building, the proposed soil boring locations of SB-1, SB-2/TW-1 and SB-3 were moved approximately eight feet west (**Figure 2**). No definitive results were obtained with regard to other subsurface structures in the building due to the presence of wire mesh within the concrete. The geophysical survey methodology and results are further detailed in the GPRS report included in **Appendix A**.

3.2 SOIL SAMPLING

Stantec personnel conducted soil sampling activities at the Property in December 2021. Prior to the start of soil sampling activities, boring locations were cleared for safe working clearance from overhead and underground utility lines by contacting Kansas One-Call® prior to the start of sampling. Contractors for Kansas One-Call® marked the locations for electric and gas utility lines servicing the Property.

On December 2, 2021, Below Ground Surface, Inc. (BGS) of Salinas, Kansas performed the drilling activities necessary for soil sampling using a track-mounted hydraulic probe sampler. Sean Clary, a Stantec Kansas-registered Intern Engineer, performed soil logging, field screening, and processing of soil samples for laboratory analysis. Soil sampling was conducted at five boring locations (SB-1, SB-2/TW-2, SB-3, SB-4 and SB-5), which varied in depth from 5 to 30 ft bgs. Boring locations are illustrated on **Figure 2**.

During the event, soil core samples were collected using direct-push sampling methods. Soil samples were collected continuously at each boring location from the ground surface to the maximum boring depths. Hydraulic probe sampling barrels were decontaminated with an Alconox® equivalent wash and water rinse prior to the collection of each soil sample. New disposable plastic “sleeve” liners were used for collection of each soil sample to minimize the potential for cross contamination between soil samples.

Soil samples were visually and physically examined by the Stantec field staff and observations made of the general lithology (percentages of gravel, sand, silt, and clay), visible layering, evidence of non-native fill/anthropogenic materials, indications of chemical or other staining, odors, and other distinctive features. Field observations are described on soil boring logs provided in **Appendix B**. Following sampling, one soil boring (SB-2/TW-2) was completed as a temporary groundwater monitoring well. Temporary groundwater monitoring well installation is discussed further in **Section 3.3**.

Portions of the soil from approximately every two-foot interval were field screened by Stantec personnel for the presence of VOCs using a Photoionization Detector (PID) equipped with an 10.6 electronvolt lamp and calibrated to 100 parts per million (ppm) isobutylene gas calibration standard along with a fresh air calibration to 0.0 ppm.

Selection of soil samples for laboratory analysis was based upon depth, presence of fill materials, and moisture content, in accordance with rationale detailed for each boring in the SSSAP. Soil samples selected for analysis were placed directly into laboratory-supplied containers, preserved as appropriate, and immediately placed in a cooler on ice for shipping to Eurofins TestAmerica Laboratories, Inc. in Cedar Falls, Iowa and Pensacola, Florida (State of Kansas Laboratory Certification Nos. E-10341 and E-10253 respectively) under chain of custody for laboratory analysis. The types of analyses performed per sample included analysis for VOCs (EPA Method 8260D), PAHs (EPA Method 8270E-SIM), PCBs (EPA Method 8082a), Kansas LRHs, MRHs, and HRHs (Method Kansas - LRH and Method Kansas – MRH/MRH), and RCRA metals including lead and mercury (EPA Method 6010D and 7471B). Laboratory analytical reports are presented in **Appendix C**. Soil laboratory analytical data for samples collected during December 2021 are summarized on **Table 1**. Soil analytical data is further discussed in **Section 5.2**. Quality assurance/quality control (QA/QC) data is further discussed in **Section 5.8.1**.



Boreholes not completed as temporary groundwater monitoring wells were immediately abandoned in accordance with KAR 28-30-1 through 28-30-207 requirements by backfilling with granular bentonite. Borehole abandonment forms are included in **Appendix B**.

The locations of the soil borings were surveyed by Stantec using a global positioning satellite instrument and used to plot the boring locations illustrated on **Figure 2**. The waste soil cuttings were collected in a Department of Transportation (DOT)-approved 55-gallon drum which was sealed, labeled, and stored on-site. The waste soil cuttings will be handled, transported, and disposed of by a licensed waste hauler per federal and state requirements.

3.3 TEMPORARY WELL INSTALLATION AND GROUNDWATER SAMPLING

On December 2, 2021, one temporary one-inch diameter schedule 40 polyvinyl chloride monitoring well with a 10-foot long 10 slot (0.010-inch) screen was constructed in soil boring SB-2/TW-1 by BGS to enable Stantec to collect groundwater “grab” samples. The screened interval of the well was 17- 27 ft bgs. The soil boring log for the temporary well is presented in **Appendix B**.

The well was purged dry several times prior to sampling. Purge water was collected in a labeled DOT-approved 55-gallon drum. After purging, groundwater samples were collected from the groundwater monitoring wells. The samples were placed in laboratory-supplied containers, preserved as appropriate, stored on ice, and submitted under chain-of-custody procedures to Eurofins TestAmerica Laboratories, Inc. in Cedar Falls, Iowa (State of Kansas Laboratory Certification No. E-10341) for dissolved RCRA metals (EPA Method 6010D and 7471B), PAHs (EPA Method 8270-SIM), PCBs (EPA Method 8082A), LRH/MRH/HRH (Method Kansas - LRH and Method Kansas – MRH/MRH), and VOCs (EPA Method 8260D) analyses as described in the QAPP (Stantec, 2019). Samples submitted for dissolved RCRA metal analyses were field filtered prior to preservation. LRH, MRH, and HRH analyses were conducted at the Eurofins TestAmerica – Pensacola facility (Laboratory Certification No. E-10253). Laboratory analytical reports are presented in **Appendix C**. Groundwater laboratory analytical data is summarized on **Table 2** and discussed in **Section 5.3**. QA/QC data is discussed in **Section 5.8.2**.

Stantec personnel subsequently abandoned the temporary monitoring well by removing the casing and screen from the boreholes and backfilling the boreholes with granular bentonite to ground surface. Borehole abandonment forms are presented in **Appendix B**. Purge water was collected in a DOT-approved 55-gallon drum, sealed, labeled, and stored on site. Purge water will be handled, transported, and disposed of by a licensed waste hauler per federal and state requirements.

3.4 SOIL VAPOR SAMPLING

Two sub-slab vapor sample points (SS-1 and SS-2) were constructed using a 5/8-inch diameter VaporPin® kit (**Figure 2**). After vapor point construction, leak testing consisting of a “shut-in-test” that measures airtightness of the fittings between the sample probe and the sample contained and a “helium shroud test” to measure if the vapor point seal leaks, was performed. After successful shut-in and helium shroud tests, the vapor point was purged of one well volume at a flow rate near or less than 200 milliliters per minute. Following purging, “grab” samples were collected at a flow rate near or less than 200 milliliters per minute using a laboratory provided 6-liter Summa canisters.

Vapor samples were placed in laboratory-supplied containers and submitted under chain-of-custody procedures to Eurofins TestAmerica Laboratories, Inc. in Burlington, Vermont (State of Kansas Laboratory Certification No. VT972) as described in the QAPP (Stantec, 2019). The vapor samples were analyzed for VOCs using USEPA Method TO-15. Laboratory analytical reports are presented in **Appendix C**. Soil vapor laboratory analytical data is summarized on **Table 3** and discussed in **Section 5.4**. QA/QC data is discussed in **Section 5.8.3**.

3.5 REGULATED HAZARDOUS BUILDING MATERIALS SURVEY

As described in **Appendix D**, the surveying, sampling and analysis of building materials for ACM and LBP was completed by Environmental Works, Inc. (EWI) under contract to Stantec in general compliance with the QAPP



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(Stantec, 2019) and SSSAP (Stantec, 2021). EWI also provided an inventory and location of other restricted wastes observed in the building which could be considered hazardous waste and/or require special handling (e.g., mercury containing thermostats, switches, fluorescent light bulb, PCB-containing transformers; oil door closures; treated lumber; electronics; paints/solvents; etc.). EWI employees are licensed by the KDHE in ACM and LBP inspection. Restricted waste licensure is not required for these surveys in Kansas. Site activities were conducted by Andrew Barchack and Nicole Wise of EWI on November 30, 2021. Results are summarized in **Sections 5.5, 5.6 and 5.7**. QA/QC data is discussed in **Sections 5.8.4 and 5.8.5**.



4.0 APPLICABLE CLEAN-UP CRITERIA

Soil

Procedures for establishing soil clean-up standards applicable to sites in Kansas with documented soil contamination are specified in the *Risk-based Standards for Kansas Manual* (RSK Manual). The most current revisions to the RSK Manual were completed during July 2021 (KDHE, 2021). Soil clean-up standards (RBSLs) depend in part on current and anticipated future land use. As described in **Section 2.1**, the current zoning of the Property is non-residential. The anticipated future use is also non-residential. Therefore, the non-residential classification will be used to assess future clean-up criteria for the Site.

RBSLs are numerical soil clean-up standards that are calculated for a minimum of two exposure pathways – direct contact by humans with exposed soil and leaching of contaminants from soil into groundwater. The approach used for the Property was to use a RBSL spreadsheet developed by the KDHE's BER staff for use by consultants. The spreadsheet is updated periodically by KDHE staff and utilizes toxicity information maintained on the USEPA Regional Screening Level website (USEPA, 2017). As toxicity data are updated periodically for different types of contaminants, the KDHE RBSL spreadsheet is similarly updated.

Groundwater

Public health-related groundwater quality standards are also set forth by KDHE's RBSLs. Standards are listed for substances of public health concern (defined as substances having carcinogenic, mutagenic, or teratogenic properties or interactive effects) and substances of public welfare concern (defined as having a negative aesthetic value but with little threat to human health). Two levels of standards are listed: the residential and non-residential. The significant differences between the two receptor classes include exposure frequency, exposure duration, and the consideration that children are potentially exposed at residential land-use scenarios and are more sensitive to environmental contaminants. The non-residential land-use scenario is based upon industrial or commercial settings where adult workers are considered the potentially exposed receptor. As the anticipated future use is non-residential, this classification will be used to assess future clean-up criteria for the Property. Values relevant to constituents evaluated in groundwater samples collected at the Site the values included in the KDHE's RBSLs published in the July 2021 RSK Manual update (KDHE, 2021).

Soil Vapor

The *Kansas Vapor Intrusion Guidance* dated August 2016 (KDHE, 2016) and RSK Manual (KDHE, 2021) provide methods for VRSLs, and mitigation recommendations. The most recent updated tables from November 2021 were utilized. KDHE currently utilizes values for residences. Vapor criteria for non-residential structures are addressed on a case by case basis if concentrations above residential VRSLs are detected.

ACM

The federal requirements established by OSHA governing exposure to asbestos in the workplace and the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for asbestos established by USEPA are applicable in Kansas. As described in **Appendix D**, USEPA and KDHE define ACM as any material that contains more than one percent (by weight) of asbestos (>1%). Only one sample from a homogeneous area with an asbestos concentration >1% is required to collectively identify that material as an ACM. Materials containing <1% asbestos do not meet the definition of ACM; however, are regulated by OSHA. NESHAP classifies asbestos containing building materials (ACBM) as either friable or non-friable. Friable material is that material which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACBMs can release fibers when damaged or disturbed, therefore USEPA has defined two categories of non-friable ACBM. Regulated ACBM includes friable ACBMs, Category I nonfriable ACBM that has become friable, Category I nonfriable ACBM that will be or has been subjected to sanding, grinding, cutting, or abrading, or Category II nonfriable ACBM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Kansas has requirements, in addition to the federal requirements, for enclosure, removal, or encapsulation of ACM and ACM waste disposal. The state's requirements for asbestos abatement licensing and certification are stricter than federal guidelines.



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LBP

The USEPA and the U.S. Housing and Urban Development (HUD) defines LBP as equal to or greater than 1.0 mg/cm² measured by XRF analysis, or 0.5% (5,000 ppm) measured by weight through laboratory analysis. The State of Kansas has adopted the same definition of LBP (mainly for residential HUD applications) as that which is equal to or greater than 1.0 mg/cm² or 0.5% (5,000 ppm), respectively. This material requires special management and disposal.

Other Restricted Wastes

Restricted waste may include, but are not limited to, building materials such as mercury containing thermostats, switches, fluorescent light bulbs; polychlorinated biphenyl-containing transformers; oil door closures; treated lumber; electronics; paints/solvents; and cleaning products. Restricted wastes have media-specific criteria dependent of the material.



5.0 RESULTS OF INVESTIGATION

The results of the investigation are provided in the following sections. Sample locations are depicted on **Figure 2**.

5.1 SITE GEOLOGY/HYDROGEOLOGY

Materials encountered at the Property include concrete pavement or gravel underlain by silty clay fill containing brick fragments to a depth of approximately 5-6 ft bgs. Fill is generally underlain by native clay and silty clay to a depth of approximately 26 ft bgs. Silty sand was encountered at a depth of approximately 26 ft bgs to the maximum depth of boring (30 ft bgs). Apparent LNAPL was measured at 23.41 ft bgs (3.01 ft thickness) in temporary monitoring well TW-2. The depth to apparent groundwater measured in TW-2 was 26.42 ft bgs. Bedrock was not encountered during investigation activities. The soil characteristics at each boring location are detailed on the boring logs presented in **Appendix B**.

5.2 SOIL QUALITY AND ANALYTICAL RESULTS

Field PID data for soil are presented on the boring logs in **Appendix B** and are evaluated in **Section 5.2.1**. The soil samples were analyzed for RCRA metals, PCBs, PAHs, VOCs, LRHs, MRHs and HRHs. Laboratory analytical results for soil samples are summarized on **Table 1** and evaluated for each constituent group in **Sections 5.2.2** through **5.2.5**. Copies of the laboratory analytical reports for soil samples are presented in **Appendix C**.

5.2.1 Field Observations

No significant field evidence of release was observed at SB-1, SB-3, SB-4 and SB-5. Field PID readings for soil samples collected to a maximum depth of boring (10 ft bgs) ranged from 0.0 to 2.5 instrument units. However, an apparent petroleum hydrocarbon odor was observed at SB-2/TW-2 below a depth of approximately 10 ft bgs. Odors increased with depth. Similarly, PID readings increased with depth from 0.0 to 689 instrument units. In general, soil samples from the unsaturated sample intervals with the highest PID readings in each boring were submitted for laboratory analysis for VOCs.

5.2.2 RCRA Metals

A total of six soil samples were analyzed for eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). All metals except selenium were detected in one or more of the soil samples. However, the concentrations of detected RCRA metals did not exceed non-residential KDHE RBSLs (**Table 1**).

5.2.3 PAHs

A total of six soil samples were submitted for analysis for PAHs. Various PAHs were detected at concentrations below their respective residential and non-residential KDHE RBSLs.

5.2.4 VOCs

A total of seven samples were analyzed for VOCs. Various petroleum VOCs were detected at concentrations below their respective residential and non-residential KDHE RBSLs (**Table 1**).

5.2.5 LRHs, MRHs and HRHs

A total of six soil samples were analyzed for LRHs, MRHs, and HRHs. Several samples had detections of HRHs. However, all concentrations were below their respective residential and non-residential KDHE RBSLs (**Table 1**).

5.2.6 PCBs

Samples from soil borings SB-1, SB-2 and SB-3 were analyzed for PCBs. No PCBs were detected in these samples (**Appendix C**).



5.3 GROUNDWATER QUALITY AND ANALYTICAL RESULTS

Stantec collected groundwater samples from temporary well TW-2. The groundwater samples were analyzed for VOCs, PAHs, PCBs, dissolved RCRA metals, LRHs, MRHs, and HRHs. The analytical report is presented in **Appendix C** and summarized on **Table 2**.

As shown on **Table 2**, no RCRA metals or HRHs were detected above their respective residential or non-residential KDHE RBSLs. However, select petroleum VOCs, PAHs, LRHs, and MRHs were detected above their respective residential and/or non-residential KDHE RBSLs. The reported values may be affected by the presence of LNAPL observed in the well prior to purging and sampling. No PCBs were detected.

5.4 SOIL VAPOR ANALYTICAL RESULTS

A total of two sub slab vapor samples were collected and analyzed for VOCs. Select petroleum and hazardous substance VOCs were detected in the samples. However, no VOCs were detected above residential VRSLs in the sub-slab samples (**Table 3**).

5.5 ACM SURVEY ANALYTICAL RESULTS

A total of 23 samples were analyzed for asbestos. No asbestos was detected at concentrations >1% which is the KDHE and USEPA threshold concentration. However, three samples had asbestos detected at <1% which is regulated by OSHA. The materials included:

- The ceiling drywall joint compound was determined to be <1% chrysotile. The material is considered nonfriable and was observed in good condition.
- Grey caulking on the building's doors was determined to be <1% chrysotile. The material is considered non-friable and was observed in good condition.

The locations of the asbestos samples and associated photographs of identified materials are provided in **Appendix D**.

5.6 LBP SURVEY XRF RESULTS

XRF measurements were performed at 70 locations. All XRF measurements were below the 1.0 mg/cm² threshold concentration and therefore are not considered to be lead-bearing. The locations of the XRF measurements and associated photographs of identified materials are provided in **Appendix D**.

5.7 OTHER RESTRICTED WASTES

The waste inventory is provided in **Appendix D**. Wastes identified included one-gallon or less containers of paint, sealants, and oil, and five-gallon or less containers of paint, sealants, and new and used oil. Three 55-gallon drums of used oil were observed in the garage area of the building. One mercury containing thermostat was observed on the wall in the retail petroleum building. Additionally, wastes including fire extinguishers and fluorescent light bulbs and ballasts were observed throughout the building.

5.8 QUALITY ASSURANCE / QUALITY CONTROL

QA/QC review was conducted of analysis of media samples collected at the Property in December 2021 and is summarized in this section. As noted in the project QAPP (Stantec, 2019), field duplicate, and matrix spike/matrix spike duplicate (MS/MSD) samples were to be used to evaluate the quality of data. Duplicate soil samples (SB1 [6-9]; FD-1) and groundwater samples (TW-2; FD-2) were collected for analysis in December 2021. MS/MSD analysis was conducted on soil sample SB-2 (7-9). MS/MSD analysis was only conducted at TW-2 for RCRA metals as insufficient containers were available for additional analyses.

A statistic commonly used to evaluate the precision of measurements is relative percent difference (RPD). To compare sample measurement results to field duplicate sample results and to compare sample measurement results to MS/MSD results, the RPD was calculated per the following equation:



$$RD (\%) = \frac{(C_1 - C_2)}{\left[\frac{(C_1 + C_2)}{2} \right]} \times 100$$

Where C_1 are concentrations in the original sample and the MS sample. The C_2 values are the field duplicate and MSD sample concentrations. An RPD of 0% indicates the two measurements are equal, while a larger RD indicates an increasing difference between the two measurements. Generally, a RPD greater than 35% (groundwater) and 50% (soil) indicates a poor correlation between samples. Laboratory analysis QA/QC summary of the available December 2021 data is presented on **Table 4a** for soil results and **Table 4b** for groundwater results. Variability could exist in the distribution of chemicals of concern within a duplicate sample set and greater caution should be taken in making remedial decisions based on individual sample data.

The QA/QC procedures were incorporated into both field and laboratory protocols. The data quality objective for this investigation was for the analytical data to be reproducible and of an acceptable quality to allow for comparison with the applicable guidelines/standards summarized previously. Further evaluation is provided below.

5.8.1 Soil

The concentrations of several constituents on **Table 1** were qualified with a “J” flag indicating the concentrations are estimated values that lie between the limit of detection and the reporting limit. This is relevant in situations where the reported concentrations are relatively similar in value to applicable soil KDHE RBSLs and could impact whether the KDHE RBSLs are exceeded. This does not appear to be the situation for any of the “J” flagged values. No VOCs were detected in the soil trip blank sample, TB-2, indicating the containers and samples were not significantly affected during shipment.

MS/MSD samples were collected from soil sample SB-2 (7-9) and laboratory analyzed for RCRA metals, VOCs, PAHs, LRHs, MRHs and HRHs. There was insufficient number of sample containers for the MS/MSD analysis for VOCs.

Recoveries for these constituents were within quality control limits except for select RCRA metals and VOCs qualified with a “F1” flag on **Table 1**. The recovery of the constituents detected outside of acceptance limits is not considered significant as none of the constituents were detected at concentrations exceeding KDHE RBSL standards.

One duplicate sample (FD-1) was taken from SB1 (6-9) in December 2021. The results of the field duplicate sample was generally similar to the results of its parent sample. Calculated RPD values for the MS/MSD and field duplicate samples and were all less than 50% (RPD threshold for soil) with the exception of arsenic results for the FD-1 and SB-1 (6-9) samples, which has an RPD of 69% (**Table 4a**). The discrepancy is not judged to be significant as the detected concentrations were below the KDHE RBSL standards. The detection limit for several of the samples analyzed for mercury were just above the residential RBSL, but well below the applicable nonresidential RBSL.

5.8.2 Groundwater

Groundwater laboratory reporting limits are all less than applicable KDHE RBSL values for nondetections. Several concentrations reported on **Table 2** are qualified with a “J” flag indicating the concentrations are estimated values that lie between the limit of detection and the reporting limit. All of the “J” flag values are less than their respective non-residential KDHE RBSLs. No VOCs were detected in the groundwater trip blank sample TB-1, indicating the containers and samples were not significantly affected during shipment.

A MS/MSD sample was collected from temporary well TW-2 and laboratory analyzed for RCRA metals only as insufficient containers were available for additional analyses. Recoveries for these constituents were within quality control limits.

A duplicate sample, FD-2, was taken from TW-2 in December 2021 in addition to the MS/MSD samples. Calculated RPD values were all less than 35% (RPD threshold for groundwater; **Table 4b**). Accurate RPD values were unable to be calculated for concentrations that were less than lab detection limits, although a large discrepancy is present in select PAH concentrations (2-methylnaphthalene, benzo[a]anthracene,



benzo[a]pyrene, benzo[b]fluoranthene, and naphthalene). These concentrations were observed above non-residential and/or residential pathways in FD-2 and not detected above laboratory detection limits in the TW-2 sample. It should be noted that LNAPL was present in the well prior to purging and sampling, which may have affected select results. In addition, the laboratory noted “evidence of matrix interference is present” in both samples, which may have been caused by turbidity and impacted the accuracy of these two samples (USEPA, 2014).

5.8.3 Soil Vapor

No field QA/QC samples were submitted for analyses due to a lack of availability of summa canisters from the laboratory. However, leak testing consisting of a “water dam” was conducted at both sub-slab vapor points. This method measures airtightness of the probe locations. If the water placed in the casing maintains a constant level, the test confirms that no leaks are present in the vapor sample probe. Both leak tests passed and the results appear representative of site conditions.

5.8.4 ACM

EWI's survey included laboratory analysis of 23 samples per the QAPP (Stantec 2019) and SSSAP (Stantec, 2021). Although no field duplicates were collected, the results of the survey appear consistent; therefore, the lack of field duplicate samples is not considered a significant data gap. As such, ACM data are considered valid for use in this study.

5.7.5 LBP

EWI's survey included measuring lead on painted surfaces at 70 locations inside the building using XRF spectroscopy, which is consistent with the approach outlined in the SSSAP. XRF calibration/confirmation measurements recorded by EWI appear to meet the requirements established in the QAPP (Stantec, 2019). Therefore, XRF data are considered valid for use in this study.



6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the Phase II ESA, the following conclusions and recommendations are made:

6.1 CONCLUSIONS

Soil

Materials encountered at the Property include concrete pavement or gravel underlain by silty clay fill containing brick fragments to a depth of approximately 5-6 ft bgs. Fill is generally underlain by native clay and silty clay to a depth of approximately 26 ft bgs. Silty sand was encountered at a depth of approximately 26 ft bgs to the maximum depth of boring (30 ft bgs). Analyzed constituents were not detected in site soil samples at concentrations exceeding applicable KDHE non-residential RBSLs.

Groundwater

Apparent LNAPL was measured at a depth of 23.41 ft bgs (3.01 ft thick) in monitoring well, TW-2. The depth to apparent groundwater measured in TW-2 was 26.42 ft bgs. Select petroleum VOCs, LRHs and MRHs were detected above their respective KDHE residential and/or non-residential RBSLs. The reported values may be affected by the presence of LNAPL observed in the well prior to purging and sampling or turbidity in the sample. The petroleum release appears to be related to the identified LUST release at the site, which is currently managed by KDHE (Project No. U5-081-14689).

Soil Vapor

VOCs were not detected above residential VRSLs in the two sub-slab vapor samples collected at the Property.

ACM

Asbestos was not detected at concentrations >1%, which is the KDHE and USEPA threshold concentration. However, three samples had asbestos detected at <1% which is regulated by the US OSHA.

LBP

All XRF measurements were below the KDHE and USEPA threshold concentration of 1.0 mg/cm² and are not considered to be lead-bearing.

Other Restricted Wastes

The waste inventory included miscellaneous liquid containers, mercury containing equipment, and fluorescent light ballasts and lights.

6.2 RECOMMENDATIONS

Based on the results of the Phase II ESA, identified petroleum impacts including the presence of LNAPL and petroleum impacted groundwater appear to be related to the LUST release currently managed by KDHE (Project No. U5-081-14689). No significant releases for non-LUST constituents were identified. The regulated hazardous building materials and other restricted wastes identified in the building should be managed in accordance with applicable federal, state, and local regulations. No other actions appear to be warranted.

Per KAR 28-48-2, any substance that contaminated groundwater or soil must be reported to KDHE. As such, a copy of this report should be submitted to both KDHE and USEPA.



7.0 DISCLAIMER AND LIMITATIONS

This Phase II ESA was performed in accordance with generally accepted practices for the environmental consulting profession, undertaking similar studies at the same time and in the same geographical area as the work conducted by Stantec. Stantec observed the degree of care and skill that are generally exercised by the profession under similar circumstances and conditions. No other warranty is expressed or implied.

Stantec's observations, findings, and opinions should not be considered as scientific certainties, but only as opinion based on our professional judgment concerning the significance of the data gathered during the course of this investigation. Specifically, Stantec cannot represent that the Property does not contain any hazardous or toxic materials or other latent conditions beyond that observed by Stantec during the course of the investigation. Additionally, due to limitations of this investigation process and the necessary use of data furnished by others, Stantec and its subcontractors cannot assume liability if actual conditions differ from the information presented in this report.



8.0 REFERENCES

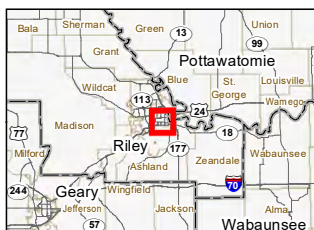
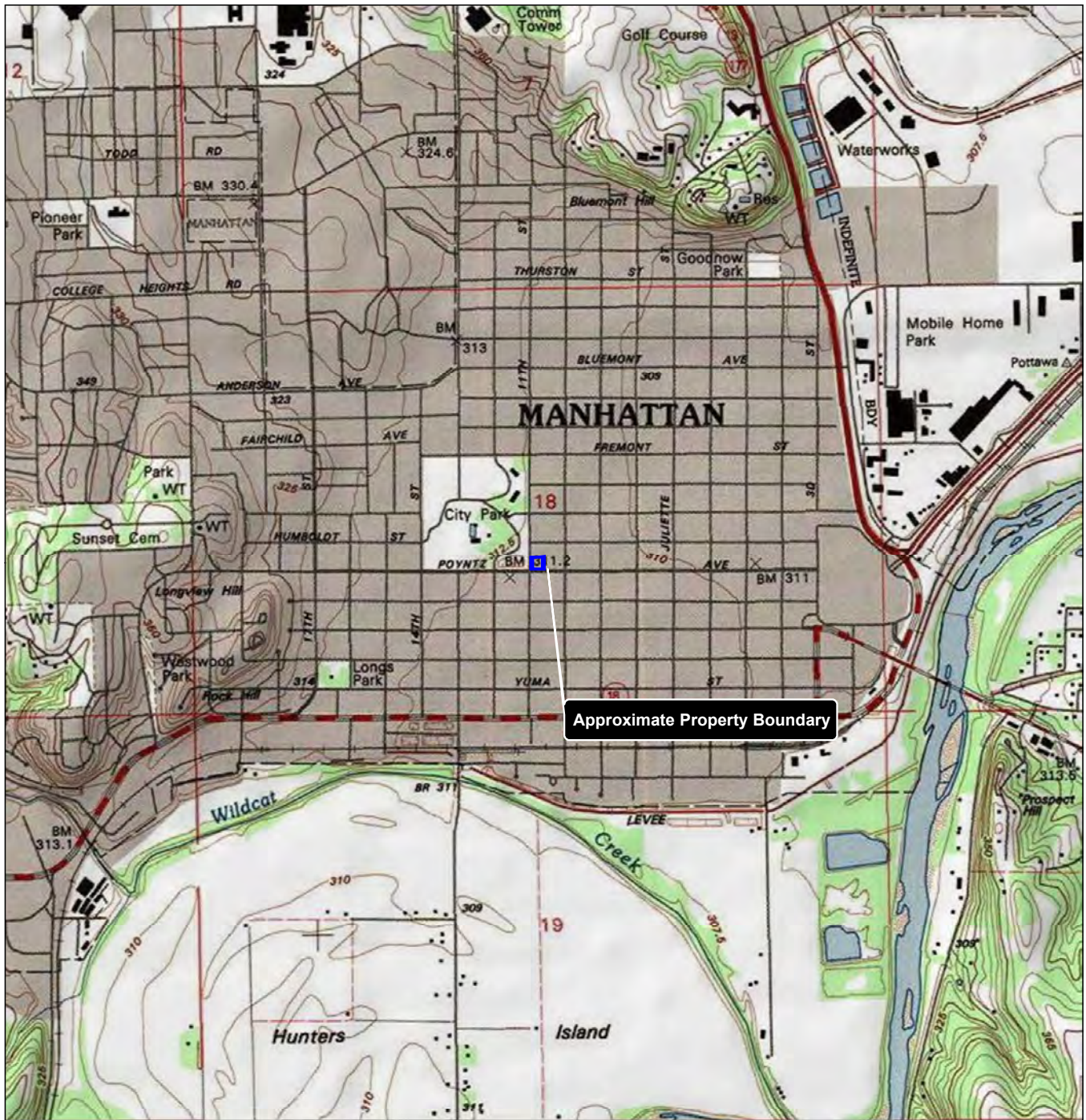
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**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

FIGURES





- Notes**
1. Coordinate System: NAD 1983 StatePlane Kansas North FIPS 1501 Feet
 2. Data Sources: Stantec, FHRC, NADS
 3. Background: USGS 7.5' Topographic Quadrangles

Legend

 Approximate Property Boundary

0 1,000 2,000 Feet
(At original document size of 8.5x11)
1:24,000



Project Location
T10S, R8E, S18
C. of Manhattan, Riley Co., KS

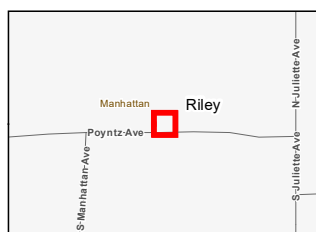
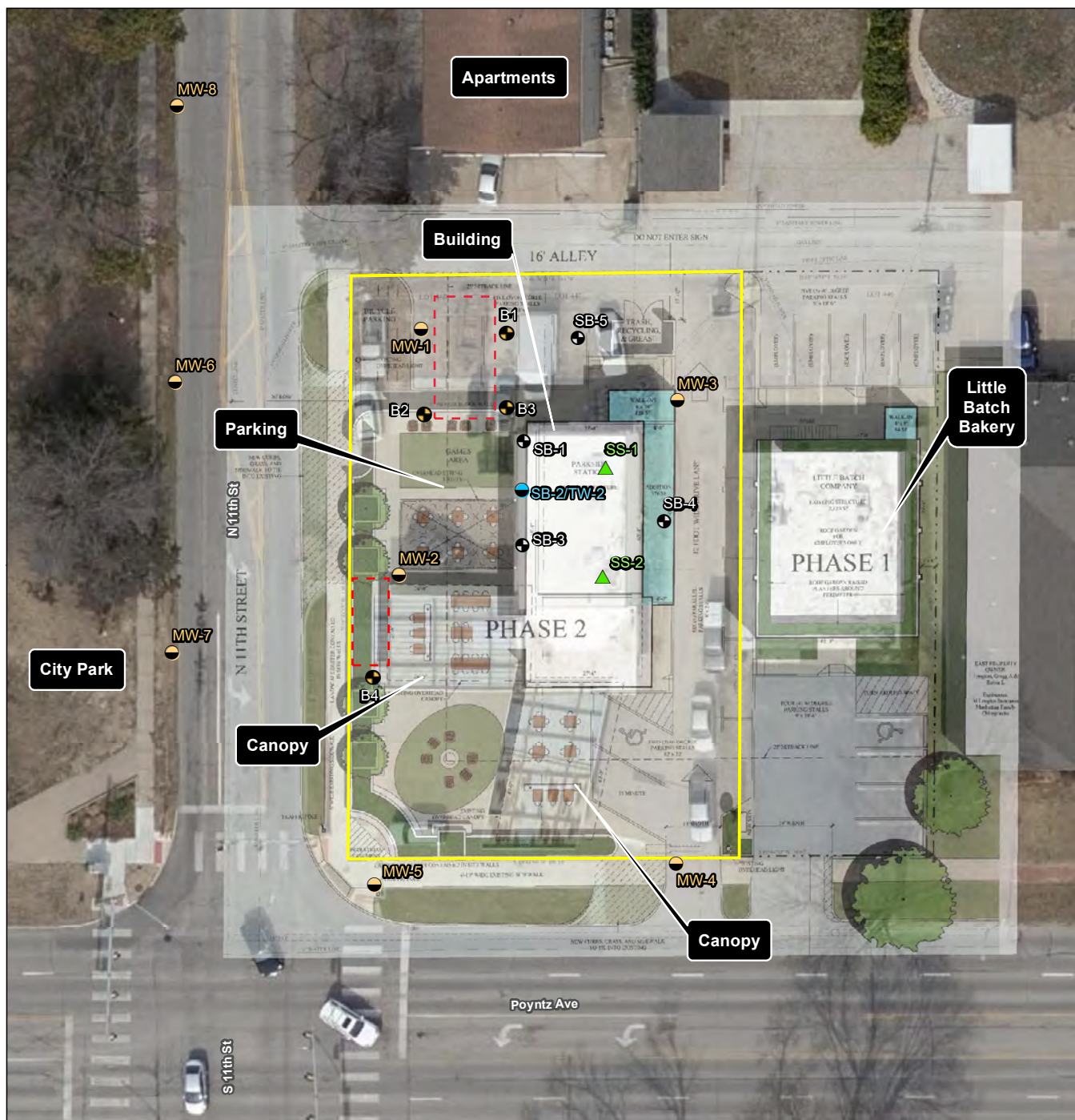
Prepared by RA on 2021-10-13
TR by MP on 2021-10-13
IR by ENG on 2022-01-03

Client/Project
Flint Hills Regional Council (FHRC)
1026 Poyntz Ave., Manhattan, KS 66502
Phase II ESA

193705435

Figure No.
1

Title
Property Location and Local Topography



Notes
 1. Coordinate System: NAD 1983 StatePlane
 Kansas North FIPS 1501 Feet
 2. Data Sources: Stantec, FHRC, NADS
 3. Background: Esri World Imagery

Legend

- Approximate Property Boundary
- Existing Well
- ⊙ Former Soil Boring Location
- ⊙ Stantec Soil Boring (December 2021)
- ⊙ Stantec Soil Boring & Temporary Well (December 2021)
- ▲ Stantec Sub-Slab Vapor Sample (December 2021)
- Approximate location of excavation surrounding former gasoline underground storage tanks (USTs)

0 20 40 Feet
 (At original document size of 8.5x11)
 1:480



Project Location
 T10S, R8E, S18
 C. of Manhattan, Riley Co., KS

Prepared by RA on 2021-10-13
 TR by MP on 2021-10-13
 IR by ENG on 2022-01-03

Client/Project
 Flint Hills Regional Council (FHRC)
 1026 Poyntz Ave., Manhattan, KS 66502
 Phase II ESA

Figure No.
 2

Title
 Property Layout and
 Sample Location Map

PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS

TABLES



Table 1 - Soil Laboratory Detection Results
1026 Poyntz Avenue, Manhattan, Kansas

Sample Location		KDHE RBSL Residential Soil Pathway	KDHE RBSL Non-Residential Soil Pathway	KDHE RBSL Residential Soil-Groundwater Pathway	KDHE RBSL Non-Residential Soil-Groundwater Pathway	SB-1	SB-2	SB-2	SB-3	SB-4	SB-5	FD-1 (SB-1)	TB-2
Sample Date	Units					12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Sample ID						SB-1 (6-9)	SB-2 (4-5)	SB-2 (7-9)	SB-3 (7-8)	SB-4 (7-8)	SB-5 (2-4)	FD-1	TB-2
Sample Depth (ft)						6-9	4-5	7-9	7-8	7-8	2-4	--	--
RCRA Metals (EPA Method 6010D & 7471B)													
Arsenic	mg/kg	18.9	63.2	n/v	n/v	3.31 J	--	<3.92	2.19 J	4.1	3.92	6.81	--
Barium	mg/kg	15,300	277,000	n/v	n/v	213	--	183 F1	130	154	135	250	--
Cadmium	mg/kg	39	965	n/v	n/v	0.748 J	--	0.522 J	0.425 J	0.636 J	0.546 J	0.766 J	--
Chromium	mg/kg	33.6	111	n/v	n/v	14.8	--	18.5	12.8	14.8	15.6	20.2	--
Lead	mg/kg	400	1,000	n/v	n/v	10.3	--	11.4	8.11	10.3	11.1	15	--
Mercury*	mg/kg	2	20	n/v	n/v	<2.19	--	4.58 J	<2.28	<1.92	<2.09	<2.27	--
Selenium	mg/kg	391	10,200	n/v	n/v	<0.475	--	<0.934	<0.496	<0.416	<0.454	<0.493	--
Silver	mg/kg	391	10,200	n/v	n/v	0.0161 J	--	0.0188 J	0.0103 J	0.0134 J	0.0291	0.0178 J	--
Detected Volatile Organic Compounds (EPA Method 8260D)													
Acetone	µg/kg	50,300,000	406,000,000	51,600	204,000	45.8 J	58.7	17.5 J	19.9 J	37.6 J	<213	44.8	<9.20
2-Butanone (MEK)	µg/kg	26,000,000	101,000,000	24,200	57,800	5.56 J	5.97 J	<1.60	1.68 J	5.57 J	<179	6.08 J	<1.50
Benzene	µg/kg	15,900	28200	168	168	<.928	<0.976	<0.963 F1	<0.862	1.27 J	<37.2	<1.02	<0.900
Methyl tert-butly ether	µg/kg	585,000	1,050,000	848	1,660	<0.227	<0.239	<0.235 F1	<0.211	<0.192	<37.2	<0.249	<0.220
sec-Butylbenzene	µg/kg	2,760,000	6,540,000	82,700	202,000	<1.03	<1.08	<1.07	<0.957	<0.871	<37.2	<1.13	<1.00
Detected Polynuclear Aromatic Hydrocarbons (EPA Method 8270E-SIM)													
2-Methylnaphthalene	µg/kg	209,000	1,280,000	8,340	17,300	<4.81	--	<4.55	<4.48	<0.00411	0.0292	<4.67	--
Benzo(b)fluoranthene	µg/kg	10,900	33,800	19,200	64,400	<3.51	--	<3.32	5.82 J	0.00808 J	0.0166	<3.41	--
Chrysene	µg/kg	1,090,000	3,380,000	805,000	2,710,000	<1.82	--	<1.72	2.33	0.00440 J	0.0132	2.74 J	--
Fluoranthene	µg/kg	2,440,000	35,200,000	2,830,000	15,200,000	<1.95	--	<1.84	3.69 J	0.00304 J	0.0211	2.57 J	--
Naphthalene	µg/kg	30,500	64,700	349	659	<4.03	--	<3.81	<3.75	<0.00345	0.0124	<3.91	--
Phenanthrene	µg/kg	n/v	n/v	n/v	n/v	<5.85	--	<5.53	<5.45	<0.00500	0.0333	<5.68	--
Pyrene	µg/kg	1,830,000	26,400,000	2,190,000	11,900,000	<1.69	--	<1.60	3.44 J	0.00289 J	0.0188	<1.64	--
Total Petroleum Hydrocarbons (Kansas TPHs)													
LRH C5-C8	mg/kg	550	950	50	150	<3.94	--	<3.99	<3.75	<3.05	<3.92	<3.67	--
MRH C9-C18	mg/kg	250	350	50	150	<6.56	--	<6.24	<0.00636	<5.77	<6.14	<6.18	--
HRH C19-C35	mg/kg	6,000	27,500	6,000	13,000	13.3 J	--	<6.24	0.00724 J	7.07 J	7.09 J	<6.18	--

Notes: SB-1, SB-2/TW-2 and SB-3 were also analyzed for polychlorinated biphenyls (PCBS; EPA Method 8082a). No PCBs were detected.

* = No other analytes had detection limits above RBSLs

= Exceeds KDHE RBSL for residential soil pathway

= Exceeds KDHE RBSL for non-residential soil pathway

= Exceeds KDHE RBSL for residential soil-groundwater pathway

= Exceeds KDHE RBSL for non-residential soil-groundwater pathway

X.XX = analyte is detected above the laboratory method detection limit.

RCRA = Resouce Conservation and Recovery Act

KDHE = Kansas Department of Health and Environment

RBSL = Risk-Based Screening Level (July 2021)

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

LRH = low range hydrocarbons

MRH = medium range hydrocarbons

HRH = high range hydrocarbons

-- = not submitted for laboratory analysis

n/v = no value established by KDHE

x = measured concentration didn't exceed the indicated standard

J = compound detected between limit of detection and limit of quantification

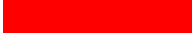
F1 = MS and/or MSD Recovery is outside acceptance limits.

Table 2 - Groundwater Laboratory Detection Results
1026 Poyntz Avenue, Manhattan, Kansas

Compounds		Constituents	Units	KDHE RBSL Residential Groundwater	KDHE RBSL Non- Residential Groundwater	TW-2 (MW-2)	FD-2 (TW-2)	TB-1
						12/2/2021	12/2/2021	12/2/2021
						Concentrations		
Dissolved RCRA Metals (EPA Method 6010D and 7471B)	Arsenic	mg/L	0.01	0.01	0.0208	0.0212	--	
	Barium	mg/L	2	2	0.422	0.423	--	
	Cadmium	mg/L	0.005	0.005	<0.0000510	<0.0000510	--	
	Chromium	mg/L	0.08	0.08	<0.00110	<0.00110	--	
	Lead	mg/L	0.015	0.015	0.00330	0.00320	--	
	Mercury	mg/L	0.002	0.002	<0.000960	<0.000960	--	
	Selenium	mg/L	0.05	0.05	<0.000420	<0.000420	--	
	Silver	mg/L	0.0779	0.508	<0.000150	<0.000150	--	
Detected VOCs (EPA Method 8260D)	1,2,4-Trimethylbenzene	µg/L	8.44	17.4	2340	2320	<0.420	
	1,3,5-Trimethylbenzene	µg/L	44	88.4	606	608.00	<0.370	
	2-Butanone (MEK)	µg/L	4,920	11,800	<21.0	23	<2.10	
	Acetone	µg/L	11,500	45,500	<31.0	<31.0	<3.10	
	Benzene	µg/L	5	5	22600	20600	<0.220	
	Carbon disulfide	µg/L	716	1,660	<4.50 **	<4.50 U**	<0.450 **	
	Ethylbenzene	µg/L	700	700	3830	4170	<0.310	
	Hexane	µg/L	n/v	n/v	885**	638	<0.780 **	
	Isopropylbenzene	µg/L	n/v	n/v	133	149	<0.350	
	Methyl tert-butly ether	µg/L	133	262	89.5	94.5	<0.490	
	Naphthalene	µg/L	1.11	2.11	569	583	<3.00	
	n-Butylbenzene	µg/L	169	392	78.1	76.1	<0.440	
	N-Propylbenzene	µg/L	660	1,910	311	335	<0.390	
	sec-Butylbenzene	µg/L	305	745	<4.40	20.4	<0.440	
	Toluene	µg/L	1,000	1,000	43000	39000.0	<0.480	
	Xylenes, Total	µg/L	10,000	10,000	15900	14100	<0.400	
Detected PAHs (EPA Method 8270-SIM)	2-Methylnaphthalene	µg/L	16.7	34.6	<0.0940	2110	--	
	Acenaphthene	µg/L	253	521	<0.0200	7.85	--	
	Acenaphthylene	µg/L	n/v	n/v	<0.0400	2.5	--	
	Anthracene	µg/L	1,150	2500	<0.0300	5.16	--	
	Benzo[a]anthracene	µg/L	0.223	0.750	<0.110	1.01	--	
	Benzo[a]pyrene	µg/L	0.200	0.200	<0.100	0.461	--	
	Benzo[b]fluoranthene	µg/L	0.160	0.537	<0.100	0.375	--	
	Benzo[g,h,i]perylene	µg/L	n/v	n/v	<0.130	0.49	--	
	Benzo[k]fluoranthene	µg/L	1.62	5.43	<0.130	<0.150	--	
	Chrysene	µg/L	22.3	75.0	<0.0730	0.676	--	
	Dibenz(a,h)anthracene	µg/L	0.00805	0.027	<0.100	<0.163	--	
	Fluoranthene	µg/L	255	1,370	<0.0820	2.27	--	
	Fluorene	µg/L	162	341	<0.0290	9.48	--	
	Indeno[1,2,3-cd]pyrene	µg/L	0.117	0.392	<0.170	<0.150	--	
	Naphthalene	µg/L	1.11	2.11	<0.200	2610	--	
	Phenanthrene	µg/L	n/v	n/v	<0.0570	10.6	--	
	Pyrene	µg/L	202	1,090	<0.0660	3.85	--	
TPHs (Kansas TPHs)	LRH	µg/L	350	950	133000	131000	--	
	MRH	µg/L	150	400	88700	89400	--	
	HRH	µg/L	1,000	2500	<83.9	124 J	--	

Notes: TW-2 and FD-2 were also analyzed for polychlorinated biphenyls (PCBS; EPA Method 8082a). No PCBs were detected.

 = Exceeds KDHE RBSL for residential pathway

 = Exceeds KDHE RBSL for non-residential pathway

 = Exceeds both KDHE RBSL for residential and non residential pathway

KDHE = Kansas Department of Health and Environment

RBSL = Risk-based Screening Level (July 2021)

n/v = no value established by KDHE

-- = not submitted for laboratory analysis

J = compound detected between limit of detection and limit of quantification

*+ = LCS and/or LCSD is outside acceptance limits, low biased.

** = value based upon the regional screening level established by the EPA

VOCs = volatile organic compounds

TPHs = total petroleum hydrocarbons

PAHs = Polymer Aromatic Hydrocarbons

LRH = low range hydrocarbons

MRH = medium range hydrocarbons

HRH = high range hydrocarbons

TB = trip bank

FD = field duplicate

mg/L = milligrams per liter

µg/L = micrograms per liter

MW-2 = Field Sample

TW-2 = Field Sample

Table 3: Sub-Slab Soil Gas Air Quality Laboratory Results, 1026 Poyntz Avenue, Manhattan, Kansas

Sample Point	Water Dam Testing of Sampling Fittings (Pass/Fail)	Date Sampled	Date Analyzed	Sample Location	Sample Duration (minutes)	Detected Volatile Organic Compounds (micrograms per cubic meter)													
						1,1,1-Trichloroethane	1,2,4-Trimethylbenzene	2-Butanone (MEK)	Acetone	Dichlorodifluoromethane	Isopropyl Alcohol	Tetrachloroethylene	Toluene	Trichlorofluoromethane	1,3,5-Trimethylbenzene	Benzene	Methylene Chloride	Ethylbenzene	Xylene, Total
Residential VRSL (micrograms per cubic meter)				Sub-Slab Residential (AF = 0.03)		173,666	243	173,666	1,076,666	6,967	NSL	1,390	173,666	24,333	1,216	120	20,866	373	3,466
SS-1	Pass	12/03/21	12/13/21	Ground floor sub-slab	34	2.0 J	0.78 J	2.6 J	100	2.7 J	12 J	280	1.3 J	1.0 J	<0.54	<0.59	<1.5	<1.1	<2.8
SS-2	Pass	12/03/21	12/13/21	Ground floor sub-slab	26	<0.21	1.4	1.6 J	13	1.7 J	<2.4	50	2.1	0.93 J	0.30 J	0.28 J	1.9	0.65 J	3.6

Note: Target Hazard Quotient (THQ) of 1 and Target Risk (TR) of 1E-05

AF = attenuation factor

NSL = no screening level assigned from USEPA Regional Screening Level (RSL) Table - November 2020

VRSL = vapor risk screening level

<x = analyte was not detected at a concentration greater than "x"

x = analyte exceeds applicable target air concentration

"J" = analyte exceeds the limit of detection but is below the limit of quantification

Table 4A: Summary of QA/QC Soil Data
1026 Poyntz Avenue, Manhattan, Kansas

Constituents	Units	MS	MSD	Relative Difference	SB1		RPD
					12/02/21	12/02/21	
					SB1 (6 - 9)	FD-1	
RCRA Metals							
Arsenic	mg/kg	187.2	184	2%	3.31 J	6.81	69%
Barium	mg/kg	327.1	330.7	1%	213.00	250.00	16%
Cadmium	mg/kg	86.29	85.76	1%	0.75 J	0.77 J	2%
Chromium	mg/kg	105.3	104.7	1%	14.80	20.20	31%
Lead	mg/kg	178.1	178.3	0%	10.30	15.00	37%
Mercury*	mg/kg	0.1733	0.1752	1%	<2.19	<2.27	NC
Selenium	mg/kg	372.4	370.6	0%	0.48	0.49	4%
Silver	mg/kg	101.4	100.9	0%	0.02 J	0.02 J	10%
Detected Volatile Organic Compounds							
Acetone	µg/kg	--	--	--	45.8 J	44.8	2%
Benzene	µg/kg	--	--	--	<0.928	<1.02	NC
2-Butanone (MEK)	µg/kg	--	--	--	5.56 J	6.08 J	9%
Methyl tert-butly ether	µg/kg	--	--	--	<0.227	<0.249	NC
sec-Butylbenzene	µg/kg	--	--	--	<1.03	<1.13	NC
Polynuclear Aromatic Hydrocarbons							
2-Methylnaphthalene	µg/kg	102.1	115.5	12%	<4.81	<4.67	NC
Benzo(b)fluoranthene	µg/kg	108.3	116.8	8%	<3.51	<3.41	NC
Chrysene	µg/kg	107.7	116.8	8%	<1.82	2.74 J	NC
Fluoranthene	µg/kg	115.3	125.1	8%	<1.95	2.57 J	NC
Naphthalene	µg/kg	100.3	110.2	9%	<4.03	<3.91	NC
Phenanthrene	µg/kg	108.3	122.3	12%	<5.85	<5.68	NC
Pyrene	µg/kg	117.6	126.2	7%	<1.69	<1.64	NC
Total Petroleum Hydrocarbons							
LRH C5-C8	mg/kg	24.68	25.12	2%	3.99	<3.67	NC
MRH C9-C18	mg/kg	31.48	33.25	5%	<6.24	<6.18	NC
HRH C19-C35	mg/kg	49.78	51.06	3%	<6.24 J	<6.18	NC

Notes:

<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
X%	Failed the QA/QC calculation limitations (≥50%)
--	Compound was not analyzed
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
mg/kg	milligrams per kilogram
NC	RPD cannot be calculated as either the sample value or duplicate value is less than the laboratory reporting limit.
QA	Quality assurance
RPD	Relative Percent Difference, a measure of the relative difference between two points
µg/kg	micrograms per kilogram

**Table 4B: Summary of QA/QC Groundwater Data
1026 Poyntz Avenue, Manhattan, Kansas**

Constituents	Units	MS	MSD	Relative Difference	TW-2		RPD
					12/02/21	12/02/21	
					TW-2	FD-2	
Dissolved Metals							
Arsenic	mg/L	0.2229	0.2238	0%	0.0208	0.0212	2%
Barium	mg/L	0.5382	0.5339	1%	0.422	0.423	0%
Cadmium	mg/L	0.09519	0.09562	0%	<0.0000510	<0.0000510	NC
Chromium	mg/L	0.09754	0.09808	1%	<0.00110	<0.00110	NC
Lead	mg/L	0.1989	0.2021	2%	0.00330	0.00320	3%
Mercury	mg/L	--	--	--	<0.000960	<0.000960	NC
Selenium	mg/L	0.3976	0.4003	1%	<0.000420	<0.000420	NC
Silver	mg/L	0.09538	0.09634	1%	<0.000150	<0.000150	NC
Polynuclear Aromatic Hydrocarbons							
2-Methylnaphthalene	µg/L	--	--	--	<0.0940	2110	NC
Acenaphthene	µg/L	--	--	--	<0.0200	7.85	NC
Acenaphthylene	µg/L	--	--	--	<0.0400	2.5	NC
Anthracene	µg/L	--	--	--	<0.0300	5.16	NC
Benzo[a]anthracene	µg/L	--	--	--	<0.110	1.01	NC
Benzo[a]pyrene	µg/L	--	--	--	<0.100	0.461	NC
Benzo[b]fluoranthene	µg/L	--	--	--	<0.100	0.375	NC
Benzo[g,h,i]perylene	µg/L	--	--	--	<0.130	0.49	NC
Benzo[k]fluoranthene	µg/L	--	--	--	<0.130	<0.150	NC
Chrysene	µg/L	--	--	--	<0.0730	0.676	NC
Dibenz[a,h]anthracene	µg/L	--	--	--	<0.100	<0.163	NC
Fluoranthene	µg/L	--	--	--	<0.0820	2.27	NC
Fluorene	µg/L	--	--	--	<0.0290	9.48	NC
Indeno[1,2,3-cd]pyrene	µg/L	--	--	--	<0.170	<0.150	NC
Naphthalene	µg/L	--	--	--	<0.200	2610	NC
Phenanthrene	µg/L	--	--	--	<0.0570	10.6	NC
Pyrene	µg/L	--	--	--	<0.0660	3.85	NC
Detected Volatile Organic Compounds							
1,2,4-Trimethylbenzene	µg/L	--	--	--	2,340.0	2,320.0	1%
1,3,5-Trimethylbenzene	µg/L	--	--	--	606.0	608.0	0%
2-Butanone (MEK)	µg/L	--	--	--	<21.0	23.0	NC
Acetone	µg/L	--	--	--	<31.0	<31.0	NC
Benzene	µg/L	--	--	--	22,600.0	20,600.0	9%
Carbon disulfide	µg/L	--	--	--	<4.50	<4.50	U ⁺
Ethylbenzene	µg/L	--	--	--	3,830.0	4,170.0	9%
Hexane	µg/L	--	--	--	885.0	638.0	32%
Isopropylbenzene	µg/L	--	--	--	133.0	149.0	11%
Methyl tert-butyl ether	µg/L	--	--	--	89.5	94.5	5%
Naphthalene	µg/L	--	--	--	569.0	583.0	2%
n-Butylbenzene	µg/L	--	--	--	78.1	76.1	3%
N-Propylbenzene	µg/L	--	--	--	311.0	335.0	7%
sec-Butylbenzene	µg/L	--	--	--	<4.40	20.4	NC
Toluene	µg/L	--	--	--	43,000.0	39,000.0	10%
Xylenes, Total	µg/L	--	--	--	15,900.0	14,100.0	12%
Total Petroleum Hydrocarbons							
LRH C5-C8	mg/kg	--	--	--	133,000.0	131,000.0	2%
MRH C9-C18	mg/kg	--	--	--	88,700.0	89,400.0	1%
HRH C19-C35	mg/kg	--	--	--	<83.9	124	NC

Notes:

<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
X%	Failed the QA/QC calculation limitations (≥35%)
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
mg/kg	milligrams per kilogram
NC	RPD cannot be calculated as either the sample value or duplicate value is less than the laboratory reporting limit.
QA	Quality assurance
RPD	Relative Percent Difference, a measure of the relative difference between two points
µg/kg	micrograms per kilogram

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

APPENDICES



**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

**APPENDIX A – GROUND PENETRATING RADAR SYSTEMS, INC.
REPORT**



Project Number 193704800



Job Summary

Job Date : 12/2/2021

Customer	Stantec Consulting Services Inc.			Phone Number	(608) 628-6278																						
Billing Address	City	State	Zip																								
12075 Corporate Pkwy	Mequon	WI	53092																								
Job Details																											
<table><tr><td>Jobsite Location</td><td colspan="6">1026 POYNTZ AVE</td></tr><tr><td>City</td><td colspan="6">MANHATTAN</td></tr><tr><td>State</td><td colspan="6">KS</td></tr></table>							Jobsite Location	1026 POYNTZ AVE						City	MANHATTAN						State	KS					
Jobsite Location	1026 POYNTZ AVE																										
City	MANHATTAN																										
State	KS																										
<table><tr><td>WA Number</td><td colspan="6">313847</td></tr><tr><td>Job Num</td><td colspan="6"></td></tr><tr><td>PO Num</td><td colspan="6">193705435</td></tr></table>							WA Number	313847						Job Num							PO Num	193705435					
WA Number	313847																										
Job Num																											
PO Num	193705435																										
Lead Technician	JEFFRIES, TERRY		Phone	913-249-5093	Email	terry.jeffries@gprsinc.com																					
Thank you for using GPRS on your project. We appreciate the opportunity to work with you. If you have questions regarding the results of this scanning, please contact the lead GPRS technician on this project.																											
EQUIPMENT USED																											
The following equipment was used on this project:																											
- Concrete Scanning GPR antenna. Typical depths achieved are up to 12-24 inches, depending on concrete conditions. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. - Underground Scanning GPR antenna. Typically capable of detecting objects up to 8' deep or more in ideal conditions but maximum effective depth can vary widely and depends on site and soil conditions. Depth penetration is most commonly limited by moisture and clay/conductive soils. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. - Electromagnetic Pipe and Cable Locator. Detects electromagnetic fields. Used to actively trace conductive pipes and tracer wires, or passively detect power and radio signals traveling along conductive pipes and utilities. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors.																											
Work Performed																											
Ground Penetrating Radar Systems performed the following work on this project:																											
<u>Underground Utility</u>																											
The scope of work included scanning the specified area to locate underground utilities. A tracer signal was sent along any accessible metallic utility or tracer wire, and the area was scanned with GPR to locate any additional targets. The locations of any detected utilities and anomalies were marked directly at the site with paint, flags, stakes, or other appropriate means, and results were reviewed with onsite personnel unless otherwise noted.																											
- We understand the scope to be to search for underground utilities in the vicinity of 5 soil boring locations. Three of the locations will be on the inside of the building and two are on the outside. - The effective depth of GPR will vary throughout a site depending on surface and soil conditions. In this area, the maximum effective GPR depth was approximately 2 feet.																											



Job Summary

Job Date : 12/2/2021

- GPRS scanned in the vicinity of five would boring locations. Initially, three of the locations were inside the building, and two were on the outside. Due to the number of conduits running in the floor, those three locations were also moved outside. Each location was scanned with a 10' radius, and any anomalies located were marked directly on the surface in spray paint. One conduit on the east side of the building near the water line could not be found. Additionally, the vent piping on the north end of the building could not be located either. Stay two feet off of any line marked.

Pictures



Utility Limitations

TERMS & CONDITIONS

https://www.gp-radar.com/legal/terms-conditions?utm_source=jobsummary&utm_medium=referral

SIGNATURE

master service
agreement

Contact Name

Erin Gross (608) 628-6278 Erin.Gross@stantec.com



Job Summary

Job Date : 12/2/2021



1.866.914.4718 • GPRSINC.COM



UTILITY LOCATING

To ensure the overall timely success of your project, utility detection is critical to any construction project where subsurface excavation is planned. If this critical first step is ignored, the risk for injury increases, budget overruns can multiply and your schedule can be delayed.

VIDEO PIPE INSPECTION

Video Pipe Inspection (CCTV) is a service used to inspect underground water, sewer and lateral pipelines. VPI is a great tool for investigating cross-bores, structural faults and damages, and lateral line inspection.

CONCRETE IMAGING

With new build construction and renovation projects, the likelihood of needing to cut or core concrete is high. There is an inherent risk of striking rebar, conduits, and post tension cables during the cutting or coring process. Our industry-leading concrete scanning services can mitigate the risks associated with saw cutting and core drilling concrete slabs.

MAPPING & MODELING

As-built utility maps, structural as-built drawings, and facility maps are actually meant to be "as-intended" drawings as the construction process or renovations can cause deviations to the original plan. GPRS can create a comprehensive facility map that contains precise as-built conditions – giving you peace of mind by knowing exactly what exists on your property.

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

APPENDIX B - SOIL BORING LOGS AND BOREHOLE ABANDONMENT FORMS



Facility/Project Name <u>1026 Poyntz</u>						Boring No. <u>SB-1</u>					
Location <u>Manhattan, KS</u>						Project No. <u>193705435</u>					
Drilling Company <u>BGS</u>						State Plane <u>N</u> , <u>E</u>					
Driller's Name <u>Mike C.</u>						☐ N ☐ E					
Drill Rig <u>Geoprobe</u>						Local Grid Location <u>ft</u> ☐ S <u>ft</u> ☐ W					
Drill Method <u>Direct Push</u>						<u>1/4</u> of <u>1/4</u> of Section <u>T</u> <u>N,R</u> <u>E/W</u>					
Water Level _____						Borehole Diameter _____					
Sample Hammer Torque _____						Surface Elevation _____ at Screen					
Sample No.	Moisture	Blows on Sampler		Sample Recovery	N Value	Logger <u>Sam Clary</u>	Editor _____	Penetrometer (Tons/sq. ft.)	PID	USCS symbol	Remarks
		0/6	6/12			Start Date <u>12/2/2021</u>	End Date <u>12/2/2021</u>				
VISUAL CLASSIFICATION											
						0-5' 50% Recovery 2 layers of concrete one 0-6" and one 2.5"					
						0-6" concrete					
					5	3.5' - 4' soft brown clay, moist, no odor, plastic					
						4-5.5' concrete & brick pieces					
					10	5.5-5.75' Brown silty clay w/ brick pieces					
						5.75-5.75 concrete					
					15	5.75-6.5 Brown stiff clay no odor					
						6.5-7' soft black clay w/ silt					
					20	7-10' stiff black silty clay w/ odor, ~~dry~~ low moisture					
					25						
					30						
					35						

Relocation once due to geoprobe retrieval

FD-1 + ~~SB-1~~ (B-9) @ 1405 (1505 Dup)

~~SB-1 (56) for 2nd VOC,~~
SRL

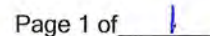
only 1 VOC sample, low PID resp.
Lab didn't send enough containers in 1x TC kit

Facility/Project Name <u>1026 Poyntz</u>						Boring No. <u>SP-2 / TW-1</u>					
Location <u>Manhattan, KS</u>						Project No. <u>193705435</u>					
Drilling Company <u>BGS</u>						State Plane <u>N</u> ☐ N ☐ E					
Driller's Name <u>Mike C.</u>						Local Grid Location <u>ft</u> ☐ S ☐ W					
Drill Rig <u>Geoprobe</u>						1/4 of <u> </u> 1/4 of Section <u> </u> , T <u> </u> N,R <u> </u> E/W					
Drill Method <u>Direct push</u>						Borehole Diameter <u> </u>					
Water Level <u> </u>						Surface Elevation <u> </u> at Screen					
Sample Hammer Torque <u> </u>						Penetrometer (Tons/sq. ft.) <u> </u>					
Logger <u>Sean Clary</u>						Editor <u> </u>					
Start Date <u>12/21/2021</u>						End Date <u>12/21/2021</u>					
Sample No.	Moisture	Blows on Sampler		Sample Recovery	N Value	VISUAL CLASSIFICATION					
		0/6	6/12			Remarks					
						0-9" concrete, Black rubble (Red)					
						sandy fill to 2', minimal recovery					
						2.5' - 3.5' Black silty clay, moist					
						plastic, soft					
						3.5 - 4.5' same as above w/					
						less moisture and rust-colored seams					
						4.5 - 5.5 soft brown clay,					
						rust colored mottling					
						5.5 - 6' Black clay w/ <10% sand					
						soft, mild odor					
						6 - 7 Brown clay soft					
						7-10 stiff grey/black					
						mild odor					
						10 - 11 no recovery					
						11 - 13 med stiff black clay, odor					
						13 - 15 med stiff grey clay, odor					
						15 - 16.5 grey clay, soft, brown					
						streaks, odor, some silt					
						16.5 - 20 very silty clay, grey to					
						black, stiff odor					
						20-21 no recovery					
						21 - 26 soft grey silty clay, moist					
						strong odor,					
						26 - 30 very silty sand, odor,					
						wet, increasing sand % w/ depth					

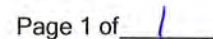
SAMPLE + MSMSD @ 7-9' @ 1220
 2nd VOC Sample @ 4-5' @ 1245
 Converted to TW-2, material settled into hole, approx 27' TD

[illegible]

SB-3 (7-8) @ 1600
only 1 VOL sample, no/low PID resp.



Only one VDC, low PID resp,
SB-4 (7-8) @ 1515



only one VOL sample (no High PID)
SB-5 (2-4) @ 1445

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: 1026 Poyntz Avenue Client: Flint Hills Regional Council
 Project Number: 193705435 Task #: _____ Start Date: 12/02/2021 Time: _____
 Field Personnel: Sean Clary Finish Date: 12/02/2021 Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____
 Street Address: 1026 Poyntz Avenue
 City: Manhattan
 County: Riley
 State: Kansas Zip: 66502
 Township: 10 S Range: 8 E Section: 18
 1/4 of the 1/4 of the 1/4
 If Known, Latitude: 39.1666 Longitude: -96.5666
 If Known*, Northing: _____ Easting: _____
 *Coordinate System: _____

Reason for Abandonment:

Temporary boring/temporary well

Permit Number (If applicable): _____

BOREHOLE / WELL INFORMATION

Borehole / Well ID: SB-1 Unique Well ID: _____
 Installation Date: 12/02/2021
☒ Borehole
☐ Monitoring Well
☐ Water Well
☐ Other (specify): _____
 Attach Well Completion Report, if available
 Construction Type:
☐ Drilled ☐ Driven (Sandpoint)
☒ Other (specify): Geoprobe/direct-push
 Formation Type:
☒ Unconsolidated Materials ☐ Bedrock
 Borehole/Well Details:
 Borehole Diameter: 2 Inches
 Total Borehole Depth: 10 FT BGS
 Casing Diameter: _____ Inches ☒ Not Applicable
 Total Casing Depth: _____ FT BGS ☒ Not Applicable
 Depth to Water: _____ FT BGS ☒ Not Encountered

SEALING INFORMATION

Pump & Piping Removed? ☐ Yes ☐ No ☒ Not Applicable
 Liner(s) Removed? ☐ Yes ☐ No ☒ Not Applicable
 Screen Removed? ☐ Yes ☐ No ☒ Not Applicable
 Entire Casing Removed? ☐ Yes ☐ No* ☒ Not Applicable
 *If No, Upper 2 feet Removed? ☐ Yes ☐ No

Method of Sealing Material Placement:

☐ Conductor Pipe - Gravity ☐ Tremie Pipe - Pumped
☒ Screened & Poured ☒ Other (specify): gravity
 Sealing Material Rose to Surface? ☒ Yes ☐ No
 Material Settled After 24 Hours? ☐ Yes* ☒ No
 If Yes, Was Hole Re-Topped? ☐ Yes ☐ No

Sealing Material Used	From	To	Volume/Quantity
Bentonite chips	<u>Surface</u>	<u>10'</u>	<u><1 bag</u>

SEALING WORK PERFORMED BY

Individual's Name: Mike C. License Number: _____
 Company Name: Below Ground Surface - BGS
 Street Address: 1835 Wall Street
 City: Salinas State: KS Zip: 67401

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: <u>1026 Poyntz Avenue</u>		Client: <u>Flint Hills Regional Council</u>	
Project Number: <u>193705435</u>	Task #: _____	Start Date: <u>12/02/2021</u>	Time: _____
Field Personnel: <u>Sean Clary</u>		Finish Date: <u>12/02/2021</u>	Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____			
Street Address: <u>1026 Poyntz Avenue</u>			
City: <u>Manhattan</u>			
County: <u>Riley</u>			
State: <u>Kansas</u>		Zip: <u>66502</u>	
Township: <u>10 S</u>		Range: <u>8 E</u>	Section: <u>18</u>
_____ 1/4 of the		_____ 1/4 of the	_____ 1/4
If Known, Latitude: <u>39.1666</u>		Longitude: <u>-96.5666</u>	
If Known*, Northing: _____		Easting: _____	
*Coordinate System: _____			

Reason for Abandonment:	
Temporary boring/temporary well	
Permit Number (If applicable): _____	

BOREHOLE / WELL INFORMATION

Borehole / Well ID: <u>SB-2/ TW-1</u>		Unique Well ID: _____
Installation Date: <u>12/02/2021</u>		
☒ Borehole ☒ Monitoring Well ☐ Water Well ☐ Other (specify): _____		Attach Well Completion Report, if available
Construction Type:		
☐ Drilled ☒ Other (specify): <u>Geoprobe/direct-push</u>		
Formation Type:		
☒ Unconsolidated Materials ☐ Bedrock		
Borehole/Well Details:		
Borehole Diameter: <u>2</u> Inches		
Total Borehole Depth: <u>27</u> FT BGS		
Casing Diameter: <u>1</u> Inches		☒ Not Applicable
Total Casing Depth: <u>27'</u> FT BGS		☒ Not Applicable
Depth to Water: <u>23.41(prod.)</u> FT BGS		☒ Not Encountered

SEALING INFORMATION

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Entire Casing Removed?	☐ Yes	☐ No*	☒ Not Applicable
*If No, Upper 2 feet Removed? ☐ Yes ☐ No			
Method of Sealing Material Placement:			
☐ Conductor Pipe - Gravity		☐ Tremie Pipe - Pumped	
☒ Screened & Poured		☒ Other (specify): <u>gravity</u>	
Sealing Material Rose to Surface?		☒ Yes	☐ No
Material Settled After 24 Hours?		☐ Yes*	☒ No
If Yes, Was Hole Re-Topped?		☐ Yes	☐ No

Sealing Material Used	From	To	Volume/Quantity
Bentonite chips	Surface	27'	<1 bag

SEALING WORK PERFORMED BY

Individual's Name: <u>Mike C.</u>		License Number: _____
Company Name: <u>Below Ground Surface - BGS</u>		
Street Address: <u>1835 Wall Street</u>		
City: <u>Salinas</u>	State: <u>KS</u>	Zip: <u>67401</u>

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: 1026 Poyntz Avenue Client: Flint Hills Regional Council
 Project Number: 193705435 Task #: _____ Start Date: 12/02/2021 Time: _____
 Field Personnel: Sean Clary Finish Date: 12/02/2021 Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____
 Street Address: 1026 Poyntz Avenue
 City: Manhattan
 County: Riley
 State: Kansas Zip: 66502
 Township: 10 S Range: 8 E Section: 18
 1/4 of the 1/4 of the 1/4
 If Known, Latitude: 39.1666 Longitude: -96.5666
 If Known*, Northing: _____ Easting: _____
 *Coordinate System: _____

Reason for Abandonment:

Temporary boring/temporary well

Permit Number (If applicable): _____

BOREHOLE / WELL INFORMATION

Borehole / Well ID: SB-3 Unique Well ID: _____
 Installation Date: 12/02/2021
☒ Borehole
☐ Monitoring Well
☐ Water Well
☐ Other (specify): _____

Attach Well Completion Report, if available

 Construction Type:
☐ Drilled ☐ Driven (Sandpoint)
☒ Other (specify): Geoprobe/direct-push
 Formation Type:
☒ Unconsolidated Materials ☐ Bedrock
 Borehole/Well Details:
 Borehole Diameter: 2 Inches
 Total Borehole Depth: 10 FT BGS
 Casing Diameter: _____ Inches ☒ Not Applicable
 Total Casing Depth: _____ FT BGS ☒ Not Applicable
 Depth to Water: _____ FT BGS ☒ Not Encountered

SEALING INFORMATION

Pump & Piping Removed? ☐ Yes ☐ No ☒ Not Applicable
 Liner(s) Removed? ☐ Yes ☐ No ☒ Not Applicable
 Screen Removed? ☐ Yes ☐ No ☒ Not Applicable
 Entire Casing Removed? ☐ Yes ☐ No* ☒ Not Applicable
 *If No, Upper 2 feet Removed? ☐ Yes ☐ No

Method of Sealing Material Placement:

☐ Conductor Pipe - Gravity ☐ Tremie Pipe - Pumped
☒ Screened & Poured ☒ Other (specify): gravity
 Sealing Material Rose to Surface? ☒ Yes ☐ No
 Material Settled After 24 Hours? ☐ Yes* ☒ No
 If Yes, Was Hole Re-Topped? ☐ Yes ☐ No

Sealing Material Used	From	To	Volume/Quantity
Bentonite chips	<u>Surface</u>	<u>10'</u>	<u><1 bag</u>

SEALING WORK PERFORMED BY

Individual's Name: Mike C. License Number: _____
 Company Name: Below Ground Surface - BGS
 Street Address: 1835 Wall Street
 City: Salinas State: KS Zip: 67401

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: 1026 Poyntz Avenue Client: Flint Hills Regional Council
 Project Number: 193705435 Task #: _____ Start Date: 12/02/2021 Time: _____
 Field Personnel: Sean Clary Finish Date: 12/02/2021 Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____
 Street Address: 1026 Poyntz Avenue
 City: Manhattan
 County: Riley
 State: Kansas Zip: 66502
 Township: 10 S Range: 8 E Section: 18
 1/4 of the 1/4 of the 1/4
 If Known, Latitude: 39.1666 Longitude: -96.5666
 If Known*, Northing: _____ Easting: _____
 *Coordinate System: _____

Reason for Abandonment:

Temporary boring/temporary well

Permit Number (If applicable): _____

BOREHOLE / WELL INFORMATION

Borehole / Well ID: SB-4 Unique Well ID: _____
 Installation Date: 12/02/2021
☒ Borehole
☐ Monitoring Well
☐ Water Well
☐ Other (specify): _____
 Attach Well Completion Report, if available
 Construction Type:
☐ Drilled ☐ Driven (Sandpoint)
☒ Other (specify): Geoprobe/direct-push
 Formation Type:
☒ Unconsolidated Materials ☐ Bedrock
 Borehole/Well Details:
 Borehole Diameter: 2 Inches
 Total Borehole Depth: 10 FT BGS
 Casing Diameter: _____ Inches ☒ Not Applicable
 Total Casing Depth: _____ FT BGS ☒ Not Applicable
 Depth to Water: _____ FT BGS ☒ Not Encountered

SEALING INFORMATION

Pump & Piping Removed? ☐ Yes ☐ No ☒ Not Applicable
 Liner(s) Removed? ☐ Yes ☐ No ☒ Not Applicable
 Screen Removed? ☐ Yes ☐ No ☒ Not Applicable
 Entire Casing Removed? ☐ Yes ☐ No* ☒ Not Applicable
 *If No, Upper 2 feet Removed? ☐ Yes ☐ No

Method of Sealing Material Placement:

☐ Conductor Pipe - Gravity ☐ Tremie Pipe - Pumped
☒ Screened & Poured ☒ Other (specify): gravity
 Sealing Material Rose to Surface? ☒ Yes ☐ No
 Material Settled After 24 Hours? ☐ Yes* ☒ No
 If Yes, Was Hole Re-Topped? ☐ Yes ☐ No

Sealing Material Used	From	To	Volume/Quantity
Bentonite chips	<u>Surface</u>	<u>10'</u>	<u><1 bag</u>

SEALING WORK PERFORMED BY

Individual's Name: Mike C. License Number: _____
 Company Name: Below Ground Surface - BGS
 Street Address: 1835 Wall Street
 City: Salinas State: KS Zip: 67401

BOREHOLE / WELL ABANDONMENT FIELD FORM

PROJECT INFORMATION

Site: <u>1026 Poyntz Avenue</u>		Client: <u>Flint Hills Regional Council</u>	
Project Number: <u>193705435</u>	Task #: _____	Start Date: <u>12/02/2021</u>	Time: _____
Field Personnel: <u>Sean Clary</u>		Finish Date: <u>12/02/2021</u>	Time: _____

GENERAL INFORMATION

Ownership (Controlling Party): _____	
Street Address: <u>1026 Poyntz Avenue</u>	
City: <u>Manhattan</u>	
County: <u>Riley</u>	
State: <u>Kansas</u>	Zip: <u>66502</u>
Township: <u>10 S</u>	Range: <u>8 E</u> Section: <u>18</u>
<u> </u> 1/4 of the	<u> </u> 1/4 of the <u> </u> 1/4
If Known, Latitude: <u>39.1666</u>	Longitude: <u>-96.5666</u>
If Known*, Northing: _____	Easting: _____
*Coordinate System: _____	

Reason for Abandonment:
<u>Temporary boring/temporary well</u>
Permit Number (If applicable): _____

BOREHOLE / WELL INFORMATION

Borehole / Well ID: <u>SB-5</u>	Unique Well ID: _____
Installation Date: <u>12/02/2021</u>	
☒ Borehole ☐ Monitoring Well ☐ Water Well ☐ Other (specify): _____	Attach Well Completion Report, if available
Construction Type:	
☐ Drilled ☒ Other (specify): <u>Geoprobe/direct-push</u>	☐ Driven (Sandpoint) ☐ Bedrock
Formation Type:	
☒ Unconsolidated Materials ☐ Bedrock	
Borehole/Well Details:	
Borehole Diameter: <u>2</u> Inches	
Total Borehole Depth: <u>5</u> FT BGS	
Casing Diameter: _____ Inches	☒ Not Applicable
Total Casing Depth: _____ FT BGS	☒ Not Applicable
Depth to Water: _____ FT BGS	☒ Not Encountered

SEALING INFORMATION

Pump & Piping Removed? ☐ Yes ☐ No ☒ Not Applicable
Liner(s) Removed? ☐ Yes ☐ No ☒ Not Applicable
Screen Removed? ☐ Yes ☐ No ☒ Not Applicable
Entire Casing Removed? ☐ Yes ☐ No* ☒ Not Applicable
*If No, Upper 2 feet Removed? ☐ Yes ☐ No
Method of Sealing Material Placement:
☐ Conductor Pipe - Gravity ☐ Tremie Pipe - Pumped ☒ Screened & Poured ☒ Other (specify): <u>gravity</u>
Sealing Material Rose to Surface? ☒ Yes ☐ No
Material Settled After 24 Hours? ☐ Yes* ☒ No
If Yes, Was Hole Re-Topped? ☐ Yes ☐ No

Sealing Material Used	From	To	Volume/Quantity
Bentonite chips	Surface	5'	<1 bag

SEALING WORK PERFORMED BY

Individual's Name: <u>Mike C.</u>	License Number: _____
Company Name: <u>Below Ground Surface - BGS</u>	
Street Address: <u>1835 Wall Street</u>	
City: <u>Salinas</u>	State: <u>KS</u> Zip: <u>67401</u>

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

APPENDIX C – LABORATORY ANALYTICAL REPORTS



ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
530 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-61273-1

Client Project/Site: 1026 Poyntz Ave - 193705435

For:

Stantec Consulting Corp.
12075 Corporate Pkwy, Suite 200
Mequon, Wisconsin 53092

Attn: Erin Gross



Authorized for release by:
12/13/2021 9:43:35 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Job ID: 200-61273-1

Laboratory: Eurofins TestAmerica, Burlington

Narrative

Job Narrative
200-61273-1

Comments

No additional comments.

Receipt

The samples were received on 12/7/2021 11:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice.

Air Toxics

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-1 (01)

Lab Sample ID: 200-61273-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.37	J	0.50	0.098	ppb v/v	2.5		TO-15	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.50	0.12	ppb v/v	2.5		TO-15	Total/NA
2-Butanone (MEK)	0.89	J	2.5	0.43	ppb v/v	2.5		TO-15	Total/NA
Acetone	42		13	5.0	ppb v/v	2.5		TO-15	Total/NA
Dichlorodifluoromethane	0.54	J	1.3	0.28	ppb v/v	2.5		TO-15	Total/NA
Isopropyl alcohol	5.0	J	13	2.5	ppb v/v	2.5		TO-15	Total/NA
Tetrachloroethene	42		0.50	0.068	ppb v/v	2.5		TO-15	Total/NA
Toluene	0.35	J	0.50	0.23	ppb v/v	2.5		TO-15	Total/NA
Trichlorofluoromethane	0.18	J	0.50	0.13	ppb v/v	2.5		TO-15	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	2.0	J	2.7	0.53	ug/m3	2.5		TO-15	Total/NA
1,2,4-Trimethylbenzene	0.78	J	2.5	0.58	ug/m3	2.5		TO-15	Total/NA
2-Butanone (MEK)	2.6	J	7.4	1.3	ug/m3	2.5		TO-15	Total/NA
Acetone	100		30	12	ug/m3	2.5		TO-15	Total/NA
Dichlorodifluoromethane	2.7	J	6.2	1.4	ug/m3	2.5		TO-15	Total/NA
Isopropyl alcohol	12	J	31	6.0	ug/m3	2.5		TO-15	Total/NA
Tetrachloroethene	280		3.4	0.46	ug/m3	2.5		TO-15	Total/NA
Toluene	1.3	J	1.9	0.88	ug/m3	2.5		TO-15	Total/NA
Trichlorofluoromethane	1.0	J	2.8	0.73	ug/m3	2.5		TO-15	Total/NA

Client Sample ID: SS-2 (01)

Lab Sample ID: 200-61273-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.29		0.20	0.047	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.061	J	0.20	0.044	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	0.53	J	1.0	0.17	ppb v/v	1		TO-15	Total/NA
Acetone	5.6		5.0	2.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.087	J	0.20	0.074	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.35	J	0.50	0.11	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.15	J	0.20	0.10	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.55		0.50	0.17	ppb v/v	1		TO-15	Total/NA
m-Xylene & p-Xylene	0.62	J	0.80	0.17	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.20		0.20	0.094	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	7.4		0.20	0.027	ppb v/v	1		TO-15	Total/NA
Toluene	0.55		0.20	0.093	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.17	J	0.20	0.052	ppb v/v	1		TO-15	Total/NA
Xylenes, Total	0.82		0.40	0.26	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.4		0.98	0.23	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.30	J	0.98	0.22	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	1.6	J	2.9	0.50	ug/m3	1		TO-15	Total/NA
Acetone	13		12	4.8	ug/m3	1		TO-15	Total/NA
Benzene	0.28	J	0.64	0.24	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	1.7	J	2.5	0.54	ug/m3	1		TO-15	Total/NA
Ethylbenzene	0.65	J	0.87	0.43	ug/m3	1		TO-15	Total/NA
Methylene Chloride	1.9		1.7	0.59	ug/m3	1		TO-15	Total/NA
m-Xylene & p-Xylene	2.7	J	3.5	0.74	ug/m3	1		TO-15	Total/NA
o-Xylene	0.86		0.87	0.41	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	50		1.4	0.18	ug/m3	1		TO-15	Total/NA
Toluene	2.1		0.75	0.35	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	0.93	J	1.1	0.29	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-2 (01) (Continued)

Lab Sample ID: 200-61273-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	3.6		1.7	1.1	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-1 (01)

Lab Sample ID: 200-61273-1

Date Collected: 12/03/21 09:44

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	J	0.50	0.098	ppb v/v			12/11/21 21:53	2.5
1,1,2,2-Tetrachloroethane	<0.11		0.50	0.11	ppb v/v			12/11/21 21:53	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.14		0.50	0.14	ppb v/v			12/11/21 21:53	2.5
1,1,2-Trichloroethane	<0.085		0.50	0.085	ppb v/v			12/11/21 21:53	2.5
1,1-Dichloroethane	<0.073		0.50	0.073	ppb v/v			12/11/21 21:53	2.5
1,1-Dichloroethene	<0.073		0.50	0.073	ppb v/v			12/11/21 21:53	2.5
1,2,4-Trichlorobenzene	<0.48		5.0	0.48	ppb v/v			12/11/21 21:53	2.5
1,2,4-Trimethylbenzene	0.16	J	0.50	0.12	ppb v/v			12/11/21 21:53	2.5
1,2-Dibromoethane (EDB)	<0.12		0.50	0.12	ppb v/v			12/11/21 21:53	2.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.14		0.50	0.14	ppb v/v			12/11/21 21:53	2.5
1,2-Dichlorobenzene	<0.18		0.50	0.18	ppb v/v			12/11/21 21:53	2.5
1,2-Dichloroethane	<0.38		0.50	0.38	ppb v/v			12/11/21 21:53	2.5
1,2-Dichloropropane	<0.22		0.50	0.22	ppb v/v			12/11/21 21:53	2.5
1,3,5-Trimethylbenzene	<0.11		0.50	0.11	ppb v/v			12/11/21 21:53	2.5
1,3-Dichlorobenzene	<0.22		0.50	0.22	ppb v/v			12/11/21 21:53	2.5
1,4-Dichlorobenzene	<0.24		0.50	0.24	ppb v/v			12/11/21 21:53	2.5
1,4-Dioxane	<4.3		13	4.3	ppb v/v			12/11/21 21:53	2.5
2-Butanone (MEK)	0.89	J	2.5	0.43	ppb v/v			12/11/21 21:53	2.5
4-Methyl-2-pentanone (MIBK)	<0.48		1.3	0.48	ppb v/v			12/11/21 21:53	2.5
Acetone	42		13	5.0	ppb v/v			12/11/21 21:53	2.5
Benzene	<0.19		0.50	0.19	ppb v/v			12/11/21 21:53	2.5
Benzyl chloride	<0.19		2.0	0.19	ppb v/v			12/11/21 21:53	2.5
Bromodichloromethane	<0.10		0.50	0.10	ppb v/v			12/11/21 21:53	2.5
Bromoform	<0.15		0.50	0.15	ppb v/v			12/11/21 21:53	2.5
Bromomethane	<0.13		0.50	0.13	ppb v/v			12/11/21 21:53	2.5
Carbon disulfide	<0.33		1.3	0.33	ppb v/v			12/11/21 21:53	2.5
Carbon tetrachloride	<0.080		0.50	0.080	ppb v/v			12/11/21 21:53	2.5
Chlorobenzene	<0.11		0.50	0.11	ppb v/v			12/11/21 21:53	2.5
Chloroethane	<0.63		2.0	0.63	ppb v/v			12/11/21 21:53	2.5
Chloroform	<0.12		0.50	0.12	ppb v/v			12/11/21 21:53	2.5
Chloromethane	<0.30		1.3	0.30	ppb v/v			12/11/21 21:53	2.5
cis-1,2-Dichloroethene	<0.083		0.50	0.083	ppb v/v			12/11/21 21:53	2.5
cis-1,3-Dichloropropene	<0.050		0.50	0.050	ppb v/v			12/11/21 21:53	2.5
Cyclohexane	<0.088		1.3	0.088	ppb v/v			12/11/21 21:53	2.5
Dibromochloromethane	<0.078		0.50	0.078	ppb v/v			12/11/21 21:53	2.5
Dichlorodifluoromethane	0.54	J	1.3	0.28	ppb v/v			12/11/21 21:53	2.5
Ethylbenzene	<0.25		0.50	0.25	ppb v/v			12/11/21 21:53	2.5
Hexachlorobutadiene	<0.078		5.0	0.078	ppb v/v			12/11/21 21:53	2.5
Hexane	<0.58		2.0	0.58	ppb v/v			12/11/21 21:53	2.5
Isopropyl alcohol	5.0	J	13	2.5	ppb v/v			12/11/21 21:53	2.5
Isopropylbenzene	<0.093		2.0	0.093	ppb v/v			12/11/21 21:53	2.5
Methyl tert-butyl ether	<0.20		2.5	0.20	ppb v/v			12/11/21 21:53	2.5
Methylene Chloride	<0.43		1.3	0.43	ppb v/v			12/11/21 21:53	2.5
m-Xylene & p-Xylene	<0.43		2.0	0.43	ppb v/v			12/11/21 21:53	2.5
Naphthalene	<0.43		1.3	0.43	ppb v/v			12/11/21 21:53	2.5
o-Xylene	<0.24		0.50	0.24	ppb v/v			12/11/21 21:53	2.5
Styrene	<0.080		0.50	0.080	ppb v/v			12/11/21 21:53	2.5
Tetrachloroethene	42		0.50	0.068	ppb v/v			12/11/21 21:53	2.5

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-1 (01)

Lab Sample ID: 200-61273-1

Date Collected: 12/03/21 09:44

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<3.0		13	3.0	ppb v/v			12/11/21 21:53	2.5
Toluene	0.35	J	0.50	0.23	ppb v/v			12/11/21 21:53	2.5
trans-1,2-Dichloroethene	<0.22		0.50	0.22	ppb v/v			12/11/21 21:53	2.5
trans-1,3-Dichloropropene	<0.22		0.50	0.22	ppb v/v			12/11/21 21:53	2.5
Trichloroethene	<0.060		0.50	0.060	ppb v/v			12/11/21 21:53	2.5
Trichlorofluoromethane	0.18	J	0.50	0.13	ppb v/v			12/11/21 21:53	2.5
Vinyl acetate	<5.3		13	5.3	ppb v/v			12/11/21 21:53	2.5
Vinyl bromide	<0.21		0.50	0.21	ppb v/v			12/11/21 21:53	2.5
Vinyl chloride	<0.070		0.50	0.070	ppb v/v			12/11/21 21:53	2.5
Xylenes, Total	<0.65		1.0	0.65	ppb v/v			12/11/21 21:53	2.5
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.0	J	2.7	0.53	ug/m3			12/11/21 21:53	2.5
1,1,2,2-Tetrachloroethane	<0.74		3.4	0.74	ug/m3			12/11/21 21:53	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	<1.1		3.8	1.1	ug/m3			12/11/21 21:53	2.5
1,1,2-Trichloroethane	<0.46		2.7	0.46	ug/m3			12/11/21 21:53	2.5
1,1-Dichloroethane	<0.29		2.0	0.29	ug/m3			12/11/21 21:53	2.5
1,1-Dichloroethene	<0.29		2.0	0.29	ug/m3			12/11/21 21:53	2.5
1,2,4-Trichlorobenzene	<3.5		37	3.5	ug/m3			12/11/21 21:53	2.5
1,2,4-Trimethylbenzene	0.78	J	2.5	0.58	ug/m3			12/11/21 21:53	2.5
1,2-Dibromoethane (EDB)	<0.88		3.8	0.88	ug/m3			12/11/21 21:53	2.5
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.96		3.5	0.96	ug/m3			12/11/21 21:53	2.5
1,2-Dichlorobenzene	<1.1		3.0	1.1	ug/m3			12/11/21 21:53	2.5
1,2-Dichloroethane	<1.5		2.0	1.5	ug/m3			12/11/21 21:53	2.5
1,2-Dichloropropane	<1.0		2.3	1.0	ug/m3			12/11/21 21:53	2.5
1,3,5-Trimethylbenzene	<0.54		2.5	0.54	ug/m3			12/11/21 21:53	2.5
1,3-Dichlorobenzene	<1.3		3.0	1.3	ug/m3			12/11/21 21:53	2.5
1,4-Dichlorobenzene	<1.4		3.0	1.4	ug/m3			12/11/21 21:53	2.5
1,4-Dioxane	<15		45	15	ug/m3			12/11/21 21:53	2.5
2-Butanone (MEK)	2.6	J	7.4	1.3	ug/m3			12/11/21 21:53	2.5
4-Methyl-2-pentanone (MIBK)	<1.9		5.1	1.9	ug/m3			12/11/21 21:53	2.5
Acetone	100		30	12	ug/m3			12/11/21 21:53	2.5
Benzene	<0.59		1.6	0.59	ug/m3			12/11/21 21:53	2.5
Benzyl chloride	<0.96		10	0.96	ug/m3			12/11/21 21:53	2.5
Bromodichloromethane	<0.67		3.4	0.67	ug/m3			12/11/21 21:53	2.5
Bromoform	<1.5		5.2	1.5	ug/m3			12/11/21 21:53	2.5
Bromomethane	<0.50		1.9	0.50	ug/m3			12/11/21 21:53	2.5
Carbon disulfide	<1.0		3.9	1.0	ug/m3			12/11/21 21:53	2.5
Carbon tetrachloride	<0.50		3.1	0.50	ug/m3			12/11/21 21:53	2.5
Chlorobenzene	<0.49		2.3	0.49	ug/m3			12/11/21 21:53	2.5
Chloroethane	<1.6		5.3	1.6	ug/m3			12/11/21 21:53	2.5
Chloroform	<0.56		2.4	0.56	ug/m3			12/11/21 21:53	2.5
Chloromethane	<0.62		2.6	0.62	ug/m3			12/11/21 21:53	2.5
cis-1,2-Dichloroethene	<0.33		2.0	0.33	ug/m3			12/11/21 21:53	2.5
cis-1,3-Dichloropropene	<0.23		2.3	0.23	ug/m3			12/11/21 21:53	2.5
Cyclohexane	<0.30		4.3	0.30	ug/m3			12/11/21 21:53	2.5
Dibromochloromethane	<0.66		4.3	0.66	ug/m3			12/11/21 21:53	2.5
Dichlorodifluoromethane	2.7	J	6.2	1.4	ug/m3			12/11/21 21:53	2.5
Ethylbenzene	<1.1		2.2	1.1	ug/m3			12/11/21 21:53	2.5

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-1 (01)

Lab Sample ID: 200-61273-1

Date Collected: 12/03/21 09:44

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.83		53	0.83	ug/m3			12/11/21 21:53	2.5
Hexane	<2.0		7.0	2.0	ug/m3			12/11/21 21:53	2.5
Isopropyl alcohol	12	J	31	6.0	ug/m3			12/11/21 21:53	2.5
Isopropylbenzene	<0.45		9.8	0.45	ug/m3			12/11/21 21:53	2.5
Methyl tert-butyl ether	<0.72		9.0	0.72	ug/m3			12/11/21 21:53	2.5
Methylene Chloride	<1.5		4.3	1.5	ug/m3			12/11/21 21:53	2.5
m-Xylene & p-Xylene	<1.8		8.7	1.8	ug/m3			12/11/21 21:53	2.5
Naphthalene	<2.2		6.6	2.2	ug/m3			12/11/21 21:53	2.5
o-Xylene	<1.0		2.2	1.0	ug/m3			12/11/21 21:53	2.5
Styrene	<0.34		2.1	0.34	ug/m3			12/11/21 21:53	2.5
Tetrachloroethene	280		3.4	0.46	ug/m3			12/11/21 21:53	2.5
Tetrahydrofuran	<8.8		37	8.8	ug/m3			12/11/21 21:53	2.5
Toluene	1.3	J	1.9	0.88	ug/m3			12/11/21 21:53	2.5
trans-1,2-Dichloroethene	<0.87		2.0	0.87	ug/m3			12/11/21 21:53	2.5
trans-1,3-Dichloropropene	<1.0		2.3	1.0	ug/m3			12/11/21 21:53	2.5
Trichloroethene	<0.32		2.7	0.32	ug/m3			12/11/21 21:53	2.5
Trichlorofluoromethane	1.0	J	2.8	0.73	ug/m3			12/11/21 21:53	2.5
Vinyl acetate	<18		44	18	ug/m3			12/11/21 21:53	2.5
Vinyl bromide	<0.93		2.2	0.93	ug/m3			12/11/21 21:53	2.5
Vinyl chloride	<0.18		1.3	0.18	ug/m3			12/11/21 21:53	2.5
Xylenes, Total	<2.8		4.3	2.8	ug/m3			12/11/21 21:53	2.5

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-2 (01)

Lab Sample ID: 200-61273-2

Date Collected: 12/03/21 09:43

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.039		0.20	0.039	ppb v/v			12/11/21 07:15	1
1,1,2,2-Tetrachloroethane	<0.043		0.20	0.043	ppb v/v			12/11/21 07:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.055		0.20	0.055	ppb v/v			12/11/21 07:15	1
1,1,2-Trichloroethane	<0.034		0.20	0.034	ppb v/v			12/11/21 07:15	1
1,1-Dichloroethane	<0.029		0.20	0.029	ppb v/v			12/11/21 07:15	1
1,1-Dichloroethene	<0.029		0.20	0.029	ppb v/v			12/11/21 07:15	1
1,2,4-Trichlorobenzene	<0.19		2.0	0.19	ppb v/v			12/11/21 07:15	1
1,2,4-Trimethylbenzene	0.29		0.20	0.047	ppb v/v			12/11/21 07:15	1
1,2-Dibromoethane (EDB)	<0.046		0.20	0.046	ppb v/v			12/11/21 07:15	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.055		0.20	0.055	ppb v/v			12/11/21 07:15	1
1,2-Dichlorobenzene	<0.070		0.20	0.070	ppb v/v			12/11/21 07:15	1
1,2-Dichloroethane	<0.15		0.20	0.15	ppb v/v			12/11/21 07:15	1
1,2-Dichloropropane	<0.087		0.20	0.087	ppb v/v			12/11/21 07:15	1
1,3,5-Trimethylbenzene	0.061	J	0.20	0.044	ppb v/v			12/11/21 07:15	1
1,3-Dichlorobenzene	<0.089		0.20	0.089	ppb v/v			12/11/21 07:15	1
1,4-Dichlorobenzene	<0.095		0.20	0.095	ppb v/v			12/11/21 07:15	1
1,4-Dioxane	<1.7		5.0	1.7	ppb v/v			12/11/21 07:15	1
2-Butanone (MEK)	0.53	J	1.0	0.17	ppb v/v			12/11/21 07:15	1
4-Methyl-2-pentanone (MIBK)	<0.19		0.50	0.19	ppb v/v			12/11/21 07:15	1
Acetone	5.6		5.0	2.0	ppb v/v			12/11/21 07:15	1
Benzene	0.087	J	0.20	0.074	ppb v/v			12/11/21 07:15	1
Benzyl chloride	<0.074		0.80	0.074	ppb v/v			12/11/21 07:15	1
Bromodichloromethane	<0.040		0.20	0.040	ppb v/v			12/11/21 07:15	1
Bromoform	<0.058		0.20	0.058	ppb v/v			12/11/21 07:15	1
Bromomethane	<0.052		0.20	0.052	ppb v/v			12/11/21 07:15	1
Carbon disulfide	<0.13		0.50	0.13	ppb v/v			12/11/21 07:15	1
Carbon tetrachloride	<0.032		0.20	0.032	ppb v/v			12/11/21 07:15	1
Chlorobenzene	<0.043		0.20	0.043	ppb v/v			12/11/21 07:15	1
Chloroethane	<0.25		0.80	0.25	ppb v/v			12/11/21 07:15	1
Chloroform	<0.046		0.20	0.046	ppb v/v			12/11/21 07:15	1
Chloromethane	<0.12		0.50	0.12	ppb v/v			12/11/21 07:15	1
cis-1,2-Dichloroethene	<0.033		0.20	0.033	ppb v/v			12/11/21 07:15	1
cis-1,3-Dichloropropene	<0.020		0.20	0.020	ppb v/v			12/11/21 07:15	1
Cyclohexane	<0.035		0.50	0.035	ppb v/v			12/11/21 07:15	1
Dibromochloromethane	<0.031		0.20	0.031	ppb v/v			12/11/21 07:15	1
Dichlorodifluoromethane	0.35	J	0.50	0.11	ppb v/v			12/11/21 07:15	1
Ethylbenzene	0.15	J	0.20	0.10	ppb v/v			12/11/21 07:15	1
Hexachlorobutadiene	<0.031		2.0	0.031	ppb v/v			12/11/21 07:15	1
Hexane	<0.23		0.80	0.23	ppb v/v			12/11/21 07:15	1
Isopropyl alcohol	<0.98		5.0	0.98	ppb v/v			12/11/21 07:15	1
Isopropylbenzene	<0.037		0.80	0.037	ppb v/v			12/11/21 07:15	1
Methyl tert-butyl ether	<0.080		1.0	0.080	ppb v/v			12/11/21 07:15	1
Methylene Chloride	0.55		0.50	0.17	ppb v/v			12/11/21 07:15	1
m-Xylene & p-Xylene	0.62	J	0.80	0.17	ppb v/v			12/11/21 07:15	1
Naphthalene	<0.17		0.50	0.17	ppb v/v			12/11/21 07:15	1
o-Xylene	0.20		0.20	0.094	ppb v/v			12/11/21 07:15	1
Styrene	<0.032		0.20	0.032	ppb v/v			12/11/21 07:15	1
Tetrachloroethene	7.4		0.20	0.027	ppb v/v			12/11/21 07:15	1

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-2 (01)

Lab Sample ID: 200-61273-2

Date Collected: 12/03/21 09:43

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<1.2		5.0	1.2	ppb v/v			12/11/21 07:15	1
Toluene	0.55		0.20	0.093	ppb v/v			12/11/21 07:15	1
trans-1,2-Dichloroethene	<0.088		0.20	0.088	ppb v/v			12/11/21 07:15	1
trans-1,3-Dichloropropene	<0.089		0.20	0.089	ppb v/v			12/11/21 07:15	1
Trichloroethene	<0.024		0.20	0.024	ppb v/v			12/11/21 07:15	1
Trichlorofluoromethane	0.17 J		0.20	0.052	ppb v/v			12/11/21 07:15	1
Vinyl acetate	<2.1		5.0	2.1	ppb v/v			12/11/21 07:15	1
Vinyl bromide	<0.085		0.20	0.085	ppb v/v			12/11/21 07:15	1
Vinyl chloride	<0.028		0.20	0.028	ppb v/v			12/11/21 07:15	1
Xylenes, Total	0.82		0.40	0.26	ppb v/v			12/11/21 07:15	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.21		1.1	0.21	ug/m3			12/11/21 07:15	1
1,1,2,2-Tetrachloroethane	<0.30		1.4	0.30	ug/m3			12/11/21 07:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		1.5	0.42	ug/m3			12/11/21 07:15	1
1,1,2-Trichloroethane	<0.19		1.1	0.19	ug/m3			12/11/21 07:15	1
1,1-Dichloroethane	<0.12		0.81	0.12	ug/m3			12/11/21 07:15	1
1,1-Dichloroethene	<0.11		0.79	0.11	ug/m3			12/11/21 07:15	1
1,2,4-Trichlorobenzene	<1.4		15	1.4	ug/m3			12/11/21 07:15	1
1,2,4-Trimethylbenzene	1.4		0.98	0.23	ug/m3			12/11/21 07:15	1
1,2-Dibromoethane (EDB)	<0.35		1.5	0.35	ug/m3			12/11/21 07:15	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.38		1.4	0.38	ug/m3			12/11/21 07:15	1
1,2-Dichlorobenzene	<0.42		1.2	0.42	ug/m3			12/11/21 07:15	1
1,2-Dichloroethane	<0.61		0.81	0.61	ug/m3			12/11/21 07:15	1
1,2-Dichloropropane	<0.40		0.92	0.40	ug/m3			12/11/21 07:15	1
1,3,5-Trimethylbenzene	0.30 J		0.98	0.22	ug/m3			12/11/21 07:15	1
1,3-Dichlorobenzene	<0.54		1.2	0.54	ug/m3			12/11/21 07:15	1
1,4-Dichlorobenzene	<0.57		1.2	0.57	ug/m3			12/11/21 07:15	1
1,4-Dioxane	<6.1		18	6.1	ug/m3			12/11/21 07:15	1
2-Butanone (MEK)	1.6 J		2.9	0.50	ug/m3			12/11/21 07:15	1
4-Methyl-2-pentanone (MIBK)	<0.78		2.0	0.78	ug/m3			12/11/21 07:15	1
Acetone	13		12	4.8	ug/m3			12/11/21 07:15	1
Benzene	0.28 J		0.64	0.24	ug/m3			12/11/21 07:15	1
Benzyl chloride	<0.38		4.1	0.38	ug/m3			12/11/21 07:15	1
Bromodichloromethane	<0.27		1.3	0.27	ug/m3			12/11/21 07:15	1
Bromoform	<0.60		2.1	0.60	ug/m3			12/11/21 07:15	1
Bromomethane	<0.20		0.78	0.20	ug/m3			12/11/21 07:15	1
Carbon disulfide	<0.40		1.6	0.40	ug/m3			12/11/21 07:15	1
Carbon tetrachloride	<0.20		1.3	0.20	ug/m3			12/11/21 07:15	1
Chlorobenzene	<0.20		0.92	0.20	ug/m3			12/11/21 07:15	1
Chloroethane	<0.66		2.1	0.66	ug/m3			12/11/21 07:15	1
Chloroform	<0.22		0.98	0.22	ug/m3			12/11/21 07:15	1
Chloromethane	<0.25		1.0	0.25	ug/m3			12/11/21 07:15	1
cis-1,2-Dichloroethene	<0.13		0.79	0.13	ug/m3			12/11/21 07:15	1
cis-1,3-Dichloropropene	<0.091		0.91	0.091	ug/m3			12/11/21 07:15	1
Cyclohexane	<0.12		1.7	0.12	ug/m3			12/11/21 07:15	1
Dibromochloromethane	<0.26		1.7	0.26	ug/m3			12/11/21 07:15	1
Dichlorodifluoromethane	1.7 J		2.5	0.54	ug/m3			12/11/21 07:15	1
Ethylbenzene	0.65 J		0.87	0.43	ug/m3			12/11/21 07:15	1

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-2 (01)

Lab Sample ID: 200-61273-2

Date Collected: 12/03/21 09:43

Matrix: Air

Date Received: 12/07/21 11:45

Sample Container: Summa Canister 6L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.33		21	0.33	ug/m3			12/11/21 07:15	1
Hexane	<0.81		2.8	0.81	ug/m3			12/11/21 07:15	1
Isopropyl alcohol	<2.4		12	2.4	ug/m3			12/11/21 07:15	1
Isopropylbenzene	<0.18		3.9	0.18	ug/m3			12/11/21 07:15	1
Methyl tert-butyl ether	<0.29		3.6	0.29	ug/m3			12/11/21 07:15	1
Methylene Chloride	1.9		1.7	0.59	ug/m3			12/11/21 07:15	1
m-Xylene & p-Xylene	2.7 J		3.5	0.74	ug/m3			12/11/21 07:15	1
Naphthalene	<0.89		2.6	0.89	ug/m3			12/11/21 07:15	1
o-Xylene	0.86		0.87	0.41	ug/m3			12/11/21 07:15	1
Styrene	<0.14		0.85	0.14	ug/m3			12/11/21 07:15	1
Tetrachloroethene	50		1.4	0.18	ug/m3			12/11/21 07:15	1
Tetrahydrofuran	<3.5		15	3.5	ug/m3			12/11/21 07:15	1
Toluene	2.1		0.75	0.35	ug/m3			12/11/21 07:15	1
trans-1,2-Dichloroethene	<0.35		0.79	0.35	ug/m3			12/11/21 07:15	1
trans-1,3-Dichloropropene	<0.40		0.91	0.40	ug/m3			12/11/21 07:15	1
Trichloroethene	<0.13		1.1	0.13	ug/m3			12/11/21 07:15	1
Trichlorofluoromethane	0.93 J		1.1	0.29	ug/m3			12/11/21 07:15	1
Vinyl acetate	<7.4		18	7.4	ug/m3			12/11/21 07:15	1
Vinyl bromide	<0.37		0.87	0.37	ug/m3			12/11/21 07:15	1
Vinyl chloride	<0.072		0.51	0.072	ug/m3			12/11/21 07:15	1
Xylenes, Total	3.6		1.7	1.1	ug/m3			12/11/21 07:15	1

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 200-174759/5

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.039		0.20	0.039	ppb v/v			12/10/21 10:55	1
1,1,2,2-Tetrachloroethane	<0.043		0.20	0.043	ppb v/v			12/10/21 10:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.055		0.20	0.055	ppb v/v			12/10/21 10:55	1
1,1,2-Trichloroethane	<0.034		0.20	0.034	ppb v/v			12/10/21 10:55	1
1,1-Dichloroethane	<0.029		0.20	0.029	ppb v/v			12/10/21 10:55	1
1,1-Dichloroethene	<0.029		0.20	0.029	ppb v/v			12/10/21 10:55	1
1,2,4-Trichlorobenzene	<0.19		2.0	0.19	ppb v/v			12/10/21 10:55	1
1,2,4-Trimethylbenzene	<0.047		0.20	0.047	ppb v/v			12/10/21 10:55	1
1,2-Dibromoethane (EDB)	<0.046		0.20	0.046	ppb v/v			12/10/21 10:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.055		0.20	0.055	ppb v/v			12/10/21 10:55	1
1,2-Dichlorobenzene	<0.070		0.20	0.070	ppb v/v			12/10/21 10:55	1
1,2-Dichloroethane	<0.15		0.20	0.15	ppb v/v			12/10/21 10:55	1
1,2-Dichloropropane	<0.087		0.20	0.087	ppb v/v			12/10/21 10:55	1
1,3,5-Trimethylbenzene	<0.044		0.20	0.044	ppb v/v			12/10/21 10:55	1
1,3-Dichlorobenzene	<0.089		0.20	0.089	ppb v/v			12/10/21 10:55	1
1,4-Dichlorobenzene	<0.095		0.20	0.095	ppb v/v			12/10/21 10:55	1
1,4-Dioxane	<1.7		5.0	1.7	ppb v/v			12/10/21 10:55	1
2-Butanone (MEK)	<0.17		1.0	0.17	ppb v/v			12/10/21 10:55	1
4-Methyl-2-pentanone (MIBK)	<0.19		0.50	0.19	ppb v/v			12/10/21 10:55	1
Acetone	<2.0		5.0	2.0	ppb v/v			12/10/21 10:55	1
Benzene	<0.074		0.20	0.074	ppb v/v			12/10/21 10:55	1
Benzyl chloride	<0.074		0.80	0.074	ppb v/v			12/10/21 10:55	1
Bromodichloromethane	<0.040		0.20	0.040	ppb v/v			12/10/21 10:55	1
Bromoform	<0.058		0.20	0.058	ppb v/v			12/10/21 10:55	1
Bromomethane	<0.052		0.20	0.052	ppb v/v			12/10/21 10:55	1
Carbon disulfide	<0.13		0.50	0.13	ppb v/v			12/10/21 10:55	1
Carbon tetrachloride	<0.032		0.20	0.032	ppb v/v			12/10/21 10:55	1
Chlorobenzene	<0.043		0.20	0.043	ppb v/v			12/10/21 10:55	1
Chloroethane	<0.25		0.80	0.25	ppb v/v			12/10/21 10:55	1
Chloroform	<0.046		0.20	0.046	ppb v/v			12/10/21 10:55	1
Chloromethane	<0.12		0.50	0.12	ppb v/v			12/10/21 10:55	1
cis-1,2-Dichloroethene	<0.033		0.20	0.033	ppb v/v			12/10/21 10:55	1
cis-1,3-Dichloropropene	<0.020		0.20	0.020	ppb v/v			12/10/21 10:55	1
Cyclohexane	<0.035		0.50	0.035	ppb v/v			12/10/21 10:55	1
Dibromochloromethane	<0.031		0.20	0.031	ppb v/v			12/10/21 10:55	1
Dichlorodifluoromethane	<0.11		0.50	0.11	ppb v/v			12/10/21 10:55	1
Ethylbenzene	<0.10		0.20	0.10	ppb v/v			12/10/21 10:55	1
Hexachlorobutadiene	<0.031		2.0	0.031	ppb v/v			12/10/21 10:55	1
Hexane	<0.23		0.80	0.23	ppb v/v			12/10/21 10:55	1
Isopropyl alcohol	<0.98		5.0	0.98	ppb v/v			12/10/21 10:55	1
Isopropylbenzene	<0.037		0.80	0.037	ppb v/v			12/10/21 10:55	1
Methyl tert-butyl ether	<0.080		1.0	0.080	ppb v/v			12/10/21 10:55	1
Methylene Chloride	<0.17		0.50	0.17	ppb v/v			12/10/21 10:55	1
m-Xylene & p-Xylene	<0.17		0.80	0.17	ppb v/v			12/10/21 10:55	1
Naphthalene	<0.17		0.50	0.17	ppb v/v			12/10/21 10:55	1
o-Xylene	<0.094		0.20	0.094	ppb v/v			12/10/21 10:55	1
Styrene	<0.032		0.20	0.032	ppb v/v			12/10/21 10:55	1
Tetrachloroethene	<0.027		0.20	0.027	ppb v/v			12/10/21 10:55	1

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-174759/5

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	<1.2		5.0	1.2	ppb v/v			12/10/21 10:55	1
Toluene	<0.093		0.20	0.093	ppb v/v			12/10/21 10:55	1
trans-1,2-Dichloroethene	<0.088		0.20	0.088	ppb v/v			12/10/21 10:55	1
trans-1,3-Dichloropropene	<0.089		0.20	0.089	ppb v/v			12/10/21 10:55	1
Trichloroethene	<0.024		0.20	0.024	ppb v/v			12/10/21 10:55	1
Trichlorofluoromethane	<0.052		0.20	0.052	ppb v/v			12/10/21 10:55	1
Vinyl acetate	<2.1		5.0	2.1	ppb v/v			12/10/21 10:55	1
Vinyl bromide	<0.085		0.20	0.085	ppb v/v			12/10/21 10:55	1
Vinyl chloride	<0.028		0.20	0.028	ppb v/v			12/10/21 10:55	1
Xylenes, Total	<0.26		0.40	0.26	ppb v/v			12/10/21 10:55	1
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.21		1.1	0.21	ug/m3			12/10/21 10:55	1
1,1,2,2-Tetrachloroethane	<0.30		1.4	0.30	ug/m3			12/10/21 10:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		1.5	0.42	ug/m3			12/10/21 10:55	1
1,1,2-Trichloroethane	<0.19		1.1	0.19	ug/m3			12/10/21 10:55	1
1,1-Dichloroethane	<0.12		0.81	0.12	ug/m3			12/10/21 10:55	1
1,1-Dichloroethene	<0.11		0.79	0.11	ug/m3			12/10/21 10:55	1
1,2,4-Trichlorobenzene	<1.4		15	1.4	ug/m3			12/10/21 10:55	1
1,2,4-Trimethylbenzene	<0.23		0.98	0.23	ug/m3			12/10/21 10:55	1
1,2-Dibromoethane (EDB)	<0.35		1.5	0.35	ug/m3			12/10/21 10:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.38		1.4	0.38	ug/m3			12/10/21 10:55	1
1,2-Dichlorobenzene	<0.42		1.2	0.42	ug/m3			12/10/21 10:55	1
1,2-Dichloroethane	<0.61		0.81	0.61	ug/m3			12/10/21 10:55	1
1,2-Dichloropropane	<0.40		0.92	0.40	ug/m3			12/10/21 10:55	1
1,3,5-Trimethylbenzene	<0.22		0.98	0.22	ug/m3			12/10/21 10:55	1
1,3-Dichlorobenzene	<0.54		1.2	0.54	ug/m3			12/10/21 10:55	1
1,4-Dichlorobenzene	<0.57		1.2	0.57	ug/m3			12/10/21 10:55	1
1,4-Dioxane	<6.1		18	6.1	ug/m3			12/10/21 10:55	1
2-Butanone (MEK)	<0.50		2.9	0.50	ug/m3			12/10/21 10:55	1
4-Methyl-2-pentanone (MIBK)	<0.78		2.0	0.78	ug/m3			12/10/21 10:55	1
Acetone	<4.8		12	4.8	ug/m3			12/10/21 10:55	1
Benzene	<0.24		0.64	0.24	ug/m3			12/10/21 10:55	1
Benzyl chloride	<0.38		4.1	0.38	ug/m3			12/10/21 10:55	1
Bromodichloromethane	<0.27		1.3	0.27	ug/m3			12/10/21 10:55	1
Bromoform	<0.60		2.1	0.60	ug/m3			12/10/21 10:55	1
Bromomethane	<0.20		0.78	0.20	ug/m3			12/10/21 10:55	1
Carbon disulfide	<0.40		1.6	0.40	ug/m3			12/10/21 10:55	1
Carbon tetrachloride	<0.20		1.3	0.20	ug/m3			12/10/21 10:55	1
Chlorobenzene	<0.20		0.92	0.20	ug/m3			12/10/21 10:55	1
Chloroethane	<0.66		2.1	0.66	ug/m3			12/10/21 10:55	1
Chloroform	<0.22		0.98	0.22	ug/m3			12/10/21 10:55	1
Chloromethane	<0.25		1.0	0.25	ug/m3			12/10/21 10:55	1
cis-1,2-Dichloroethene	<0.13		0.79	0.13	ug/m3			12/10/21 10:55	1
cis-1,3-Dichloropropene	<0.091		0.91	0.091	ug/m3			12/10/21 10:55	1
Cyclohexane	<0.12		1.7	0.12	ug/m3			12/10/21 10:55	1
Dibromochloromethane	<0.26		1.7	0.26	ug/m3			12/10/21 10:55	1
Dichlorodifluoromethane	<0.54		2.5	0.54	ug/m3			12/10/21 10:55	1
Ethylbenzene	<0.43		0.87	0.43	ug/m3			12/10/21 10:55	1

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-174759/5

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.33		21	0.33	ug/m3			12/10/21 10:55	1
Hexane	<0.81		2.8	0.81	ug/m3			12/10/21 10:55	1
Isopropyl alcohol	<2.4		12	2.4	ug/m3			12/10/21 10:55	1
Isopropylbenzene	<0.18		3.9	0.18	ug/m3			12/10/21 10:55	1
Methyl tert-butyl ether	<0.29		3.6	0.29	ug/m3			12/10/21 10:55	1
Methylene Chloride	<0.59		1.7	0.59	ug/m3			12/10/21 10:55	1
m-Xylene & p-Xylene	<0.74		3.5	0.74	ug/m3			12/10/21 10:55	1
Naphthalene	<0.89		2.6	0.89	ug/m3			12/10/21 10:55	1
o-Xylene	<0.41		0.87	0.41	ug/m3			12/10/21 10:55	1
Styrene	<0.14		0.85	0.14	ug/m3			12/10/21 10:55	1
Tetrachloroethene	<0.18		1.4	0.18	ug/m3			12/10/21 10:55	1
Tetrahydrofuran	<3.5		15	3.5	ug/m3			12/10/21 10:55	1
Toluene	<0.35		0.75	0.35	ug/m3			12/10/21 10:55	1
trans-1,2-Dichloroethene	<0.35		0.79	0.35	ug/m3			12/10/21 10:55	1
trans-1,3-Dichloropropene	<0.40		0.91	0.40	ug/m3			12/10/21 10:55	1
Trichloroethene	<0.13		1.1	0.13	ug/m3			12/10/21 10:55	1
Trichlorofluoromethane	<0.29		1.1	0.29	ug/m3			12/10/21 10:55	1
Vinyl acetate	<7.4		18	7.4	ug/m3			12/10/21 10:55	1
Vinyl bromide	<0.37		0.87	0.37	ug/m3			12/10/21 10:55	1
Vinyl chloride	<0.072		0.51	0.072	ug/m3			12/10/21 10:55	1
Xylenes, Total	<1.1		1.7	1.1	ug/m3			12/10/21 10:55	1

Lab Sample ID: LCS 200-174759/3

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.8		ppb v/v		108	72 - 127
1,1,2,2-Tetrachloroethane	10.0	9.66		ppb v/v		97	74 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.01		ppb v/v		90	70 - 121
1,1,2-Trichloroethane	10.0	9.67		ppb v/v		97	75 - 126
1,1-Dichloroethane	10.0	11.0		ppb v/v		110	66 - 130
1,1-Dichloroethene	10.0	8.48		ppb v/v		85	68 - 120
1,2,4-Trichlorobenzene	10.0	9.51		ppb v/v		95	50 - 150
1,2,4-Trimethylbenzene	10.0	10.2		ppb v/v		102	71 - 129
1,2-Dibromoethane (EDB)	10.0	10.1		ppb v/v		101	78 - 122
1,2-Dichloro-1,1,2,2-tetrafluoroethane	10.0	11.1		ppb v/v		111	71 - 141
1,2-Dichlorobenzene	10.0	10.2		ppb v/v		102	68 - 129
1,2-Dichloroethane	10.0	11.0		ppb v/v		110	68 - 135
1,2-Dichloropropane	10.0	10.4		ppb v/v		104	69 - 128
1,3,5-Trimethylbenzene	10.0	10.2		ppb v/v		102	72 - 126
1,3-Dichlorobenzene	10.0	10.4		ppb v/v		104	69 - 131
1,4-Dichlorobenzene	10.0	10.4		ppb v/v		104	67 - 132
1,4-Dioxane	10.0	9.50		ppb v/v		95	66 - 129
2-Butanone (MEK)	10.0	8.86		ppb v/v		89	72 - 124
4-Methyl-2-pentanone (MIBK)	10.0	10.9		ppb v/v		109	58 - 144
Acetone	10.0	8.72		ppb v/v		87	54 - 154

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174759/3

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.4		ppb v/v		104	73 - 119
Benzyl chloride	10.0	9.37		ppb v/v		94	60 - 136
Bromodichloromethane	10.0	10.7		ppb v/v		107	75 - 127
Bromoform	10.0	10.3		ppb v/v		103	53 - 149
Bromomethane	10.0	11.0		ppb v/v		110	72 - 124
Carbon disulfide	10.0	8.78		ppb v/v		88	71 - 138
Carbon tetrachloride	10.0	10.4		ppb v/v		104	71 - 133
Chlorobenzene	10.0	9.92		ppb v/v		99	76 - 119
Chloroethane	10.0	10.8		ppb v/v		108	68 - 130
Chloroform	10.0	10.9		ppb v/v		109	73 - 124
Chloromethane	10.0	11.8		ppb v/v		118	56 - 141
cis-1,2-Dichloroethene	10.0	10.1		ppb v/v		101	72 - 121
cis-1,3-Dichloropropene	10.0	10.1		ppb v/v		101	74 - 125
Cyclohexane	10.0	10.4		ppb v/v		104	76 - 124
Dibromochloromethane	10.0	10.2		ppb v/v		102	73 - 125
Dichlorodifluoromethane	10.0	10.0		ppb v/v		100	61 - 142
Ethylbenzene	10.0	10.1		ppb v/v		101	74 - 122
Hexachlorobutadiene	10.0	9.16		ppb v/v		92	58 - 130
Hexane	10.0	10.7		ppb v/v		107	63 - 138
Isopropyl alcohol	10.0	7.04		ppb v/v		70	53 - 142
Isopropylbenzene	10.0	10.0		ppb v/v		100	73 - 123
Methyl tert-butyl ether	10.0	11.8		ppb v/v		118	70 - 127
Methylene Chloride	10.0	12.8		ppb v/v		128	59 - 137
m-Xylene & p-Xylene	20.0	20.1		ppb v/v		101	76 - 121
Naphthalene	10.0	9.70		ppb v/v		97	50 - 150
o-Xylene	10.0	10.0		ppb v/v		100	73 - 123
Styrene	10.0	10.7		ppb v/v		107	74 - 125
Tetrachloroethene	10.0	9.60		ppb v/v		96	70 - 125
Tetrahydrofuran	10.0	10.5		ppb v/v		105	60 - 149
Toluene	10.0	9.77		ppb v/v		98	75 - 122
trans-1,2-Dichloroethene	10.0	11.6		ppb v/v		116	69 - 137
trans-1,3-Dichloropropene	10.0	10.6		ppb v/v		106	74 - 128
Trichloroethene	10.0	10.6		ppb v/v		106	73 - 122
Trichlorofluoromethane	10.0	10.4		ppb v/v		104	70 - 129
Vinyl acetate	10.0	8.31		ppb v/v		83	59 - 149
Vinyl bromide	10.0	9.83		ppb v/v		98	75 - 125
Vinyl chloride	10.0	9.91		ppb v/v		99	61 - 135
Xylenes, Total	30.0	30.1		ppb v/v		100	75 - 122
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	55	58.8		ug/m3		108	72 - 127
1,1,2,2-Tetrachloroethane	69	66.3		ug/m3		97	74 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	77	69.1		ug/m3		90	70 - 121
1,1,2-Trichloroethane	55	52.8		ug/m3		97	75 - 126
1,1-Dichloroethane	40	44.5		ug/m3		110	66 - 130
1,1-Dichloroethene	40	33.6		ug/m3		85	68 - 120
1,2,4-Trichlorobenzene	74	70.6		ug/m3		95	50 - 150
1,2,4-Trimethylbenzene	49	50.1		ug/m3		102	71 - 129

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174759/3

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	77	77.7		ug/m3		101	78 - 122
1,2-Dichloro-1,1,2,2-tetrafluoroethane	70	77.5		ug/m3		111	71 - 141
1,2-Dichlorobenzene	60	61.2		ug/m3		102	68 - 129
1,2-Dichloroethane	40	44.6		ug/m3		110	68 - 135
1,2-Dichloropropane	46	48.0		ug/m3		104	69 - 128
1,3,5-Trimethylbenzene	49	50.1		ug/m3		102	72 - 126
1,3-Dichlorobenzene	60	62.7		ug/m3		104	69 - 131
1,4-Dichlorobenzene	60	62.6		ug/m3		104	67 - 132
1,4-Dioxane	36	34.2		ug/m3		95	66 - 129
2-Butanone (MEK)	29	26.1		ug/m3		89	72 - 124
4-Methyl-2-pentanone (MIBK)	41	44.5		ug/m3		109	58 - 144
Acetone	24	20.7		ug/m3		87	54 - 154
Benzene	32	33.2		ug/m3		104	73 - 119
Benzyl chloride	52	48.5		ug/m3		94	60 - 136
Bromodichloromethane	67	71.6		ug/m3		107	75 - 127
Bromoform	100	107		ug/m3		103	53 - 149
Bromomethane	39	42.6		ug/m3		110	72 - 124
Carbon disulfide	31	27.4		ug/m3		88	71 - 138
Carbon tetrachloride	63	65.6		ug/m3		104	71 - 133
Chlorobenzene	46	45.6		ug/m3		99	76 - 119
Chloroethane	26	28.4		ug/m3		108	68 - 130
Chloroform	49	53.2		ug/m3		109	73 - 124
Chloromethane	21	24.4		ug/m3		118	56 - 141
cis-1,2-Dichloroethene	40	40.0		ug/m3		101	72 - 121
cis-1,3-Dichloropropene	45	45.6		ug/m3		101	74 - 125
Cyclohexane	34	35.7		ug/m3		104	76 - 124
Dibromochloromethane	85	87.0		ug/m3		102	73 - 125
Dichlorodifluoromethane	49	49.6		ug/m3		100	61 - 142
Ethylbenzene	43	43.7		ug/m3		101	74 - 122
Hexachlorobutadiene	110	97.7		ug/m3		92	58 - 130
Hexane	35	37.9		ug/m3		107	63 - 138
Isopropyl alcohol	25	17.3		ug/m3		70	53 - 142
Isopropylbenzene	49	49.3		ug/m3		100	73 - 123
Methyl tert-butyl ether	36	42.4		ug/m3		118	70 - 127
Methylene Chloride	35	44.5		ug/m3		128	59 - 137
m-Xylene & p-Xylene	87	87.4		ug/m3		101	76 - 121
Naphthalene	52	50.8		ug/m3		97	50 - 150
o-Xylene	43	43.5		ug/m3		100	73 - 123
Styrene	43	45.4		ug/m3		107	74 - 125
Tetrachloroethene	68	65.1		ug/m3		96	70 - 125
Tetrahydrofuran	29	31.0		ug/m3		105	60 - 149
Toluene	38	36.8		ug/m3		98	75 - 122
trans-1,2-Dichloroethene	40	45.8		ug/m3		116	69 - 137
trans-1,3-Dichloropropene	45	48.2		ug/m3		106	74 - 128
Trichloroethene	54	56.7		ug/m3		106	73 - 122
Trichlorofluoromethane	56	58.2		ug/m3		104	70 - 129
Vinyl acetate	35	29.3		ug/m3		83	59 - 149
Vinyl bromide	44	43.0		ug/m3		98	75 - 125

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174759/3

Matrix: Air

Analysis Batch: 174759

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	26	25.3		ug/m3		99	61 - 135
Xylenes, Total	130	131		ug/m3		100	75 - 122

Lab Sample ID: MB 200-174816/4

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.039		0.20	0.039	ppb v/v			12/11/21 13:51	1
1,1,2,2-Tetrachloroethane	<0.043		0.20	0.043	ppb v/v			12/11/21 13:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.055		0.20	0.055	ppb v/v			12/11/21 13:51	1
1,1,2-Trichloroethane	<0.034		0.20	0.034	ppb v/v			12/11/21 13:51	1
1,1-Dichloroethane	<0.029		0.20	0.029	ppb v/v			12/11/21 13:51	1
1,1-Dichloroethene	<0.029		0.20	0.029	ppb v/v			12/11/21 13:51	1
1,2,4-Trichlorobenzene	<0.19		2.0	0.19	ppb v/v			12/11/21 13:51	1
1,2,4-Trimethylbenzene	<0.047		0.20	0.047	ppb v/v			12/11/21 13:51	1
1,2-Dibromoethane (EDB)	<0.046		0.20	0.046	ppb v/v			12/11/21 13:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.055		0.20	0.055	ppb v/v			12/11/21 13:51	1
1,2-Dichlorobenzene	<0.070		0.20	0.070	ppb v/v			12/11/21 13:51	1
1,2-Dichloroethane	<0.15		0.20	0.15	ppb v/v			12/11/21 13:51	1
1,2-Dichloropropane	<0.087		0.20	0.087	ppb v/v			12/11/21 13:51	1
1,3,5-Trimethylbenzene	<0.044		0.20	0.044	ppb v/v			12/11/21 13:51	1
1,3-Dichlorobenzene	<0.089		0.20	0.089	ppb v/v			12/11/21 13:51	1
1,4-Dichlorobenzene	<0.095		0.20	0.095	ppb v/v			12/11/21 13:51	1
1,4-Dioxane	<1.7		5.0	1.7	ppb v/v			12/11/21 13:51	1
2-Butanone (MEK)	<0.17		1.0	0.17	ppb v/v			12/11/21 13:51	1
4-Methyl-2-pentanone (MIBK)	<0.19		0.50	0.19	ppb v/v			12/11/21 13:51	1
Acetone	<2.0		5.0	2.0	ppb v/v			12/11/21 13:51	1
Benzene	<0.074		0.20	0.074	ppb v/v			12/11/21 13:51	1
Benzyl chloride	<0.074		0.80	0.074	ppb v/v			12/11/21 13:51	1
Bromodichloromethane	<0.040		0.20	0.040	ppb v/v			12/11/21 13:51	1
Bromoform	<0.058		0.20	0.058	ppb v/v			12/11/21 13:51	1
Bromomethane	<0.052		0.20	0.052	ppb v/v			12/11/21 13:51	1
Carbon disulfide	<0.13		0.50	0.13	ppb v/v			12/11/21 13:51	1
Carbon tetrachloride	<0.032		0.20	0.032	ppb v/v			12/11/21 13:51	1
Chlorobenzene	<0.043		0.20	0.043	ppb v/v			12/11/21 13:51	1
Chloroethane	<0.25		0.80	0.25	ppb v/v			12/11/21 13:51	1
Chloroform	<0.046		0.20	0.046	ppb v/v			12/11/21 13:51	1
Chloromethane	<0.12		0.50	0.12	ppb v/v			12/11/21 13:51	1
cis-1,2-Dichloroethene	<0.033		0.20	0.033	ppb v/v			12/11/21 13:51	1
cis-1,3-Dichloropropene	<0.020		0.20	0.020	ppb v/v			12/11/21 13:51	1
Cyclohexane	<0.035		0.50	0.035	ppb v/v			12/11/21 13:51	1
Dibromochloromethane	<0.031		0.20	0.031	ppb v/v			12/11/21 13:51	1
Dichlorodifluoromethane	<0.11		0.50	0.11	ppb v/v			12/11/21 13:51	1
Ethylbenzene	<0.10		0.20	0.10	ppb v/v			12/11/21 13:51	1
Hexachlorobutadiene	<0.031		2.0	0.031	ppb v/v			12/11/21 13:51	1
Hexane	<0.23		0.80	0.23	ppb v/v			12/11/21 13:51	1
Isopropyl alcohol	<0.98		5.0	0.98	ppb v/v			12/11/21 13:51	1
Isopropylbenzene	<0.037		0.80	0.037	ppb v/v			12/11/21 13:51	1

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-174816/4

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	<0.080		1.0	0.080	ppb v/v			12/11/21 13:51	1
Methylene Chloride	<0.17		0.50	0.17	ppb v/v			12/11/21 13:51	1
m-Xylene & p-Xylene	<0.17		0.80	0.17	ppb v/v			12/11/21 13:51	1
Naphthalene	<0.17		0.50	0.17	ppb v/v			12/11/21 13:51	1
o-Xylene	<0.094		0.20	0.094	ppb v/v			12/11/21 13:51	1
Styrene	<0.032		0.20	0.032	ppb v/v			12/11/21 13:51	1
Tetrachloroethene	<0.027		0.20	0.027	ppb v/v			12/11/21 13:51	1
Tetrahydrofuran	<1.2		5.0	1.2	ppb v/v			12/11/21 13:51	1
Toluene	<0.093		0.20	0.093	ppb v/v			12/11/21 13:51	1
trans-1,2-Dichloroethene	<0.088		0.20	0.088	ppb v/v			12/11/21 13:51	1
trans-1,3-Dichloropropene	<0.089		0.20	0.089	ppb v/v			12/11/21 13:51	1
Trichloroethene	<0.024		0.20	0.024	ppb v/v			12/11/21 13:51	1
Trichlorofluoromethane	<0.052		0.20	0.052	ppb v/v			12/11/21 13:51	1
Vinyl acetate	<2.1		5.0	2.1	ppb v/v			12/11/21 13:51	1
Vinyl bromide	<0.085		0.20	0.085	ppb v/v			12/11/21 13:51	1
Vinyl chloride	<0.028		0.20	0.028	ppb v/v			12/11/21 13:51	1
Xylenes, Total	<0.26		0.40	0.26	ppb v/v			12/11/21 13:51	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.21		1.1	0.21	ug/m3			12/11/21 13:51	1
1,1,2,2-Tetrachloroethane	<0.30		1.4	0.30	ug/m3			12/11/21 13:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.42		1.5	0.42	ug/m3			12/11/21 13:51	1
1,1,2-Trichloroethane	<0.19		1.1	0.19	ug/m3			12/11/21 13:51	1
1,1-Dichloroethane	<0.12		0.81	0.12	ug/m3			12/11/21 13:51	1
1,1-Dichloroethene	<0.11		0.79	0.11	ug/m3			12/11/21 13:51	1
1,2,4-Trichlorobenzene	<1.4		15	1.4	ug/m3			12/11/21 13:51	1
1,2,4-Trimethylbenzene	<0.23		0.98	0.23	ug/m3			12/11/21 13:51	1
1,2-Dibromoethane (EDB)	<0.35		1.5	0.35	ug/m3			12/11/21 13:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<0.38		1.4	0.38	ug/m3			12/11/21 13:51	1
1,2-Dichlorobenzene	<0.42		1.2	0.42	ug/m3			12/11/21 13:51	1
1,2-Dichloroethane	<0.61		0.81	0.61	ug/m3			12/11/21 13:51	1
1,2-Dichloropropane	<0.40		0.92	0.40	ug/m3			12/11/21 13:51	1
1,3,5-Trimethylbenzene	<0.22		0.98	0.22	ug/m3			12/11/21 13:51	1
1,3-Dichlorobenzene	<0.54		1.2	0.54	ug/m3			12/11/21 13:51	1
1,4-Dichlorobenzene	<0.57		1.2	0.57	ug/m3			12/11/21 13:51	1
1,4-Dioxane	<6.1		18	6.1	ug/m3			12/11/21 13:51	1
2-Butanone (MEK)	<0.50		2.9	0.50	ug/m3			12/11/21 13:51	1
4-Methyl-2-pentanone (MIBK)	<0.78		2.0	0.78	ug/m3			12/11/21 13:51	1
Acetone	<4.8		12	4.8	ug/m3			12/11/21 13:51	1
Benzene	<0.24		0.64	0.24	ug/m3			12/11/21 13:51	1
Benzyl chloride	<0.38		4.1	0.38	ug/m3			12/11/21 13:51	1
Bromodichloromethane	<0.27		1.3	0.27	ug/m3			12/11/21 13:51	1
Bromoform	<0.60		2.1	0.60	ug/m3			12/11/21 13:51	1
Bromomethane	<0.20		0.78	0.20	ug/m3			12/11/21 13:51	1
Carbon disulfide	<0.40		1.6	0.40	ug/m3			12/11/21 13:51	1
Carbon tetrachloride	<0.20		1.3	0.20	ug/m3			12/11/21 13:51	1
Chlorobenzene	<0.20		0.92	0.20	ug/m3			12/11/21 13:51	1
Chloroethane	<0.66		2.1	0.66	ug/m3			12/11/21 13:51	1
Chloroform	<0.22		0.98	0.22	ug/m3			12/11/21 13:51	1

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-174816/4

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<0.25		1.0	0.25	ug/m3			12/11/21 13:51	1
cis-1,2-Dichloroethene	<0.13		0.79	0.13	ug/m3			12/11/21 13:51	1
cis-1,3-Dichloropropene	<0.091		0.91	0.091	ug/m3			12/11/21 13:51	1
Cyclohexane	<0.12		1.7	0.12	ug/m3			12/11/21 13:51	1
Dibromochloromethane	<0.26		1.7	0.26	ug/m3			12/11/21 13:51	1
Dichlorodifluoromethane	<0.54		2.5	0.54	ug/m3			12/11/21 13:51	1
Ethylbenzene	<0.43		0.87	0.43	ug/m3			12/11/21 13:51	1
Hexachlorobutadiene	<0.33		21	0.33	ug/m3			12/11/21 13:51	1
Hexane	<0.81		2.8	0.81	ug/m3			12/11/21 13:51	1
Isopropyl alcohol	<2.4		12	2.4	ug/m3			12/11/21 13:51	1
Isopropylbenzene	<0.18		3.9	0.18	ug/m3			12/11/21 13:51	1
Methyl tert-butyl ether	<0.29		3.6	0.29	ug/m3			12/11/21 13:51	1
Methylene Chloride	<0.59		1.7	0.59	ug/m3			12/11/21 13:51	1
m-Xylene & p-Xylene	<0.74		3.5	0.74	ug/m3			12/11/21 13:51	1
Naphthalene	<0.89		2.6	0.89	ug/m3			12/11/21 13:51	1
o-Xylene	<0.41		0.87	0.41	ug/m3			12/11/21 13:51	1
Styrene	<0.14		0.85	0.14	ug/m3			12/11/21 13:51	1
Tetrachloroethene	<0.18		1.4	0.18	ug/m3			12/11/21 13:51	1
Tetrahydrofuran	<3.5		15	3.5	ug/m3			12/11/21 13:51	1
Toluene	<0.35		0.75	0.35	ug/m3			12/11/21 13:51	1
trans-1,2-Dichloroethene	<0.35		0.79	0.35	ug/m3			12/11/21 13:51	1
trans-1,3-Dichloropropene	<0.40		0.91	0.40	ug/m3			12/11/21 13:51	1
Trichloroethene	<0.13		1.1	0.13	ug/m3			12/11/21 13:51	1
Trichlorofluoromethane	<0.29		1.1	0.29	ug/m3			12/11/21 13:51	1
Vinyl acetate	<7.4		18	7.4	ug/m3			12/11/21 13:51	1
Vinyl bromide	<0.37		0.87	0.37	ug/m3			12/11/21 13:51	1
Vinyl chloride	<0.072		0.51	0.072	ug/m3			12/11/21 13:51	1
Xylenes, Total	<1.1		1.7	1.1	ug/m3			12/11/21 13:51	1

Lab Sample ID: LCS 200-174816/3

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.1		ppb v/v		101	72 - 127
1,1,1,2-Tetrachloroethane	10.0	9.53		ppb v/v		95	74 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.43		ppb v/v		84	70 - 121
1,1,2-Trichloroethane	10.0	9.19		ppb v/v		92	75 - 126
1,1-Dichloroethane	10.0	10.1		ppb v/v		101	66 - 130
1,1-Dichloroethene	10.0	7.87		ppb v/v		79	68 - 120
1,2,4-Trichlorobenzene	10.0	9.85		ppb v/v		99	50 - 150
1,2,4-Trimethylbenzene	10.0	9.83		ppb v/v		98	71 - 129
1,2-Dibromoethane (EDB)	10.0	9.48		ppb v/v		95	78 - 122
1,2-Dichloro-1,1,2,2-tetrafluoroethane	10.0	10.8		ppb v/v		108	71 - 141
1,2-Dichlorobenzene	10.0	9.64		ppb v/v		96	68 - 129
1,2-Dichloroethane	10.0	10.6		ppb v/v		106	68 - 135
1,2-Dichloropropane	10.0	9.84		ppb v/v		98	69 - 128

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174816/3

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	10.0	9.83		ppb v/v		98	72 - 126
1,3-Dichlorobenzene	10.0	9.78		ppb v/v		98	69 - 131
1,4-Dichlorobenzene	10.0	9.87		ppb v/v		99	67 - 132
1,4-Dioxane	10.0	10.6		ppb v/v		106	66 - 129
2-Butanone (MEK)	10.0	8.67		ppb v/v		87	72 - 124
4-Methyl-2-pentanone (MIBK)	10.0	10.9		ppb v/v		109	58 - 144
Acetone	10.0	9.02		ppb v/v		90	54 - 154
Benzene	10.0	9.71		ppb v/v		97	73 - 119
Benzyl chloride	10.0	9.78		ppb v/v		98	60 - 136
Bromodichloromethane	10.0	10.2		ppb v/v		102	75 - 127
Bromoform	10.0	10.3		ppb v/v		103	53 - 149
Bromomethane	10.0	9.50		ppb v/v		95	72 - 124
Carbon disulfide	10.0	8.64		ppb v/v		86	71 - 138
Carbon tetrachloride	10.0	9.86		ppb v/v		99	71 - 133
Chlorobenzene	10.0	9.39		ppb v/v		94	76 - 119
Chloroethane	10.0	9.95		ppb v/v		100	68 - 130
Chloroform	10.0	10.2		ppb v/v		102	73 - 124
Chloromethane	10.0	11.7		ppb v/v		117	56 - 141
cis-1,2-Dichloroethene	10.0	9.23		ppb v/v		92	72 - 121
cis-1,3-Dichloropropene	10.0	10.2		ppb v/v		102	74 - 125
Cyclohexane	10.0	9.71		ppb v/v		97	76 - 124
Dibromochloromethane	10.0	9.72		ppb v/v		97	73 - 125
Dichlorodifluoromethane	10.0	10.2		ppb v/v		102	61 - 142
Ethylbenzene	10.0	9.61		ppb v/v		96	74 - 122
Hexachlorobutadiene	10.0	9.58		ppb v/v		96	58 - 130
Hexane	10.0	10.2		ppb v/v		102	63 - 138
Isopropyl alcohol	10.0	9.02		ppb v/v		90	53 - 142
Isopropylbenzene	10.0	9.69		ppb v/v		97	73 - 123
Methyl tert-butyl ether	10.0	11.2		ppb v/v		112	70 - 127
Methylene Chloride	10.0	8.36		ppb v/v		84	59 - 137
m-Xylene & p-Xylene	20.0	19.2		ppb v/v		96	76 - 121
Naphthalene	10.0	9.39		ppb v/v		94	50 - 150
o-Xylene	10.0	9.53		ppb v/v		95	73 - 123
Styrene	10.0	10.1		ppb v/v		101	74 - 125
Tetrachloroethene	10.0	9.00		ppb v/v		90	70 - 125
Tetrahydrofuran	10.0	10.6		ppb v/v		106	60 - 149
Toluene	10.0	9.13		ppb v/v		91	75 - 122
trans-1,2-Dichloroethene	10.0	10.7		ppb v/v		107	69 - 137
trans-1,3-Dichloropropene	10.0	10.4		ppb v/v		104	74 - 128
Trichloroethene	10.0	9.55		ppb v/v		96	73 - 122
Trichlorofluoromethane	10.0	9.99		ppb v/v		100	70 - 129
Vinyl acetate	10.0	11.3		ppb v/v		113	59 - 149
Vinyl bromide	10.0	9.44		ppb v/v		94	75 - 125
Vinyl chloride	10.0	9.51		ppb v/v		95	61 - 135
Xylenes, Total	30.0	28.7		ppb v/v		96	75 - 122
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	55	55.3		ug/m3		101	72 - 127
1,1,2,2-Tetrachloroethane	69	65.4		ug/m3		95	74 - 126

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174816/3

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	77	64.6		ug/m3		84	70 - 121
1,1,2-Trichloroethane	55	50.2		ug/m3		92	75 - 126
1,1-Dichloroethane	40	41.0		ug/m3		101	66 - 130
1,1-Dichloroethene	40	31.2		ug/m3		79	68 - 120
1,2,4-Trichlorobenzene	74	73.1		ug/m3		99	50 - 150
1,2,4-Trimethylbenzene	49	48.3		ug/m3		98	71 - 129
1,2-Dibromoethane (EDB)	77	72.9		ug/m3		95	78 - 122
1,2-Dichloro-1,1,2,2-tetrafluoroethane	70	75.6		ug/m3		108	71 - 141
1,2-Dichlorobenzene	60	57.9		ug/m3		96	68 - 129
1,2-Dichloroethane	40	43.0		ug/m3		106	68 - 135
1,2-Dichloropropane	46	45.5		ug/m3		98	69 - 128
1,3,5-Trimethylbenzene	49	48.3		ug/m3		98	72 - 126
1,3-Dichlorobenzene	60	58.8		ug/m3		98	69 - 131
1,4-Dichlorobenzene	60	59.3		ug/m3		99	67 - 132
1,4-Dioxane	36	38.3		ug/m3		106	66 - 129
2-Butanone (MEK)	29	25.6		ug/m3		87	72 - 124
4-Methyl-2-pentanone (MIBK)	41	44.6		ug/m3		109	58 - 144
Acetone	24	21.4		ug/m3		90	54 - 154
Benzene	32	31.0		ug/m3		97	73 - 119
Benzyl chloride	52	50.6		ug/m3		98	60 - 136
Bromodichloromethane	67	68.6		ug/m3		102	75 - 127
Bromoform	100	106		ug/m3		103	53 - 149
Bromomethane	39	36.9		ug/m3		95	72 - 124
Carbon disulfide	31	26.9		ug/m3		86	71 - 138
Carbon tetrachloride	63	62.0		ug/m3		99	71 - 133
Chlorobenzene	46	43.2		ug/m3		94	76 - 119
Chloroethane	26	26.3		ug/m3		100	68 - 130
Chloroform	49	49.6		ug/m3		102	73 - 124
Chloromethane	21	24.1		ug/m3		117	56 - 141
cis-1,2-Dichloroethene	40	36.6		ug/m3		92	72 - 121
cis-1,3-Dichloropropene	45	46.3		ug/m3		102	74 - 125
Cyclohexane	34	33.4		ug/m3		97	76 - 124
Dibromochloromethane	85	82.8		ug/m3		97	73 - 125
Dichlorodifluoromethane	49	50.3		ug/m3		102	61 - 142
Ethylbenzene	43	41.7		ug/m3		96	74 - 122
Hexachlorobutadiene	110	102		ug/m3		96	58 - 130
Hexane	35	35.9		ug/m3		102	63 - 138
Isopropyl alcohol	25	22.2		ug/m3		90	53 - 142
Isopropylbenzene	49	47.6		ug/m3		97	73 - 123
Methyl tert-butyl ether	36	40.4		ug/m3		112	70 - 127
Methylene Chloride	35	29.0		ug/m3		84	59 - 137
m-Xylene & p-Xylene	87	83.5		ug/m3		96	76 - 121
Naphthalene	52	49.2		ug/m3		94	50 - 150
o-Xylene	43	41.4		ug/m3		95	73 - 123
Styrene	43	43.2		ug/m3		101	74 - 125
Tetrachloroethene	68	61.0		ug/m3		90	70 - 125
Tetrahydrofuran	29	31.2		ug/m3		106	60 - 149

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-174816/3

Matrix: Air

Analysis Batch: 174816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	38	34.4		ug/m3		91	75 - 122
trans-1,2-Dichloroethene	40	42.4		ug/m3		107	69 - 137
trans-1,3-Dichloropropene	45	47.4		ug/m3		104	74 - 128
Trichloroethene	54	51.3		ug/m3		96	73 - 122
Trichlorofluoromethane	56	56.1		ug/m3		100	70 - 129
Vinyl acetate	35	39.7		ug/m3		113	59 - 149
Vinyl bromide	44	41.3		ug/m3		94	75 - 125
Vinyl chloride	26	24.3		ug/m3		95	61 - 135
Xylenes, Total	130	125		ug/m3		96	75 - 122

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Air - GC/MS VOA

Analysis Batch: 174759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-61273-2	SS-2 (01)	Total/NA	Air	TO-15	
MB 200-174759/5	Method Blank	Total/NA	Air	TO-15	
LCS 200-174759/3	Lab Control Sample	Total/NA	Air	TO-15	

Analysis Batch: 174816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-61273-1	SS-1 (01)	Total/NA	Air	TO-15	
MB 200-174816/4	Method Blank	Total/NA	Air	TO-15	
LCS 200-174816/3	Lab Control Sample	Total/NA	Air	TO-15	

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Client Sample ID: SS-1 (01)

Date Collected: 12/03/21 09:44

Date Received: 12/07/21 11:45

Lab Sample ID: 200-61273-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.5	174816	12/11/21 21:53	A1B	TAL BUR

Client Sample ID: SS-2 (01)

Date Collected: 12/03/21 09:43

Date Received: 12/07/21 11:45

Lab Sample ID: 200-61273-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	174759	12/11/21 07:15	K1P	TAL BUR

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2336	02-25-23
Connecticut	State	PH-0751	09-30-21 *
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	05-17-22
Florida	NELAP	E87467	06-30-22
Minnesota	NELAP	050-999-436	12-31-22
New Hampshire	NELAP	2006	12-18-21
New Jersey	NELAP	VT972	06-30-22
New York	NELAP	10391	04-01-22
Pennsylvania	NELAP	68-00489	04-30-22
Rhode Island	State	LAO00298	12-30-21
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00272	10-30-23
Vermont	State	VT4000	02-10-22
Virginia	NELAP	460209	12-14-21
Wisconsin	State	399133350	08-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Burlington

Method Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL BUR

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave - 193705435

Job ID: 200-61273-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
200-61273-1	SS-1 (01)	Air	12/03/21 09:44	12/07/21 11:45	Air Canister (6-Liter) #8346
200-61273-2	SS-2 (01)	Air	12/03/21 09:43	12/07/21 11:45	Air Canister (6-Liter) #11688

1

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15

Eurofins TestAmerica, Burlington
530 Community Drive

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

Suite 11
South Burlington, VT 05403-6809
phone 802.660.1990 fax 802.660.1919

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

[illegible]

ORIGIN ID:ALOA (319) 277-2401
SAMPLE RECEIVING
EUROFINS TESTAMERICA
3019 VENTURE WAY

SHIP DATE: 06DEC21
ACTWGT: 26.85 LB
CAD: 0870970/CAFE3506

CEDAR FALLS, IA 50613
UNITED STATES US

BILL RECIPIENT

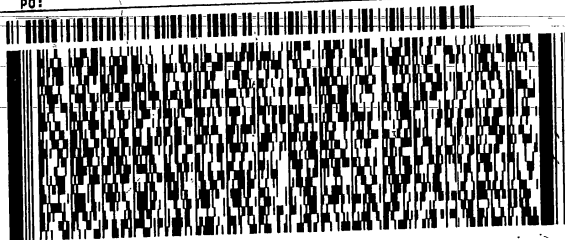
TO **SAMPLE RECEIVING**
TESTAMERICA/BURLINGTON
530 COMMUNITY DRIVE
SUITE 11
BURLINGTON VT 05403

(802) 680-1990

REF:

DEPT:

INU:
PO:



FedEx
Express

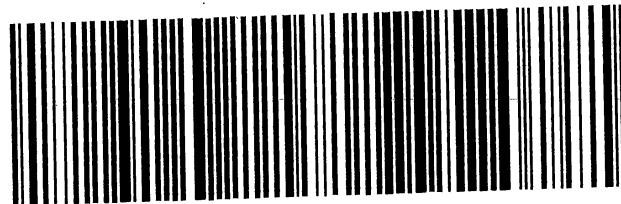


TRK# 5390 2048 6208
0201

TUE - 07 DEC 11:30A
PRIORITY OVERNIGHT

XE BTVA

05403
VT-US **BTVA**



Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 200-61273-1

Login Number: 61273

List Number: 1

Creator: Cunningham, Caroline R

List Source: Eurofins TestAmerica, Burlington

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-25101-1
 SDG No.: _____
 Client Sample ID: 34001249 Lab Sample ID: 140-25101-1
 Matrix: Air Lab File ID: J25L25101A.D
 Analysis Method: TO 15 LL Date Collected: 10/22/2021 08:45
 Sample wt/vol: 500 (mL) Date Analyzed: 10/26/2021 05:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 55054 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.040	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.16	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadiene	ND		0.16	
541-73-1	1,3-Dichlorobenzene	0.084		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-25101-1
 SDG No.: _____
 Client Sample ID: 34001249 Lab Sample ID: 140-25101-1
 Matrix: Air Lab File ID: J25L25101A.D
 Analysis Method: TO 15 LL Date Collected: 10/22/2021 08:45
 Sample wt/vol: 500 (mL) Date Analyzed: 10/26/2021 05:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 55054 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		2.0	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.032	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-25101-1
 SDG No.: _____
 Client Sample ID: 34001249 Lab Sample ID: 140-25101-1
 Matrix: Air Lab File ID: J25L25101A.D
 Analysis Method: TO 15 LL Date Collected: 10/22/2021 08:45
 Sample wt/vol: 500 (mL) Date Analyzed: 10/26/2021 05:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 55054 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
108-87-2	Methylcyclohexane	ND		0.080	
75-09-2	Methylene Chloride	ND		0.40	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		1.0	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.036	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-25101-1
SDG No.: _____
Client Sample ID: 34001249 Lab Sample ID: 140-25101-1
Matrix: Air Lab File ID: J25L25101A.D
Analysis Method: TO 15 LL Date Collected: 10/22/2021 08:45
Sample wt/vol: 500 (mL) Date Analyzed: 10/26/2021 05:50
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 55054 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
488-23-3	1,2,3,4-Tetramethylbenzene TIC		ND		
527-53-7	1,2,3,5-Tetramethylbenzene TIC		ND		
934-80-5	1,2-Dimethyl-4-Ethylbenzene TIC		ND		
872-55-9	2-Ethylthiophene TIC		ND		
554-14-3	2-Methylthiophene TIC		ND		
616-44-4	3-Methylthiophene TIC		ND		
95-15-8	Benzo(b)thiophene TIC		ND		

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\MG\20211021-21151.b\J25L25101A.D
 Lims ID: 140-25101-A-1
 Client ID: 34001249
 Sample Type: Client
 Inject. Date: 26-Oct-2021 05:50:30 ALS Bottle#: 17 Worklist Smp#: 27
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0021151-027
 Misc. Info.: 34001249
 Operator ID: HMT Instrument ID: MG
 Method: \\chromfs\Knoxville\ChromData\MG\20211021-21151.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Oct-2021 04:21:25 Calib Date: 17-Sep-2021 04:09:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\MG\20210916-20701.b\GI16LV07.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX1675

First Level Reviewer: khachitpongpanits

Date: 26-Oct-2021 17:27:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.167	9.162	0.005	93	381613	4.80	
* 2 1,4-Difluorobenzene	114	11.346	11.346	0.000	95	1862925	4.80	
* 3 Chlorobenzene-d5 (IS)	117	16.042	16.043	-0.001	88	1537055	4.80	
\$ 4 4-Bromofluorobenzene (Surr)	95	17.709	17.709	0.000	95	956262	4.60	
13 Butane	43	4.319	4.317	0.005	91	7947	0.0866	
17 Ethanol	31	4.923	4.910	0.016	85	20117	1.12	
19 2-Methylbutane	43	5.193	5.185	0.011	87	2914	0.0342	
33 Carbon disulfide	76	6.708	6.707	0.005	91	3053	0.0117	
40 Hexane	56	8.391	8.395	0.000	45	931	0.0142	
47 1,1,1-Trichloroethane	97	10.219	10.225	0.000	29	3216	0.0151	
48 1,2-Dichloroethane	62	10.332	10.332	0.000	4	1407	0.0117	
51 n-Butanol	31	10.822	10.769	0.053	66	1917	0.0954	
50 Benzene	78	10.812	10.817	-0.005	93	3922	0.0122	
61 1,4-Dioxane	88	12.370	12.316	0.054	70	1459	0.0306	
68 1,1,2-Trichloroethane	83	14.155	14.174	-0.011	15	1231	0.0106	
69 2-Hexanone	58	14.565	14.538	0.027	88	1719	0.0185	
72 Ethylene Dibromide	107	15.153	15.153	0.000	95	1583	0.008642	
73 Tetrachloroethene	129	15.212	15.217	-0.005	93	1542	0.0100	
78 Ethylbenzene	91	16.371	16.371	0.000	96	6684	0.0137	
79 m-Xylene & p-Xylene	91	16.533	16.533	0.000	95	12459	0.0330	
83 o-Xylene	91	17.067	17.067	0.000	96	7515	0.0189	
97 1,3-Dichlorobenzene	146	19.154	19.154	0.000	98	15224	0.0842	

QC Flag Legend

Processing Flags

Reagents:

40MXISSUR_00001

Amount Added: 40.00

Units: mL

Run Reagent

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\MG\20211021-21151.b\J25L25101A.D

Injection Date: 26-Oct-2021 05:50:30

Instrument ID: MG

Operator ID: HMT

Lims ID: 140-25101-A-1

Lab Sample ID: 140-25101-1

Worklist Smp#: 27

Client ID: 34001249

Purge Vol: 500.000 mL

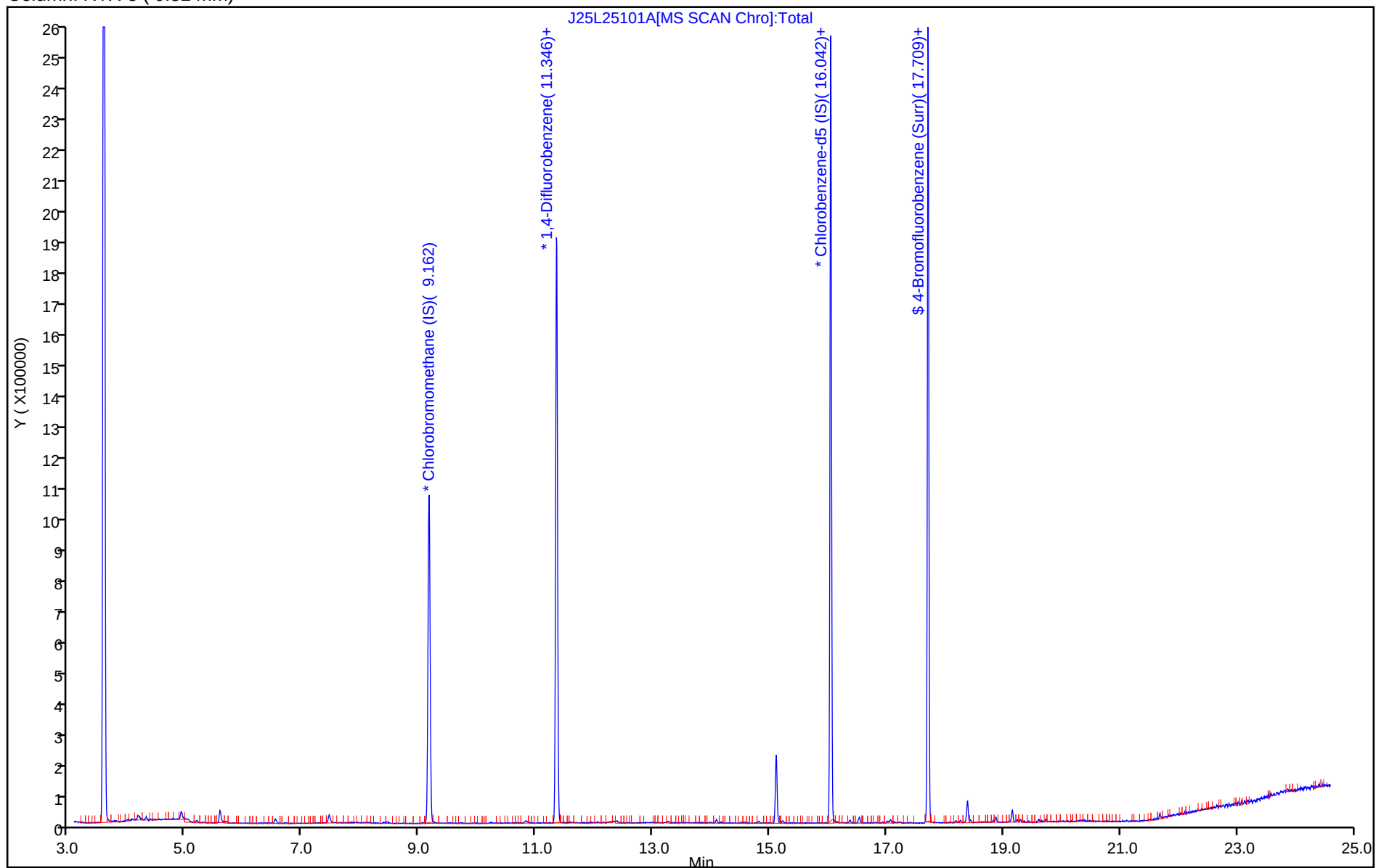
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\MG\20211021-21151.b\J25L25101A.D

Injection Date: 26-Oct-2021 05:50:30

Instrument ID: MG

Lims ID: 140-25101-A-1

Lab Sample ID: 140-25101-1

Client ID: 34001249

Operator ID: HMT

ALS Bottle#: 17

Worklist Smp#: 27

Purge Vol: 500.000 mL

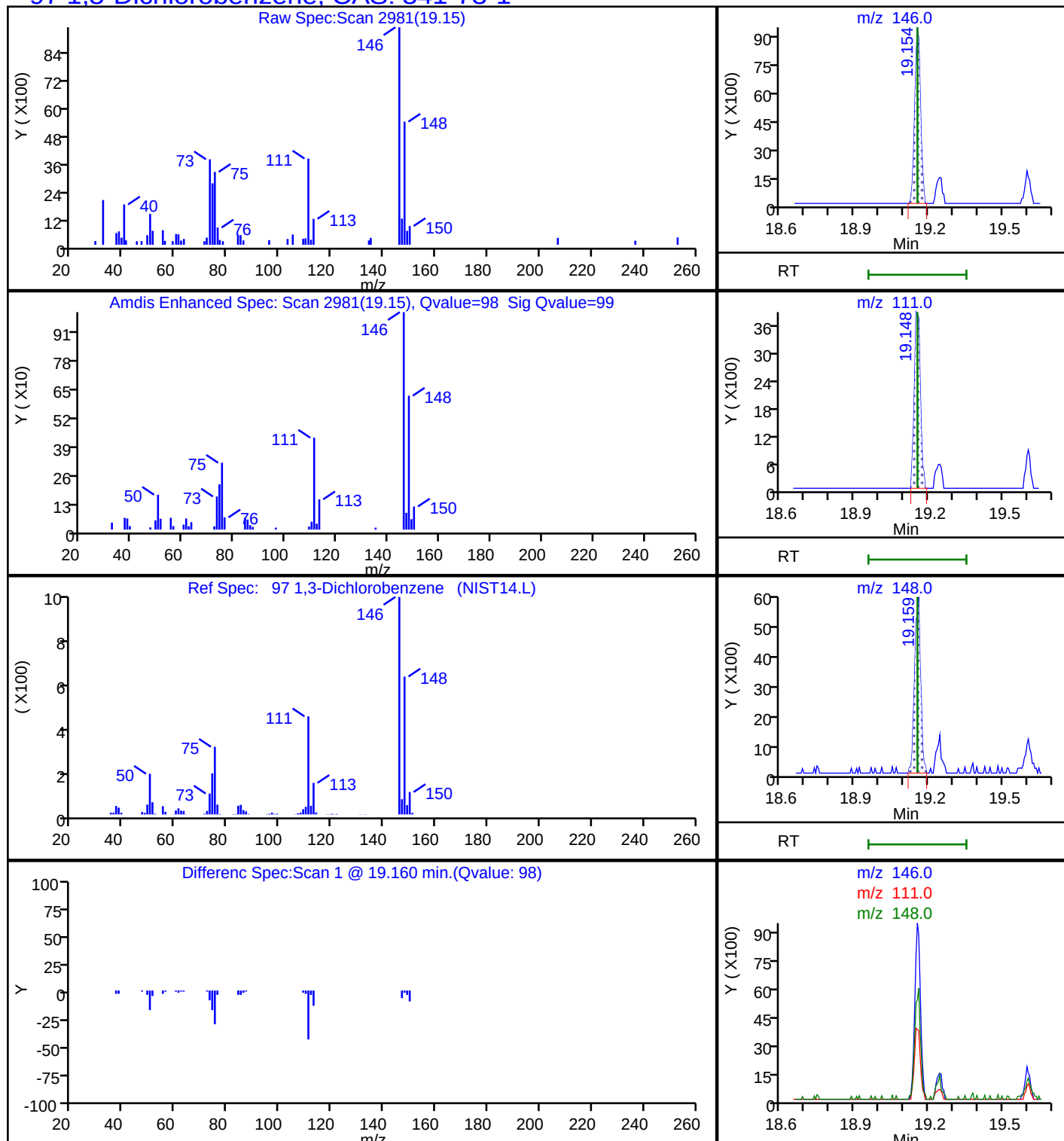
Dil. Factor: 1.0000

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

97 1,3-Dichlorobenzene, CAS: 541-73-1

ANALYTICAL REPORT

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-221096-1

Laboratory Sample Delivery Group: 193705435

Client Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

For:

Stantec Consulting Corp.
12075 Corporate Pkwy, Suite 200
Mequon, Wisconsin 53092

Attn: Erin Gross



Authorized for release by:
12/21/2021 12:04:08 PM

Shawn Hayes, Senior Project Manager
(319)229-8211
Shawn.Hayes@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Job ID: 310-221096-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-221096-1

Comments

No additional comments.

Receipt

The samples were received on 12/4/2021 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.6° C and 1.8° C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-338345 recovered above the upper control limit for Carbon disulfide (40.3%D), 1,1-Dichloropropene (22.5%D) and Hexane (65.2%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-338345/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-338345 recovered outside control limits for the following analytes: Carbon disulfide and Hexane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-338469 recovered above the upper control limit for cis-1,3-Dichloropropene(20.9%D) and cis-1,2-Dichloroethene(23.9%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-338469/3).

Method 8260D: The method blank for preparation batch 310-338465 and analytical batch 310-338469 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-338507 recovered above the upper control limit for Carbon disulfide (39.7%D) and hexane (68.2%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-338507/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-338507 recovered outside control limits for the following analytes: Carbon disulfide and hexane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery for the following sample was outside control limits: FD-2 (310-221096-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270E SIM: Surrogate recovery for the following samples were outside control limits: FD-2 (310-221096-8) and MW-2 (310-221096-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

Method Kansas - LRH: The following samples were diluted to bring the concentration of target analytes within the calibration range: FD-2 (310-221096-8) and MW-2 (310-221096-11). Elevated reporting limits (RLs) are provided.

Method Kansas - LRH: The following samples were diluted because the base dilution for KS_LRH soil analysis is 1:50: SB-1 (6-9) (310-221096-1), SB-2 (7-9) (310-221096-2), SB-3 (7-8) (310-221096-4), SB-4 (7-8) (310-221096-5) and SB-5 (2-4) (310-221096-6) and FD-1 (310-221096-12).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Job ID: 310-221096-1 (Continued)

Laboratory: Eurofins TestAmerica, Cedar Falls (Continued)

GC Semi VOA

Method Kan- MRH/HRH: The following samples were diluted to bring the concentration of target analytes within the calibration range: FD-2 (310-221096-8) and MW-2 (310-221096-11). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 310-339055. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-221096-1	SB-1 (6-9)	Soil	12/02/21 14:05	12/04/21 10:10
310-221096-2	SB-2 (7-9)	Soil	12/02/21 12:20	12/04/21 10:10
310-221096-3	SB-2 (4-5)	Soil	12/02/21 12:45	12/04/21 10:10
310-221096-4	SB-3 (7-8)	Soil	12/02/21 16:00	12/04/21 10:10
310-221096-5	SB-4 (7-8)	Soil	12/02/21 15:15	12/04/21 10:10
310-221096-6	SB-5 (2-4)	Soil	12/02/21 14:45	12/04/21 10:10
310-221096-8	FD-2	Water	12/02/21 17:15	12/04/21 10:10
310-221096-9	TB-1	Water	12/02/21 07:00	12/04/21 10:10
310-221096-10	TB-2	Soil	12/02/21 07:01	12/04/21 10:10
310-221096-11	MW-2	Water	12/02/21 16:15	12/04/21 10:10
310-221096-12	FD-1	Soil	12/02/21 15:05	12/04/21 10:10

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-1 (6-9)

Lab Sample ID: 310-221096-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	45.8	J	51.5	9.48	ug/Kg	1	✱	8260D	Total/NA
2-Butanone (MEK)	5.56	J	20.6	1.55	ug/Kg	1	✱	8260D	Total/NA
HRH C19-C35	13.4	J	26.3	6.56	mg/Kg	1	✱	Kan- MRH/HRH	Total/NA
Arsenic	3.31	J	3.80	2.00	mg/Kg	1	✱	6010D	Total/NA
Barium	213		0.951	0.342	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.748	J	0.951	0.219	mg/Kg	1	✱	6010D	Total/NA
Chromium	14.8		0.951	0.532	mg/Kg	1	✱	6010D	Total/NA
Lead	10.3		4.75	1.24	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.0161	J	0.0217	0.00867	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-2 (7-9)

Lab Sample ID: 310-221096-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	17.5	J	53.5	9.84	ug/Kg	1	✱	8260D	Total/NA
Barium	183	F1	1.87	0.673	mg/Kg	2	✱	6010D	Total/NA
Cadmium	0.522	J	1.87	0.430	mg/Kg	2	✱	6010D	Total/NA
Chromium	18.5		1.87	1.05	mg/Kg	2	✱	6010D	Total/NA
Lead	11.4		9.34	2.43	mg/Kg	2	✱	6010D	Total/NA
Selenium	4.58	J	9.34	4.30	mg/Kg	2	✱	6010D	Total/NA
Mercury	0.0188	J	0.0212	0.00847	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-2 (4-5)

Lab Sample ID: 310-221096-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	58.7		54.2	9.98	ug/Kg	1	✱	8260D	Total/NA
2-Butanone (MEK)	5.97	J	21.7	1.63	ug/Kg	1	✱	8260D	Total/NA

Client Sample ID: SB-3 (7-8)

Lab Sample ID: 310-221096-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19.9	J	47.9	8.81	ug/Kg	1	✱	8260D	Total/NA
2-Butanone (MEK)	1.68	J	19.1	1.44	ug/Kg	1	✱	8260D	Total/NA
Tetrachloroethene	1.01	J	4.79	0.909	ug/Kg	1	✱	8260D	Total/NA
Benzo[b]fluoranthene	5.82	J	12.1	3.27	ug/Kg	1	✱	8270E SIM	Total/NA
Chrysene	2.33	J	12.1	1.69	ug/Kg	1	✱	8270E SIM	Total/NA
Fluoranthene	3.69	J	12.1	1.82	ug/Kg	1	✱	8270E SIM	Total/NA
Pyrene	3.44	J	12.1	1.57	ug/Kg	1	✱	8270E SIM	Total/NA
HRH C19-C35	0.00724	J	0.0254	0.00636	mg/Kg	1	✱	Kan- MRH/HRH	Total/NA
Arsenic	2.19	J	3.97	2.08	mg/Kg	1	✱	6010D	Total/NA
Barium	130		0.993	0.357	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.425	J	0.993	0.228	mg/Kg	1	✱	6010D	Total/NA
Chromium	12.8		0.993	0.556	mg/Kg	1	✱	6010D	Total/NA
Lead	8.11		4.96	1.29	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.0103	J	0.0204	0.00817	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-4 (7-8)

Lab Sample ID: 310-221096-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	37.6	J	43.5	8.01	ug/Kg	1	✱	8260D	Total/NA
Benzene	1.27	J	4.35	0.784	ug/Kg	1	✱	8260D	Total/NA
2-Butanone (MEK)	5.57	J	17.4	1.31	ug/Kg	1	✱	8260D	Total/NA
Carbon disulfide	1.34	J	4.35	1.05	ug/Kg	1	✱	8260D	Total/NA
Hexane	12.5	J	21.8	6.53	ug/Kg	1	✱	8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-4 (7-8) (Continued)

Lab Sample ID: 310-221096-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	8.08	J	11.1	3.00	ug/Kg	1	✱	8270E SIM	Total/NA
Chrysene	4.40	J	11.1	1.56	ug/Kg	1	✱	8270E SIM	Total/NA
Fluoranthene	3.04	J	11.1	1.67	ug/Kg	1	✱	8270E SIM	Total/NA
Pyrene	2.89	J	11.1	1.45	ug/Kg	1	✱	8270E SIM	Total/NA
HRH C19-C35	7.07	J	23.1	5.77	mg/Kg	1	✱	Kan- MRH/HRH	Total/NA
Arsenic	4.10		3.33	1.75	mg/Kg	1	✱	6010D	Total/NA
Barium	154		0.833	0.300	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.636	J	0.833	0.192	mg/Kg	1	✱	6010D	Total/NA
Chromium	14.8		0.833	0.466	mg/Kg	1	✱	6010D	Total/NA
Lead	10.3		4.16	1.08	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.0134	J	0.0179	0.00718	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: SB-5 (2-4)

Lab Sample ID: 310-221096-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	2.02	J	12.0	1.79	ug/Kg	1	✱	8270E SIM	Total/NA
Benzo[a]anthracene	12.0		12.0	6.57	ug/Kg	1	✱	8270E SIM	Total/NA
Benzo[a]pyrene	11.1	J	12.0	3.11	ug/Kg	1	✱	8270E SIM	Total/NA
Benzo[b]fluoranthene	16.6		12.0	3.23	ug/Kg	1	✱	8270E SIM	Total/NA
Benzo[g,h,i]perylene	12.8		12.0	2.39	ug/Kg	1	✱	8270E SIM	Total/NA
Benzo[k]fluoranthene	4.61	J	12.0	3.83	ug/Kg	1	✱	8270E SIM	Total/NA
Chrysene	13.2		12.0	1.67	ug/Kg	1	✱	8270E SIM	Total/NA
Dibenz(a,h)anthracene	5.81	J	12.0	2.75	ug/Kg	1	✱	8270E SIM	Total/NA
Fluoranthene	21.1		12.0	1.79	ug/Kg	1	✱	8270E SIM	Total/NA
Indeno[1,2,3-cd]pyrene	8.56	J	12.0	2.75	ug/Kg	1	✱	8270E SIM	Total/NA
2-Methylnaphthalene	29.2		12.0	4.42	ug/Kg	1	✱	8270E SIM	Total/NA
Naphthalene	12.4		12.0	3.71	ug/Kg	1	✱	8270E SIM	Total/NA
Phenanthrene	33.3		12.0	5.38	ug/Kg	1	✱	8270E SIM	Total/NA
Pyrene	18.8		12.0	1.55	ug/Kg	1	✱	8270E SIM	Total/NA
HRH C19-C35	7.09	J	24.5	6.14	mg/Kg	1	✱	Kan- MRH/HRH	Total/NA
Arsenic	3.92		3.63	1.91	mg/Kg	1	✱	6010D	Total/NA
Barium	135		0.909	0.327	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.546	J	0.909	0.209	mg/Kg	1	✱	6010D	Total/NA
Chromium	15.6		0.909	0.509	mg/Kg	1	✱	6010D	Total/NA
Lead	11.1		4.54	1.18	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.0291		0.0232	0.00927	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: FD-2

Lab Sample ID: 310-221096-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	20600		50.0	22.0	ug/L	100		8260D	Total/NA
2-Chlorotoluene	387		10.0	2.80	ug/L	10		8260D	Total/NA
1,2-Dichloroethane	18.2		10.0	3.90	ug/L	10		8260D	Total/NA
Ethylbenzene	4170		10.0	3.10	ug/L	10		8260D	Total/NA
Hexane	638		100	78.0	ug/L	100		8260D	Total/NA
Isopropylbenzene	149		10.0	3.50	ug/L	10		8260D	Total/NA
Methyl tert-butyl ether	94.5		10.0	4.90	ug/L	10		8260D	Total/NA
Naphthalene	583		50.0	30.0	ug/L	10		8260D	Total/NA
n-Butylbenzene	76.1		10.0	4.40	ug/L	10		8260D	Total/NA
N-Propylbenzene	335		10.0	3.90	ug/L	10		8260D	Total/NA
p-Isopropyltoluene	13.3		10.0	3.30	ug/L	10		8260D	Total/NA
sec-Butylbenzene	20.4		10.0	4.40	ug/L	10		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-2 (Continued)

Lab Sample ID: 310-221096-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	39000		100	43.0	ug/L	100		8260D	Total/NA
1,2,4-Trimethylbenzene	2320		10.0	4.20	ug/L	10		8260D	Total/NA
1,3,5-Trimethylbenzene	608		10.0	3.70	ug/L	10		8260D	Total/NA
Xylenes, Total	14100		300	40.0	ug/L	100		8260D	Total/NA
Acenaphthene	7.85		0.250	0.0613	ug/L	1		8270E SIM	Total/NA
Acenaphthylene	2.50		0.250	0.0788	ug/L	1		8270E SIM	Total/NA
Anthracene	5.16		0.250	0.124	ug/L	1		8270E SIM	Total/NA
Benzo[a]anthracene	1.01		0.250	0.138	ug/L	1		8270E SIM	Total/NA
Benzo[a]pyrene	0.461		0.250	0.163	ug/L	1		8270E SIM	Total/NA
Benzo[b]fluoranthene	0.375		0.250	0.163	ug/L	1		8270E SIM	Total/NA
Benzo[g,h,i]perylene	0.490		0.250	0.163	ug/L	1		8270E SIM	Total/NA
Chrysene	0.676		0.250	0.0913	ug/L	1		8270E SIM	Total/NA
Fluoranthene	2.27		0.250	0.103	ug/L	1		8270E SIM	Total/NA
Fluorene	9.48		0.250	0.0488	ug/L	1		8270E SIM	Total/NA
2-Methylnaphthalene	2110		25.0	10.0	ug/L	100		8270E SIM	Total/NA
Naphthalene	2610		62.5	25.0	ug/L	100		8270E SIM	Total/NA
Phenanthrene	10.6		0.250	0.125	ug/L	1		8270E SIM	Total/NA
Pyrene	3.85		0.250	0.138	ug/L	1		8270E SIM	Total/NA
LRH C5-C8	131000		20000	7600	ug/L	200		Kansas - LRH	Total/NA
HRH C19-C35	124	J	132	86.5	ug/L	1		Kan- MRH/HRH	Total/NA
MRH C9-C18 - DL	89400		226	147	ug/L	2		Kan- MRH/HRH	Total/NA
Arsenic	0.0212		0.00200	0.000750	mg/L	1		6020B	Dissolved
Barium	0.423		0.00200	0.000370	mg/L	1		6020B	Dissolved
Lead	0.00320		0.000500	0.000210	mg/L	1		6020B	Dissolved

Client Sample ID: TB-1

Lab Sample ID: 310-221096-9

No Detections.

Client Sample ID: TB-2

Lab Sample ID: 310-221096-10

No Detections.

Client Sample ID: MW-2

Lab Sample ID: 310-221096-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	22600		50.0	22.0	ug/L	100		8260D	Total/NA
1,1-Dichloroethane	3.15	J	10.0	2.20	ug/L	10		8260D	Total/NA
Ethylbenzene	3830		10.0	3.10	ug/L	10		8260D	Total/NA
Hexane	885	*+	10.0	7.80	ug/L	10		8260D	Total/NA
Isopropylbenzene	133		10.0	3.50	ug/L	10		8260D	Total/NA
Methyl tert-butyl ether	89.5		10.0	4.90	ug/L	10		8260D	Total/NA
Naphthalene	569		50.0	30.0	ug/L	10		8260D	Total/NA
n-Butylbenzene	78.1		10.0	4.40	ug/L	10		8260D	Total/NA
N-Propylbenzene	311		10.0	3.90	ug/L	10		8260D	Total/NA
p-Isopropyltoluene	13.3		10.0	3.30	ug/L	10		8260D	Total/NA
Toluene	43000		100	43.0	ug/L	100		8260D	Total/NA
1,2,4-Trimethylbenzene	2340		10.0	4.20	ug/L	10		8260D	Total/NA
1,3,5-Trimethylbenzene	606		10.0	3.70	ug/L	10		8260D	Total/NA
Xylenes, Total	15900		300	40.0	ug/L	100		8260D	Total/NA
Acenaphthene	2.76		0.250	0.0613	ug/L	1		8270E SIM	Total/NA
Acenaphthylene	0.886		0.250	0.0788	ug/L	1		8270E SIM	Total/NA
Anthracene	2.59		0.250	0.124	ug/L	1		8270E SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: MW-2 (Continued)

Lab Sample ID: 310-221096-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.432		0.250	0.138	ug/L	1		8270E SIM	Total/NA
Benzo[a]pyrene	0.191	J	0.250	0.163	ug/L	1		8270E SIM	Total/NA
Benzo[b]fluoranthene	0.171	J	0.250	0.163	ug/L	1		8270E SIM	Total/NA
Benzo[g,h,i]perylene	0.287		0.250	0.163	ug/L	1		8270E SIM	Total/NA
Chrysene	0.288		0.250	0.0913	ug/L	1		8270E SIM	Total/NA
Fluoranthene	0.909		0.250	0.103	ug/L	1		8270E SIM	Total/NA
Fluorene	3.95		0.250	0.0488	ug/L	1		8270E SIM	Total/NA
2-Methylnaphthalene	939		25.0	10.0	ug/L	100		8270E SIM	Total/NA
Naphthalene	1490		62.5	25.0	ug/L	100		8270E SIM	Total/NA
Phenanthrene	4.28		0.250	0.125	ug/L	1		8270E SIM	Total/NA
Pyrene	1.39		0.250	0.138	ug/L	1		8270E SIM	Total/NA
LRH C5-C8	133000		20000	7600	ug/L	200		Kansas - LRH	Total/NA
MRH C9-C18 - DL	88700		547	356	ug/L	5		Kan- MRH/HRH	Total/NA
Arsenic	0.0208		0.00200	0.000750	mg/L	1		6020B	Dissolved
Barium	0.422		0.00200	0.000370	mg/L	1		6020B	Dissolved
Lead	0.00330		0.000500	0.000210	mg/L	1		6020B	Dissolved

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	44.8	J	56.6	10.4	ug/Kg	1	✱	8260D	Total/NA
2-Butanone (MEK)	6.08	J	22.6	1.70	ug/Kg	1	✱	8260D	Total/NA
Chrysene	2.74	J	12.6	1.77	ug/Kg	1	✱	8270E SIM	Total/NA
Fluoranthene	2.57	J	12.6	1.89	ug/Kg	1	✱	8270E SIM	Total/NA
Arsenic	6.81		3.95	2.07	mg/Kg	1	✱	6010D	Total/NA
Barium	250		1.97	0.711	mg/Kg	2	✱	6010D	Total/NA
Cadmium	0.766	J	0.987	0.227	mg/Kg	1	✱	6010D	Total/NA
Chromium	20.2		0.987	0.553	mg/Kg	1	✱	6010D	Total/NA
Lead	15.0		4.93	1.28	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.0178	J	0.0201	0.00803	mg/Kg	1	✱	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-1 (6-9)

Lab Sample ID: 310-221096-1

Date Collected: 12/02/21 14:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 76.2

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	45.8	J	51.5	9.48	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Benzene	<0.928		5.15	0.928	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Bromobenzene	<0.330		5.15	0.330	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Bromochloromethane	<0.423		5.15	0.423	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Bromodichloromethane	<0.402		5.15	0.402	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Bromoform	<0.660		10.3	0.660	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Bromomethane	<1.65		20.6	1.65	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
2-Butanone (MEK)	5.56	J	20.6	1.55	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Carbon disulfide	<1.24		5.15	1.24	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Carbon tetrachloride	<1.44		5.15	1.44	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Chlorobenzene	<0.794		5.15	0.794	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Chlorodibromomethane	<0.227		5.15	0.227	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Chloroethane	<3.71		20.6	3.71	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Chloroform	<1.75		5.15	1.75	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Chloromethane	<3.40		20.6	3.40	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
2-Chlorotoluene	<0.423		5.15	0.423	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
4-Chlorotoluene	<1.65		5.15	1.65	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
cis-1,2-Dichloroethene	<0.773		5.15	0.773	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
cis-1,3-Dichloropropene	<0.577		5.15	0.577	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2-Dibromo-3-Chloropropane	<0.866		10.3	0.866	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2-Dibromoethane (EDB)	<0.268		5.15	0.268	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Dibromomethane	<0.206		5.15	0.206	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2-Dichlorobenzene	<0.402		5.15	0.402	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,3-Dichlorobenzene	<0.484		5.15	0.484	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,4-Dichlorobenzene	<0.567		5.15	0.567	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Dichlorodifluoromethane	<4.02		15.5	4.02	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1-Dichloroethane	<0.443		5.15	0.443	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2-Dichloroethane	<0.320		5.15	0.320	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1-Dichloroethene	<0.721		5.15	0.721	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2-Dichloropropane	<0.443		5.15	0.443	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,3-Dichloropropane	<0.268		5.15	0.268	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
2,2-Dichloropropane	<0.886		20.6	0.886	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1-Dichloropropene	<0.536		5.15	0.536	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Ethylbenzene	<2.47		5.15	2.47	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Hexachlorobutadiene	<1.24		25.8	1.24	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Hexane	<7.73		25.8	7.73	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Isopropylbenzene	<1.96		5.15	1.96	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Methylene Chloride	<29.9		51.5	29.9	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Methyl tert-butyl ether	<0.227		5.15	0.227	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Naphthalene	<7.01		25.8	7.01	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
n-Butylbenzene	<2.16		5.15	2.16	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
N-Propylbenzene	<1.44		5.15	1.44	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
p-Isopropyltoluene	<0.917		5.15	0.917	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
sec-Butylbenzene	<1.03		5.15	1.03	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Styrene	<3.61		5.15	3.61	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
tert-Butylbenzene	<0.866		5.15	0.866	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1,1,2-Tetrachloroethane	<0.330		5.15	0.330	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1,2,2-Tetrachloroethane	<0.361		5.15	0.361	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Tetrachloroethene	<0.979		5.15	0.979	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-1 (6-9)

Lab Sample ID: 310-221096-1

Date Collected: 12/02/21 14:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 76.2

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.40		5.15	3.40	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
trans-1,2-Dichloroethene	<0.629		5.15	0.629	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
trans-1,3-Dichloropropene	<0.567		5.15	0.567	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2,3-Trichlorobenzene	<0.783		10.3	0.783	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2,4-Trichlorobenzene	<1.75		10.3	1.75	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1,1-Trichloroethane	<0.474		5.15	0.474	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,1,2-Trichloroethane	<0.330		5.15	0.330	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Trichloroethene	<1.44		5.15	1.44	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Trichlorofluoromethane	<5.67		20.6	5.67	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2,3-Trichloropropane	<0.495		5.15	0.495	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,2,4-Trimethylbenzene	<3.20		5.15	3.20	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
1,3,5-Trimethylbenzene	<1.86		5.15	1.86	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Vinyl chloride	<3.61		10.3	3.61	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1
Xylenes, Total	<3.71		10.3	3.71	ug/Kg	☆	12/08/21 07:49	12/08/21 15:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		77 - 120	12/08/21 07:49	12/08/21 15:28	1
Dibromofluoromethane (Surr)	103		80 - 123	12/08/21 07:49	12/08/21 15:28	1
Toluene-d8 (Surr)	104		76 - 120	12/08/21 07:49	12/08/21 15:28	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<2.21		13.0	2.21	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Acenaphthylene	<1.95		13.0	1.95	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Anthracene	<2.86		13.0	2.86	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Benzo[a]anthracene	<7.15		13.0	7.15	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Benzo[a]pyrene	<3.38		13.0	3.38	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Benzo[b]fluoranthene	<3.51		13.0	3.51	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Benzo[g,h,i]perylene	<2.60		13.0	2.60	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Benzo[k]fluoranthene	<4.16		13.0	4.16	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Chrysene	<1.82		13.0	1.82	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Dibenz(a,h)anthracene	<2.99		13.0	2.99	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Fluoranthene	<1.95		13.0	1.95	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Fluorene	<1.82		13.0	1.82	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Indeno[1,2,3-cd]pyrene	<2.99		13.0	2.99	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
2-Methylnaphthalene	<4.81		13.0	4.81	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Naphthalene	<4.03		13.0	4.03	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Phenanthrene	<5.85		13.0	5.85	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1
Pyrene	<1.69		13.0	1.69	ug/Kg	☆	12/08/21 07:57	12/10/21 14:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	52		24 - 110	12/08/21 07:57	12/10/21 14:22	1
Nitrobenzene-d5 (Surr)	49		17 - 114	12/08/21 07:57	12/10/21 14:22	1
Terphenyl-d14 (Surr)	62		22 - 110	12/08/21 07:57	12/10/21 14:22	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.94		7.58	3.94	mg/Kg	☆	12/16/21 13:30	12/16/21 18:45	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	99		70 - 130	12/16/21 13:30	12/16/21 18:45	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-1 (6-9)

Lab Sample ID: 310-221096-1

Date Collected: 12/02/21 14:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 76.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.00760		0.0634	0.00760	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1221	<0.00760		0.0634	0.00760	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1232	<0.00760		0.0634	0.00760	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1242	<0.00760		0.0634	0.00760	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1248	<0.00976		0.0634	0.00976	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1254	<0.00976		0.0634	0.00976	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1260	<0.00976		0.0634	0.00976	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
PCB-1268	<0.00976		0.0634	0.00976	mg/Kg	✱	12/10/21 07:45	12/14/21 14:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	74		10 - 110				12/10/21 07:45	12/14/21 14:44	1
Tetrachloro-m-xylene (Surr)	60		10 - 110				12/10/21 07:45	12/14/21 14:44	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<6.56		26.3	6.56	mg/Kg	✱	12/08/21 11:15	12/11/21 20:01	1
HRH C19-C35	13.4	J	26.3	6.56	mg/Kg	✱	12/08/21 11:15	12/11/21 20:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	81		40 - 140				12/08/21 11:15	12/11/21 20:01	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.31	J	3.80	2.00	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1
Barium	213		0.951	0.342	mg/Kg	✱	12/10/21 10:00	12/15/21 23:47	1
Cadmium	0.748	J	0.951	0.219	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1
Chromium	14.8		0.951	0.532	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1
Lead	10.3		4.75	1.24	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1
Selenium	<2.19		4.75	2.19	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1
Silver	<0.475		0.951	0.475	mg/Kg	✱	12/10/21 10:00	12/14/21 21:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0161	J	0.0217	0.00867	mg/Kg	✱	12/15/21 13:01	12/17/21 13:45	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-2 (7-9)

Lab Sample ID: 310-221096-2

Date Collected: 12/02/21 12:20

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.7

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	17.5	J	53.5	9.84	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Benzene	<0.963	F1	5.35	0.963	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Bromobenzene	<0.342		5.35	0.342	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Bromochloromethane	<0.439	F1	5.35	0.439	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Bromodichloromethane	<0.417	F1	5.35	0.417	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Bromoform	<0.685	F1	10.7	0.685	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Bromomethane	<1.71		21.4	1.71	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
2-Butanone (MEK)	<1.60		21.4	1.60	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Carbon disulfide	<1.28	F1	5.35	1.28	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Carbon tetrachloride	<1.50	F1	5.35	1.50	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Chlorobenzene	<0.824	F1	5.35	0.824	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Chlorodibromomethane	<0.235	F1	5.35	0.235	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Chloroethane	<3.85		21.4	3.85	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Chloroform	<1.82	F1	5.35	1.82	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Chloromethane	<3.53		21.4	3.53	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
2-Chlorotoluene	<0.439		5.35	0.439	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
4-Chlorotoluene	<1.71		5.35	1.71	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
cis-1,2-Dichloroethene	<0.802	F1	5.35	0.802	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
cis-1,3-Dichloropropene	<0.599	F1	5.35	0.599	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2-Dibromo-3-Chloropropane	<0.899		10.7	0.899	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2-Dibromoethane (EDB)	<0.278	F1	5.35	0.278	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Dibromomethane	<0.214	F1	5.35	0.214	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2-Dichlorobenzene	<0.417		5.35	0.417	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,3-Dichlorobenzene	<0.503		5.35	0.503	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,4-Dichlorobenzene	<0.588		5.35	0.588	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Dichlorodifluoromethane	<4.17		16.0	4.17	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1-Dichloroethane	<0.460	F1	5.35	0.460	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2-Dichloroethane	<0.332	F1	5.35	0.332	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1-Dichloroethene	<0.749	F1	5.35	0.749	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2-Dichloropropane	<0.460	F1	5.35	0.460	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,3-Dichloropropane	<0.278	F1	5.35	0.278	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
2,2-Dichloropropane	<0.920	F1	21.4	0.920	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1-Dichloropropene	<0.556	F1	5.35	0.556	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Ethylbenzene	<2.57	F1	5.35	2.57	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Hexachlorobutadiene	<1.28		26.7	1.28	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Hexane	<8.02	F1	26.7	8.02	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Isopropylbenzene	<2.03	F1	5.35	2.03	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Methylene Chloride	<31.0	F1	53.5	31.0	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Methyl tert-butyl ether	<0.235	F1	5.35	0.235	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Naphthalene	<7.27	F1	26.7	7.27	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
n-Butylbenzene	<2.25		5.35	2.25	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
N-Propylbenzene	<1.50		5.35	1.50	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
p-Isopropyltoluene	<0.952		5.35	0.952	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
sec-Butylbenzene	<1.07		5.35	1.07	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Styrene	<3.74	F1	5.35	3.74	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
tert-Butylbenzene	<0.899		5.35	0.899	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1,1,2-Tetrachloroethane	<0.342	F1	5.35	0.342	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1,2,2-Tetrachloroethane	<0.374	F1	5.35	0.374	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Tetrachloroethene	<1.02	F1	5.35	1.02	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-2 (7-9)

Lab Sample ID: 310-221096-2

Date Collected: 12/02/21 12:20

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.7

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.53	F1	5.35	3.53	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
trans-1,2-Dichloroethene	<0.652	F1	5.35	0.652	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
trans-1,3-Dichloropropene	<0.588	F1	5.35	0.588	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2,3-Trichlorobenzene	<0.813		10.7	0.813	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2,4-Trichlorobenzene	<1.82		10.7	1.82	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1,1-Trichloroethane	<0.492	F1	5.35	0.492	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,1,2-Trichloroethane	<0.342	F1	5.35	0.342	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Trichloroethene	<1.50	F1	5.35	1.50	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Trichlorofluoromethane	<5.88		21.4	5.88	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2,3-Trichloropropane	<0.513	F1	5.35	0.513	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,2,4-Trimethylbenzene	<3.32		5.35	3.32	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
1,3,5-Trimethylbenzene	<1.93		5.35	1.93	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Vinyl chloride	<3.74		10.7	3.74	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1
Xylenes, Total	<3.85	F1	10.7	3.85	ug/Kg	☆	12/08/21 07:49	12/08/21 15:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		77 - 120	12/08/21 07:49	12/08/21 15:53	1
Dibromofluoromethane (Surr)	105		80 - 123	12/08/21 07:49	12/08/21 15:53	1
Toluene-d8 (Surr)	99		76 - 120	12/08/21 07:49	12/08/21 15:53	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<2.09		12.3	2.09	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Acenaphthylene	<1.84		12.3	1.84	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Anthracene	<2.70		12.3	2.70	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Benzo[a]anthracene	<6.76		12.3	6.76	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Benzo[a]pyrene	<3.20		12.3	3.20	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Benzo[b]fluoranthene	<3.32		12.3	3.32	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Benzo[g,h,i]perylene	<2.46		12.3	2.46	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Benzo[k]fluoranthene	<3.93		12.3	3.93	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Chrysene	<1.72		12.3	1.72	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Dibenz(a,h)anthracene	<2.83		12.3	2.83	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Fluoranthene	<1.84		12.3	1.84	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Fluorene	<1.72		12.3	1.72	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Indeno[1,2,3-cd]pyrene	<2.83		12.3	2.83	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
2-Methylnaphthalene	<4.55		12.3	4.55	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Naphthalene	<3.81		12.3	3.81	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Phenanthrene	<5.53		12.3	5.53	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1
Pyrene	<1.60		12.3	1.60	ug/Kg	☆	12/08/21 07:57	12/10/21 14:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		24 - 110	12/08/21 07:57	12/10/21 14:01	1
Nitrobenzene-d5 (Surr)	70		17 - 114	12/08/21 07:57	12/10/21 14:01	1
Terphenyl-d14 (Surr)	89		22 - 110	12/08/21 07:57	12/10/21 14:01	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.99		7.67	3.99	mg/Kg	☆	12/16/21 13:30	12/16/21 19:49	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	100		70 - 130	12/16/21 13:30	12/16/21 19:49	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-2 (7-9)

Lab Sample ID: 310-221096-2

Date Collected: 12/02/21 12:20

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.7

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.00751		0.0626	0.00751	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1221	<0.00751		0.0626	0.00751	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1232	<0.00751		0.0626	0.00751	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1242	<0.00751		0.0626	0.00751	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1248	<0.00964		0.0626	0.00964	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1254	<0.00964		0.0626	0.00964	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1260	<0.00964		0.0626	0.00964	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
PCB-1268	<0.00964		0.0626	0.00964	mg/Kg	✱	12/10/21 07:45	12/14/21 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	92		10 - 110				12/10/21 07:45	12/14/21 12:26	1
Tetrachloro-m-xylene (Surr)	72		10 - 110				12/10/21 07:45	12/14/21 12:26	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<6.24		25.0	6.24	mg/Kg	✱	12/08/21 11:15	12/11/21 19:47	1
HRH C19-C35	<6.24		25.0	6.24	mg/Kg	✱	12/08/21 11:15	12/11/21 19:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	80		40 - 140				12/08/21 11:15	12/11/21 19:47	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<3.92		7.48	3.92	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Barium	183	F1	1.87	0.673	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Cadmium	0.522	J	1.87	0.430	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Chromium	18.5		1.87	1.05	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Lead	11.4		9.34	2.43	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Selenium	4.58	J	9.34	4.30	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2
Silver	<0.934		1.87	0.934	mg/Kg	✱	12/10/21 10:00	12/14/21 13:14	2

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0188	J	0.0212	0.00847	mg/Kg	✱	12/15/21 13:01	12/17/21 13:47	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-2 (4-5)

Lab Sample ID: 310-221096-3

Date Collected: 12/02/21 12:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 80.7

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	58.7		54.2	9.98	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Benzene	<0.976		5.42	0.976	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Bromobenzene	<0.347		5.42	0.347	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Bromochloromethane	<0.445		5.42	0.445	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Bromodichloromethane	<0.423		5.42	0.423	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Bromoform	<0.694		10.8	0.694	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Bromomethane	<1.74		21.7	1.74	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
2-Butanone (MEK)	5.97 J		21.7	1.63	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Carbon disulfide	<1.30		5.42	1.30	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Carbon tetrachloride	<1.52		5.42	1.52	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Chlorobenzene	<0.835		5.42	0.835	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Chlorodibromomethane	<0.239		5.42	0.239	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Chloroethane	<3.90		21.7	3.90	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Chloroform	<1.84		5.42	1.84	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Chloromethane	<3.58		21.7	3.58	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
2-Chlorotoluene	<0.445		5.42	0.445	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
4-Chlorotoluene	<1.74		5.42	1.74	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
cis-1,2-Dichloroethene	<0.813		5.42	0.813	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
cis-1,3-Dichloropropene	<0.607		5.42	0.607	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,2-Dibromo-3-Chloropropane	<0.911		10.8	0.911	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,2-Dibromoethane (EDB)	<0.282		5.42	0.282	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Dibromomethane	<0.217		5.42	0.217	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,2-Dichlorobenzene	<0.423		5.42	0.423	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,3-Dichlorobenzene	<0.510		5.42	0.510	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,4-Dichlorobenzene	<0.596		5.42	0.596	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Dichlorodifluoromethane	<4.23		16.3	4.23	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,1-Dichloroethane	<0.466		5.42	0.466	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,2-Dichloroethane	<0.336		5.42	0.336	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,1-Dichloroethene	<0.759		5.42	0.759	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,2-Dichloropropane	<0.466		5.42	0.466	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,3-Dichloropropane	<0.282		5.42	0.282	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
2,2-Dichloropropane	<0.933		21.7	0.933	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,1-Dichloropropene	<0.564		5.42	0.564	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Ethylbenzene	<2.60		5.42	2.60	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Hexachlorobutadiene	<1.30		27.1	1.30	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Hexane	<8.13		27.1	8.13	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Isopropylbenzene	<2.06		5.42	2.06	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Methylene Chloride	<31.5		54.2	31.5	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Methyl tert-butyl ether	<0.239		5.42	0.239	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Naphthalene	<7.37		27.1	7.37	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
n-Butylbenzene	<2.28		5.42	2.28	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
N-Propylbenzene	<1.52		5.42	1.52	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
p-Isopropyltoluene	<0.965		5.42	0.965	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
sec-Butylbenzene	<1.08		5.42	1.08	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Styrene	<3.80		5.42	3.80	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
tert-Butylbenzene	<0.911		5.42	0.911	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,1,1,2-Tetrachloroethane	<0.347		5.42	0.347	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
1,1,2,2-Tetrachloroethane	<0.380		5.42	0.380	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1
Tetrachloroethene	<1.03		5.42	1.03	ug/Kg	☆	12/08/21 07:49	12/08/21 16:54	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-2 (4-5)

Lab Sample ID: 310-221096-3

Date Collected: 12/02/21 12:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 80.7

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.58		5.42	3.58	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
trans-1,2-Dichloroethene	<0.662		5.42	0.662	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
trans-1,3-Dichloropropene	<0.596		5.42	0.596	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,2,3-Trichlorobenzene	<0.824		10.8	0.824	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,2,4-Trichlorobenzene	<1.84		10.8	1.84	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,1,1-Trichloroethane	<0.499		5.42	0.499	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,1,2-Trichloroethane	<0.347		5.42	0.347	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
Trichloroethene	<1.52		5.42	1.52	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
Trichlorofluoromethane	<5.96		21.7	5.96	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,2,3-Trichloropropane	<0.521		5.42	0.521	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,2,4-Trimethylbenzene	<3.36		5.42	3.36	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
1,3,5-Trimethylbenzene	<1.95		5.42	1.95	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
Vinyl chloride	<3.80		10.8	3.80	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1
Xylenes, Total	<3.90		10.8	3.90	ug/Kg	✱	12/08/21 07:49	12/08/21 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		77 - 120	12/08/21 07:49	12/08/21 16:54	1
Dibromofluoromethane (Surr)	98		80 - 123	12/08/21 07:49	12/08/21 16:54	1
Toluene-d8 (Surr)	98		76 - 120	12/08/21 07:49	12/08/21 16:54	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-3 (7-8)

Lab Sample ID: 310-221096-4

Date Collected: 12/02/21 16:00

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.5

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19.9	J	47.9	8.81	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Benzene	<0.862		4.79	0.862	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Bromobenzene	<0.306		4.79	0.306	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Bromochloromethane	<0.392		4.79	0.392	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Bromodichloromethane	<0.373		4.79	0.373	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Bromoform	<0.613		9.57	0.613	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Bromomethane	<1.53		19.1	1.53	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
2-Butanone (MEK)	1.68	J	19.1	1.44	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Carbon disulfide	<1.15		4.79	1.15	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Carbon tetrachloride	<1.34		4.79	1.34	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Chlorobenzene	<0.737		4.79	0.737	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Chlorodibromomethane	<0.211		4.79	0.211	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Chloroethane	<3.45		19.1	3.45	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Chloroform	<1.63		4.79	1.63	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Chloromethane	<3.16		19.1	3.16	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
2-Chlorotoluene	<0.392		4.79	0.392	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
4-Chlorotoluene	<1.53		4.79	1.53	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
cis-1,2-Dichloroethene	<0.718		4.79	0.718	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
cis-1,3-Dichloropropene	<0.536		4.79	0.536	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,2-Dibromo-3-Chloropropane	<0.804		9.57	0.804	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,2-Dibromoethane (EDB)	<0.249		4.79	0.249	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Dibromomethane	<0.191		4.79	0.191	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,2-Dichlorobenzene	<0.373		4.79	0.373	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,3-Dichlorobenzene	<0.450		4.79	0.450	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,4-Dichlorobenzene	<0.527		4.79	0.527	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Dichlorodifluoromethane	<3.73		14.4	3.73	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,1-Dichloroethane	<0.412		4.79	0.412	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,2-Dichloroethane	<0.297		4.79	0.297	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,1-Dichloroethene	<0.670		4.79	0.670	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,2-Dichloropropane	<0.412		4.79	0.412	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,3-Dichloropropane	<0.249		4.79	0.249	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
2,2-Dichloropropane	<0.823		19.1	0.823	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,1-Dichloropropene	<0.498		4.79	0.498	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Ethylbenzene	<2.30		4.79	2.30	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Hexachlorobutadiene	<1.15		23.9	1.15	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Hexane	<7.18		23.9	7.18	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Isopropylbenzene	<1.82		4.79	1.82	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Methylene Chloride	<27.8		47.9	27.8	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Methyl tert-butyl ether	<0.211		4.79	0.211	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Naphthalene	<6.51		23.9	6.51	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
n-Butylbenzene	<2.01		4.79	2.01	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
N-Propylbenzene	<1.34		4.79	1.34	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
p-Isopropyltoluene	<0.852		4.79	0.852	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
sec-Butylbenzene	<0.957		4.79	0.957	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Styrene	<3.35		4.79	3.35	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
tert-Butylbenzene	<0.804		4.79	0.804	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,1,1,2-Tetrachloroethane	<0.306		4.79	0.306	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
1,1,2,2-Tetrachloroethane	<0.335		4.79	0.335	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1
Tetrachloroethene	1.01	J	4.79	0.909	ug/Kg	☆	12/08/21 07:49	12/08/21 17:19	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-3 (7-8)

Lab Sample ID: 310-221096-4

Date Collected: 12/02/21 16:00

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.5

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.16		4.79	3.16	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
trans-1,2-Dichloroethene	<0.584		4.79	0.584	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
trans-1,3-Dichloropropene	<0.527		4.79	0.527	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,2,3-Trichlorobenzene	<0.728		9.57	0.728	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,2,4-Trichlorobenzene	<1.63		9.57	1.63	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,1,1-Trichloroethane	<0.440		4.79	0.440	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,1,2-Trichloroethane	<0.306		4.79	0.306	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
Trichloroethene	<1.34		4.79	1.34	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
Trichlorofluoromethane	<5.27		19.1	5.27	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,2,3-Trichloropropane	<0.460		4.79	0.460	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,2,4-Trimethylbenzene	<2.97		4.79	2.97	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
1,3,5-Trimethylbenzene	<1.72		4.79	1.72	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
Vinyl chloride	<3.35		9.57	3.35	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1
Xylenes, Total	<3.45		9.57	3.45	ug/Kg	✱	12/08/21 07:49	12/08/21 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		77 - 120	12/08/21 07:49	12/08/21 17:19	1
Dibromofluoromethane (Surr)	95		80 - 123	12/08/21 07:49	12/08/21 17:19	1
Toluene-d8 (Surr)	100		76 - 120	12/08/21 07:49	12/08/21 17:19	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<2.06		12.1	2.06	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Acenaphthylene	<1.82		12.1	1.82	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Anthracene	<2.66		12.1	2.66	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Benzo[a]anthracene	<6.66		12.1	6.66	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Benzo[a]pyrene	<3.15		12.1	3.15	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Benzo[b]fluoranthene	5.82	J	12.1	3.27	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Benzo[g,h,i]perylene	<2.42		12.1	2.42	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Benzo[k]fluoranthene	<3.87		12.1	3.87	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Chrysene	2.33	J	12.1	1.69	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Dibenz(a,h)anthracene	<2.78		12.1	2.78	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Fluoranthene	3.69	J	12.1	1.82	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Fluorene	<1.69		12.1	1.69	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Indeno[1,2,3-cd]pyrene	<2.78		12.1	2.78	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
2-Methylnaphthalene	<4.48		12.1	4.48	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Naphthalene	<3.75		12.1	3.75	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Phenanthrene	<5.45		12.1	5.45	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1
Pyrene	3.44	J	12.1	1.57	ug/Kg	✱	12/08/21 07:57	12/10/21 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	73		24 - 110	12/08/21 07:57	12/10/21 14:43	1
Nitrobenzene-d5 (Surr)	71		17 - 114	12/08/21 07:57	12/10/21 14:43	1
Terphenyl-d14 (Surr)	86		22 - 110	12/08/21 07:57	12/10/21 14:43	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.75		7.21	3.75	mg/Kg	✱	12/16/21 13:30	12/16/21 20:54	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	98		70 - 130	12/16/21 13:30	12/16/21 20:54	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-3 (7-8)

Lab Sample ID: 310-221096-4

Date Collected: 12/02/21 16:00

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 78.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.00732		0.0610	0.00732	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1221	<0.00732		0.0610	0.00732	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1232	<0.00732		0.0610	0.00732	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1242	<0.00732		0.0610	0.00732	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1248	<0.00939		0.0610	0.00939	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1254	<0.00939		0.0610	0.00939	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1260	<0.00939		0.0610	0.00939	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
PCB-1268	<0.00939		0.0610	0.00939	mg/Kg	✱	12/10/21 07:45	12/14/21 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		10 - 110				12/10/21 07:45	12/14/21 14:55	1
Tetrachloro-m-xylene (Surr)	70		10 - 110				12/10/21 07:45	12/14/21 14:55	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<0.00636		0.0254	0.00636	mg/Kg	✱	12/08/21 11:15	12/11/21 20:16	1
HRH C19-C35	0.00724	J	0.0254	0.00636	mg/Kg	✱	12/08/21 11:15	12/11/21 20:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	86		40 - 140				12/08/21 11:15	12/11/21 20:16	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.19	J	3.97	2.08	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1
Barium	130		0.993	0.357	mg/Kg	✱	12/10/21 10:00	12/15/21 23:52	1
Cadmium	0.425	J	0.993	0.228	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1
Chromium	12.8		0.993	0.556	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1
Lead	8.11		4.96	1.29	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1
Selenium	<2.28		4.96	2.28	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1
Silver	<0.496		0.993	0.496	mg/Kg	✱	12/10/21 10:00	12/14/21 21:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0103	J	0.0204	0.00817	mg/Kg	✱	12/15/21 13:01	12/17/21 13:53	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-4 (7-8)

Lab Sample ID: 310-221096-5

Date Collected: 12/02/21 15:15

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 86.6

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	37.6	J	43.5	8.01	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Benzene	1.27	J	4.35	0.784	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Bromobenzene	<0.279		4.35	0.279	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Bromochloromethane	<0.357		4.35	0.357	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Bromodichloromethane	<0.340		4.35	0.340	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Bromoform	<0.557		8.71	0.557	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Bromomethane	<1.39		17.4	1.39	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
2-Butanone (MEK)	5.57	J	17.4	1.31	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Carbon disulfide	1.34	J	4.35	1.05	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Carbon tetrachloride	<1.22		4.35	1.22	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Chlorobenzene	<0.671		4.35	0.671	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Chlorodibromomethane	<0.192		4.35	0.192	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Chloroethane	<3.14		17.4	3.14	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Chloroform	<1.48		4.35	1.48	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Chloromethane	<2.87		17.4	2.87	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
2-Chlorotoluene	<0.357		4.35	0.357	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
4-Chlorotoluene	<1.39		4.35	1.39	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
cis-1,2-Dichloroethene	<0.653		4.35	0.653	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
cis-1,3-Dichloropropene	<0.488		4.35	0.488	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2-Dibromo-3-Chloropropane	<0.732		8.71	0.732	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2-Dibromoethane (EDB)	<0.226		4.35	0.226	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Dibromomethane	<0.174		4.35	0.174	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2-Dichlorobenzene	<0.340		4.35	0.340	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,3-Dichlorobenzene	<0.409		4.35	0.409	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,4-Dichlorobenzene	<0.479		4.35	0.479	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Dichlorodifluoromethane	<3.40		13.1	3.40	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1-Dichloroethane	<0.374		4.35	0.374	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2-Dichloroethane	<0.270		4.35	0.270	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1-Dichloroethene	<0.610		4.35	0.610	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2-Dichloropropane	<0.374		4.35	0.374	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,3-Dichloropropane	<0.226		4.35	0.226	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
2,2-Dichloropropane	<0.749		17.4	0.749	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1-Dichloropropene	<0.453		4.35	0.453	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Ethylbenzene	<2.09		4.35	2.09	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Hexachlorobutadiene	<1.05		21.8	1.05	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Hexane	12.5	J	21.8	6.53	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Isopropylbenzene	<1.65		4.35	1.65	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Methylene Chloride	<25.3		43.5	25.3	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Methyl tert-butyl ether	<0.192		4.35	0.192	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Naphthalene	<5.92		21.8	5.92	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
n-Butylbenzene	<1.83		4.35	1.83	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
N-Propylbenzene	<1.22		4.35	1.22	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
p-Isopropyltoluene	<0.775		4.35	0.775	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
sec-Butylbenzene	<0.871		4.35	0.871	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Styrene	<3.05		4.35	3.05	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
tert-Butylbenzene	<0.732		4.35	0.732	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1,1,2-Tetrachloroethane	<0.279		4.35	0.279	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1,2,2-Tetrachloroethane	<0.305		4.35	0.305	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Tetrachloroethene	<0.827		4.35	0.827	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-4 (7-8)

Lab Sample ID: 310-221096-5

Date Collected: 12/02/21 15:15

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 86.6

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<2.87		4.35	2.87	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
trans-1,2-Dichloroethene	<0.531		4.35	0.531	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
trans-1,3-Dichloropropene	<0.479		4.35	0.479	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2,3-Trichlorobenzene	<0.662		8.71	0.662	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2,4-Trichlorobenzene	<1.48		8.71	1.48	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1,1-Trichloroethane	<0.401		4.35	0.401	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,1,2-Trichloroethane	<0.279		4.35	0.279	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Trichloroethene	<1.22		4.35	1.22	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Trichlorofluoromethane	<4.79		17.4	4.79	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2,3-Trichloropropane	<0.418		4.35	0.418	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,2,4-Trimethylbenzene	<2.70		4.35	2.70	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
1,3,5-Trimethylbenzene	<1.57		4.35	1.57	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Vinyl chloride	<3.05		8.71	3.05	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1
Xylenes, Total	<3.14		8.71	3.14	ug/Kg	☆	12/08/21 07:49	12/08/21 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		77 - 120	12/08/21 07:49	12/08/21 17:44	1
Dibromofluoromethane (Surr)	88		80 - 123	12/08/21 07:49	12/08/21 17:44	1
Toluene-d8 (Surr)	106		76 - 120	12/08/21 07:49	12/08/21 17:44	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<1.89		11.1	1.89	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Acenaphthylene	<1.67		11.1	1.67	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Anthracene	<2.45		11.1	2.45	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Benzo[a]anthracene	<6.11		11.1	6.11	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Benzo[a]pyrene	<2.89		11.1	2.89	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Benzo[b]fluoranthene	8.08	J	11.1	3.00	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Benzo[g,h,i]perylene	<2.22		11.1	2.22	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Benzo[k]fluoranthene	<3.56		11.1	3.56	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Chrysene	4.40	J	11.1	1.56	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Dibenz(a,h)anthracene	<2.56		11.1	2.56	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Fluoranthene	3.04	J	11.1	1.67	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Fluorene	<1.56		11.1	1.56	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Indeno[1,2,3-cd]pyrene	<2.56		11.1	2.56	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
2-Methylnaphthalene	<4.11		11.1	4.11	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Naphthalene	<3.45		11.1	3.45	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Phenanthrene	<5.00		11.1	5.00	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1
Pyrene	2.89	J	11.1	1.45	ug/Kg	☆	12/08/21 07:57	12/10/21 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72		24 - 110	12/08/21 07:57	12/10/21 15:04	1
Nitrobenzene-d5 (Surr)	55		17 - 114	12/08/21 07:57	12/10/21 15:04	1
Terphenyl-d14 (Surr)	85		22 - 110	12/08/21 07:57	12/10/21 15:04	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.05		5.86	3.05	mg/Kg	☆	12/16/21 13:30	12/16/21 21:58	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	98		70 - 130	12/16/21 13:30	12/16/21 21:58	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-4 (7-8)

Lab Sample ID: 310-221096-5

Date Collected: 12/02/21 15:15

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 86.6

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<5.77		23.1	5.77	mg/Kg	✱	12/08/21 11:15	12/11/21 20:30	1
HRH C19-C35	7.07	J	23.1	5.77	mg/Kg	✱	12/08/21 11:15	12/11/21 20:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	86		40 - 140				12/08/21 11:15	12/11/21 20:30	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.10		3.33	1.75	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1
Barium	154		0.833	0.300	mg/Kg	✱	12/10/21 10:00	12/15/21 23:58	1
Cadmium	0.636	J	0.833	0.192	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1
Chromium	14.8		0.833	0.466	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1
Lead	10.3		4.16	1.08	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1
Selenium	<1.92		4.16	1.92	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1
Silver	<0.416		0.833	0.416	mg/Kg	✱	12/10/21 10:00	12/14/21 21:56	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0134	J	0.0179	0.00718	mg/Kg	✱	12/15/21 13:01	12/17/21 13:56	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-5 (2-4)

Lab Sample ID: 310-221096-6

Date Collected: 12/02/21 14:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.6

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<213		744	213	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Benzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Bromobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Bromochloromethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Bromodichloromethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Bromoform	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Bromomethane	<372		744	372	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
2-Butanone (MEK)	<179		1120	179	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Carbon disulfide	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Carbon tetrachloride	<51.3		149	51.3	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Chlorobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Chlorodibromomethane	<54.3		149	54.3	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Chloroethane	<74.4		149	74.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Chloroform	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Chloromethane	<46.1		372	46.1	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
2-Chlorotoluene	<40.9		149	40.9	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
4-Chlorotoluene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
cis-1,2-Dichloroethene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
cis-1,3-Dichloropropene	<42.4		149	42.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2-Dibromo-3-Chloropropane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2-Dibromoethane (EDB)	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Dibromomethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2-Dichlorobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,3-Dichlorobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,4-Dichlorobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Dichlorodifluoromethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1-Dichloroethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2-Dichloroethane	<54.3		149	54.3	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1-Dichloroethene	<47.6		149	47.6	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2-Dichloropropane	<40.2		149	40.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,3-Dichloropropane	<48.4		149	48.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
2,2-Dichloropropane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1-Dichloropropene	<42.4		149	42.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Ethylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Hexachlorobutadiene	<45.4		149	45.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Hexane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Isopropylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Methylene Chloride	<193		372	193	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Methyl tert-butyl ether	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Naphthalene	<37.2		372	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
n-Butylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
N-Propylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
p-Isopropyltoluene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
sec-Butylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Styrene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
tert-Butylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1,1,2-Tetrachloroethane	<43.9		149	43.9	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1,2,2-Tetrachloroethane	<52.8		149	52.8	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Tetrachloroethene	<49.8		149	49.8	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-5 (2-4)

Lab Sample ID: 310-221096-6

Date Collected: 12/02/21 14:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.6

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
trans-1,2-Dichloroethene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
trans-1,3-Dichloropropene	<39.4		149	39.4	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2,3-Trichlorobenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2,4-Trichlorobenzene	<38.7		149	38.7	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1,1-Trichloroethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,1,2-Trichloroethane	<55.0		149	55.0	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Trichloroethene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Trichlorofluoromethane	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2,3-Trichloropropane	<66.2		149	66.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,2,4-Trimethylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
1,3,5-Trimethylbenzene	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Vinyl chloride	<37.2		149	37.2	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1
Xylenes, Total	<62.5		223	62.5	ug/Kg	☆	12/13/21 07:33	12/13/21 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		79 - 120	12/13/21 07:33	12/13/21 16:34	1
Dibromofluoromethane (Surr)	91		80 - 124	12/13/21 07:33	12/13/21 16:34	1
Toluene-d8 (Surr)	102		78 - 120	12/13/21 07:33	12/13/21 16:34	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<2.03		12.0	2.03	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Acenaphthylene	2.02	J	12.0	1.79	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Anthracene	<2.63		12.0	2.63	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Benzo[a]anthracene	12.0		12.0	6.57	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Benzo[a]pyrene	11.1	J	12.0	3.11	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Benzo[b]fluoranthene	16.6		12.0	3.23	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Benzo[g,h,i]perylene	12.8		12.0	2.39	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Benzo[k]fluoranthene	4.61	J	12.0	3.83	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Chrysene	13.2		12.0	1.67	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Dibenz(a,h)anthracene	5.81	J	12.0	2.75	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Fluoranthene	21.1		12.0	1.79	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Fluorene	<1.67		12.0	1.67	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Indeno[1,2,3-cd]pyrene	8.56	J	12.0	2.75	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
2-Methylnaphthalene	29.2		12.0	4.42	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Naphthalene	12.4		12.0	3.71	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Phenanthrene	33.3		12.0	5.38	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1
Pyrene	18.8		12.0	1.55	ug/Kg	☆	12/08/21 07:57	12/10/21 15:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		24 - 110	12/08/21 07:57	12/10/21 15:25	1
Nitrobenzene-d5 (Surr)	71		17 - 114	12/08/21 07:57	12/10/21 15:25	1
Terphenyl-d14 (Surr)	91		22 - 110	12/08/21 07:57	12/10/21 15:25	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.92		7.54	3.92	mg/Kg	☆	12/16/21 13:30	12/16/21 23:03	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	98		70 - 130	12/16/21 13:30	12/16/21 23:03	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-5 (2-4)

Lab Sample ID: 310-221096-6

Date Collected: 12/02/21 14:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.6

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<6.14		24.5	6.14	mg/Kg	✱	12/08/21 11:15	12/11/21 20:45	1
HRH C19-C35	7.09	J	24.5	6.14	mg/Kg	✱	12/08/21 11:15	12/11/21 20:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	83		40 - 140				12/08/21 11:15	12/11/21 20:45	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.92		3.63	1.91	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1
Barium	135		0.909	0.327	mg/Kg	✱	12/10/21 10:00	12/16/21 00:03	1
Cadmium	0.546	J	0.909	0.209	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1
Chromium	15.6		0.909	0.509	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1
Lead	11.1		4.54	1.18	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1
Selenium	<2.09		4.54	2.09	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1
Silver	<0.454		0.909	0.454	mg/Kg	✱	12/10/21 10:00	12/14/21 22:01	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0291		0.0232	0.00927	mg/Kg	✱	12/15/21 13:01	12/17/21 13:58	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-2

Lab Sample ID: 310-221096-8

Date Collected: 12/02/21 17:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<31.0		100	31.0	ug/L			12/10/21 17:49	10
Benzene	20600		50.0	22.0	ug/L			12/13/21 18:14	100
Bromobenzene	<3.40		10.0	3.40	ug/L			12/10/21 17:49	10
Bromochloromethane	<5.40		50.0	5.40	ug/L			12/10/21 17:49	10
Bromodichloromethane	<3.90		10.0	3.90	ug/L			12/10/21 17:49	10
Bromoform	<7.80		50.0	7.80	ug/L			12/10/21 17:49	10
Bromomethane	<110		400	110	ug/L			12/13/21 18:14	100
2-Butanone (MEK)	<21.0		100	21.0	ug/L			12/10/21 17:49	10
Carbon disulfide	<4.50	+	10.0	4.50	ug/L			12/10/21 17:49	10
Carbon tetrachloride	<6.50		20.0	6.50	ug/L			12/10/21 17:49	10
Chlorobenzene	<4.00		10.0	4.00	ug/L			12/10/21 17:49	10
Chlorodibromomethane	<7.50		50.0	7.50	ug/L			12/10/21 17:49	10
Chloroethane	<7.90		40.0	7.90	ug/L			12/10/21 17:49	10
Chloroform	<13.0		30.0	13.0	ug/L			12/10/21 17:49	10
Chloromethane	<6.10		30.0	6.10	ug/L			12/10/21 17:49	10
2-Chlorotoluene	387		10.0	2.80	ug/L			12/10/21 17:49	10
4-Chlorotoluene	<2.90		10.0	2.90	ug/L			12/10/21 17:49	10
cis-1,2-Dichloroethene	<2.10		10.0	2.10	ug/L			12/10/21 17:49	10
cis-1,3-Dichloropropene	<2.50		50.0	2.50	ug/L			12/10/21 17:49	10
1,2-Dibromo-3-Chloropropane	<12.0		50.0	12.0	ug/L			12/10/21 17:49	10
1,2-Dibromoethane (EDB)	<3.40		10.0	3.40	ug/L			12/10/21 17:49	10
Dibromomethane	<3.30		10.0	3.30	ug/L			12/10/21 17:49	10
1,2-Dichlorobenzene	<3.70		10.0	3.70	ug/L			12/10/21 17:49	10
1,3-Dichlorobenzene	<3.00		10.0	3.00	ug/L			12/10/21 17:49	10
1,4-Dichlorobenzene	<2.30		10.0	2.30	ug/L			12/10/21 17:49	10
Dichlorodifluoromethane	<2.50		30.0	2.50	ug/L			12/10/21 17:49	10
1,1-Dichloroethane	<2.20		10.0	2.20	ug/L			12/10/21 17:49	10
1,2-Dichloroethane	18.2		10.0	3.90	ug/L			12/10/21 17:49	10
1,1-Dichloroethene	<5.60		20.0	5.60	ug/L			12/10/21 17:49	10
1,2-Dichloropropane	<2.70		10.0	2.70	ug/L			12/10/21 17:49	10
1,3-Dichloropropane	<4.00		10.0	4.00	ug/L			12/10/21 17:49	10
2,2-Dichloropropane	<6.90		40.0	6.90	ug/L			12/10/21 17:49	10
1,1-Dichloropropene	<4.30		10.0	4.30	ug/L			12/10/21 17:49	10
Ethylbenzene	4170		10.0	3.10	ug/L			12/10/21 17:49	10
Hexachlorobutadiene	<14.0		50.0	14.0	ug/L			12/10/21 17:49	10
Hexane	638		100	78.0	ug/L			12/13/21 18:14	100
Isopropylbenzene	149		10.0	3.50	ug/L			12/10/21 17:49	10
Methylene Chloride	<17.0		50.0	17.0	ug/L			12/10/21 17:49	10
Methyl tert-butyl ether	94.5		10.0	4.90	ug/L			12/10/21 17:49	10
Naphthalene	583		50.0	30.0	ug/L			12/10/21 17:49	10
n-Butylbenzene	76.1		10.0	4.40	ug/L			12/10/21 17:49	10
N-Propylbenzene	335		10.0	3.90	ug/L			12/10/21 17:49	10
p-Isopropyltoluene	13.3		10.0	3.30	ug/L			12/10/21 17:49	10
sec-Butylbenzene	20.4		10.0	4.40	ug/L			12/10/21 17:49	10
Styrene	<3.70		10.0	3.70	ug/L			12/10/21 17:49	10
tert-Butylbenzene	<3.90		10.0	3.90	ug/L			12/10/21 17:49	10
1,1,1,2-Tetrachloroethane	<3.80		10.0	3.80	ug/L			12/10/21 17:49	10
1,1,2,2-Tetrachloroethane	<4.70		10.0	4.70	ug/L			12/10/21 17:49	10
Tetrachloroethene	<4.80		10.0	4.80	ug/L			12/10/21 17:49	10

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-2

Lab Sample ID: 310-221096-8

Date Collected: 12/02/21 17:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	39000		100	43.0	ug/L			12/13/21 18:14	100
trans-1,2-Dichloroethene	<2.70		10.0	2.70	ug/L			12/10/21 17:49	10
trans-1,3-Dichloropropene	<5.60		50.0	5.60	ug/L			12/10/21 17:49	10
1,2,3-Trichlorobenzene	<9.00		50.0	9.00	ug/L			12/10/21 17:49	10
1,2,4-Trichlorobenzene	<7.50		50.0	7.50	ug/L			12/10/21 17:49	10
1,1,1-Trichloroethane	<1.90		10.0	1.90	ug/L			12/10/21 17:49	10
1,1,2-Trichloroethane	<4.50		10.0	4.50	ug/L			12/10/21 17:49	10
Trichloroethene	<4.30		10.0	4.30	ug/L			12/10/21 17:49	10
Trichlorofluoromethane	<3.80		40.0	3.80	ug/L			12/10/21 17:49	10
1,2,3-Trichloropropane	<5.90		10.0	5.90	ug/L			12/10/21 17:49	10
1,2,4-Trimethylbenzene	2320		10.0	4.20	ug/L			12/10/21 17:49	10
1,3,5-Trimethylbenzene	608		10.0	3.70	ug/L			12/10/21 17:49	10
Vinyl chloride	<1.80		10.0	1.80	ug/L			12/10/21 17:49	10
Xylenes, Total	14100		300	40.0	ug/L			12/13/21 18:14	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		80 - 120		12/10/21 17:49	10
4-Bromofluorobenzene (Surr)	89		80 - 120		12/13/21 18:14	100
Dibromofluoromethane (Surr)	75	S1-	79 - 120		12/10/21 17:49	10
Dibromofluoromethane (Surr)	93		79 - 120		12/13/21 18:14	100
Toluene-d8 (Surr)	103		79 - 120		12/10/21 17:49	10
Toluene-d8 (Surr)	97		79 - 120		12/13/21 18:14	100

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	7.85		0.250	0.0613	ug/L		12/09/21 07:55	12/18/21 00:49	1
Acenaphthylene	2.50		0.250	0.0788	ug/L		12/09/21 07:55	12/18/21 00:49	1
Anthracene	5.16		0.250	0.124	ug/L		12/09/21 07:55	12/18/21 00:49	1
Benzo[a]anthracene	1.01		0.250	0.138	ug/L		12/09/21 07:55	12/18/21 00:49	1
Benzo[a]pyrene	0.461		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 00:49	1
Benzo[b]fluoranthene	0.375		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 00:49	1
Benzo[g,h,i]perylene	0.490		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 00:49	1
Benzo[k]fluoranthene	<0.150		0.250	0.150	ug/L		12/09/21 07:55	12/18/21 00:49	1
Chrysene	0.676		0.250	0.0913	ug/L		12/09/21 07:55	12/18/21 00:49	1
Dibenz(a,h)anthracene	<0.163		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 00:49	1
Fluoranthene	2.27		0.250	0.103	ug/L		12/09/21 07:55	12/18/21 00:49	1
Fluorene	9.48		0.250	0.0488	ug/L		12/09/21 07:55	12/18/21 00:49	1
Indeno[1,2,3-cd]pyrene	<0.150		0.250	0.150	ug/L		12/09/21 07:55	12/18/21 00:49	1
2-Methylnaphthalene	2110		25.0	10.0	ug/L		12/09/21 07:55	12/20/21 14:17	100
Naphthalene	2610		62.5	25.0	ug/L		12/09/21 07:55	12/20/21 14:17	100
Phenanthrene	10.6		0.250	0.125	ug/L		12/09/21 07:55	12/18/21 00:49	1
Pyrene	3.85		0.250	0.138	ug/L		12/09/21 07:55	12/18/21 00:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	65		21 - 110	12/09/21 07:55	12/18/21 00:49	1
Nitrobenzene-d5 (Surr)	204	S1+	15 - 110	12/09/21 07:55	12/18/21 00:49	1
Terphenyl-d14 (Surr)	74		13 - 110	12/09/21 07:55	12/18/21 00:49	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-2

Lab Sample ID: 310-221096-8

Date Collected: 12/02/21 17:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	131000		20000	7600	ug/L			12/15/21 02:10	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	96		70 - 130					12/15/21 02:10	200

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HRH C19-C35	124	J	132	86.5	ug/L		12/09/21 10:42	12/11/21 21:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	124		40 - 140				12/09/21 10:42	12/11/21 21:57	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	89400		226	147	ug/L		12/09/21 10:42	12/13/21 18:16	2

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0212		0.00200	0.000750	mg/L		12/08/21 09:00	12/14/21 14:45	1
Barium	0.423		0.00200	0.000370	mg/L		12/08/21 09:00	12/14/21 14:45	1
Cadmium	<0.0000510		0.000100	0.0000510	mg/L		12/08/21 09:00	12/14/21 14:45	1
Chromium	<0.00110		0.00500	0.00110	mg/L		12/08/21 09:00	12/14/21 14:45	1
Lead	0.00320		0.000500	0.000210	mg/L		12/08/21 09:00	12/14/21 14:45	1
Selenium	<0.000960		0.00500	0.000960	mg/L		12/08/21 09:00	12/14/21 14:45	1
Silver	<0.000420		0.00100	0.000420	mg/L		12/08/21 09:00	12/14/21 14:45	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000150		0.000200	0.000150	mg/L		12/14/21 12:30	12/15/21 12:26	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: TB-1

Lab Sample ID: 310-221096-9

Date Collected: 12/02/21 07:00

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			12/10/21 13:09	1
Benzene	<0.220		0.500	0.220	ug/L			12/10/21 13:09	1
Bromobenzene	<0.340		1.00	0.340	ug/L			12/10/21 13:09	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			12/10/21 13:09	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			12/10/21 13:09	1
Bromoform	<0.780		5.00	0.780	ug/L			12/10/21 13:09	1
Bromomethane	<1.10		4.00	1.10	ug/L			12/13/21 12:02	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			12/10/21 13:09	1
Carbon disulfide	<0.450	*+	1.00	0.450	ug/L			12/10/21 13:09	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			12/10/21 13:09	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			12/10/21 13:09	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			12/10/21 13:09	1
Chloroethane	<0.790		4.00	0.790	ug/L			12/10/21 13:09	1
Chloroform	<1.30		3.00	1.30	ug/L			12/10/21 13:09	1
Chloromethane	<0.610		3.00	0.610	ug/L			12/10/21 13:09	1
2-Chlorotoluene	<0.280		1.00	0.280	ug/L			12/10/21 13:09	1
4-Chlorotoluene	<0.290		1.00	0.290	ug/L			12/10/21 13:09	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			12/10/21 13:09	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			12/10/21 13:09	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			12/10/21 13:09	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			12/10/21 13:09	1
Dibromomethane	<0.330		1.00	0.330	ug/L			12/10/21 13:09	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			12/10/21 13:09	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			12/10/21 13:09	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			12/10/21 13:09	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			12/10/21 13:09	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			12/10/21 13:09	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			12/10/21 13:09	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			12/10/21 13:09	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			12/10/21 13:09	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			12/10/21 13:09	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			12/10/21 13:09	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			12/10/21 13:09	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			12/10/21 13:09	1
Hexachlorobutadiene	<1.40		5.00	1.40	ug/L			12/10/21 13:09	1
Hexane	<0.780	*+	1.00	0.780	ug/L			12/10/21 13:09	1
Isopropylbenzene	<0.350		1.00	0.350	ug/L			12/10/21 13:09	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			12/10/21 13:09	1
Methyl tert-butyl ether	<0.490		1.00	0.490	ug/L			12/10/21 13:09	1
Naphthalene	<3.00		5.00	3.00	ug/L			12/10/21 13:09	1
n-Butylbenzene	<0.440		1.00	0.440	ug/L			12/10/21 13:09	1
N-Propylbenzene	<0.390		1.00	0.390	ug/L			12/10/21 13:09	1
p-Isopropyltoluene	<0.330		1.00	0.330	ug/L			12/10/21 13:09	1
sec-Butylbenzene	<0.440		1.00	0.440	ug/L			12/10/21 13:09	1
Styrene	<0.370		1.00	0.370	ug/L			12/10/21 13:09	1
tert-Butylbenzene	<0.390		1.00	0.390	ug/L			12/10/21 13:09	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			12/10/21 13:09	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			12/10/21 13:09	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			12/10/21 13:09	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: TB-1

Lab Sample ID: 310-221096-9

Date Collected: 12/02/21 07:00

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.430		1.00	0.430	ug/L			12/10/21 13:09	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			12/10/21 13:09	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			12/10/21 13:09	1
1,2,3-Trichlorobenzene	<0.900		5.00	0.900	ug/L			12/10/21 13:09	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			12/10/21 13:09	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			12/10/21 13:09	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			12/10/21 13:09	1
Trichloroethene	<0.430		1.00	0.430	ug/L			12/10/21 13:09	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			12/10/21 13:09	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			12/10/21 13:09	1
1,2,4-Trimethylbenzene	<0.420		1.00	0.420	ug/L			12/10/21 13:09	1
1,3,5-Trimethylbenzene	<0.370		1.00	0.370	ug/L			12/10/21 13:09	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			12/10/21 13:09	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			12/10/21 13:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		12/10/21 13:09	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/13/21 12:02	1
Dibromofluoromethane (Surr)	98		79 - 120		12/10/21 13:09	1
Dibromofluoromethane (Surr)	99		79 - 120		12/13/21 12:02	1
Toluene-d8 (Surr)	102		79 - 120		12/10/21 13:09	1
Toluene-d8 (Surr)	104		79 - 120		12/13/21 12:02	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: TB-2

Lab Sample ID: 310-221096-10

Date Collected: 12/02/21 07:01

Matrix: Soil

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<9.20		50.0	9.20	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Benzene	<0.900		5.00	0.900	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Bromobenzene	<0.320		5.00	0.320	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Bromochloromethane	<0.410		5.00	0.410	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Bromodichloromethane	<0.390		5.00	0.390	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Bromoform	<0.640		10.0	0.640	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Bromomethane	<1.60		20.0	1.60	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
2-Butanone (MEK)	<1.50		20.0	1.50	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Carbon disulfide	<1.20		5.00	1.20	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Carbon tetrachloride	<1.40		5.00	1.40	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Chlorobenzene	<0.770		5.00	0.770	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Chlorodibromomethane	<0.220		5.00	0.220	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Chloroethane	<3.60		20.0	3.60	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Chloroform	<1.70		5.00	1.70	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Chloromethane	<3.30		20.0	3.30	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
2-Chlorotoluene	<0.410		5.00	0.410	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
4-Chlorotoluene	<1.60		5.00	1.60	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
cis-1,2-Dichloroethene	<0.750		5.00	0.750	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
cis-1,3-Dichloropropene	<0.560		5.00	0.560	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2-Dibromo-3-Chloropropane	<0.840		10.0	0.840	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2-Dibromoethane (EDB)	<0.260		5.00	0.260	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Dibromomethane	<0.200		5.00	0.200	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2-Dichlorobenzene	<0.390		5.00	0.390	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,3-Dichlorobenzene	<0.470		5.00	0.470	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,4-Dichlorobenzene	<0.550		5.00	0.550	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Dichlorodifluoromethane	<3.90		15.0	3.90	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1-Dichloroethane	<0.430		5.00	0.430	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2-Dichloroethane	<0.310		5.00	0.310	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1-Dichloropropene	<0.700		5.00	0.700	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2-Dichloropropane	<0.430		5.00	0.430	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,3-Dichloropropane	<0.260		5.00	0.260	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
2,2-Dichloropropane	<0.860		20.0	0.860	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1-Dichloropropene	<0.520		5.00	0.520	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Ethylbenzene	<2.40		5.00	2.40	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Hexachlorobutadiene	<1.20		25.0	1.20	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Hexane	<7.50		25.0	7.50	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Isopropylbenzene	<1.90		5.00	1.90	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Methylene Chloride	<29.0		50.0	29.0	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Methyl tert-butyl ether	<0.220		5.00	0.220	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Naphthalene	<6.80		25.0	6.80	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
n-Butylbenzene	<2.10		5.00	2.10	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
N-Propylbenzene	<1.40		5.00	1.40	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
p-Isopropyltoluene	<0.890		5.00	0.890	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
sec-Butylbenzene	<1.00		5.00	1.00	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Styrene	<3.50		5.00	3.50	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
tert-Butylbenzene	<0.840		5.00	0.840	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1,1,2-Tetrachloroethane	<0.320		5.00	0.320	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1,2,2-Tetrachloroethane	<0.350		5.00	0.350	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Tetrachloroethene	<0.950		5.00	0.950	ug/Kg		12/08/21 07:49	12/08/21 18:59	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: TB-2

Lab Sample ID: 310-221096-10

Date Collected: 12/02/21 07:01

Matrix: Soil

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.30		5.00	3.30	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
trans-1,2-Dichloroethene	<0.610		5.00	0.610	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
trans-1,3-Dichloropropene	<0.550		5.00	0.550	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2,3-Trichlorobenzene	<0.760		10.0	0.760	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2,4-Trichlorobenzene	<1.70		10.0	1.70	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1,1-Trichloroethane	<0.460		5.00	0.460	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,1,2-Trichloroethane	<0.320		5.00	0.320	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Trichloroethene	<1.40		5.00	1.40	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Trichlorofluoromethane	<5.50		20.0	5.50	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2,3-Trichloropropane	<0.480		5.00	0.480	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,2,4-Trimethylbenzene	<3.10		5.00	3.10	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
1,3,5-Trimethylbenzene	<1.80		5.00	1.80	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Vinyl chloride	<3.50		10.0	3.50	ug/Kg		12/08/21 07:49	12/08/21 18:59	1
Xylenes, Total	<3.60		10.0	3.60	ug/Kg		12/08/21 07:49	12/08/21 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		77 - 120	12/08/21 07:49	12/08/21 18:59	1
Dibromofluoromethane (Surr)	98		80 - 123	12/08/21 07:49	12/08/21 18:59	1
Toluene-d8 (Surr)	99		76 - 120	12/08/21 07:49	12/08/21 18:59	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: MW-2

Lab Sample ID: 310-221096-11

Date Collected: 12/02/21 16:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<31.0		100	31.0	ug/L			12/10/21 18:08	10
Benzene	22600		50.0	22.0	ug/L			12/13/21 18:59	100
Bromobenzene	<3.40		10.0	3.40	ug/L			12/10/21 18:08	10
Bromochloromethane	<5.40		50.0	5.40	ug/L			12/10/21 18:08	10
Bromodichloromethane	<3.90		10.0	3.90	ug/L			12/10/21 18:08	10
Bromoform	<7.80		50.0	7.80	ug/L			12/10/21 18:08	10
Bromomethane	<110		400	110	ug/L			12/13/21 18:59	100
2-Butanone (MEK)	<21.0		100	21.0	ug/L			12/10/21 18:08	10
Carbon disulfide	<4.50	+	10.0	4.50	ug/L			12/10/21 18:08	10
Carbon tetrachloride	<6.50		20.0	6.50	ug/L			12/10/21 18:08	10
Chlorobenzene	<4.00		10.0	4.00	ug/L			12/10/21 18:08	10
Chlorodibromomethane	<7.50		50.0	7.50	ug/L			12/10/21 18:08	10
Chloroethane	<7.90		40.0	7.90	ug/L			12/10/21 18:08	10
Chloroform	<13.0		30.0	13.0	ug/L			12/10/21 18:08	10
Chloromethane	<6.10		30.0	6.10	ug/L			12/10/21 18:08	10
2-Chlorotoluene	<2.80		10.0	2.80	ug/L			12/10/21 18:08	10
4-Chlorotoluene	<2.90		10.0	2.90	ug/L			12/10/21 18:08	10
cis-1,2-Dichloroethene	<2.10		10.0	2.10	ug/L			12/10/21 18:08	10
cis-1,3-Dichloropropene	<2.50		50.0	2.50	ug/L			12/10/21 18:08	10
1,2-Dibromo-3-Chloropropane	<12.0		50.0	12.0	ug/L			12/10/21 18:08	10
1,2-Dibromoethane (EDB)	<3.40		10.0	3.40	ug/L			12/10/21 18:08	10
Dibromomethane	<3.30		10.0	3.30	ug/L			12/10/21 18:08	10
1,2-Dichlorobenzene	<3.70		10.0	3.70	ug/L			12/10/21 18:08	10
1,3-Dichlorobenzene	<3.00		10.0	3.00	ug/L			12/10/21 18:08	10
1,4-Dichlorobenzene	<2.30		10.0	2.30	ug/L			12/10/21 18:08	10
Dichlorodifluoromethane	<2.50		30.0	2.50	ug/L			12/10/21 18:08	10
1,1-Dichloroethane	3.15	J	10.0	2.20	ug/L			12/10/21 18:08	10
1,2-Dichloroethane	<3.90		10.0	3.90	ug/L			12/10/21 18:08	10
1,1-Dichloroethene	<5.60		20.0	5.60	ug/L			12/10/21 18:08	10
1,2-Dichloropropane	<2.70		10.0	2.70	ug/L			12/10/21 18:08	10
1,3-Dichloropropane	<4.00		10.0	4.00	ug/L			12/10/21 18:08	10
2,2-Dichloropropane	<6.90		40.0	6.90	ug/L			12/10/21 18:08	10
1,1-Dichloropropene	<4.30		10.0	4.30	ug/L			12/10/21 18:08	10
Ethylbenzene	3830		10.0	3.10	ug/L			12/10/21 18:08	10
Hexachlorobutadiene	<14.0		50.0	14.0	ug/L			12/10/21 18:08	10
Hexane	885	+	10.0	7.80	ug/L			12/10/21 18:08	10
Isopropylbenzene	133		10.0	3.50	ug/L			12/10/21 18:08	10
Methylene Chloride	<17.0		50.0	17.0	ug/L			12/10/21 18:08	10
Methyl tert-butyl ether	89.5		10.0	4.90	ug/L			12/10/21 18:08	10
Naphthalene	569		50.0	30.0	ug/L			12/10/21 18:08	10
n-Butylbenzene	78.1		10.0	4.40	ug/L			12/10/21 18:08	10
N-Propylbenzene	311		10.0	3.90	ug/L			12/10/21 18:08	10
p-Isopropyltoluene	13.3		10.0	3.30	ug/L			12/10/21 18:08	10
sec-Butylbenzene	<4.40		10.0	4.40	ug/L			12/10/21 18:08	10
Styrene	<3.70		10.0	3.70	ug/L			12/10/21 18:08	10
tert-Butylbenzene	<3.90		10.0	3.90	ug/L			12/10/21 18:08	10
1,1,1,2-Tetrachloroethane	<3.80		10.0	3.80	ug/L			12/10/21 18:08	10
1,1,2,2-Tetrachloroethane	<4.70		10.0	4.70	ug/L			12/10/21 18:08	10
Tetrachloroethene	<4.80		10.0	4.80	ug/L			12/10/21 18:08	10

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: MW-2

Lab Sample ID: 310-221096-11

Date Collected: 12/02/21 16:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	43000		100	43.0	ug/L			12/13/21 18:59	100
trans-1,2-Dichloroethene	<2.70		10.0	2.70	ug/L			12/10/21 18:08	10
trans-1,3-Dichloropropene	<5.60		50.0	5.60	ug/L			12/10/21 18:08	10
1,2,3-Trichlorobenzene	<9.00		50.0	9.00	ug/L			12/10/21 18:08	10
1,2,4-Trichlorobenzene	<7.50		50.0	7.50	ug/L			12/10/21 18:08	10
1,1,1-Trichloroethane	<1.90		10.0	1.90	ug/L			12/10/21 18:08	10
1,1,2-Trichloroethane	<4.50		10.0	4.50	ug/L			12/10/21 18:08	10
Trichloroethene	<4.30		10.0	4.30	ug/L			12/10/21 18:08	10
Trichlorofluoromethane	<3.80		40.0	3.80	ug/L			12/10/21 18:08	10
1,2,3-Trichloropropane	<5.90		10.0	5.90	ug/L			12/10/21 18:08	10
1,2,4-Trimethylbenzene	2340		10.0	4.20	ug/L			12/10/21 18:08	10
1,3,5-Trimethylbenzene	606		10.0	3.70	ug/L			12/10/21 18:08	10
Vinyl chloride	<1.80		10.0	1.80	ug/L			12/10/21 18:08	10
Xylenes, Total	15900		300	40.0	ug/L			12/13/21 18:59	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		80 - 120		12/10/21 18:08	10
4-Bromofluorobenzene (Surr)	94		80 - 120		12/13/21 18:59	100
Dibromofluoromethane (Surr)	81		79 - 120		12/10/21 18:08	10
Dibromofluoromethane (Surr)	106		79 - 120		12/13/21 18:59	100
Toluene-d8 (Surr)	101		79 - 120		12/10/21 18:08	10
Toluene-d8 (Surr)	104		79 - 120		12/13/21 18:59	100

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	2.76		0.250	0.0613	ug/L		12/09/21 07:55	12/18/21 01:10	1
Acenaphthylene	0.886		0.250	0.0788	ug/L		12/09/21 07:55	12/18/21 01:10	1
Anthracene	2.59		0.250	0.124	ug/L		12/09/21 07:55	12/18/21 01:10	1
Benzo[a]anthracene	0.432		0.250	0.138	ug/L		12/09/21 07:55	12/18/21 01:10	1
Benzo[a]pyrene	0.191	J	0.250	0.163	ug/L		12/09/21 07:55	12/18/21 01:10	1
Benzo[b]fluoranthene	0.171	J	0.250	0.163	ug/L		12/09/21 07:55	12/18/21 01:10	1
Benzo[g,h,i]perylene	0.287		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 01:10	1
Benzo[k]fluoranthene	<0.150		0.250	0.150	ug/L		12/09/21 07:55	12/18/21 01:10	1
Chrysene	0.288		0.250	0.0913	ug/L		12/09/21 07:55	12/18/21 01:10	1
Dibenz(a,h)anthracene	<0.163		0.250	0.163	ug/L		12/09/21 07:55	12/18/21 01:10	1
Fluoranthene	0.909		0.250	0.103	ug/L		12/09/21 07:55	12/18/21 01:10	1
Fluorene	3.95		0.250	0.0488	ug/L		12/09/21 07:55	12/18/21 01:10	1
Indeno[1,2,3-cd]pyrene	<0.150		0.250	0.150	ug/L		12/09/21 07:55	12/18/21 01:10	1
2-Methylnaphthalene	939		25.0	10.0	ug/L		12/09/21 07:55	12/20/21 14:38	100
Naphthalene	1490		62.5	25.0	ug/L		12/09/21 07:55	12/20/21 14:38	100
Phenanthrene	4.28		0.250	0.125	ug/L		12/09/21 07:55	12/18/21 01:10	1
Pyrene	1.39		0.250	0.138	ug/L		12/09/21 07:55	12/18/21 01:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	59		21 - 110	12/09/21 07:55	12/18/21 01:10	1
Nitrobenzene-d5 (Surr)	128	S1+	15 - 110	12/09/21 07:55	12/18/21 01:10	1
Terphenyl-d14 (Surr)	61		13 - 110	12/09/21 07:55	12/18/21 01:10	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: MW-2

Lab Sample ID: 310-221096-11

Date Collected: 12/02/21 16:15

Matrix: Water

Date Received: 12/04/21 10:10

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	133000		20000	7600	ug/L			12/15/21 03:11	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	96		70 - 130		12/15/21 03:11	200

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.202		0.952	0.202	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1221	<0.202		0.952	0.202	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1232	<0.202		0.952	0.202	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1242	<0.202		0.952	0.202	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1248	<0.131		0.952	0.131	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1254	<0.131		0.952	0.131	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1260	<0.131		0.952	0.131	ug/L		12/17/21 08:54	12/17/21 16:18	1
PCB-1268	<0.131		0.952	0.131	ug/L		12/17/21 08:54	12/17/21 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	68		10 - 110	12/17/21 08:54	12/17/21 16:18	1
Tetrachloro-m-xylene (Surr)	62		13 - 110	12/17/21 08:54	12/17/21 16:18	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HRH C19-C35	<83.9		128	83.9	ug/L		12/09/21 10:42	12/11/21 22:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	107		40 - 140	12/09/21 10:42	12/11/21 22:11	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	88700		547	356	ug/L		12/09/21 10:42	12/13/21 18:30	5

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0208		0.00200	0.000750	mg/L		12/08/21 09:00	12/14/21 14:52	1
Barium	0.422		0.00200	0.000370	mg/L		12/08/21 09:00	12/14/21 14:52	1
Cadmium	<0.0000510		0.000100	0.0000510	mg/L		12/08/21 09:00	12/14/21 14:52	1
Chromium	<0.00110		0.00500	0.00110	mg/L		12/08/21 09:00	12/14/21 14:52	1
Lead	0.00330		0.000500	0.000210	mg/L		12/08/21 09:00	12/14/21 14:52	1
Selenium	<0.000960		0.00500	0.000960	mg/L		12/08/21 09:00	12/14/21 14:52	1
Silver	<0.000420		0.00100	0.000420	mg/L		12/08/21 09:00	12/14/21 14:52	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000150		0.000200	0.000150	mg/L		12/14/21 12:30	12/15/21 12:32	1

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Date Collected: 12/02/21 15:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.0

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	44.8	J	56.6	10.4	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Benzene	<1.02		5.66	1.02	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Bromobenzene	<0.362		5.66	0.362	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Bromochloromethane	<0.464		5.66	0.464	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Bromodichloromethane	<0.442		5.66	0.442	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Bromoform	<0.725		11.3	0.725	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Bromomethane	<1.81		22.6	1.81	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
2-Butanone (MEK)	6.08	J	22.6	1.70	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Carbon disulfide	<1.36		5.66	1.36	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Carbon tetrachloride	<1.59		5.66	1.59	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Chlorobenzene	<0.872		5.66	0.872	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Chlorodibromomethane	<0.249		5.66	0.249	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Chloroethane	<4.08		22.6	4.08	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Chloroform	<1.92		5.66	1.92	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Chloromethane	<3.74		22.6	3.74	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
2-Chlorotoluene	<0.464		5.66	0.464	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
4-Chlorotoluene	<1.81		5.66	1.81	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
cis-1,2-Dichloroethene	<0.849		5.66	0.849	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
cis-1,3-Dichloropropene	<0.634		5.66	0.634	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2-Dibromo-3-Chloropropane	<0.951		11.3	0.951	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2-Dibromoethane (EDB)	<0.294		5.66	0.294	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Dibromomethane	<0.226		5.66	0.226	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2-Dichlorobenzene	<0.442		5.66	0.442	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,3-Dichlorobenzene	<0.532		5.66	0.532	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,4-Dichlorobenzene	<0.623		5.66	0.623	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Dichlorodifluoromethane	<4.42		17.0	4.42	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1-Dichloroethane	<0.487		5.66	0.487	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2-Dichloroethane	<0.351		5.66	0.351	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1-Dichloroethene	<0.793		5.66	0.793	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2-Dichloropropane	<0.487		5.66	0.487	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,3-Dichloropropane	<0.294		5.66	0.294	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
2,2-Dichloropropane	<0.974		22.6	0.974	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1-Dichloropropene	<0.589		5.66	0.589	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Ethylbenzene	<2.72		5.66	2.72	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Hexachlorobutadiene	<1.36		28.3	1.36	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Hexane	<8.49		28.3	8.49	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Isopropylbenzene	<2.15		5.66	2.15	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Methylene Chloride	<32.8		56.6	32.8	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Methyl tert-butyl ether	<0.249		5.66	0.249	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Naphthalene	<7.70		28.3	7.70	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
n-Butylbenzene	<2.38		5.66	2.38	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
N-Propylbenzene	<1.59		5.66	1.59	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
p-Isopropyltoluene	<1.01		5.66	1.01	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
sec-Butylbenzene	<1.13		5.66	1.13	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Styrene	<3.96		5.66	3.96	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
tert-Butylbenzene	<0.951		5.66	0.951	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1,1,2-Tetrachloroethane	<0.362		5.66	0.362	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1,2,2-Tetrachloroethane	<0.396		5.66	0.396	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Tetrachloroethene	<1.08		5.66	1.08	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Date Collected: 12/02/21 15:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.0

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<3.74		5.66	3.74	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
trans-1,2-Dichloroethene	<0.691		5.66	0.691	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
trans-1,3-Dichloropropene	<0.623		5.66	0.623	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2,3-Trichlorobenzene	<0.860		11.3	0.860	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2,4-Trichlorobenzene	<1.92		11.3	1.92	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1,1-Trichloroethane	<0.521		5.66	0.521	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,1,2-Trichloroethane	<0.362		5.66	0.362	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Trichloroethene	<1.59		5.66	1.59	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Trichlorofluoromethane	<6.23		22.6	6.23	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2,3-Trichloropropane	<0.543		5.66	0.543	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,2,4-Trimethylbenzene	<3.51		5.66	3.51	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
1,3,5-Trimethylbenzene	<2.04		5.66	2.04	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Vinyl chloride	<3.96		11.3	3.96	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1
Xylenes, Total	<4.08		11.3	4.08	ug/Kg	☆	12/08/21 07:49	12/08/21 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		77 - 120	12/08/21 07:49	12/08/21 18:34	1
Dibromofluoromethane (Surr)	97		80 - 123	12/08/21 07:49	12/08/21 18:34	1
Toluene-d8 (Surr)	98		76 - 120	12/08/21 07:49	12/08/21 18:34	1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<2.14		12.6	2.14	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Acenaphthylene	<1.89		12.6	1.89	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Anthracene	<2.77		12.6	2.77	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Benzo[a]anthracene	<6.94		12.6	6.94	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Benzo[a]pyrene	<3.28		12.6	3.28	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Benzo[b]fluoranthene	<3.41		12.6	3.41	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Benzo[g,h,i]perylene	<2.52		12.6	2.52	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Benzo[k]fluoranthene	<4.04		12.6	4.04	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Chrysene	2.74	J	12.6	1.77	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Dibenz(a,h)anthracene	<2.90		12.6	2.90	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Fluoranthene	2.57	J	12.6	1.89	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Fluorene	<1.77		12.6	1.77	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Indeno[1,2,3-cd]pyrene	<2.90		12.6	2.90	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
2-Methylnaphthalene	<4.67		12.6	4.67	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Naphthalene	<3.91		12.6	3.91	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Phenanthrene	<5.68		12.6	5.68	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1
Pyrene	<1.64		12.6	1.64	ug/Kg	☆	12/09/21 07:55	12/14/21 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		24 - 110	12/09/21 07:55	12/14/21 15:21	1
Nitrobenzene-d5 (Surr)	58		17 - 114	12/09/21 07:55	12/14/21 15:21	1
Terphenyl-d14 (Surr)	56		22 - 110	12/09/21 07:55	12/14/21 15:21	1

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<3.67		7.07	3.67	mg/Kg	☆	12/16/21 17:20	12/19/21 21:39	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	95		70 - 130	12/16/21 17:20	12/19/21 21:39	50

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Date Collected: 12/02/21 15:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.0

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.00741		0.0617	0.00741	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1221	<0.00741		0.0617	0.00741	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1232	<0.00741		0.0617	0.00741	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1242	<0.00741		0.0617	0.00741	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1248	<0.00950		0.0617	0.00950	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1254	<0.00950		0.0617	0.00950	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1260	<0.00950		0.0617	0.00950	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
PCB-1268	<0.00950		0.0617	0.00950	mg/Kg	✱	12/10/21 07:45	12/14/21 15:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	86		10 - 110				12/10/21 07:45	12/14/21 15:05	1
Tetrachloro-m-xylene (Surr)	74		10 - 110				12/10/21 07:45	12/14/21 15:05	1

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<6.18		24.7	6.18	mg/Kg	✱	12/15/21 11:22	12/17/21 05:03	1
HRH C19-C35	<6.18		24.7	6.18	mg/Kg	✱	12/15/21 11:22	12/17/21 05:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	91		40 - 140				12/15/21 11:22	12/17/21 05:03	1

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.81		3.95	2.07	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1
Barium	250		1.97	0.711	mg/Kg	✱	12/10/21 10:00	12/16/21 10:30	2
Cadmium	0.766	J	0.987	0.227	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1
Chromium	20.2		0.987	0.553	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1
Lead	15.0		4.93	1.28	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1
Selenium	<2.27		4.93	2.27	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1
Silver	<0.493		0.987	0.493	mg/Kg	✱	12/10/21 10:00	12/14/21 22:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0178	J	0.0201	0.00803	mg/Kg	✱	12/15/21 13:01	12/17/21 14:00	1

Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Soil

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (77-120)	DBFM (80-123)	TOL (76-120)
310-221096-1	SB-1 (6-9)	92	103	104
310-221096-2	SB-2 (7-9)	89	105	99
310-221096-2 MS	SB-2 (7-9)	96	93	104
310-221096-3	SB-2 (4-5)	93	98	98
310-221096-4	SB-3 (7-8)	89	95	100
310-221096-5	SB-4 (7-8)	94	88	106
310-221096-10	TB-2	92	98	99
310-221096-12	FD-1	84	97	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Soil

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (79-120)	DBFM (80-124)	TOL (78-120)
310-221096-6	SB-5 (2-4)	102	91	102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (77-120)	DBFM (80-123)	TOL (76-120)
LCS 310-337942/2-A	Lab Control Sample	99	95	101
MB 310-337942/1-A	Method Blank	96	103	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (79-120)	DBFM (80-124)	TOL (78-120)
LCS 310-338465/2-A	Lab Control Sample	103	100	101
MB 310-338465/1-A	Method Blank	104	95	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Eurofins TestAmerica, Cedar Falls

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas
TOL = Toluene-d8 (Surr)

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (79-120)	TOL (79-120)
310-221096-8	FD-2	118	75 S1-	103
310-221096-8	FD-2	89	93	97
310-221096-9	TB-1	97	98	102
310-221096-9	TB-1	94	99	104
310-221096-11	MW-2	111	81	101
310-221096-11	MW-2	94	106	104
LCS 310-338345/6	Lab Control Sample	111	97	103
LCS 310-338345/7	Lab Control Sample	104	99	105
LCS 310-338507/6	Lab Control Sample	113	94	104
LCS 310-338507/7	Lab Control Sample	98	98	104
LCS 310-338510/6	Lab Control Sample	100	106	107
LCS 310-338510/7	Lab Control Sample	89	104	100
MB 310-338345/5	Method Blank	97	95	106
MB 310-338507/5	Method Blank	99	95	103
MB 310-338510/5	Method Blank	93	101	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Soil

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (24-110)	NBZ (17-114)	TPHL (22-110)
310-221096-1	SB-1 (6-9)	52	49	62
310-221096-2	SB-2 (7-9)	75	70	89
310-221096-2 MS	SB-2 (7-9)	69	67	81
310-221096-2 MSD	SB-2 (7-9)	81	57	90
310-221096-4	SB-3 (7-8)	73	71	86
310-221096-5	SB-4 (7-8)	72	55	85
310-221096-6	SB-5 (2-4)	78	71	91
310-221096-12	FD-1	57	58	56

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (24-110)	NBZ (17-114)	TPHL (22-110)
LCS 310-337947/2-A	Lab Control Sample	66	64	84
LCS 310-338120/2-A	Lab Control Sample	84	81	89
MB 310-337947/1-A	Method Blank	64	59	84

Eurofins TestAmerica, Cedar Falls

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (24-110)	NBZ (17-114)	TPHL (22-110)
MB 310-338120/1-A	Method Blank	68	67	
MB 310-338120/1-A	Method Blank			66
Surrogate Legend				
FBP = 2-Fluorobiphenyl (Surr)				
NBZ = Nitrobenzene-d5 (Surr)				
TPHL = Terphenyl-d14 (Surr)				

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP (21-110)	NBZ (15-110)	TPHL (13-110)
310-221096-8	FD-2	65	204 S1+	74
310-221096-11	MW-2	59	128 S1+	61
LCS 310-338119/2-A	Lab Control Sample	65	64	86
MB 310-338119/1-A	Method Blank	72	66	88
Surrogate Legend				
FBP = 2-Fluorobiphenyl (Surr)				
NBZ = Nitrobenzene-d5 (Surr)				
TPHL = Terphenyl-d14 (Surr)				

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Matrix: Soil

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TFT-F1 (70-130)	
310-221096-1	SB-1 (6-9)	99	
310-221096-2	SB-2 (7-9)	100	
310-221096-2 MS	SB-2 (7-9)	96	
310-221096-2 MSD	SB-2 (7-9)	97	
310-221096-4	SB-3 (7-8)	98	
310-221096-5	SB-4 (7-8)	98	
310-221096-6	SB-5 (2-4)	98	
310-221096-12	FD-1	95	
Surrogate Legend			
TFT-F = a,a,a-Trifluorotoluene (fid)			

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TFT-F1 (70-130)	
LCS 400-560235/2-A	Lab Control Sample	98	
LCSD 400-560235/3-A	Lab Control Sample Dup	96	
MB 400-560235/1-A	Method Blank	97	
Surrogate Legend			

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas
TFT-F = a,a,a-Trifluorotoluene (fid)

Job ID: 310-221096-1
SDG: 193705435

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT-F1 (70-130)
310-221096-8	FD-2	96
310-221096-11	MW-2	96
LCS 400-559838/3	Lab Control Sample	100
LCSD 400-559838/4	Lab Control Sample Dup	100
MB 400-559838/2	Method Blank	99

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Soil

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-110)	TCX1 (10-110)
310-221096-1	SB-1 (6-9)	74	60
310-221096-2	SB-2 (7-9)	92	72
310-221096-2 MS	SB-2 (7-9)	95	71
310-221096-2 MSD	SB-2 (7-9)	98	72
310-221096-4	SB-3 (7-8)	82	70
310-221096-12	FD-1	86	74

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-110)	TCX1 (10-110)
LCS 310-338269/2-A	Lab Control Sample	101	84
MB 310-338269/1-A	Method Blank	103	77

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-110)	TCX1 (13-110)
310-221096-11	MW-2	68	62
LCS 310-339055/2-A	Lab Control Sample	91	54
LCSD 310-339055/3-A	Lab Control Sample Dup	65	43
MB 310-339055/1-A	Method Blank	90	60

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

Eurofins TestAmerica, Cedar Falls

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas
TCX = Tetrachloro-m-xylene (Surr)

Job ID: 310-221096-1
SDG: 193705435

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Matrix: Soil

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1COD (40-140)
310-221096-1	SB-1 (6-9)	81
310-221096-2	SB-2 (7-9)	80
310-221096-2 MS	SB-2 (7-9)	82
310-221096-2 MSD	SB-2 (7-9)	81
310-221096-4	SB-3 (7-8)	86
310-221096-5	SB-4 (7-8)	86
310-221096-6	SB-5 (2-4)	83
310-221096-12	FD-1	91
310-221096-12 MS	FD-1	93
310-221096-12 MSD	FD-1	95

Surrogate Legend

1COD = 1-Chlorooctadecane

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1COD (40-140)
LCS 400-558944/2-A	Lab Control Sample	81
LCS 400-559999/2-A	Lab Control Sample	92
MB 400-558944/1-A	Method Blank	83
MB 400-559999/1-A	Method Blank	93

Surrogate Legend

1COD = 1-Chlorooctadecane

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1COD (40-140)
310-221096-8	FD-2	124
310-221096-11	MW-2	107
LCS 400-559146/2-A	Lab Control Sample	112
LCSD 400-559146/3-A	Lab Control Sample Dup	111
MB 400-559146/1-A	Method Blank	109

Surrogate Legend

1COD = 1-Chlorooctadecane

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-337942/1-A

Matrix: Solid

Analysis Batch: 337944

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 337942

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<17.4		94.4	17.4	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Benzene	<1.70		9.44	1.70	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Bromobenzene	<0.604		9.44	0.604	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Bromochloromethane	<0.774		9.44	0.774	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Bromodichloromethane	<0.736		9.44	0.736	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Bromoform	<1.21		18.9	1.21	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Bromomethane	<3.02		37.8	3.02	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
2-Butanone (MEK)	<2.83		37.8	2.83	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Carbon disulfide	<2.27		9.44	2.27	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Carbon tetrachloride	<2.64		9.44	2.64	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Chlorobenzene	<1.45		9.44	1.45	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Chlorodibromomethane	<0.415		9.44	0.415	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Chloroethane	<6.80		37.8	6.80	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Chloroform	<3.21		9.44	3.21	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Chloromethane	<6.23		37.8	6.23	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
2-Chlorotoluene	<0.774		9.44	0.774	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
4-Chlorotoluene	<3.02		9.44	3.02	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
cis-1,2-Dichloroethene	<1.42		9.44	1.42	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
cis-1,3-Dichloropropene	<1.06		9.44	1.06	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2-Dibromo-3-Chloropropane	<1.59		18.9	1.59	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2-Dibromoethane (EDB)	<0.491		9.44	0.491	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Dibromomethane	<0.378		9.44	0.378	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2-Dichlorobenzene	<0.736		9.44	0.736	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,3-Dichlorobenzene	<0.887		9.44	0.887	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,4-Dichlorobenzene	<1.04		9.44	1.04	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Dichlorodifluoromethane	<7.36		28.3	7.36	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1-Dichloroethane	<0.812		9.44	0.812	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2-Dichloroethane	<0.585		9.44	0.585	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1-Dichloroethene	<1.32		9.44	1.32	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2-Dichloropropane	<0.812		9.44	0.812	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,3-Dichloropropane	<0.491		9.44	0.491	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
2,2-Dichloropropane	<1.62		37.8	1.62	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1-Dichloropropene	<0.982		9.44	0.982	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Ethylbenzene	<4.53		9.44	4.53	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Hexachlorobutadiene	<2.27		47.2	2.27	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Hexane	<14.2		47.2	14.2	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Isopropylbenzene	<3.59		9.44	3.59	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Methylene Chloride	<54.8		94.4	54.8	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Methyl tert-butyl ether	<0.415		9.44	0.415	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Naphthalene	<12.8		47.2	12.8	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
n-Butylbenzene	<3.97		9.44	3.97	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
N-Propylbenzene	<2.64		9.44	2.64	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
p-Isopropyltoluene	<1.68		9.44	1.68	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
sec-Butylbenzene	<1.89		9.44	1.89	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Styrene	<6.61		9.44	6.61	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
tert-Butylbenzene	<1.59		9.44	1.59	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1,1,2-Tetrachloroethane	<0.604		9.44	0.604	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1,2,2-Tetrachloroethane	<0.661		9.44	0.661	ug/Kg		12/08/21 07:49	12/08/21 10:54	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-337942/1-A

Matrix: Solid

Analysis Batch: 337944

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 337942

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.79		9.44	1.79	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Toluene	<6.23		9.44	6.23	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
trans-1,2-Dichloroethene	<1.15		9.44	1.15	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
trans-1,3-Dichloropropene	<1.04		9.44	1.04	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2,3-Trichlorobenzene	<1.44		18.9	1.44	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2,4-Trichlorobenzene	<3.21		18.9	3.21	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1,1-Trichloroethane	<0.869		9.44	0.869	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,1,2-Trichloroethane	<0.604		9.44	0.604	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Trichloroethene	<2.64		9.44	2.64	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Trichlorofluoromethane	<10.4		37.8	10.4	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2,3-Trichloropropane	<0.906		9.44	0.906	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,2,4-Trimethylbenzene	<5.85		9.44	5.85	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
1,3,5-Trimethylbenzene	<3.40		9.44	3.40	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Vinyl chloride	<6.61		18.9	6.61	ug/Kg		12/08/21 07:49	12/08/21 10:54	1
Xylenes, Total	<6.80		18.9	6.80	ug/Kg		12/08/21 07:49	12/08/21 10:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		77 - 120	12/08/21 07:49	12/08/21 10:54	1
Dibromofluoromethane (Surr)	103		80 - 123	12/08/21 07:49	12/08/21 10:54	1
Toluene-d8 (Surr)	99		76 - 120	12/08/21 07:49	12/08/21 10:54	1

Lab Sample ID: LCS 310-337942/2-A

Matrix: Solid

Analysis Batch: 337944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 337942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	178	188.8		ug/Kg		106	52 - 150
Benzene	89.2	84.93		ug/Kg		95	77 - 134
Bromobenzene	89.2	82.15		ug/Kg		92	77 - 121
Bromochloromethane	89.2	88.71		ug/Kg		99	80 - 135
Bromodichloromethane	89.2	82.65		ug/Kg		93	78 - 122
Bromoform	89.2	83.81		ug/Kg		94	72 - 122
2-Butanone (MEK)	178	169.1		ug/Kg		95	60 - 150
Carbon disulfide	89.2	78.75		ug/Kg		88	61 - 142
Carbon tetrachloride	89.2	84.20		ug/Kg		94	77 - 127
Chlorobenzene	89.2	77.06		ug/Kg		86	76 - 120
Chlorodibromomethane	89.2	83.66		ug/Kg		94	78 - 122
Chloroform	89.2	83.45		ug/Kg		94	78 - 127
2-Chlorotoluene	89.2	79.33		ug/Kg		89	76 - 121
4-Chlorotoluene	89.2	75.66		ug/Kg		85	70 - 120
cis-1,2-Dichloroethene	89.2	87.64		ug/Kg		98	74 - 136
cis-1,3-Dichloropropene	89.2	87.55		ug/Kg		98	79 - 126
1,2-Dibromo-3-Chloropropane	89.2	85.05		ug/Kg		95	52 - 150
1,2-Dibromoethane (EDB)	89.2	83.43		ug/Kg		93	80 - 125
Dibromomethane	89.2	84.53		ug/Kg		95	80 - 130
1,2-Dichlorobenzene	89.2	81.10		ug/Kg		91	72 - 122
1,3-Dichlorobenzene	89.2	79.64		ug/Kg		89	67 - 124
1,4-Dichlorobenzene	89.2	82.66		ug/Kg		93	66 - 124

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-337942/2-A

Matrix: Solid

Analysis Batch: 337944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 337942

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	89.2	85.94		ug/Kg		96	74 - 137
1,2-Dichloroethane	89.2	83.90		ug/Kg		94	79 - 132
1,1-Dichloroethene	89.2	79.09		ug/Kg		89	62 - 130
1,2-Dichloropropane	89.2	85.65		ug/Kg		96	78 - 135
1,3-Dichloropropane	89.2	86.07		ug/Kg		96	79 - 139
2,2-Dichloropropane	89.2	85.22		ug/Kg		95	54 - 150
1,1-Dichloropropene	89.2	85.46		ug/Kg		96	76 - 133
Ethylbenzene	89.2	82.19		ug/Kg		92	78 - 122
Hexachlorobutadiene	89.2	76.38		ug/Kg		86	41 - 141
Hexane	89.2	62.91		ug/Kg		70	36 - 136
Isopropylbenzene	89.2	81.81		ug/Kg		92	76 - 120
Methylene Chloride	89.2	90.41	J	ug/Kg		101	55 - 150
Methyl tert-butyl ether	89.2	82.33		ug/Kg		92	73 - 135
Naphthalene	89.2	90.35		ug/Kg		101	52 - 150
n-Butylbenzene	89.2	83.43		ug/Kg		93	59 - 125
N-Propylbenzene	89.2	80.14		ug/Kg		90	74 - 123
p-Isopropyltoluene	89.2	81.23		ug/Kg		91	67 - 123
sec-Butylbenzene	89.2	84.03		ug/Kg		94	70 - 123
Styrene	89.2	79.89		ug/Kg		90	75 - 120
tert-Butylbenzene	89.2	85.33		ug/Kg		96	74 - 124
1,1,1,2-Tetrachloroethane	89.2	79.47		ug/Kg		89	77 - 121
1,1,2,2-Tetrachloroethane	89.2	87.53		ug/Kg		98	80 - 127
Tetrachloroethene	89.2	80.83		ug/Kg		91	72 - 121
Toluene	89.2	85.11		ug/Kg		95	77 - 121
trans-1,2-Dichloroethene	89.2	81.33		ug/Kg		91	71 - 134
trans-1,3-Dichloropropene	89.2	85.44		ug/Kg		96	77 - 122
1,2,3-Trichlorobenzene	89.2	77.73		ug/Kg		87	47 - 147
1,2,4-Trichlorobenzene	89.2	78.14		ug/Kg		88	49 - 139
1,1,1-Trichloroethane	89.2	85.58		ug/Kg		96	79 - 132
1,1,2-Trichloroethane	89.2	81.57		ug/Kg		91	80 - 124
Trichloroethene	89.2	84.77		ug/Kg		95	76 - 132
1,2,3-Trichloropropane	89.2	90.41		ug/Kg		101	79 - 126
1,2,4-Trimethylbenzene	89.2	84.40		ug/Kg		95	69 - 125
1,3,5-Trimethylbenzene	89.2	80.80		ug/Kg		91	70 - 122
Xylenes, Total	178	165.0		ug/Kg		92	76 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		77 - 120
Dibromofluoromethane (Surr)	95		80 - 123
Toluene-d8 (Surr)	101		76 - 120

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 337944

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337942

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	17.5	J	106	33.99	J	ug/Kg	✱	16	10 - 150
Benzene	<0.963	F1	52.9	3.917	J F1	ug/Kg	✱	7	45 - 140

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 337944

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337942

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	<0.342		52.9	5.791		ug/Kg	✱	11	10 - 134
Bromochloromethane	<0.439	F1	52.9	7.649	F1	ug/Kg	✱	14	56 - 136
Bromodichloromethane	<0.417	F1	52.9	5.284	J F1	ug/Kg	✱	10	44 - 128
Bromoform	<0.685	F1	52.9	9.776	J F1	ug/Kg	✱	18	24 - 129
2-Butanone (MEK)	<1.60		106	21.97		ug/Kg	✱	21	21 - 150
Carbon disulfide	<1.28	F1	52.9	6.072	F1	ug/Kg	✱	11	26 - 142
Carbon tetrachloride	<1.50	F1	52.9	2.074	J F1	ug/Kg	✱	4	43 - 131
Chlorobenzene	<0.824	F1	52.9	3.202	J F1	ug/Kg	✱	6	21 - 130
Chlorodibromomethane	<0.235	F1	52.9	6.789	F1	ug/Kg	✱	13	35 - 130
Chloroform	<1.82	F1	52.9	5.679	F1	ug/Kg	✱	11	55 - 130
2-Chlorotoluene	<0.439		52.9	6.774		ug/Kg	✱	13	11 - 129
4-Chlorotoluene	<1.71		52.9	6.316		ug/Kg	✱	12	10 - 124
cis-1,2-Dichloroethene	<0.802	F1	52.9	5.500	F1	ug/Kg	✱	10	45 - 140
cis-1,3-Dichloropropene	<0.599	F1	52.9	4.093	J F1	ug/Kg	✱	8	31 - 134
1,2-Dibromo-3-Chloropropane	<0.899		52.9	14.39		ug/Kg	✱	27	13 - 150
1,2-Dibromoethane (EDB)	<0.278	F1	52.9	5.373	F1	ug/Kg	✱	10	37 - 134
Dibromomethane	<0.214	F1	52.9	6.208	F1	ug/Kg	✱	12	48 - 137
1,2-Dichlorobenzene	<0.417		52.9	9.535		ug/Kg	✱	18	10 - 128
1,3-Dichlorobenzene	<0.503		52.9	9.268		ug/Kg	✱	18	10 - 124
1,4-Dichlorobenzene	<0.588		52.9	9.696		ug/Kg	✱	18	10 - 124
1,1-Dichloroethane	<0.460	F1	52.9	6.537	F1	ug/Kg	✱	12	58 - 137
1,2-Dichloroethane	<0.332	F1	52.9	6.371	F1	ug/Kg	✱	12	55 - 132
1,1-Dichloroethene	<0.749	F1	52.9	5.544	F1	ug/Kg	✱	10	38 - 138
1,2-Dichloropropane	<0.460	F1	52.9	4.545	J F1	ug/Kg	✱	9	53 - 136
1,3-Dichloropropane	<0.278	F1	52.9	5.347	F1	ug/Kg	✱	10	45 - 142
2,2-Dichloropropane	<0.920	F1	52.9	3.568	J F1	ug/Kg	✱	7	39 - 150
1,1-Dichloropropene	<0.556	F1	52.9	2.622	J F1	ug/Kg	✱	5	40 - 137
Ethylbenzene	<2.57	F1	52.9	2.732	J F1	ug/Kg	✱	5	22 - 135
Hexachlorobutadiene	<1.28		52.9	15.21	J	ug/Kg	✱	29	10 - 141
Hexane	<8.02	F1	52.9	<7.93	F1	ug/Kg	✱	0	11 - 136
Isopropylbenzene	<2.03	F1	52.9	4.450	J F1	ug/Kg	✱	8	17 - 130
Methylene Chloride	<31.0	F1	52.9	<30.7	F1	ug/Kg	✱	0	37 - 150
Methyl tert-butyl ether	<0.235	F1	52.9	5.455	F1	ug/Kg	✱	10	66 - 135
Naphthalene	<7.27	F1	52.9	<7.19	F1	ug/Kg	✱	0	10 - 150
n-Butylbenzene	<2.25		52.9	12.25		ug/Kg	✱	23	10 - 125
N-Propylbenzene	<1.50		52.9	5.593		ug/Kg	✱	11	10 - 132
p-Isopropyltoluene	<0.952		52.9	10.00		ug/Kg	✱	19	10 - 123
sec-Butylbenzene	<1.07		52.9	9.412		ug/Kg	✱	18	10 - 128
Styrene	<3.74	F1	52.9	<3.70	F1	ug/Kg	✱	0	10 - 132
tert-Butylbenzene	<0.899		52.9	8.930		ug/Kg	✱	17	15 - 131
1,1,1,2-Tetrachloroethane	<0.342	F1	52.9	5.652	F1	ug/Kg	✱	11	35 - 128
1,1,1,2,2-Tetrachloroethane	<0.374	F1	52.9	15.34	F1	ug/Kg	✱	29	33 - 138
Tetrachloroethene	<1.02	F1	52.9	1.554	J F1	ug/Kg	✱	3	23 - 127
Toluene	<3.53	F1	52.9	<3.49	F1	ug/Kg	✱	0	35 - 129
trans-1,2-Dichloroethene	<0.652	F1	52.9	5.693	F1	ug/Kg	✱	11	45 - 136
trans-1,3-Dichloropropene	<0.588	F1	52.9	4.793	J F1	ug/Kg	✱	9	26 - 129
1,2,3-Trichlorobenzene	<0.813		52.9	7.586	J	ug/Kg	✱	14	10 - 147
1,2,4-Trichlorobenzene	<1.82		52.9	9.441	J	ug/Kg	✱	18	10 - 139
1,1,1-Trichloroethane	<0.492	F1	52.9	3.215	J F1	ug/Kg	✱	6	53 - 135

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 337944

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337942

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	<0.342	F1	52.9	6.624	F1	ug/Kg	⊛	13	46 - 133
Trichloroethene	<1.50	F1	52.9	3.026	J F1	ug/Kg	⊛	6	38 - 138
1,2,3-Trichloropropane	<0.513	F1	52.9	12.82	F1	ug/Kg	⊛	24	38 - 134
1,2,4-Trimethylbenzene	<3.32		52.9	8.236		ug/Kg	⊛	16	10 - 138
1,3,5-Trimethylbenzene	<1.93		52.9	6.736		ug/Kg	⊛	13	12 - 127
Xylenes, Total	<3.85	F1	106	6.441	J F1	ug/Kg	⊛	6	17 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		77 - 120
Dibromofluoromethane (Surr)	93		80 - 123
Toluene-d8 (Surr)	104		76 - 120

Lab Sample ID: MB 310-338345/5

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			12/10/21 11:17	1
Benzene	<0.220		0.500	0.220	ug/L			12/10/21 11:17	1
Bromobenzene	<0.340		1.00	0.340	ug/L			12/10/21 11:17	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			12/10/21 11:17	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			12/10/21 11:17	1
Bromoform	<0.780		5.00	0.780	ug/L			12/10/21 11:17	1
Bromomethane	<1.10		4.00	1.10	ug/L			12/10/21 11:17	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			12/10/21 11:17	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			12/10/21 11:17	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			12/10/21 11:17	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			12/10/21 11:17	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			12/10/21 11:17	1
Chloroethane	<0.790		4.00	0.790	ug/L			12/10/21 11:17	1
Chloroform	<1.30		3.00	1.30	ug/L			12/10/21 11:17	1
Chloromethane	<0.610		3.00	0.610	ug/L			12/10/21 11:17	1
2-Chlorotoluene	<0.280		1.00	0.280	ug/L			12/10/21 11:17	1
4-Chlorotoluene	<0.290		1.00	0.290	ug/L			12/10/21 11:17	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			12/10/21 11:17	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			12/10/21 11:17	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			12/10/21 11:17	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			12/10/21 11:17	1
Dibromomethane	<0.330		1.00	0.330	ug/L			12/10/21 11:17	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			12/10/21 11:17	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			12/10/21 11:17	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			12/10/21 11:17	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			12/10/21 11:17	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			12/10/21 11:17	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			12/10/21 11:17	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			12/10/21 11:17	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			12/10/21 11:17	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			12/10/21 11:17	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338345/5

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			12/10/21 11:17	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			12/10/21 11:17	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			12/10/21 11:17	1
Hexachlorobutadiene	<1.40		5.00	1.40	ug/L			12/10/21 11:17	1
Hexane	<0.780		1.00	0.780	ug/L			12/10/21 11:17	1
Isopropylbenzene	<0.350		1.00	0.350	ug/L			12/10/21 11:17	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			12/10/21 11:17	1
Methyl tert-butyl ether	<0.490		1.00	0.490	ug/L			12/10/21 11:17	1
Naphthalene	<3.00		5.00	3.00	ug/L			12/10/21 11:17	1
n-Butylbenzene	<0.440		1.00	0.440	ug/L			12/10/21 11:17	1
N-Propylbenzene	<0.390		1.00	0.390	ug/L			12/10/21 11:17	1
p-Isopropyltoluene	<0.330		1.00	0.330	ug/L			12/10/21 11:17	1
sec-Butylbenzene	<0.440		1.00	0.440	ug/L			12/10/21 11:17	1
Styrene	<0.370		1.00	0.370	ug/L			12/10/21 11:17	1
tert-Butylbenzene	<0.390		1.00	0.390	ug/L			12/10/21 11:17	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			12/10/21 11:17	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			12/10/21 11:17	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			12/10/21 11:17	1
Toluene	<0.430		1.00	0.430	ug/L			12/10/21 11:17	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			12/10/21 11:17	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			12/10/21 11:17	1
1,2,3-Trichlorobenzene	<0.900		5.00	0.900	ug/L			12/10/21 11:17	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			12/10/21 11:17	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			12/10/21 11:17	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			12/10/21 11:17	1
Trichloroethene	<0.430		1.00	0.430	ug/L			12/10/21 11:17	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			12/10/21 11:17	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			12/10/21 11:17	1
1,2,4-Trimethylbenzene	<0.420		1.00	0.420	ug/L			12/10/21 11:17	1
1,3,5-Trimethylbenzene	<0.370		1.00	0.370	ug/L			12/10/21 11:17	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			12/10/21 11:17	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			12/10/21 11:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		12/10/21 11:17	1
Dibromofluoromethane (Surr)	95		79 - 120		12/10/21 11:17	1
Toluene-d8 (Surr)	106		79 - 120		12/10/21 11:17	1

Lab Sample ID: LCS 310-338345/6

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	48.39		ug/L		121	50 - 150
Benzene	20.0	22.43		ug/L		112	73 - 127
Bromobenzene	20.0	19.52		ug/L		98	68 - 128
Bromochloromethane	20.0	20.51		ug/L		103	77 - 140
Bromodichloromethane	20.0	21.27		ug/L		106	70 - 122

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-338345/6

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	18.37		ug/L		92	58 - 125
2-Butanone (MEK)	40.0	45.23		ug/L		113	49 - 150
Carbon disulfide	20.0	30.12	*+	ug/L		151	58 - 140
Carbon tetrachloride	20.0	21.93		ug/L		110	66 - 136
Chlorobenzene	20.0	20.84		ug/L		104	72 - 124
Chlorodibromomethane	20.0	19.92		ug/L		100	66 - 126
Chloroform	20.0	19.74		ug/L		99	72 - 125
2-Chlorotoluene	20.0	23.59		ug/L		118	68 - 129
4-Chlorotoluene	20.0	23.74		ug/L		119	67 - 128
cis-1,2-Dichloroethene	20.0	22.15		ug/L		111	71 - 130
cis-1,3-Dichloropropene	20.0	22.11		ug/L		111	69 - 122
1,2-Dibromo-3-Chloropropane	20.0	18.70		ug/L		93	42 - 150
1,2-Dibromoethane (EDB)	20.0	21.43		ug/L		107	70 - 129
Dibromomethane	20.0	20.71		ug/L		104	71 - 133
1,2-Dichlorobenzene	20.0	21.62		ug/L		108	67 - 125
1,3-Dichlorobenzene	20.0	20.91		ug/L		105	65 - 128
1,4-Dichlorobenzene	20.0	20.60		ug/L		103	66 - 126
1,1-Dichloroethane	20.0	22.35		ug/L		112	71 - 131
1,2-Dichloroethane	20.0	22.92		ug/L		115	72 - 128
1,1-Dichloroethene	20.0	25.47		ug/L		127	64 - 137
1,2-Dichloropropane	20.0	20.95		ug/L		105	71 - 130
1,3-Dichloropropane	20.0	22.33		ug/L		112	72 - 130
2,2-Dichloropropane	20.0	25.02		ug/L		125	33 - 150
1,1-Dichloropropene	20.0	23.74		ug/L		119	72 - 130
Ethylbenzene	20.0	22.69		ug/L		113	73 - 127
Hexachlorobutadiene	20.0	21.57		ug/L		108	48 - 150
Hexane	20.0	35.47	*+	ug/L		177	50 - 150
Isopropylbenzene	20.0	21.51		ug/L		108	71 - 127
Methylene Chloride	20.0	25.93		ug/L		130	48 - 150
Methyl tert-butyl ether	20.0	23.63		ug/L		118	68 - 127
Naphthalene	20.0	19.70		ug/L		98	43 - 150
n-Butylbenzene	20.0	24.64		ug/L		123	64 - 129
N-Propylbenzene	20.0	22.54		ug/L		113	68 - 129
p-Isopropyltoluene	20.0	22.26		ug/L		111	66 - 128
sec-Butylbenzene	20.0	21.87		ug/L		109	64 - 134
Styrene	20.0	21.30		ug/L		107	69 - 127
tert-Butylbenzene	20.0	22.14		ug/L		111	66 - 132
1,1,1,2-Tetrachloroethane	20.0	18.47		ug/L		92	69 - 124
1,1,2,2-Tetrachloroethane	20.0	21.38		ug/L		107	66 - 129
Tetrachloroethene	20.0	19.62		ug/L		98	68 - 135
Toluene	20.0	21.93		ug/L		110	71 - 126
trans-1,2-Dichloroethene	20.0	24.32		ug/L		122	69 - 132
trans-1,3-Dichloropropene	20.0	22.91		ug/L		115	65 - 123
1,2,3-Trichlorobenzene	20.0	19.32		ug/L		97	45 - 150
1,2,4-Trichlorobenzene	20.0	19.20		ug/L		96	57 - 133
1,1,1-Trichloroethane	20.0	22.65		ug/L		113	70 - 129
1,1,2-Trichloroethane	20.0	22.87		ug/L		114	68 - 128
Trichloroethene	20.0	22.48		ug/L		112	71 - 130
1,2,3-Trichloropropane	20.0	23.41		ug/L		117	61 - 137

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-338345/6

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trimethylbenzene	20.0	21.72		ug/L		109	64 - 133
1,3,5-Trimethylbenzene	20.0	21.97		ug/L		110	66 - 134
Xylenes, Total	40.0	44.08		ug/L		110	70 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		80 - 120
Dibromofluoromethane (Surr)	97		79 - 120
Toluene-d8 (Surr)	103		79 - 120

Lab Sample ID: LCS 310-338345/7

Matrix: Water

Analysis Batch: 338345

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	20.0	10.67		ug/L		53	22 - 150
Chloroethane	20.0	17.44		ug/L		87	61 - 139
Chloromethane	20.0	16.26		ug/L		81	48 - 150
Dichlorodifluoromethane	20.0	18.95		ug/L		95	50 - 150
Trichlorofluoromethane	20.0	20.63		ug/L		103	59 - 150
Vinyl chloride	20.0	18.78		ug/L		94	65 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	99		79 - 120
Toluene-d8 (Surr)	105		79 - 120

Lab Sample ID: MB 310-338465/1-A

Matrix: Solid

Analysis Batch: 338469

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<136		474	136	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Benzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Bromobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Bromochloromethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Bromodichloromethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Bromoform	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Bromomethane	<237		474	237	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
2-Butanone (MEK)	<114		712	114	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Carbon disulfide	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Carbon tetrachloride	<32.7		94.9	32.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Chlorobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Chlorodibromomethane	<34.6		94.9	34.6	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Chloroethane	<47.4		94.9	47.4	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Chloroform	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Chloromethane	<29.4		237	29.4	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
2-Chlorotoluene	<26.1		94.9	26.1	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
4-Chlorotoluene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338465/1-A

Matrix: Solid

Analysis Batch: 338469

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
cis-1,3-Dichloropropene	<27.0		94.9	27.0	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2-Dibromo-3-Chloropropane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2-Dibromoethane (EDB)	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Dibromomethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2-Dichlorobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,3-Dichlorobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,4-Dichlorobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Dichlorodifluoromethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1-Dichloroethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2-Dichloroethane	<34.6		94.9	34.6	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1-Dichloroethene	<30.4		94.9	30.4	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2-Dichloropropane	<25.6		94.9	25.6	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,3-Dichloropropane	<30.8		94.9	30.8	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
2,2-Dichloropropane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1-Dichloropropene	<27.0		94.9	27.0	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Ethylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Hexachlorobutadiene	<28.9		94.9	28.9	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Hexane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Isopropylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Methylene Chloride	<123		237	123	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Methyl tert-butyl ether	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Naphthalene	36.39	J	237	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
n-Butylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
N-Propylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
p-Isopropyltoluene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
sec-Butylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Styrene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
tert-Butylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1,1,2-Tetrachloroethane	<28.0		94.9	28.0	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1,1,2,2-Tetrachloroethane	<33.7		94.9	33.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Tetrachloroethene	<31.8		94.9	31.8	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Toluene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
trans-1,2-Dichloroethene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
trans-1,3-Dichloropropene	<25.1		94.9	25.1	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2,3-Trichlorobenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2,4-Trichlorobenzene	<24.7		94.9	24.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1,1-Trichloroethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,1,2-Trichloroethane	<35.1		94.9	35.1	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Trichloroethene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Trichlorofluoromethane	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2,3-Trichloropropane	<42.2		94.9	42.2	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,2,4-Trimethylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
1,3,5-Trimethylbenzene	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Vinyl chloride	<23.7		94.9	23.7	ug/Kg		12/13/21 07:33	12/13/21 10:37	1
Xylenes, Total	<39.9		142	39.9	ug/Kg		12/13/21 07:33	12/13/21 10:37	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338465/1-A

Matrix: Solid

Analysis Batch: 338469

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338465

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		79 - 120	12/13/21 07:33	12/13/21 10:37	1
Dibromofluoromethane (Surr)	95		80 - 124	12/13/21 07:33	12/13/21 10:37	1
Toluene-d8 (Surr)	100		78 - 120	12/13/21 07:33	12/13/21 10:37	1

Lab Sample ID: LCS 310-338465/2-A

Matrix: Solid

Analysis Batch: 338469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	1980	1925		ug/Kg		97	44 - 150
Benzene	988	947.5		ug/Kg		96	80 - 134
Bromobenzene	988	932.6		ug/Kg		94	80 - 126
Bromochloromethane	988	1032		ug/Kg		104	80 - 144
Bromodichloromethane	988	863.1		ug/Kg		87	75 - 132
Bromoform	988	852.6		ug/Kg		86	62 - 131
2-Butanone (MEK)	1980	2101		ug/Kg		106	57 - 150
Carbon disulfide	988	812.6		ug/Kg		82	63 - 136
Carbon tetrachloride	988	936.4		ug/Kg		95	78 - 132
Chlorobenzene	988	930.0		ug/Kg		94	80 - 126
Chlorodibromomethane	988	895.7		ug/Kg		91	74 - 128
Chloroform	988	911.8		ug/Kg		92	80 - 138
2-Chlorotoluene	988	913.0		ug/Kg		92	80 - 126
4-Chlorotoluene	988	897.7		ug/Kg		91	80 - 125
cis-1,2-Dichloroethene	988	1074		ug/Kg		109	80 - 140
cis-1,3-Dichloropropene	988	1036		ug/Kg		105	80 - 127
1,2-Dibromo-3-Chloropropane	988	848.3		ug/Kg		86	45 - 145
1,2-Dibromoethane (EDB)	988	918.1		ug/Kg		93	80 - 128
Dibromomethane	988	876.3		ug/Kg		89	80 - 139
1,2-Dichlorobenzene	988	863.8		ug/Kg		87	80 - 121
1,3-Dichlorobenzene	988	870.2		ug/Kg		88	80 - 122
1,4-Dichlorobenzene	988	924.7		ug/Kg		94	80 - 121
1,1-Dichloroethane	988	1030		ug/Kg		104	75 - 150
1,2-Dichloroethane	988	891.7		ug/Kg		90	79 - 141
1,1-Dichloroethene	988	859.4		ug/Kg		87	60 - 150
1,2-Dichloropropane	988	931.6		ug/Kg		94	80 - 143
1,3-Dichloropropane	988	922.6		ug/Kg		93	80 - 129
2,2-Dichloropropane	988	1065		ug/Kg		108	64 - 150
1,1-Dichloropropene	988	987.4		ug/Kg		100	80 - 137
Ethylbenzene	988	1001		ug/Kg		101	80 - 126
Hexachlorobutadiene	988	973.6		ug/Kg		99	51 - 150
Hexane	988	983.3		ug/Kg		99	50 - 150
Isopropylbenzene	988	1025		ug/Kg		104	80 - 128
Methylene Chloride	988	827.5		ug/Kg		84	62 - 150
Methyl tert-butyl ether	988	952.0		ug/Kg		96	73 - 147
Naphthalene	988	1035		ug/Kg		105	47 - 147
n-Butylbenzene	988	941.0		ug/Kg		95	75 - 126
N-Propylbenzene	988	972.8		ug/Kg		98	79 - 131
p-Isopropyltoluene	988	999.1		ug/Kg		101	79 - 124

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-338465/2-A

Matrix: Solid

Analysis Batch: 338469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
sec-Butylbenzene	988	948.7		ug/Kg		96	79 - 122
Styrene	988	952.0		ug/Kg		96	80 - 129
tert-Butylbenzene	988	981.3		ug/Kg		99	79 - 124
1,1,1,2-Tetrachloroethane	988	904.9		ug/Kg		92	78 - 125
1,1,2,2-Tetrachloroethane	988	910.4		ug/Kg		92	74 - 133
Tetrachloroethene	988	1054		ug/Kg		107	80 - 129
Toluene	988	1000		ug/Kg		101	80 - 126
trans-1,2-Dichloroethene	988	897.1		ug/Kg		91	75 - 146
trans-1,3-Dichloropropene	988	977.1		ug/Kg		99	80 - 129
1,2,3-Trichlorobenzene	988	972.8		ug/Kg		98	48 - 148
1,2,4-Trichlorobenzene	988	988.5		ug/Kg		100	70 - 125
1,1,1-Trichloroethane	988	971.5		ug/Kg		98	79 - 136
1,1,2-Trichloroethane	988	875.6		ug/Kg		89	80 - 130
Trichloroethene	988	940.1		ug/Kg		95	80 - 137
1,2,3-Trichloropropane	988	891.0		ug/Kg		90	66 - 142
1,2,4-Trimethylbenzene	988	993.4		ug/Kg		101	79 - 128
1,3,5-Trimethylbenzene	988	976.2		ug/Kg		99	80 - 125
Xylenes, Total	1980	2053		ug/Kg		104	80 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		79 - 120
Dibromofluoromethane (Surr)	100		80 - 124
Toluene-d8 (Surr)	101		78 - 120

Lab Sample ID: MB 310-338507/5

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			12/13/21 10:47	1
Benzene	<0.220		0.500	0.220	ug/L			12/13/21 10:47	1
Bromobenzene	<0.340		1.00	0.340	ug/L			12/13/21 10:47	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			12/13/21 10:47	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			12/13/21 10:47	1
Bromoform	<0.780		5.00	0.780	ug/L			12/13/21 10:47	1
Bromomethane	<1.10		4.00	1.10	ug/L			12/13/21 10:47	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			12/13/21 10:47	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			12/13/21 10:47	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			12/13/21 10:47	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			12/13/21 10:47	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			12/13/21 10:47	1
Chloroethane	<0.790		4.00	0.790	ug/L			12/13/21 10:47	1
Chloroform	<1.30		3.00	1.30	ug/L			12/13/21 10:47	1
Chloromethane	<0.610		3.00	0.610	ug/L			12/13/21 10:47	1
2-Chlorotoluene	<0.280		1.00	0.280	ug/L			12/13/21 10:47	1
4-Chlorotoluene	<0.290		1.00	0.290	ug/L			12/13/21 10:47	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			12/13/21 10:47	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			12/13/21 10:47	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338507/5

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			12/13/21 10:47	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			12/13/21 10:47	1
Dibromomethane	<0.330		1.00	0.330	ug/L			12/13/21 10:47	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			12/13/21 10:47	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			12/13/21 10:47	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			12/13/21 10:47	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			12/13/21 10:47	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			12/13/21 10:47	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			12/13/21 10:47	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			12/13/21 10:47	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			12/13/21 10:47	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			12/13/21 10:47	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			12/13/21 10:47	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			12/13/21 10:47	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			12/13/21 10:47	1
Hexachlorobutadiene	<1.40		5.00	1.40	ug/L			12/13/21 10:47	1
Hexane	<0.780		1.00	0.780	ug/L			12/13/21 10:47	1
Isopropylbenzene	<0.350		1.00	0.350	ug/L			12/13/21 10:47	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			12/13/21 10:47	1
Methyl tert-butyl ether	<0.490		1.00	0.490	ug/L			12/13/21 10:47	1
Naphthalene	<3.00		5.00	3.00	ug/L			12/13/21 10:47	1
n-Butylbenzene	<0.440		1.00	0.440	ug/L			12/13/21 10:47	1
N-Propylbenzene	<0.390		1.00	0.390	ug/L			12/13/21 10:47	1
p-Isopropyltoluene	<0.330		1.00	0.330	ug/L			12/13/21 10:47	1
sec-Butylbenzene	<0.440		1.00	0.440	ug/L			12/13/21 10:47	1
Styrene	<0.370		1.00	0.370	ug/L			12/13/21 10:47	1
tert-Butylbenzene	<0.390		1.00	0.390	ug/L			12/13/21 10:47	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			12/13/21 10:47	1
1,1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			12/13/21 10:47	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			12/13/21 10:47	1
Toluene	<0.430		1.00	0.430	ug/L			12/13/21 10:47	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			12/13/21 10:47	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			12/13/21 10:47	1
1,2,3-Trichlorobenzene	<0.900		5.00	0.900	ug/L			12/13/21 10:47	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			12/13/21 10:47	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			12/13/21 10:47	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			12/13/21 10:47	1
Trichloroethene	<0.430		1.00	0.430	ug/L			12/13/21 10:47	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			12/13/21 10:47	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			12/13/21 10:47	1
1,2,4-Trimethylbenzene	<0.420		1.00	0.420	ug/L			12/13/21 10:47	1
1,3,5-Trimethylbenzene	<0.370		1.00	0.370	ug/L			12/13/21 10:47	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			12/13/21 10:47	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			12/13/21 10:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		12/13/21 10:47	1
Dibromofluoromethane (Surr)	95		79 - 120		12/13/21 10:47	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338507/5

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		79 - 120		12/13/21 10:47	1

Lab Sample ID: LCS 310-338507/6

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	53.87		ug/L		135	50 - 150
Benzene	20.0	22.75		ug/L		114	73 - 127
Bromobenzene	20.0	21.37		ug/L		107	68 - 128
Bromochloromethane	20.0	20.10		ug/L		101	77 - 140
Bromodichloromethane	20.0	21.77		ug/L		109	70 - 122
Bromoform	20.0	19.44		ug/L		97	58 - 125
2-Butanone (MEK)	40.0	46.26		ug/L		116	49 - 150
Carbon disulfide	20.0	31.60	*+	ug/L		158	58 - 140
Carbon tetrachloride	20.0	23.17		ug/L		116	66 - 136
Chlorobenzene	20.0	21.29		ug/L		106	72 - 124
Chlorodibromomethane	20.0	19.74		ug/L		99	66 - 126
Chloroform	20.0	20.30		ug/L		102	72 - 125
2-Chlorotoluene	20.0	23.76		ug/L		119	68 - 129
4-Chlorotoluene	20.0	24.50		ug/L		122	67 - 128
cis-1,2-Dichloroethene	20.0	22.30		ug/L		111	71 - 130
cis-1,3-Dichloropropene	20.0	22.24		ug/L		111	69 - 122
1,2-Dibromo-3-Chloropropane	20.0	18.24		ug/L		91	42 - 150
1,2-Dibromoethane (EDB)	20.0	21.62		ug/L		108	70 - 129
Dibromomethane	20.0	21.11		ug/L		106	71 - 133
1,2-Dichlorobenzene	20.0	21.69		ug/L		108	67 - 125
1,3-Dichlorobenzene	20.0	20.52		ug/L		103	65 - 128
1,4-Dichlorobenzene	20.0	20.20		ug/L		101	66 - 126
1,1-Dichloroethane	20.0	22.18		ug/L		111	71 - 131
1,2-Dichloroethane	20.0	23.06		ug/L		115	72 - 128
1,1-Dichloroethene	20.0	27.21		ug/L		136	64 - 137
1,2-Dichloropropane	20.0	21.65		ug/L		108	71 - 130
1,3-Dichloropropane	20.0	22.00		ug/L		110	72 - 130
2,2-Dichloropropane	20.0	25.01		ug/L		125	33 - 150
1,1-Dichloropropene	20.0	25.18		ug/L		126	72 - 130
Ethylbenzene	20.0	23.30		ug/L		116	73 - 127
Hexachlorobutadiene	20.0	22.52		ug/L		113	48 - 150
Hexane	20.0	38.46	*+	ug/L		192	50 - 150
Isopropylbenzene	20.0	21.98		ug/L		110	71 - 127
Methylene Chloride	20.0	26.85		ug/L		134	48 - 150
Methyl tert-butyl ether	20.0	24.54		ug/L		123	68 - 127
Naphthalene	20.0	19.50		ug/L		98	43 - 150
n-Butylbenzene	20.0	24.69		ug/L		123	64 - 129
N-Propylbenzene	20.0	23.49		ug/L		117	68 - 129
p-Isopropyltoluene	20.0	22.46		ug/L		112	66 - 128
sec-Butylbenzene	20.0	21.88		ug/L		109	64 - 134
Styrene	20.0	21.95		ug/L		110	69 - 127

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-338507/6

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
tert-Butylbenzene	20.0	21.58		ug/L		108	66 - 132
1,1,1,2-Tetrachloroethane	20.0	19.55		ug/L		98	69 - 124
1,1,2,2-Tetrachloroethane	20.0	22.03		ug/L		110	66 - 129
Tetrachloroethene	20.0	20.96		ug/L		105	68 - 135
Toluene	20.0	22.44		ug/L		112	71 - 126
trans-1,2-Dichloroethene	20.0	25.49		ug/L		127	69 - 132
trans-1,3-Dichloropropene	20.0	23.17		ug/L		116	65 - 123
1,2,3-Trichlorobenzene	20.0	19.61		ug/L		98	45 - 150
1,2,4-Trichlorobenzene	20.0	19.25		ug/L		96	57 - 133
1,1,1-Trichloroethane	20.0	23.10		ug/L		116	70 - 129
1,1,2-Trichloroethane	20.0	22.35		ug/L		112	68 - 128
Trichloroethene	20.0	23.35		ug/L		117	71 - 130
1,2,3-Trichloropropane	20.0	24.08		ug/L		120	61 - 137
1,2,4-Trimethylbenzene	20.0	21.34		ug/L		107	64 - 133
1,3,5-Trimethylbenzene	20.0	21.73		ug/L		109	66 - 134
Xylenes, Total	40.0	43.93		ug/L		110	70 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		80 - 120
Dibromofluoromethane (Surr)	94		79 - 120
Toluene-d8 (Surr)	104		79 - 120

Lab Sample ID: LCS 310-338507/7

Matrix: Water

Analysis Batch: 338507

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	20.0	12.15		ug/L		61	22 - 150
Chloroethane	20.0	19.22		ug/L		96	61 - 139
Chloromethane	20.0	16.71		ug/L		84	48 - 150
Dichlorodifluoromethane	20.0	22.70		ug/L		113	50 - 150
Trichlorofluoromethane	20.0	21.92		ug/L		110	59 - 150
Vinyl chloride	20.0	20.65		ug/L		103	65 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		79 - 120
Toluene-d8 (Surr)	104		79 - 120

Lab Sample ID: MB 310-338510/5

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			12/13/21 11:02	1
Benzene	<0.220		0.500	0.220	ug/L			12/13/21 11:02	1
Bromobenzene	<0.340		1.00	0.340	ug/L			12/13/21 11:02	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			12/13/21 11:02	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338510/5

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.390		1.00	0.390	ug/L			12/13/21 11:02	1
Bromoform	<0.780		5.00	0.780	ug/L			12/13/21 11:02	1
Bromomethane	<1.10		4.00	1.10	ug/L			12/13/21 11:02	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			12/13/21 11:02	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			12/13/21 11:02	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			12/13/21 11:02	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			12/13/21 11:02	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			12/13/21 11:02	1
Chloroethane	<0.790		4.00	0.790	ug/L			12/13/21 11:02	1
Chloroform	<1.30		3.00	1.30	ug/L			12/13/21 11:02	1
Chloromethane	<0.610		3.00	0.610	ug/L			12/13/21 11:02	1
2-Chlorotoluene	<0.280		1.00	0.280	ug/L			12/13/21 11:02	1
4-Chlorotoluene	<0.290		1.00	0.290	ug/L			12/13/21 11:02	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			12/13/21 11:02	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			12/13/21 11:02	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			12/13/21 11:02	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			12/13/21 11:02	1
Dibromomethane	<0.330		1.00	0.330	ug/L			12/13/21 11:02	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			12/13/21 11:02	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			12/13/21 11:02	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			12/13/21 11:02	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			12/13/21 11:02	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			12/13/21 11:02	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			12/13/21 11:02	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			12/13/21 11:02	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			12/13/21 11:02	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			12/13/21 11:02	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			12/13/21 11:02	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			12/13/21 11:02	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			12/13/21 11:02	1
Hexachlorobutadiene	<1.40		5.00	1.40	ug/L			12/13/21 11:02	1
Hexane	<0.780		1.00	0.780	ug/L			12/13/21 11:02	1
Isopropylbenzene	<0.350		1.00	0.350	ug/L			12/13/21 11:02	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			12/13/21 11:02	1
Methyl tert-butyl ether	<0.490		1.00	0.490	ug/L			12/13/21 11:02	1
Naphthalene	<3.00		5.00	3.00	ug/L			12/13/21 11:02	1
n-Butylbenzene	<0.440		1.00	0.440	ug/L			12/13/21 11:02	1
N-Propylbenzene	<0.390		1.00	0.390	ug/L			12/13/21 11:02	1
p-Isopropyltoluene	<0.330		1.00	0.330	ug/L			12/13/21 11:02	1
sec-Butylbenzene	<0.440		1.00	0.440	ug/L			12/13/21 11:02	1
Styrene	<0.370		1.00	0.370	ug/L			12/13/21 11:02	1
tert-Butylbenzene	<0.390		1.00	0.390	ug/L			12/13/21 11:02	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			12/13/21 11:02	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			12/13/21 11:02	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			12/13/21 11:02	1
Toluene	<0.430		1.00	0.430	ug/L			12/13/21 11:02	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			12/13/21 11:02	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			12/13/21 11:02	1
1,2,3-Trichlorobenzene	<0.900		5.00	0.900	ug/L			12/13/21 11:02	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-338510/5

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			12/13/21 11:02	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			12/13/21 11:02	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			12/13/21 11:02	1
Trichloroethene	<0.430		1.00	0.430	ug/L			12/13/21 11:02	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			12/13/21 11:02	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			12/13/21 11:02	1
1,2,4-Trimethylbenzene	<0.420		1.00	0.420	ug/L			12/13/21 11:02	1
1,3,5-Trimethylbenzene	<0.370		1.00	0.370	ug/L			12/13/21 11:02	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			12/13/21 11:02	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			12/13/21 11:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		12/13/21 11:02	1
Dibromofluoromethane (Surr)	101		79 - 120		12/13/21 11:02	1
Toluene-d8 (Surr)	105		79 - 120		12/13/21 11:02	1

Lab Sample ID: LCS 310-338510/6

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	36.81		ug/L		92	50 - 150
Benzene	20.0	20.22		ug/L		101	73 - 127
Bromobenzene	20.0	20.01		ug/L		100	68 - 128
Bromochloromethane	20.0	21.52		ug/L		108	77 - 140
Bromodichloromethane	20.0	21.91		ug/L		110	70 - 122
Bromoform	20.0	21.32		ug/L		107	58 - 125
2-Butanone (MEK)	40.0	38.71		ug/L		97	49 - 150
Carbon disulfide	20.0	19.15		ug/L		96	58 - 140
Carbon tetrachloride	20.0	22.36		ug/L		112	66 - 136
Chlorodibromomethane	20.0	22.35		ug/L		112	66 - 126
Chloroform	20.0	19.44		ug/L		97	72 - 125
2-Chlorotoluene	20.0	21.38		ug/L		107	68 - 129
4-Chlorotoluene	20.0	20.61		ug/L		103	67 - 128
cis-1,2-Dichloroethene	20.0	20.53		ug/L		103	71 - 130
cis-1,3-Dichloropropene	20.0	19.50		ug/L		98	69 - 122
1,2-Dibromo-3-Chloropropane	20.0	21.31		ug/L		107	42 - 150
1,2-Dibromoethane (EDB)	20.0	20.63		ug/L		103	70 - 129
Dibromomethane	20.0	19.76		ug/L		99	71 - 133
1,2-Dichlorobenzene	20.0	20.57		ug/L		103	67 - 125
1,3-Dichlorobenzene	20.0	22.82		ug/L		114	65 - 128
1,1-Dichloroethane	20.0	19.72		ug/L		99	71 - 131
1,1-Dichloroethene	20.0	20.31		ug/L		102	64 - 137
1,2-Dichloropropane	20.0	18.84		ug/L		94	71 - 130
2,2-Dichloropropane	20.0	22.81		ug/L		114	33 - 150
1,1-Dichloropropene	20.0	22.28		ug/L		111	72 - 130
Ethylbenzene	20.0	20.66		ug/L		103	73 - 127
Hexachlorobutadiene	20.0	22.75		ug/L		114	48 - 150

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-338510/6

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexane	20.0	22.23		ug/L		111	50 - 150
Isopropylbenzene	20.0	20.81		ug/L		104	71 - 127
Methylene Chloride	20.0	22.25		ug/L		111	48 - 150
Methyl tert-butyl ether	20.0	19.98		ug/L		100	68 - 127
Naphthalene	20.0	20.27		ug/L		101	43 - 150
n-Butylbenzene	20.0	21.23		ug/L		106	64 - 129
p-Isopropyltoluene	20.0	20.88		ug/L		104	66 - 128
Styrene	20.0	20.50		ug/L		102	69 - 127
1,1,1,2-Tetrachloroethane	20.0	22.24		ug/L		111	69 - 124
1,1,2,2-Tetrachloroethane	20.0	19.75		ug/L		99	66 - 129
Tetrachloroethene	20.0	22.96		ug/L		115	68 - 135
Toluene	20.0	20.19		ug/L		101	71 - 126
trans-1,2-Dichloroethene	20.0	20.69		ug/L		103	69 - 132
trans-1,3-Dichloropropene	20.0	20.09		ug/L		100	65 - 123
1,2,3-Trichlorobenzene	20.0	21.38		ug/L		107	45 - 150
1,2,4-Trichlorobenzene	20.0	22.02		ug/L		110	57 - 133
1,1,1-Trichloroethane	20.0	20.39		ug/L		102	70 - 129
1,1,2-Trichloroethane	20.0	21.51		ug/L		108	68 - 128
Trichloroethene	20.0	20.48		ug/L		102	71 - 130
1,3,5-Trimethylbenzene	20.0	20.55		ug/L		103	66 - 134
Xylenes, Total	40.0	41.13		ug/L		103	70 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	106		79 - 120
Toluene-d8 (Surr)	107		79 - 120

Lab Sample ID: LCS 310-338510/7

Matrix: Water

Analysis Batch: 338510

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	20.0	15.82		ug/L		79	22 - 150
Chloroethane	20.0	19.72		ug/L		99	61 - 139
Chloromethane	20.0	19.53		ug/L		98	48 - 150
Trichlorofluoromethane	20.0	25.77		ug/L		129	59 - 150
Vinyl chloride	20.0	20.60		ug/L		103	65 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		80 - 120
Dibromofluoromethane (Surr)	104		79 - 120
Toluene-d8 (Surr)	100		79 - 120

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 310-337947/1-A

Matrix: Solid

Analysis Batch: 338308

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 337947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<1.70		9.98	1.70	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Acenaphthylene	<1.50		9.98	1.50	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Anthracene	<2.20		9.98	2.20	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Benzo[a]anthracene	<5.49		9.98	5.49	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Benzo[a]pyrene	<2.60		9.98	2.60	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Benzo[b]fluoranthene	<2.70		9.98	2.70	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Benzo[g,h,i]perylene	<2.00		9.98	2.00	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Benzo[k]fluoranthene	<3.20		9.98	3.20	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Chrysene	<1.40		9.98	1.40	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Dibenz(a,h)anthracene	<2.30		9.98	2.30	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Fluoranthene	<1.50		9.98	1.50	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Fluorene	<1.40		9.98	1.40	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Indeno[1,2,3-cd]pyrene	<2.30		9.98	2.30	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
2-Methylnaphthalene	<3.69		9.98	3.69	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Naphthalene	<3.10		9.98	3.10	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Phenanthrene	<4.49		9.98	4.49	ug/Kg		12/08/21 07:57	12/10/21 11:14	1
Pyrene	<1.30		9.98	1.30	ug/Kg		12/08/21 07:57	12/10/21 11:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	64		24 - 110	12/08/21 07:57	12/10/21 11:14	1
Nitrobenzene-d5 (Surr)	59		17 - 114	12/08/21 07:57	12/10/21 11:14	1
Terphenyl-d14 (Surr)	84		22 - 110	12/08/21 07:57	12/10/21 11:14	1

Lab Sample ID: LCS 310-337947/2-A

Matrix: Solid

Analysis Batch: 338308

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 337947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acenaphthene	127	71.95		ug/Kg		57	34 - 110
Acenaphthylene	127	75.23		ug/Kg		59	34 - 110
Anthracene	127	80.85		ug/Kg		64	36 - 110
Benzo[a]anthracene	127	86.59		ug/Kg		68	38 - 110
Benzo[a]pyrene	127	85.12		ug/Kg		67	36 - 110
Benzo[b]fluoranthene	127	84.94		ug/Kg		67	37 - 110
Benzo[g,h,i]perylene	127	89.50		ug/Kg		71	29 - 110
Benzo[k]fluoranthene	127	83.58		ug/Kg		66	37 - 110
Chrysene	127	87.80		ug/Kg		69	34 - 110
Dibenz(a,h)anthracene	127	92.25		ug/Kg		73	31 - 110
Fluoranthene	127	92.17		ug/Kg		73	36 - 110
Fluorene	127	78.69		ug/Kg		62	36 - 110
Indeno[1,2,3-cd]pyrene	127	90.04		ug/Kg		71	31 - 110
2-Methylnaphthalene	127	75.61		ug/Kg		60	37 - 110
Naphthalene	127	77.07		ug/Kg		61	36 - 110
Phenanthrene	127	80.43		ug/Kg		64	35 - 110
Pyrene	127	92.05		ug/Kg		73	35 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	66		24 - 110

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 310-337947/2-A

Matrix: Solid

Analysis Batch: 338308

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 337947

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Nitrobenzene-d5 (Surr)	64		17 - 114
Terphenyl-d14 (Surr)	84		22 - 110

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 338308

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	<2.09		161	96.05		ug/Kg	✱	60	18 - 110
Acenaphthylene	<1.84		161	101.2		ug/Kg	✱	63	21 - 110
Anthracene	<2.70		161	105.4		ug/Kg	✱	65	21 - 110
Benzo[a]anthracene	<6.76		161	110.5		ug/Kg	✱	69	18 - 110
Benzo[a]pyrene	<3.20		161	104.0		ug/Kg	✱	65	21 - 110
Benzo[b]fluoranthene	<3.32		161	108.3		ug/Kg	✱	67	12 - 117
Benzo[g,h,i]perylene	<2.46		161	120.0		ug/Kg	✱	74	15 - 110
Benzo[k]fluoranthene	<3.93		161	104.2		ug/Kg	✱	65	19 - 111
Chrysene	<1.72		161	107.7		ug/Kg	✱	67	13 - 118
Dibenz(a,h)anthracene	<2.83		161	120.5		ug/Kg	✱	75	19 - 110
Fluoranthene	<1.84		161	115.3		ug/Kg	✱	72	11 - 112
Fluorene	<1.72		161	105.7		ug/Kg	✱	66	21 - 110
Indeno[1,2,3-cd]pyrene	<2.83		161	115.4		ug/Kg	✱	72	18 - 110
2-Methylnaphthalene	<4.55		161	102.1		ug/Kg	✱	63	10 - 116
Naphthalene	<3.81		161	100.3		ug/Kg	✱	62	10 - 115
Phenanthrene	<5.53		161	108.3		ug/Kg	✱	67	10 - 110
Pyrene	<1.60		161	117.6		ug/Kg	✱	73	10 - 118

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		24 - 110
Nitrobenzene-d5 (Surr)	67		17 - 114
Terphenyl-d14 (Surr)	81		22 - 110

Lab Sample ID: 310-221096-2 MSD

Matrix: Soil

Analysis Batch: 338308

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acenaphthene	<2.09		163	108.9		ug/Kg	✱	67	18 - 110	13	39
Acenaphthylene	<1.84		163	113.2		ug/Kg	✱	69	21 - 110	11	40
Anthracene	<2.70		163	119.5		ug/Kg	✱	73	21 - 110	13	40
Benzo[a]anthracene	<6.76		163	120.7		ug/Kg	✱	74	18 - 110	9	40
Benzo[a]pyrene	<3.20		163	113.8		ug/Kg	✱	70	21 - 110	9	40
Benzo[b]fluoranthene	<3.32		163	116.8		ug/Kg	✱	72	12 - 117	8	40
Benzo[g,h,i]perylene	<2.46		163	132.9		ug/Kg	✱	81	15 - 110	10	40
Benzo[k]fluoranthene	<3.93		163	113.3		ug/Kg	✱	69	19 - 111	8	40
Chrysene	<1.72		163	116.8		ug/Kg	✱	72	13 - 118	8	40
Dibenz(a,h)anthracene	<2.83		163	130.8		ug/Kg	✱	80	19 - 110	8	39
Fluoranthene	<1.84		163	125.1		ug/Kg	✱	77	11 - 112	8	40
Fluorene	<1.72		163	118.9		ug/Kg	✱	73	21 - 110	12	39

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 310-221096-2 MSD

Matrix: Soil

Analysis Batch: 338308

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 337947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Indeno[1,2,3-cd]pyrene	<2.83		163	127.1		ug/Kg	✖	78	18 - 110	10	40
2-Methylnaphthalene	<4.55		163	115.5		ug/Kg	✖	71	10 - 116	12	40
Naphthalene	<3.81		163	110.2		ug/Kg	✖	67	10 - 115	9	40
Phenanthrene	<5.53		163	122.3		ug/Kg	✖	75	10 - 110	12	40
Pyrene	<1.60		163	126.2		ug/Kg	✖	77	10 - 118	7	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	81		24 - 110
Nitrobenzene-d5 (Surr)	57		17 - 114
Terphenyl-d14 (Surr)	90		22 - 110

Lab Sample ID: MB 310-338119/1-A

Matrix: Water

Analysis Batch: 339083

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.0490		0.200	0.0490	ug/L		12/09/21 07:55	12/17/21 10:58	1
Acenaphthylene	<0.0630		0.200	0.0630	ug/L		12/09/21 07:55	12/17/21 10:58	1
Anthracene	<0.0990		0.200	0.0990	ug/L		12/09/21 07:55	12/17/21 10:58	1
Benzo[a]anthracene	<0.110		0.200	0.110	ug/L		12/09/21 07:55	12/17/21 10:58	1
Benzo[a]pyrene	<0.130		0.200	0.130	ug/L		12/09/21 07:55	12/17/21 10:58	1
Benzo[b]fluoranthene	<0.130		0.200	0.130	ug/L		12/09/21 07:55	12/17/21 10:58	1
Benzo[g,h,i]perylene	<0.130		0.200	0.130	ug/L		12/09/21 07:55	12/17/21 10:58	1
Benzo[k]fluoranthene	<0.120		0.200	0.120	ug/L		12/09/21 07:55	12/17/21 10:58	1
Chrysene	<0.0730		0.200	0.0730	ug/L		12/09/21 07:55	12/17/21 10:58	1
Dibenz(a,h)anthracene	<0.130		0.200	0.130	ug/L		12/09/21 07:55	12/17/21 10:58	1
Fluoranthene	<0.0820		0.200	0.0820	ug/L		12/09/21 07:55	12/17/21 10:58	1
Fluorene	<0.0390		0.200	0.0390	ug/L		12/09/21 07:55	12/17/21 10:58	1
Indeno[1,2,3-cd]pyrene	<0.120		0.200	0.120	ug/L		12/09/21 07:55	12/17/21 10:58	1
2-Methylnaphthalene	<0.0800		0.200	0.0800	ug/L		12/09/21 07:55	12/17/21 10:58	1
Naphthalene	<0.200		0.500	0.200	ug/L		12/09/21 07:55	12/17/21 10:58	1
Phenanthrene	<0.100		0.200	0.100	ug/L		12/09/21 07:55	12/17/21 10:58	1
Pyrene	<0.110		0.200	0.110	ug/L		12/09/21 07:55	12/17/21 10:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	72		21 - 110	12/09/21 07:55	12/17/21 10:58	1
Nitrobenzene-d5 (Surr)	66		15 - 110	12/09/21 07:55	12/17/21 10:58	1
Terphenyl-d14 (Surr)	88		13 - 110	12/09/21 07:55	12/17/21 10:58	1

Lab Sample ID: LCS 310-338119/2-A

Matrix: Water

Analysis Batch: 339083

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.377		ug/L		69	25 - 110
Acenaphthylene	2.00	1.440		ug/L		72	25 - 110
Anthracene	2.00	1.604		ug/L		80	26 - 110
Benzo[a]anthracene	2.00	1.465		ug/L		73	26 - 110

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 310-338119/2-A

Matrix: Water

Analysis Batch: 339083

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]pyrene	2.00	1.373		ug/L		69	20 - 110
Benzo[b]fluoranthene	2.00	1.365		ug/L		68	24 - 110
Benzo[g,h,i]perylene	2.00	1.774		ug/L		89	17 - 110
Benzo[k]fluoranthene	2.00	1.358		ug/L		68	26 - 110
Chrysene	2.00	1.525		ug/L		76	23 - 110
Dibenz(a,h)anthracene	2.00	1.804		ug/L		90	14 - 110
Fluoranthene	2.00	1.603		ug/L		80	24 - 110
Fluorene	2.00	1.442		ug/L		72	27 - 110
Indeno[1,2,3-cd]pyrene	2.00	1.766		ug/L		88	15 - 110
2-Methylnaphthalene	2.00	1.185		ug/L		59	19 - 110
Naphthalene	2.00	1.319		ug/L		66	24 - 110
Phenanthrene	2.00	1.460		ug/L		73	28 - 110
Pyrene	2.00	1.617		ug/L		81	26 - 110

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	65		21 - 110
Nitrobenzene-d5 (Surr)	64		15 - 110
Terphenyl-d14 (Surr)	86		13 - 110

Lab Sample ID: MB 310-338120/1-A

Matrix: Solid

Analysis Batch: 338513

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	<3.63		9.80	3.63	ug/Kg		12/09/21 07:55	12/13/21 10:54	1
Naphthalene	<3.04		9.80	3.04	ug/Kg		12/09/21 07:55	12/13/21 10:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	68		24 - 110	12/09/21 07:55	12/13/21 10:54	1
Nitrobenzene-d5 (Surr)	67		17 - 114	12/09/21 07:55	12/13/21 10:54	1

Lab Sample ID: MB 310-338120/1-A

Matrix: Solid

Analysis Batch: 338513

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<1.67		9.80	1.67	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Acenaphthylene	<1.47		9.80	1.47	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Anthracene	<2.16		9.80	2.16	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Benzo[a]anthracene	<5.39		9.80	5.39	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Benzo[a]pyrene	<2.55		9.80	2.55	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Benzo[b]fluoranthene	<2.65		9.80	2.65	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Benzo[g,h,i]perylene	<1.96		9.80	1.96	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Benzo[k]fluoranthene	<3.14		9.80	3.14	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Chrysene	<1.37		9.80	1.37	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Dibenz(a,h)anthracene	<2.25		9.80	2.25	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Fluoranthene	<1.47		9.80	1.47	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Fluorene	<1.37		9.80	1.37	ug/Kg		12/09/21 07:55	12/13/21 18:57	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 310-338120/1-A
Matrix: Solid
Analysis Batch: 338513

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	<2.25		9.80	2.25	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Phenanthrene	<4.41		9.80	4.41	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Pyrene	<1.27		9.80	1.27	ug/Kg		12/09/21 07:55	12/13/21 18:57	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	66		22 - 110				12/09/21 07:55	12/13/21 18:57	1

Lab Sample ID: LCS 310-338120/2-A
Matrix: Solid
Analysis Batch: 338513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	125	93.02		ug/Kg		74	34 - 110
Acenaphthylene	125	97.04		ug/Kg		77	34 - 110
Anthracene	125	109.9		ug/Kg		88	36 - 110
Benzo[a]anthracene	125	110.3		ug/Kg		88	38 - 110
Benzo[a]pyrene	125	107.4		ug/Kg		86	36 - 110
Benzo[b]fluoranthene	125	105.3		ug/Kg		84	37 - 110
Benzo[g,h,i]perylene	125	120.4		ug/Kg		96	29 - 110
Benzo[k]fluoranthene	125	98.78		ug/Kg		79	37 - 110
Chrysene	125	113.7		ug/Kg		91	34 - 110
Dibenz(a,h)anthracene	125	126.5		ug/Kg		101	31 - 110
Fluoranthene	125	99.28		ug/Kg		79	36 - 110
Fluorene	125	95.33		ug/Kg		76	36 - 110
Indeno[1,2,3-cd]pyrene	125	123.0		ug/Kg		98	31 - 110
2-Methylnaphthalene	125	96.04		ug/Kg		77	37 - 110
Naphthalene	125	100.5		ug/Kg		80	36 - 110
Phenanthrene	125	99.92		ug/Kg		80	35 - 110
Pyrene	125	97.55		ug/Kg		78	35 - 110
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2-Fluorobiphenyl (Surr)	84		24 - 110				
Nitrobenzene-d5 (Surr)	81		17 - 114				
Terphenyl-d14 (Surr)	89		22 - 110				

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH)

Lab Sample ID: MB 400-559838/2
Matrix: Water
Analysis Batch: 559838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
LRH C5-C8	<38.0		100	38.0	ug/L			12/14/21 12:07	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	99		70 - 130					12/14/21 12:07	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH) (Continued)

Lab Sample ID: LCS 400-559838/3

Matrix: Water

Analysis Batch: 559838

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
LRH C5-C8			300	292.0		ug/L		97	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
a,a,a-Trifluorotoluene (fid)	100		70 - 130								

Lab Sample ID: LCSD 400-559838/4

Matrix: Water

Analysis Batch: 559838

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
LRH C5-C8			300	302.1		ug/L		101	70 - 130	3	25
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid)	100		70 - 130								

Lab Sample ID: MB 400-560235/1-A

Matrix: Solid

Analysis Batch: 560226

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 560235

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
LRH C5-C8	<2.60		5.00	2.60	mg/Kg		12/16/21 10:20	12/16/21 13:22	50
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
a,a,a-Trifluorotoluene (fid)	97		70 - 130	12/16/21 10:20	12/16/21 13:22	50			

Lab Sample ID: LCS 400-560235/2-A

Matrix: Solid

Analysis Batch: 560226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 560235

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
LRH C5-C8			15.0	14.33		mg/Kg		96	70 - 130		
Surrogate		LCS %Recovery	LCS Qualifier	Limits							
a,a,a-Trifluorotoluene (fid)		98		70 - 130							

Lab Sample ID: LCSD 400-560235/3-A

Matrix: Solid

Analysis Batch: 560226

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 560235

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
LRH C5-C8			15.0	14.12		mg/Kg		94	70 - 130	2	25
Surrogate	%Recovery	LCSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid)	96		70 - 130								

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: Kansas - LRH - Kansas - Low Range Hydrocarbons (LRH) (Continued)

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 560226

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 560235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
LRH C5-C8	<3.99		22.3	24.68		mg/Kg	✱	110	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
a,a,a-Trifluorotoluene (fid)	96		70 - 130						

Lab Sample ID: 310-221096-2 MSD

Matrix: Soil

Analysis Batch: 560226

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 560235

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
LRH C5-C8	<3.99		22.8	25.12		mg/Kg	✱	110	70 - 130	2	25
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid)	97		70 - 130								

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 310-338269/1-A

Matrix: Solid

Analysis Batch: 338625

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338269

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.00569		0.0474	0.00569	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1221	<0.00569		0.0474	0.00569	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1232	<0.00569		0.0474	0.00569	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1242	<0.00569		0.0474	0.00569	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1248	<0.00731		0.0474	0.00731	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1254	<0.00731		0.0474	0.00731	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1260	<0.00731		0.0474	0.00731	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
PCB-1268	<0.00731		0.0474	0.00731	mg/Kg		12/10/21 07:45	12/14/21 11:44	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	103		10 - 110				12/10/21 07:45	12/14/21 11:44	1
Tetrachloro-m-xylene (Surr)	77		10 - 110				12/10/21 07:45	12/14/21 11:44	1

Lab Sample ID: LCS 310-338269/2-A

Matrix: Solid

Analysis Batch: 338625

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338269

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	0.317	0.2779		mg/Kg		88	30 - 110
PCB-1260	0.317	0.2832		mg/Kg		89	24 - 110
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl (Surr)	101		10 - 110				
Tetrachloro-m-xylene (Surr)	84		10 - 110				

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 338625

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 338269

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	<0.00751		0.397	0.2893		mg/Kg	☼	73	10 - 124
PCB-1260	<0.00964		0.397	0.3102		mg/Kg	☼	78	10 - 116
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
DCB Decachlorobiphenyl (Surr)	95		10 - 110						
Tetrachloro-m-xylene (Surr)	71		10 - 110						

Lab Sample ID: 310-221096-2 MSD

Matrix: Soil

Analysis Batch: 338625

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 338269

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	<0.00751		0.408	0.3058		mg/Kg	☼	75	10 - 124	6	40
PCB-1260	<0.00964		0.408	0.3358		mg/Kg	☼	82	10 - 116	8	40
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
DCB Decachlorobiphenyl (Surr)	98		10 - 110								
Tetrachloro-m-xylene (Surr)	72		10 - 110								

Lab Sample ID: MB 310-339055/1-A

Matrix: Water

Analysis Batch: 339132

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 339055

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.170		0.800	0.170	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1221	<0.170		0.800	0.170	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1232	<0.170		0.800	0.170	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1242	<0.170		0.800	0.170	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1248	<0.110		0.800	0.110	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1254	<0.110		0.800	0.110	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1260	<0.110		0.800	0.110	ug/L		12/17/21 08:54	12/17/21 15:25	1
PCB-1268	<0.110		0.800	0.110	ug/L		12/17/21 08:54	12/17/21 15:25	1
Surrogate	MB %Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	90		10 - 110				12/17/21 08:54	12/17/21 15:25	1
Tetrachloro-m-xylene (Surr)	60		13 - 110				12/17/21 08:54	12/17/21 15:25	1

Lab Sample ID: LCS 310-339055/2-A

Matrix: Water

Analysis Batch: 339132

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 339055

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	5.00	3.967		ug/L		79	24 - 110
PCB-1260	5.00	4.688		ug/L		94	20 - 110
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits				
DCB Decachlorobiphenyl (Surr)	91		10 - 110				

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 310-339055/2-A

Matrix: Water

Analysis Batch: 339132

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 339055

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	54		13 - 110

Lab Sample ID: LCSD 310-339055/3-A

Matrix: Water

Analysis Batch: 339132

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 339055

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
PCB-1016	5.00	3.037		ug/L		61	24 - 110	27	35
PCB-1260	5.00	3.528		ug/L		71	20 - 110	28	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	65		10 - 110
Tetrachloro-m-xylene (Surr)	43		13 - 110

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)

Lab Sample ID: MB 400-558944/1-A

Matrix: Solid

Analysis Batch: 559524

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 558944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<5.00		20.0	5.00	mg/Kg		12/08/21 11:15	12/11/21 18:49	1
HRH C19-C35	<5.00		20.0	5.00	mg/Kg		12/08/21 11:15	12/11/21 18:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	83		40 - 140	12/08/21 11:15	12/11/21 18:49	1

Lab Sample ID: LCS 400-558944/2-A

Matrix: Solid

Analysis Batch: 559524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 558944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MRH C9-C18	40.0	23.20		mg/Kg		58	40 - 140
HRH C19-C35	46.7	37.31		mg/Kg		80	40 - 140

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctadecane	81		40 - 140

Lab Sample ID: 310-221096-2 MS

Matrix: Soil

Analysis Batch: 559524

Client Sample ID: SB-2 (7-9)

Prep Type: Total/NA

Prep Batch: 558944

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
MRH C9-C18	<6.24		48.5	31.48		mg/Kg	☼	65	40 - 140
HRH C19-C35	<6.24		56.6	49.78		mg/Kg	☼	88	40 - 140

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH) (Continued)

Lab Sample ID: 310-221096-2 MS
Matrix: Soil
Analysis Batch: 559524

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 558944

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctadecane	82		40 - 140

Lab Sample ID: 310-221096-2 MSD
Matrix: Soil
Analysis Batch: 559524

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 558944

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MRH C9-C18	<6.24		49.5	33.25		mg/Kg	✱	67	40 - 140	5	50
HRH C19-C35	<6.24		57.7	51.06		mg/Kg	✱	88	40 - 140	3	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctadecane	81		40 - 140								

Lab Sample ID: MB 400-559146/1-A
Matrix: Water
Analysis Batch: 559525

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559146

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<78.0		120	78.0	ug/L		12/09/21 10:42	12/11/21 21:14	1
HRH C19-C35	<92.0		140	92.0	ug/L		12/09/21 10:42	12/11/21 21:14	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	109		40 - 140				12/09/21 10:42	12/11/21 21:14	1

Lab Sample ID: LCS 400-559146/2-A
Matrix: Water
Analysis Batch: 559525

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559146

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MRH C9-C18	3000	3079		ug/L		103	40 - 140
HRH C19-C35	3500	3736		ug/L		107	40 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctadecane	112		40 - 140				

Lab Sample ID: LCSD 400-559146/3-A
Matrix: Water
Analysis Batch: 559525

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559146

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MRH C9-C18	3000	3099		ug/L		103	40 - 140	1	25
HRH C19-C35	3500	3798		ug/L		109	40 - 140	2	25
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctadecane	111		40 - 140						

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: Kan- MRH/HRH - Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH) (Continued)

Lab Sample ID: MB 400-559999/1-A
Matrix: Solid
Analysis Batch: 560312

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MRH C9-C18	<5.00		20.0	5.00	mg/Kg		12/15/21 11:22	12/17/21 04:06	1
HRH C19-C35	<5.00		20.0	5.00	mg/Kg		12/15/21 11:22	12/17/21 04:06	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	93		40 - 140				12/15/21 11:22	12/17/21 04:06	1

Lab Sample ID: LCS 400-559999/2-A
Matrix: Solid
Analysis Batch: 560312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MRH C9-C18	40.0	27.75		mg/Kg		69	40 - 140
HRH C19-C35	46.7	45.45		mg/Kg		97	40 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctadecane	92		40 - 140				

Lab Sample ID: 310-221096-12 MS
Matrix: Soil
Analysis Batch: 560312

Client Sample ID: FD-1
Prep Type: Total/NA
Prep Batch: 559999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
MRH C9-C18	<6.18		49.6	35.31		mg/Kg	⊛	71	40 - 140
HRH C19-C35	<6.18		57.9	57.01		mg/Kg	⊛	98	40 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctadecane	93		40 - 140						

Lab Sample ID: 310-221096-12 MSD
Matrix: Soil
Analysis Batch: 560312

Client Sample ID: FD-1
Prep Type: Total/NA
Prep Batch: 559999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MRH C9-C18	<6.18		50.2	36.25		mg/Kg	⊛	72	40 - 140	3	50
HRH C19-C35	<6.18		58.6	59.93		mg/Kg	⊛	102	40 - 140	5	50
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctadecane	95		40 - 140								

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-338296/1-A
Matrix: Solid
Analysis Batch: 338722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338296

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<1.99		3.80	1.99	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Barium	<0.342		0.950	0.342	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Cadmium	<0.218		0.950	0.218	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Chromium	<0.532		0.950	0.532	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Lead	<1.23		4.75	1.23	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Selenium	<2.18		4.75	2.18	mg/Kg		12/10/21 10:00	12/14/21 12:59	1
Silver	<0.475		0.950	0.475	mg/Kg		12/10/21 10:00	12/14/21 12:59	1

Lab Sample ID: LCS 310-338296/2-A
Matrix: Solid
Analysis Batch: 338722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338296

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	167	154.9		mg/Kg		93	80 - 120
Barium	83.5	79.38		mg/Kg		95	80 - 120
Cadmium	83.5	70.70		mg/Kg		85	80 - 120
Chromium	83.5	73.33		mg/Kg		88	80 - 120
Lead	167	144.1		mg/Kg		86	80 - 120
Selenium	334	311.5		mg/Kg		93	80 - 120
Silver	83.5	87.27		mg/Kg		105	80 - 120

Lab Sample ID: 310-221096-2 MS
Matrix: Soil
Analysis Batch: 338722

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 338296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	<3.92		192	187.2		mg/Kg	✱	97	75 - 125
Barium	183	F1	96.2	327.1	F1	mg/Kg	✱	149	75 - 125
Cadmium	0.522	J	96.2	86.29		mg/Kg	✱	89	75 - 125
Chromium	18.5		96.2	105.3		mg/Kg	✱	90	75 - 125
Lead	11.4		192	178.1		mg/Kg	✱	87	75 - 125
Selenium	4.58	J	385	372.4		mg/Kg	✱	96	75 - 125
Silver	<0.934		96.2	101.4		mg/Kg	✱	105	75 - 125

Lab Sample ID: 310-221096-2 MSD
Matrix: Soil
Analysis Batch: 338722

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 338296

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	<3.92		183	184.0		mg/Kg	✱	101	75 - 125	2	20
Barium	183	F1	91.4	330.7	F1	mg/Kg	✱	161	75 - 125	1	20
Cadmium	0.522	J	91.4	85.76		mg/Kg	✱	93	75 - 125	1	20
Chromium	18.5		91.4	104.7		mg/Kg	✱	94	75 - 125	1	20
Lead	11.4		183	178.3		mg/Kg	✱	91	75 - 125	0	20
Selenium	4.58	J	366	370.6		mg/Kg	✱	100	75 - 125	0	20
Silver	<0.934		91.4	100.9		mg/Kg	✱	110	75 - 125	0	20

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-337907/1-A

Matrix: Water

Analysis Batch: 338798

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 337907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.000750		0.00200	0.000750	mg/L		12/08/21 09:00	12/14/21 14:40	1
Barium	<0.000370		0.00200	0.000370	mg/L		12/08/21 09:00	12/14/21 14:40	1
Cadmium	<0.0000510		0.000100	0.0000510	mg/L		12/08/21 09:00	12/14/21 14:40	1
Chromium	<0.00110		0.00500	0.00110	mg/L		12/08/21 09:00	12/14/21 14:40	1
Lead	<0.000210		0.000500	0.000210	mg/L		12/08/21 09:00	12/14/21 14:40	1
Selenium	<0.000960		0.00500	0.000960	mg/L		12/08/21 09:00	12/14/21 14:40	1
Silver	<0.000420		0.00100	0.000420	mg/L		12/08/21 09:00	12/14/21 14:40	1

Lab Sample ID: LCS 310-337907/2-A

Matrix: Water

Analysis Batch: 338798

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 337907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.200	0.1967		mg/L		98	80 - 120
Barium	0.100	0.1068		mg/L		107	80 - 120
Cadmium	0.100	0.1028		mg/L		103	80 - 120
Chromium	0.100	0.09902		mg/L		99	80 - 120
Lead	0.200	0.2069		mg/L		103	80 - 120
Selenium	0.400	0.3699		mg/L		92	80 - 120
Silver	0.100	0.1111		mg/L		111	80 - 120

Lab Sample ID: 310-221096-8 MS

Matrix: Water

Analysis Batch: 338798

Client Sample ID: FD-2

Prep Type: Dissolved

Prep Batch: 337907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0212		0.200	0.2229		mg/L		101	75 - 125
Barium	0.423		0.100	0.5382	4	mg/L		115	75 - 125
Cadmium	<0.0000510		0.100	0.09519		mg/L		95	75 - 125
Chromium	<0.00110		0.100	0.09754		mg/L		98	75 - 125
Lead	0.00320		0.200	0.1989		mg/L		98	75 - 125
Selenium	<0.000960		0.400	0.3976		mg/L		99	75 - 125
Silver	<0.000420		0.100	0.09538		mg/L		95	75 - 125

Lab Sample ID: 310-221096-8 MSD

Matrix: Water

Analysis Batch: 338798

Client Sample ID: FD-2

Prep Type: Dissolved

Prep Batch: 337907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0212		0.200	0.2238		mg/L		101	75 - 125	0	20
Barium	0.423		0.100	0.5339	4	mg/L		111	75 - 125	1	20
Cadmium	<0.0000510		0.100	0.09562		mg/L		96	75 - 125	0	20
Chromium	<0.00110		0.100	0.09808		mg/L		98	75 - 125	1	20
Lead	0.00320		0.200	0.2021		mg/L		99	75 - 125	2	20
Selenium	<0.000960		0.400	0.4003		mg/L		100	75 - 125	1	20
Silver	<0.000420		0.100	0.09634		mg/L		96	75 - 125	1	20

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-338687/1-A
Matrix: Water
Analysis Batch: 338892

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338687

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000150		0.000200	0.000150	mg/L		12/14/21 12:30	12/15/21 11:45	1

Lab Sample ID: LCS 310-338687/2-A
Matrix: Water
Analysis Batch: 338892

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338687

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001719		mg/L		103	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-338850/1-A
Matrix: Solid
Analysis Batch: 339169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00650		0.0163	0.00650	mg/Kg		12/15/21 13:01	12/17/21 13:28	1

Lab Sample ID: LCS 310-338850/2-A
Matrix: Solid
Analysis Batch: 339169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.148	0.1491		mg/Kg		101	80 - 120

Lab Sample ID: 310-221096-2 MS
Matrix: Soil
Analysis Batch: 339169

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 338850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0188	J	0.156	0.1733		mg/Kg	✱	99	80 - 120

Lab Sample ID: 310-221096-2 MSD
Matrix: Soil
Analysis Batch: 339169

Client Sample ID: SB-2 (7-9)
Prep Type: Total/NA
Prep Batch: 338850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0188	J	0.161	0.1752		mg/Kg	✱	97	80 - 120	1	20

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC/MS VOA

Prep Batch: 337942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	5035	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	5035	
310-221096-3	SB-2 (4-5)	Total/NA	Soil	5035	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	5035	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	5035	
310-221096-10	TB-2	Total/NA	Soil	5035	
310-221096-12	FD-1	Total/NA	Soil	5035	
MB 310-337942/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-337942/2-A	Lab Control Sample	Total/NA	Solid	5035	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	5035	

Analysis Batch: 337944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	8260D	337942
310-221096-2	SB-2 (7-9)	Total/NA	Soil	8260D	337942
310-221096-3	SB-2 (4-5)	Total/NA	Soil	8260D	337942
310-221096-4	SB-3 (7-8)	Total/NA	Soil	8260D	337942
310-221096-5	SB-4 (7-8)	Total/NA	Soil	8260D	337942
310-221096-10	TB-2	Total/NA	Soil	8260D	337942
310-221096-12	FD-1	Total/NA	Soil	8260D	337942
MB 310-337942/1-A	Method Blank	Total/NA	Solid	8260D	337942
LCS 310-337942/2-A	Lab Control Sample	Total/NA	Solid	8260D	337942
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	8260D	337942

Analysis Batch: 338345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	8260D	
310-221096-9	TB-1	Total/NA	Water	8260D	
310-221096-11	MW-2	Total/NA	Water	8260D	
MB 310-338345/5	Method Blank	Total/NA	Water	8260D	
LCS 310-338345/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-338345/7	Lab Control Sample	Total/NA	Water	8260D	

Prep Batch: 338465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-6	SB-5 (2-4)	Total/NA	Soil	5035	
MB 310-338465/1-A	Method Blank	Total/NA	Solid	5035	
LCS 310-338465/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 338469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-6	SB-5 (2-4)	Total/NA	Soil	8260D	338465
MB 310-338465/1-A	Method Blank	Total/NA	Solid	8260D	338465
LCS 310-338465/2-A	Lab Control Sample	Total/NA	Solid	8260D	338465

Analysis Batch: 338507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-9	TB-1	Total/NA	Water	8260D	
MB 310-338507/5	Method Blank	Total/NA	Water	8260D	
LCS 310-338507/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-338507/7	Lab Control Sample	Total/NA	Water	8260D	

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC/MS VOA

Analysis Batch: 338510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	8260D	
310-221096-11	MW-2	Total/NA	Water	8260D	
MB 310-338510/5	Method Blank	Total/NA	Water	8260D	
LCS 310-338510/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-338510/7	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 337947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	3546	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	3546	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	3546	
310-221096-6	SB-5 (2-4)	Total/NA	Soil	3546	
MB 310-337947/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-337947/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	3546	

Prep Batch: 338119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	3510C	
310-221096-11	MW-2	Total/NA	Water	3510C	
MB 310-338119/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-338119/2-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 338120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	3546	
MB 310-338120/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-338120/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 338308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	8270E SIM	337947
310-221096-2	SB-2 (7-9)	Total/NA	Soil	8270E SIM	337947
310-221096-4	SB-3 (7-8)	Total/NA	Soil	8270E SIM	337947
310-221096-5	SB-4 (7-8)	Total/NA	Soil	8270E SIM	337947
310-221096-6	SB-5 (2-4)	Total/NA	Soil	8270E SIM	337947
MB 310-337947/1-A	Method Blank	Total/NA	Solid	8270E SIM	337947
LCS 310-337947/2-A	Lab Control Sample	Total/NA	Solid	8270E SIM	337947
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	8270E SIM	337947
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	8270E SIM	337947

Analysis Batch: 338513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-338120/1-A	Method Blank	Total/NA	Solid	8270E SIM	338120
MB 310-338120/1-A	Method Blank	Total/NA	Solid	8270E SIM	338120
LCS 310-338120/2-A	Lab Control Sample	Total/NA	Solid	8270E SIM	338120

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC/MS Semi VOA

Analysis Batch: 338551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	8270E SIM	338120

Analysis Batch: 339083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-338119/1-A	Method Blank	Total/NA	Water	8270E SIM	338119
LCS 310-338119/2-A	Lab Control Sample	Total/NA	Water	8270E SIM	338119

Analysis Batch: 339094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	8270E SIM	338119
310-221096-11	MW-2	Total/NA	Water	8270E SIM	338119

Analysis Batch: 339328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	8270E SIM	338119
310-221096-11	MW-2	Total/NA	Water	8270E SIM	338119

GC VOA

Analysis Batch: 559838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	Kansas - LRH	
310-221096-11	MW-2	Total/NA	Water	Kansas - LRH	
MB 400-559838/2	Method Blank	Total/NA	Water	Kansas - LRH	
LCS 400-559838/3	Lab Control Sample	Total/NA	Water	Kansas - LRH	
LCSD 400-559838/4	Lab Control Sample Dup	Total/NA	Water	Kansas - LRH	

Analysis Batch: 560226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	Kansas - LRH	560235
310-221096-2	SB-2 (7-9)	Total/NA	Soil	Kansas - LRH	560235
310-221096-4	SB-3 (7-8)	Total/NA	Soil	Kansas - LRH	560235
310-221096-5	SB-4 (7-8)	Total/NA	Soil	Kansas - LRH	560235
310-221096-6	SB-5 (2-4)	Total/NA	Soil	Kansas - LRH	560235
MB 400-560235/1-A	Method Blank	Total/NA	Solid	Kansas - LRH	560235
LCS 400-560235/2-A	Lab Control Sample	Total/NA	Solid	Kansas - LRH	560235
LCSD 400-560235/3-A	Lab Control Sample Dup	Total/NA	Solid	Kansas - LRH	560235
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	Kansas - LRH	560235
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	Kansas - LRH	560235

Prep Batch: 560235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	5035	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	5035	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	5035	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	5035	
310-221096-6	SB-5 (2-4)	Total/NA	Soil	5035	
310-221096-12	FD-1	Total/NA	Soil	5035	
MB 400-560235/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-560235/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 400-560235/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC VOA (Continued)

Prep Batch: 560235 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	5035	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	5035	

Analysis Batch: 560641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	Kansas - LRH	560235

GC Semi VOA

Prep Batch: 338269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	3546	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	3546	
310-221096-12	FD-1	Total/NA	Soil	3546	
MB 310-338269/1-A	Method Blank	Total/NA	Solid	3546	
LCS 310-338269/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	3546	

Analysis Batch: 338625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	8082A	338269
310-221096-2	SB-2 (7-9)	Total/NA	Soil	8082A	338269
310-221096-4	SB-3 (7-8)	Total/NA	Soil	8082A	338269
310-221096-12	FD-1	Total/NA	Soil	8082A	338269
MB 310-338269/1-A	Method Blank	Total/NA	Solid	8082A	338269
LCS 310-338269/2-A	Lab Control Sample	Total/NA	Solid	8082A	338269
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	8082A	338269
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	8082A	338269

Prep Batch: 339055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-11	MW-2	Total/NA	Water	3510C	
MB 310-339055/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-339055/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-339055/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 339132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-11	MW-2	Total/NA	Water	8082A	339055
MB 310-339055/1-A	Method Blank	Total/NA	Water	8082A	339055
LCS 310-339055/2-A	Lab Control Sample	Total/NA	Water	8082A	339055
LCSD 310-339055/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	339055

Prep Batch: 558944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	3546	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	3546	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	3546	

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC Semi VOA (Continued)

Prep Batch: 558944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-6	SB-5 (2-4)	Total/NA	Soil	3546	
MB 400-558944/1-A	Method Blank	Total/NA	Solid	3546	
LCS 400-558944/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	3546	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	3546	

Prep Batch: 559146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	3511	
310-221096-8 - DL	FD-2	Total/NA	Water	3511	
310-221096-11	MW-2	Total/NA	Water	3511	
310-221096-11 - DL	MW-2	Total/NA	Water	3511	
MB 400-559146/1-A	Method Blank	Total/NA	Water	3511	
LCS 400-559146/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 400-559146/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 559524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	Kan- MRH/HRH	558944
310-221096-2	SB-2 (7-9)	Total/NA	Soil	Kan- MRH/HRH	558944
310-221096-4	SB-3 (7-8)	Total/NA	Soil	Kan- MRH/HRH	558944
310-221096-5	SB-4 (7-8)	Total/NA	Soil	Kan- MRH/HRH	558944
310-221096-6	SB-5 (2-4)	Total/NA	Soil	Kan- MRH/HRH	558944
MB 400-558944/1-A	Method Blank	Total/NA	Solid	Kan- MRH/HRH	558944
LCS 400-558944/2-A	Lab Control Sample	Total/NA	Solid	Kan- MRH/HRH	558944
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	Kan- MRH/HRH	558944
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	Kan- MRH/HRH	558944

Analysis Batch: 559525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Total/NA	Water	Kan- MRH/HRH	559146
310-221096-11	MW-2	Total/NA	Water	Kan- MRH/HRH	559146
MB 400-559146/1-A	Method Blank	Total/NA	Water	Kan- MRH/HRH	559146
LCS 400-559146/2-A	Lab Control Sample	Total/NA	Water	Kan- MRH/HRH	559146
LCSD 400-559146/3-A	Lab Control Sample Dup	Total/NA	Water	Kan- MRH/HRH	559146

Analysis Batch: 559751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8 - DL	FD-2	Total/NA	Water	Kan- MRH/HRH	559146
310-221096-11 - DL	MW-2	Total/NA	Water	Kan- MRH/HRH	559146

Prep Batch: 559999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	3546	
MB 400-559999/1-A	Method Blank	Total/NA	Solid	3546	
LCS 400-559999/2-A	Lab Control Sample	Total/NA	Solid	3546	
310-221096-12 MS	FD-1	Total/NA	Soil	3546	
310-221096-12 MSD	FD-1	Total/NA	Soil	3546	

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

GC Semi VOA

Analysis Batch: 560312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	Kan- MRH/HRH	559999
MB 400-559999/1-A	Method Blank	Total/NA	Solid	Kan- MRH/HRH	559999
LCS 400-559999/2-A	Lab Control Sample	Total/NA	Solid	Kan- MRH/HRH	559999
310-221096-12 MS	FD-1	Total/NA	Soil	Kan- MRH/HRH	559999
310-221096-12 MSD	FD-1	Total/NA	Soil	Kan- MRH/HRH	559999

Metals

Prep Batch: 337907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Dissolved	Water	3005A	
310-221096-11	MW-2	Dissolved	Water	3005A	
MB 310-337907/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-337907/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-221096-8 MS	FD-2	Dissolved	Water	3005A	
310-221096-8 MSD	FD-2	Dissolved	Water	3005A	

Prep Batch: 338296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	3050B	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	3050B	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	3050B	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	3050B	
310-221096-6	SB-5 (2-4)	Total/NA	Soil	3050B	
310-221096-12	FD-1	Total/NA	Soil	3050B	
MB 310-338296/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 310-338296/2-A	Lab Control Sample	Total/NA	Solid	3050B	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	3050B	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	3050B	

Prep Batch: 338687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Dissolved	Water	7470A	
310-221096-11	MW-2	Dissolved	Water	7470A	
MB 310-338687/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-338687/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 338722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-2	SB-2 (7-9)	Total/NA	Soil	6010D	338296
MB 310-338296/1-A	Method Blank	Total/NA	Solid	6010D	338296
LCS 310-338296/2-A	Lab Control Sample	Total/NA	Solid	6010D	338296
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	6010D	338296
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	6010D	338296

Analysis Batch: 338798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Dissolved	Water	6020B	337907
310-221096-11	MW-2	Dissolved	Water	6020B	337907
MB 310-337907/1-A	Method Blank	Total/NA	Water	6020B	337907
LCS 310-337907/2-A	Lab Control Sample	Total/NA	Water	6020B	337907

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Metals (Continued)

Analysis Batch: 338798 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8 MS	FD-2	Dissolved	Water	6020B	337907
310-221096-8 MSD	FD-2	Dissolved	Water	6020B	337907

Analysis Batch: 338817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	6010D	338296
310-221096-4	SB-3 (7-8)	Total/NA	Soil	6010D	338296
310-221096-5	SB-4 (7-8)	Total/NA	Soil	6010D	338296
310-221096-6	SB-5 (2-4)	Total/NA	Soil	6010D	338296
310-221096-12	FD-1	Total/NA	Soil	6010D	338296

Prep Batch: 338850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	7471B	
310-221096-2	SB-2 (7-9)	Total/NA	Soil	7471B	
310-221096-4	SB-3 (7-8)	Total/NA	Soil	7471B	
310-221096-5	SB-4 (7-8)	Total/NA	Soil	7471B	
310-221096-6	SB-5 (2-4)	Total/NA	Soil	7471B	
310-221096-12	FD-1	Total/NA	Soil	7471B	
MB 310-338850/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-338850/2-A	Lab Control Sample	Total/NA	Solid	7471B	
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	7471B	
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	7471B	

Analysis Batch: 338892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-8	FD-2	Dissolved	Water	7470A	338687
310-221096-11	MW-2	Dissolved	Water	7470A	338687
MB 310-338687/1-A	Method Blank	Total/NA	Water	7470A	338687
LCS 310-338687/2-A	Lab Control Sample	Total/NA	Water	7470A	338687

Analysis Batch: 338963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	6010D	338296
310-221096-4	SB-3 (7-8)	Total/NA	Soil	6010D	338296
310-221096-5	SB-4 (7-8)	Total/NA	Soil	6010D	338296
310-221096-6	SB-5 (2-4)	Total/NA	Soil	6010D	338296

Analysis Batch: 338975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-12	FD-1	Total/NA	Soil	6010D	338296

Analysis Batch: 339169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-221096-1	SB-1 (6-9)	Total/NA	Soil	7471B	338850
310-221096-2	SB-2 (7-9)	Total/NA	Soil	7471B	338850
310-221096-4	SB-3 (7-8)	Total/NA	Soil	7471B	338850
310-221096-5	SB-4 (7-8)	Total/NA	Soil	7471B	338850
310-221096-6	SB-5 (2-4)	Total/NA	Soil	7471B	338850
310-221096-12	FD-1	Total/NA	Soil	7471B	338850
MB 310-338850/1-A	Method Blank	Total/NA	Solid	7471B	338850

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Metals (Continued)

Analysis Batch: 339169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-338850/2-A	Lab Control Sample	Total/NA	Solid	7471B	338850
310-221096-2 MS	SB-2 (7-9)	Total/NA	Soil	7471B	338850
310-221096-2 MSD	SB-2 (7-9)	Total/NA	Soil	7471B	338850

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-1 (6-9)

Date Collected: 12/02/21 14:05

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-1

Matrix: Soil

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 15:28	TCH	TAL CF
Total/NA	Prep	3546			337947	12/08/21 07:57	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338308	12/10/21 14:22	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 13:30	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560226	12/16/21 18:45	GRK	TAL PEN
Total/NA	Prep	3546			338269	12/10/21 07:45	KMH	TAL CF
Total/NA	Analysis	8082A		1	338625	12/14/21 14:44	BBW	TAL CF
Total/NA	Prep	3546			558944	12/08/21 11:15	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559524	12/11/21 20:01	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338817	12/14/21 21:45	CTB	TAL CF
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338963	12/15/21 23:47	CTB	TAL CF
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 13:45	EAM	TAL CF

Client Sample ID: SB-2 (7-9)

Date Collected: 12/02/21 12:20

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-2

Matrix: Soil

Percent Solids: 78.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 15:53	TCH	TAL CF
Total/NA	Prep	3546			337947	12/08/21 07:57	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338308	12/10/21 14:01	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 13:30	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560226	12/16/21 19:49	GRK	TAL PEN
Total/NA	Prep	3546			338269	12/10/21 07:45	KMH	TAL CF
Total/NA	Analysis	8082A		1	338625	12/14/21 12:26	BBW	TAL CF
Total/NA	Prep	3546			558944	12/08/21 11:15	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559524	12/11/21 19:47	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		2	338722	12/14/21 13:14	CTB	TAL CF
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 13:47	EAM	TAL CF

Client Sample ID: SB-2 (4-5)

Date Collected: 12/02/21 12:45

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-3

Matrix: Soil

Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 16:54	TCH	TAL CF

Eurofins TestAmerica, Cedar Falls

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-3 (7-8)

Date Collected: 12/02/21 16:00

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-4

Matrix: Soil

Percent Solids: 78.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 17:19	TCH	TAL CF
Total/NA	Prep	3546			337947	12/08/21 07:57	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338308	12/10/21 14:43	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 13:30	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560226	12/16/21 20:54	GRK	TAL PEN
Total/NA	Prep	3546			338269	12/10/21 07:45	KMH	TAL CF
Total/NA	Analysis	8082A		1	338625	12/14/21 14:55	BBW	TAL CF
Total/NA	Prep	3546			558944	12/08/21 11:15	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559524	12/11/21 20:16	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338817	12/14/21 21:51	CTB	TAL CF
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338963	12/15/21 23:52	CTB	TAL CF
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 13:53	EAM	TAL CF

Client Sample ID: SB-4 (7-8)

Date Collected: 12/02/21 15:15

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-5

Matrix: Soil

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 17:44	TCH	TAL CF
Total/NA	Prep	3546			337947	12/08/21 07:57	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338308	12/10/21 15:04	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 13:30	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560226	12/16/21 21:58	GRK	TAL PEN
Total/NA	Prep	3546			558944	12/08/21 11:15	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559524	12/11/21 20:30	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338817	12/14/21 21:56	CTB	TAL CF
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338963	12/15/21 23:58	CTB	TAL CF
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 13:56	EAM	TAL CF

Client Sample ID: SB-5 (2-4)

Date Collected: 12/02/21 14:45

Date Received: 12/04/21 10:10

Lab Sample ID: 310-221096-6

Matrix: Soil

Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			338465	12/13/21 07:33	TCH	TAL CF
Total/NA	Analysis	8260D		1	338469	12/13/21 16:34	TCH	TAL CF

Eurofins TestAmerica, Cedar Falls

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: SB-5 (2-4)

Lab Sample ID: 310-221096-6

Date Collected: 12/02/21 14:45

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			337947	12/08/21 07:57	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338308	12/10/21 15:25	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 13:30	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560226	12/16/21 23:03	GRK	TAL PEN
Total/NA	Prep	3546			558944	12/08/21 11:15	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559524	12/11/21 20:45	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338817	12/14/21 22:01	CTB	TAL CF
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338963	12/16/21 00:03	CTB	TAL CF
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 13:58	EAM	TAL CF

Client Sample ID: FD-2

Lab Sample ID: 310-221096-8

Date Collected: 12/02/21 17:15

Matrix: Water

Date Received: 12/04/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		10	338345	12/10/21 17:49	TRZ	TAL CF
Total/NA	Analysis	8260D		100	338510	12/13/21 18:14	TRZ	TAL CF
Total/NA	Prep	3510C			338119	12/09/21 07:55	JCM	TAL CF
Total/NA	Analysis	8270E SIM		1	339094	12/18/21 00:49	BKT	TAL CF
Total/NA	Prep	3510C			338119	12/09/21 07:55	JCM	TAL CF
Total/NA	Analysis	8270E SIM		100	339328	12/20/21 14:17	BKT	TAL CF
Total/NA	Analysis	Kansas - LRH		200	559838	12/15/21 02:10	GRK	TAL PEN
Total/NA	Prep	3511			559146	12/09/21 10:42	KWS	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559525	12/11/21 21:57	JAW	TAL PEN
Total/NA	Prep	3511	DL		559146	12/09/21 10:42	KWS	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH	DL	2	559751	12/13/21 18:16	N1C	TAL PEN
Dissolved	Prep	3005A			337907	12/08/21 09:00	ACM2	TAL CF
Dissolved	Analysis	6020B		1	338798	12/14/21 14:45	SAP	TAL CF
Dissolved	Prep	7470A			338687	12/14/21 12:30	EAM	TAL CF
Dissolved	Analysis	7470A		1	338892	12/15/21 12:26	EAM	TAL CF

Client Sample ID: TB-1

Lab Sample ID: 310-221096-9

Date Collected: 12/02/21 07:00

Matrix: Water

Date Received: 12/04/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	338345	12/10/21 13:09	TRZ	TAL CF
Total/NA	Analysis	8260D		1	338507	12/13/21 12:02	TRZ	TAL CF

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: TB-2

Lab Sample ID: 310-221096-10

Date Collected: 12/02/21 07:01

Matrix: Soil

Date Received: 12/04/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 18:59	TCH	TAL CF

Client Sample ID: MW-2

Lab Sample ID: 310-221096-11

Date Collected: 12/02/21 16:15

Matrix: Water

Date Received: 12/04/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		10	338345	12/10/21 18:08	TRZ	TAL CF
Total/NA	Analysis	8260D		100	338510	12/13/21 18:59	TRZ	TAL CF
Total/NA	Prep	3510C			338119	12/09/21 07:55	JCM	TAL CF
Total/NA	Analysis	8270E SIM		1	339094	12/18/21 01:10	BKT	TAL CF
Total/NA	Prep	3510C			338119	12/09/21 07:55	JCM	TAL CF
Total/NA	Analysis	8270E SIM		100	339328	12/20/21 14:38	BKT	TAL CF
Total/NA	Analysis	Kansas - LRH		200	559838	12/15/21 03:11	GRK	TAL PEN
Total/NA	Prep	3510C			339055	12/17/21 08:54	JCM	TAL CF
Total/NA	Analysis	8082A		1	339132	12/17/21 16:18	BBW	TAL CF
Total/NA	Prep	3511			559146	12/09/21 10:42	KWS	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	559525	12/11/21 22:11	JAW	TAL PEN
Total/NA	Prep	3511	DL		559146	12/09/21 10:42	KWS	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH	DL	5	559751	12/13/21 18:30	N1C	TAL PEN
Dissolved	Prep	3005A			337907	12/08/21 09:00	ACM2	TAL CF
Dissolved	Analysis	6020B		1	338798	12/14/21 14:52	SAP	TAL CF
Dissolved	Prep	7470A			338687	12/14/21 12:30	EAM	TAL CF
Dissolved	Analysis	7470A		1	338892	12/15/21 12:32	EAM	TAL CF

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Date Collected: 12/02/21 15:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			337942	12/08/21 07:49	TCH	TAL CF
Total/NA	Analysis	8260D		1	337944	12/08/21 18:34	TCH	TAL CF
Total/NA	Prep	3546			338120	12/09/21 07:55	KMH	TAL CF
Total/NA	Analysis	8270E SIM		1	338551	12/14/21 15:21	BKT	TAL CF
Total/NA	Prep	5035			560235	12/16/21 17:20	GRK	TAL PEN
Total/NA	Analysis	Kansas - LRH		50	560641	12/19/21 21:39	GRK	TAL PEN
Total/NA	Prep	3546			338269	12/10/21 07:45	KMH	TAL CF
Total/NA	Analysis	8082A		1	338625	12/14/21 15:05	BBW	TAL CF
Total/NA	Prep	3546			559999	12/15/21 11:22	BKL	TAL PEN
Total/NA	Analysis	Kan- MRH/HRH		1	560312	12/17/21 05:03	JAW	TAL PEN
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	338817	12/14/21 22:06	CTB	TAL CF
Total/NA	Prep	3050B			338296	12/10/21 10:00	ACM2	TAL CF
Total/NA	Analysis	6010D		2	338975	12/16/21 10:30	CTB	TAL CF

Eurofins TestAmerica, Cedar Falls

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Client Sample ID: FD-1

Lab Sample ID: 310-221096-12

Date Collected: 12/02/21 15:05

Matrix: Soil

Date Received: 12/04/21 10:10

Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			338850	12/15/21 13:01	EAM	TAL CF
Total/NA	Analysis	7471B		1	339169	12/17/21 14:00	EAM	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Laboratory: Eurofins TestAmerica, Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kansas	NELAP	E-10341	01-31-22

Laboratory: Eurofins TestAmerica, Pensacola

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kansas	NELAP	E-10253	10-31-22

Method Summary

Client: Stantec Consulting Corp.
Project/Site: 1026 Poyntz Ave, Manhattan, Kansas

Job ID: 310-221096-1
SDG: 193705435

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL CF
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL CF
Kansas - LRH	Kansas - Low Range Hydrocarbons (LRH)	KDHE	TAL PEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CF
Kan- MRH/HRH	Kansas - Medium-Range (MRH) and High-Range Hydrocarbons (HRH)	KDHE	TAL PEN
6010D	Metals (ICP)	SW846	TAL CF
6020B	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
7471B	Mercury (CVAA)	SW846	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF
3050B	Preparation, Metals	SW846	TAL CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CF
3511	Microextraction of Organic Compounds	SW846	TAL PEN
3546	Microwave Extraction	SW846	TAL CF
3546	Microwave Extraction	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL CF
5030C	Purge and Trap	SW846	TAL PEN
5035	Closed System Purge and Trap	SW846	TAL CF
5035	Closed System Purge and Trap	SW846	TAL PEN
7470A	Preparation, Mercury	SW846	TAL CF
7471B	Preparation, Mercury	SW846	TAL CF

Protocol References:

KDHE = Kansas Department of Health and Environment

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CF = Eurofins TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Environment Testing
TestAmerica



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Stantec</u>			
City/State:	CITY <u>Mequon</u>	STATE <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>12/4/21</u>	TIME <u>1010</u>	Received By: <u>LR</u>
Delivery Type: ☐ UPS ☒ FedEx <u>SAR</u> ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☐ Yes ☒ No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?		☒ Yes ☐ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☒ Yes ☐ No	If yes: Which VOA samples are in cooler? <u>↓</u>
<u>SB 1-5, ED 1</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>N</u>		Correction Factor (°C): <u>0</u>	
Temp/Blank Temperature - If no temp blank or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>—</u>		Corrected Temp (°C): <u>—</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1 <u>250 ml R</u>		CONTAINER 2
Uncorrected Temp (°C):	<u>0.6</u>		
Corrected Temp (°C):	<u>0.6</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
TestAmerica

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Stantec</u>			
City/State:	CITY <u>Medison</u>	STATE <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>12/4/21</u>	TIME <u>1010</u>	Received By: <u>LR</u>
Delivery Type: ☐ UPS ☒ FedEx <u>SAT</u> ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present?		☒ Yes ☐ No	If yes: Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☒ Yes ☐ No	If yes: Which VOA samples are in cooler? <u>↓</u>
<u>All water</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>N</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature (all temp blank or temp blank temperature is not applicable; proceed to Sample Container Temperature)			
Uncorrected Temp (°C): <u>—</u>		Corrected Temp (°C): <u>—</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1 <u>4oz clear</u>		CONTAINER 2
Uncorrected Temp (°C):	<u>1.8</u>		
Corrected Temp (°C):	<u>1.8</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Document: CF-LG-WI-002

Revision: 25

Date: 06/17/2019

Eurofins TestAmerica, Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

Eurofins TestAmerica, Cedar Falls

3019 Venture Way

Cedar Falls, IA 50613

Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214

Client Information		Sampler: <u>SRL</u>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s)		COC No					
Client Contact: Erin Gross		Phone: <u>913 980 0281</u>		E-Mail: Shawn.Hayes@Eurofinset.com		State of Origin		Page: <u>1 of 2</u>					
Company: Stantec Consulting Corp.		PWSID		Analysis Requested									
Address: 12075 Corporate Pkwy, Suite 200		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8260D - Volatiles <u>Various Pres</u> 8270E - SIM - PAH SIM 8082A - Standard PCB 6010D - 7471B RCRA Metals 6010D - Lead 8020B - 7470A Dissolved RCRA Metals Kansas_LRH <u>Various Pres</u> Kansas_MRH_HRH <u>Various Pres</u> Total Number of containers 13 26 5 13 12 11									
City: Mequon		TAT Requested (days):											
State, Zip: WI, 53092		Compliance Project: ☐ Yes ☐ No											
Phone		PO # 193705435											
Email: erin.gross@stantec.com		WO #		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Decadecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)									
Project Name: 1026 Poyntz Ave. Manhattan, Kansas		Project # 31013841											
Project Number: 193705435		SSOW#		Other:									
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, D=drinking, BT=tissue, A=air)		Preservation Code		Special Instructions/Note:	
<u>SB-1 (6-9)</u>		<u>12/2/21</u>		<u>1405</u>		<u>G</u>		<u>Soil</u>		<u>2 2 2 2 2 2 2 2</u>		<u>13</u>	
<u>SB-2 (7-9)</u>		<u>12/2/21</u>		<u>1220</u>		<u>G</u>		<u>Soil</u>		<u>Y 10 2 2 2 2 0 6 1</u>		<u>26</u>	
<u>SB-2 (4-5)</u>		<u>12/2/21</u>		<u>1245</u>		<u>G</u>		<u>Soil</u>		<u>N 5 0 0 0 0 0 0 0</u>		<u>5</u>	
<u>SB-3 (7-8)</u>		<u>12/2/21</u>		<u>1600</u>		<u>G</u>		<u>Soil</u>		<u>N 5 1 1 1 1 0 3 1</u>		<u>13</u>	
<u>SB-4 (7-8)</u>		<u>12/2/21</u>		<u>1515</u>		<u>G</u>		<u>Soil</u>		<u>N 5 1 0 1 1 0 3 1</u>		<u>12</u>	
<u>SB-5 (2-4)</u>		<u>12/2/21</u>		<u>1445</u>		<u>G</u>		<u>Soil</u>		<u>N 5 1 0 1 0 0 3 1</u>		<u>11</u>	
<u>SA</u> <u>SA</u>													
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
☐ Non-Hazard ☐ Flammable ☐ Skin irritant ☐ Poison B ☐ Unknown ☐ Radiological										☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:			
Empty Kit Relinquished by				Date:		Time:		Method of Shipment					
Relinquished by: <u>Sean R. Chang</u>				Date/Time: <u>12/3/21 1100</u>		Company: <u>STN</u>		Received by: <u>LR</u>		Date/Time: <u>12/3/21 1010</u>		Company:	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: ☐ Yes ☐ No				Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

Ver 01/16/2019

Chain of Custody Record

Client Information		Sampler: <u>SRC</u>		Lab PM: <u>Hayes, Shawn M</u>		Carrier Tracking No(s):		COC No:																															
Client Contact: <u>Erin Gross</u>		Phone: <u>913 980 0281</u>		E-Mail: <u>Shawn.Hayes@Eurofinset.com</u>		State of Origin:		Page: <u>2 of 2</u>																															
Company: <u>Stantec Consulting Corp.</u>		PWSID:		Analysis Requested																																			
Address: <u>12075 Corporate Pkwy, Suite 200</u>		Due Date Requested:		<table border="1"> <tr> <td rowspan="4">Field Filtered Sample (Yes or No)</td> <td rowspan="4">Perform MS/MSD (Yes or No)</td> <td rowspan="4">8260D - Volatiles</td> <td rowspan="4">8270E, SIN - PAH SIM</td> <td rowspan="4">8082A - Standard PCB</td> <td rowspan="4">6010D, 7471B RCRA Metals</td> <td rowspan="4">6010D - Lead</td> <td rowspan="4">8020B, 7470A Dissolved RCRA Metals</td> <td rowspan="4">Kansas_LRH</td> <td rowspan="4">Kansas_MRH_LRH</td> <td rowspan="4">Various Pres</td> <td rowspan="4">Various Pres</td> <td rowspan="4">Various Pres</td> <td rowspan="4">Total Number of containers</td> </tr> <tr></tr> <tr></tr> <tr></tr> </table>						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - Volatiles	8270E, SIN - PAH SIM	8082A - Standard PCB	6010D, 7471B RCRA Metals	6010D - Lead	8020B, 7470A Dissolved RCRA Metals	Kansas_LRH	Kansas_MRH_LRH	Various Pres	Various Pres	Various Pres	Total Number of containers																
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - Volatiles	8270E, SIN - PAH SIM																					8082A - Standard PCB	6010D, 7471B RCRA Metals	6010D - Lead	8020B, 7470A Dissolved RCRA Metals	Kansas_LRH	Kansas_MRH_LRH	Various Pres	Various Pres	Various Pres	Total Number of containers						
City: <u>Mequon</u>		TAT Requested (days):																																					
State, Zip: <u>WI, 53092</u>		Compliance Project: ☐ Yes ☐ No																																					
Phone:		PC #:																																					
Email: <u>erin.gross@stantec.com</u>		WOC #:																																					
Project Name: <u>1025 Poyntz Ave, Manhattan, Kansas</u>		Project #:																																					
Project Number: <u>193705435</u>		SSOW#:																																					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, D=dewastrell, BT=tissue, A=air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8260D - Volatiles		8270E, SIN - PAH SIM		8082A - Standard PCB		6010D, 7471B RCRA Metals		6010D - Lead		8020B, 7470A Dissolved RCRA Metals		Kansas_LRH		Kansas_MRH_LRH		Various Pres		Various Pres		Various Pres		Total Number of containers		Special Instructions/Note:	
<u>FD-1</u>		<u>12/2/21</u>		<u>1505</u>		<u>G</u>		<u>Soil</u>		<u>N</u>		<u>5</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>0</u>		<u>3</u>		<u>1</u>		<u>13</u>		<u>Blind Dup</u>									
<u>FD-2</u>		<u>12/2/21</u>		<u>1715</u>		<u>G</u>		<u>H₂O</u>		<u>N</u>		<u>3</u>		<u>1</u>		<u>0</u>		<u>0</u>		<u>1</u>		<u>2</u>		<u>2</u>		<u>9</u>		<u>Blind Dup</u>											
<u>TB-1</u>		<u>12/2/21</u>		<u>0700</u>		<u>G</u>		<u>H₂O</u>		<u>N</u>		<u>2</u>														<u>2</u>		<u>H₂O VOL TB</u>											
<u>TB-2</u>		<u>12/2/21</u>		<u>0701</u>		<u>G</u>		<u>QALC</u>		<u>N</u>		<u>5</u>		<u>0</u>		<u>0</u>		<u>0</u>		<u>0</u>		<u>0</u>		<u>0</u>		<u>5</u>		<u>SOIL VOL TB</u>											
<u>FW-2</u>								<u>SRC</u>																															
<u>MW-2</u>		<u>12/2/21</u>		<u>1615</u>		<u>G</u>		<u>H₂O</u>		<u>N</u>		<u>3</u>		<u>1</u>		<u>1</u>		<u>0</u>		<u>0</u>		<u>1</u>		<u>2</u>		<u>10</u>													
<u>SRC</u>																																							
<u>SRC</u>																																							

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements

Empty Kit Relinquished by

Date

Time

Method of Shipment

Relinquished by

Date/Time

Date/Time

Company

Received by

Date/Time

Company

Relinquished by

Date/Time

Company

Received by

Date/Time

Company

Relinquished by

Date/Time

Company

Received by

Date/Time

Company

Custody Seals Intact:

☐ Yes ☐ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:



2.0^x IR

Page 97 of 100

12/21/2021

Environment Testing
America

[illegible]

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 310-221096-1

SDG Number: 193705435

Login Number: 221096

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	Freezer did not get pulled on Saturday
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 310-221096-1

SDG Number: 193705435

Login Number: 221096

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 12/07/21 05:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C IR 7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**PHASE II ENVIRONMENTAL SITE ASSESSMENT
1026 POYNTZ AVENUE
MANHATTAN, KANSAS**

APPENDIX D – REGULATED HAZARDOUS BUILDING MATERIALS SURVEY REPORT





HAZARDOUS MATERIALS SURVEY

FORMER RETAIL PETROLEUM PROPERTY 1026 POYNTZ AVENUE MANHATTAN, KANSAS

Prepared For:

Stantec Consulting Corporation
Mequon, Wisconsin

Prepared By:

Environmental Works, Inc.
Kansas City, Missouri

EWI Project #213533, A1

December 17, 2021

Prepared By:

Mr. Andrew Barchak
Hazardous Materials Inspection Manager

Reviewed By:

Ms. Gracie Tiffany
Operations Manager- Due Diligence

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Appendix C	PLM Summary and Chain of Custody
Appendix D	XRF Performance Characteristic Sheet
Appendix E	Interpretation of XRF Field Data

1.0 INTRODUCTION

Environmental Works, Inc. (EWI) performed a Hazardous Materials Survey on the Former Retail Petroleum Property located at 1026 Poyntz Avenue, Manhattan, Kansas (Site). The Hazardous Materials Survey included an asbestos inspection, lead-based paint (LBP) survey and a waste inventory. Mr. Andrew Barchak and Ms. Nicole Wise of EWI conducted the survey activities on November 30, 2021. The location of the Site is displayed on Figure 1.0.

1.1 Survey Objectives

The purpose of the survey was to determine the presence, location, condition, and quantity of asbestos containing materials (ACM) and LBP within the buildings, so that they can be managed properly during daily activities and future demolition/renovation activities. The asbestos inspection was conducted in accordance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. The LBP survey was conducted generally in accordance with the procedures specified in the Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing by a State of Kansas licensed Inspector. An inventory of waste materials was conducted to document locations, quantities, and conditions of materials that could potentially be considered hazardous waste and/or require separate disposal from construction/demolition materials.

1.2 Building Description

The Site consists of a 0.35-acre commercial property with an approximately 1,737 square foot (ft²) single-story retail petroleum station and two metal gasoline pump canopies totaling approximately 1,824 ft² with unknown construction dates. The remaining portions of the are concrete and asphalt surrounding parking and grass covered land.

The storefront is a concrete block construction with concrete block exterior and a flat TPO-covered pitched roof. The interior consists of painted concrete block walls, concrete floors either exposed or covered with vinyl flooring and drywall ceilings and/or acoustic drop ceilings with metal frame above. The gasoline pump canopy is painted metal construction with a flat metal roof.

1.3 Previous Reports and Documentation

Prior to conducting the inspection, EWI requested documentation of previous inspections, sampling, or abatement activities conducted at the Site. No records were available for review.

2.0 ASBESTOS INSPECTION

The asbestos inspection was conducted in accordance with the NESHAP regulations and Kansas Department of Health and Environment (KDHE) regulations for inspections. The inspection was completed by an Asbestos Hazard Emergency Response Act (AHERA) accredited State licensed inspector. Copies of the inspector's licenses are provided in Appendix A.

2.1 Purpose

The air toxics provisions of the Clean Air Act (CAA) require US EPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112 of the CAA, US EPA established the Asbestos NESHAP (40 CFR Part 61, Subpart M) to include specific compounds or hazardous air pollutants (HAP) that are known or suspected to cause cancer or other serious health effects. Asbestos was one of the first HAPs regulated under the air toxics program and were amended to cross-reference citations to US Occupational Safety and Health Administration (US OSHA), US Department of Transportation (US DOT) and US EPA requirements for disposal of asbestos waste.

NESHAP regulations require a thorough inspection where demolition or renovation operation will occur and the owner or operator of a commercial building to notify the regulatory authority before permanent removal (abatement) of certain thresholds and types of regulated asbestos-containing materials (RACM). The KDHE is delegated authority by US EPA to regulate and enforce renovation and demolition projects involving RACM. The US EPA and KDHE require a thorough inspections of all regulated structures that will be subject to renovation or demolition by a certified asbestos inspector to determine if any ACMs are present. Additionally, the US EPA requires building inspectors be accredited under the AHERA.

US EPA and KDHE define ACM as any material containing more than 1% asbestos. Materials containing <1% asbestos do not meet the definition of ACM under US EPA NESHAP; however, are regulated by US OSHA.

ACMs are distinguished between friable or non-friable forms. Friable ACMs are materials that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACMs can release fibers when damaged or disturbed, therefore EPA has defined two categories of non-friable ACM. RACM includes friable ACMs, Category I nonfriable ACM that has become friable, Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or Category II nonfriable ACM that has a high probability of becoming or has become crumbled,

pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

2.2 Inspection Activities

EWI conducted a visual survey of the Site prior to sampling to determine the presence, location, and condition of suspect ACMs. The suspect ACMs were grouped into homogeneous sampling areas, which are defined as an area of suspect materials that appear to be similar throughout in appearance, color, texture, and material construction/application dates.

EWI inspected the accessible areas of the interior and exterior of the Site where suspect asbestos materials may be present. The inspection included common areas, utility spaces, mechanical rooms, attics, above ceilings, and throughout pipe chases, as access allowed and within the agreed upon scope of work for the project. Based on the nature of this inspection, EWI used destructive sampling methods to complete the inspection.

Per the scope of work, sampling was not performed on the roofing materials during the inspection to prevent damage to the roofing materials.

2.3 Sample Protocol

EWI collected bulk samples of homogenous suspect ACMs identified during the visual reconnaissance to confirm or deny the presence of asbestos and provide a comprehensive understanding of quantities, condition, and locations of ACMs throughout the building. The number of samples collected for each homogenous material was dependent on the type of material, estimated quantity of the material and material locations, and inspector judgment.

Care was taken to prevent cross-contamination of collected samples. The bulk samples were placed into individual sample containers and labeled with individual laboratory identification numbers. A unique sample identification number was assigned to each sample. The sample identification numbers, notes pertaining to the material description, condition, and sample location of the suspect materials were recorded on the field forms.

The samples were shipped via overnight carrier under proper chain-of-custody protocol and analyzed for asbestos by Eurofins Environmental Microbiology Laboratory, Inc., Aerotech Laboratories, Inc., (EMLab P&K) of Phoenix, Arizona, a National Voluntary Laboratory Accreditation Program (NVLAP)-certified laboratory.

2.4 Laboratory Analytical Method

Bulk samples were analyzed using Polarized Light Microscopy (PLM) in conjunction with Dispersion Staining (DS) techniques, as outlined in USEPA Method, 600/R-93-116. The PLM Summary Report from the laboratory provides the type and percentage of asbestos (if any), as well as the type and percentage of other non-asbestos fibers. The PLM Summary Report is included in Appendix C.

2.5 Suspect Asbestos-Containing Materials

EWI identified 6 homogenous suspect materials and collected 11 samples for laboratory analysis. An Asbestos Sample Summary is provided as Table 1.0 and includes the complete list of suspect ACMs observed and sampled, sample ID numbers, material descriptions, sample locations, and analytical results. Sample Locations are provided on Figure 2.0.

2.6 Sample Results

Materials determined to contain greater than one percent (>1%) of any type of asbestos fibers are considered an ACM by the US EPA. Materials containing less than one percent (<1%) of asbestos fibers do not meet the definition of ACM under US EPA NESHAP; however, are regulated by US OSHA.

Based on the analytical results, 2 samples were identified with <1% asbestos. The following table provides a list of the samples containing asbestos or assumed to be ACM and the material locations, condition, and approximate quantities identified at the Site. Photographic documentation of the ACM identified at the Site during the inspection is included in Appendix B.

Sample Summary

Sample ID	Material	Sample Location	Analytical Results - Laboratory Description
2-2	Drywall System	Building – Garage Ceiling	<1% Chrysotile – Off-White Compound with Gray Paint
			<1% Chrysotile – Off-White Joint Compound
5-2	Door Caulk	Building – Garage Door	<1% Chrysotile – Gray Caulk

The following materials were identified as <1% asbestos containing (does not meet the definition of ACM under US EPA NESHAP, but regulated by OSHA):

- The ceiling drywall joint compound was determined to be <1% chrysotile is considered non-friable and was observed in good condition.
- Grey caulking was observed on the building's doors was determined to be <1% chrysotile is considered non-friable and was observed in good condition.

3.0 LEAD-BASED PAINT SURVEY

The testing protocol utilized during this inspection focused on a surface investigation for the presence of LBP. The survey was conducted in general accordance with the HUD Guidelines for the Evaluation and Control of Lead-Based Paint in Housing (June 1995), updated Chapter 7 (July 2012). Accessible interior and exterior surfaces of the building (ceilings, walls, doors, door frames, windows framing, trim, and accessories [pipe hangers, air duct grates, etc.]) were tested for the presence of LBP.

3.1 Inspected Areas

The exposed accessible painted surfaces throughout the buildings of the Site were inspected for LBP. The LBP Survey Record Sheet provided as Table 2.0 details the field data including colors, locations, substrates, conditions, rooms, and X-ray fluorescence (XRF) results obtained during this LBP survey.

3.2 Sample Collection Procedures/Methodology

The Site was surveyed to determine the presence, location, condition, and lead content of the painted/stained and or metal surfaces. The inspection utilized an XRF analyzer (NITON – XLp702A, Serial #106544). The performance of the XRF analyzer was checked against a standard, pursuant to the manufacturer's specifications, by analyzing pre-determined lead paint sample chips produced by the National Institute of Standards and Testing (NIST). These quality control measures produce a 95% confidence level that XRF readings accurately reflect the actual level of lead in the tested surfaces. The XRF was checked against the standardized paint chips every time it was turned on, every four (4) hours thereafter and prior to shutting the device off. A copy of the XRF Performance Characteristic Sheet and the User's Certification are included in Appendix D.

Each side of the building is assigned a letter (Side 'A', Side 'B', Side 'C', and Side 'D'). The side of the building where the front entrance is located is designated Side 'A'. The three remaining sides of the building are labeled clockwise as follows: standing inside the building, with back to the front entrance (the 'A' side), the side on the left is 'B', the rear side is 'C', and the side to the right is 'D'. For exterior surfaces, when facing the front entrance of the building, the front entrance side is 'A', and, proceeding clockwise, the left side is 'B', the rear side is 'C', and the right side is 'D'.

Within the building, the sides of each room are assigned letters in the same way as the interior as a whole. That is, when standing in any interior room, with the front entrance of the building behind where one is standing, the side which is parallel to the front entrance is designated side 'A', and, again proceeding clockwise, the side on the left is 'B', the side facing (parallel to the rear side of the building) is 'C', and the right side is 'D'. A description of XRF field data is included in Appendix E.

Test locations were selected based on observed painted/stained surfaces at the Site and accessibility for the XRF unit. By conducting a random sampling of the buildings and statistically analyzing the results of the XRF data, the existence and location of LBP at the Subject Site is identified.

3.3 XRF Results

According to the US EPA and HUD, positive detections of LBP is defined as XRF measurements greater than or equal to 1.0 milligrams per square centimeter (mg/cm²). Table 2.0 LBP Survey Record Sheet provides a complete list of XRF results and description of the testing combinations. The number assigned to each room or room name is provided on Figure 2.0 and a description of XRF field data including paint condition, building description, and room designation are provided in Appendix E.

The XRF readings taken at the Site were below 1.0 mg/cm²; therefore, determined not lead-based, based on the US EPA's definition of LBP.

4.0 WASTE INVENTORY

EWI completed an inventory of waste materials observed at the Site that could potentially be considered hazardous waste and/or require separate disposal from construction/demolition materials. The inventory included the following types of materials: thermostats and fluorescent light bulbs possibly containing mercury, fluorescent light ballasts potentially containing polychlorinated biphenyls (PBCs), appliances containing Freon, product containers holding hazardous materials (cleaning supplies, paint, etc.) and other waste materials that may need to be removed prior to the site activities for demolition/renovation.

EWI went through each room of the buildings identifying, categorizing, and quantifying the hazardous materials. Additionally, the exterior of the Site was visually inspected for drums or other large containers that may contain hazardous waste.

The following table summarizes the hazardous materials inventory completed at the Site. Representative photographs are included in Appendix B.

1026 Poyntz Avenue, Manhattan, Kansas				
Location	Material	Container /Capacity	Number of Containers	Condition and Notes
Garage	Gear Oil Motor Oil	5-gallon 1-quart	2 2	Good, no evidence of release
Garage Exterior	Used Oil	55-gallon	3	Good, no evidence of release
Garage	Paint	1-gallon	3	Good, no evidence of release
Garage	Sealant	5-gallon	2	Good, no evidence of release
Lobby	Paint	5-gallon 1-gallon 1-quart	1 5 1	Good, no evidence of release
Transformers				
1 pole-mounted transformer was observed onsite near the gas station near the north property boundary. According to federal guidelines, all transformers manufactured after July 1979 are required to contain less than 50 ppm PCBs. Labeling indicating, they contain less than 2 ppm PCBs was not observed, but the transformers appeared to be in good condition with no visible staining on their casings or the ground underneath.				
One Electrical dry-type transformer also situated onsite.				
Above-ground Storage Tanks				
None				
Under-ground Storage Tanks				
One approximately 200-gallon oil-water separator observed in the north bay of the garage of the gas station. Three under-ground hydraulic lifts (2 still in place) were observed in the bays of the garage of the gas station.				

Fluorescent Light Bulb and Ballasts
Based on the original construction date of the building (1967), it is possible the fluorescent lighting ballasts contain PCBs. Fluorescent light bulbs contain mercury and must be disposed of as universal waste. 28 fluorescent light bulb and 25 ballasts in the gas station interior and exterior
Hot Water Heaters
Two hot water heater was observed in the gas station. The units appeared in good condition.
Fire Extinguishers
3 in the gas station
Mercury Thermostats
1 mercury containing thermostat observed in the gas station.
Air conditioner or heating systems
1 central HVAC heating unit, 2 window AC units and 2 ceiling-mounted heating units were observed in the gas station.
White Goods
1 air compressor was observed in the garage of the gas station.
Solid waste Containers
Solid waste (household trash) was observed in the solid waste container, no illegal or regulated materials were observed in the gas station. No staining or evidence of release was observed on the ground surface below the waste containers.

5.0 CONCLUSIONS AND RECOMMENDATIONS

On November 30, 2021, Andrew Barchak of EWI performed a Hazardous Materials Survey including an asbestos inspection, LBP survey and waste inventory on the Former Retail Petroleum Property located at 1026 Poyntz Avenue, Manhattan, Kansas.

5.1 Asbestos Inspection

The following materials were identified as <1% asbestos containing (does not meet the definition of ACM under US EPA NESHAP, but regulated by OSHA):

- The ceiling drywall joint compound was determined to be <1% chrysotile is considered non-friable and was observed in good condition.
- Grey caulking was observed on the building's doors was determined to be <1% chrysotile is considered non-friable and was observed in good condition.

Based on the findings of this Asbestos Inspection, EWI recommends the following actions be taken with regard to <1% ACMs at the Site:

EWI recommends building materials containing <1% asbestos do not meet the definition of ACM under US EPA NESHAP; however, are regulated by US OSHA. If building materials containing <1% asbestos are being disturbed, demolition contractors must follow OSHA worker safety rules. At a minimum, these contractors must notify and provide training to their employees about work practices, clean-up, and disposal requirements.

5.2 Lead-Based Paint Survey

According to the US EPA and HUD, LBP is defined as XRF measurements greater than or equal to 1.0 mg/cm². Based on the XRF results, all readings taken at the Site were below 1.0 mg/cm²; therefore, determined not lead-based, based on the US EPA's definition of LBP.

5.3 Waste Inventory

A waste inventory is provided in Section 4.0. Wastes identified included 1-gallon or less containers of paint, sealants, and oil, and 5-gallon or less containers of paint, sealants, new and used oil. Three 55-gallon drums of used oil were observed in the garage area of the building. One mercury containing thermostat was observed on the wall in the retail petroleum building, needs to be disposed of in accordance with applicable federal, state, and local regulations. Additionally, wastes including fire extinguishers and fluorescent light bulbs and ballasts were observed throughout the

building. These materials including the historical ballasts and bulbs should be disposed of in accordance with applicable federal, state, and local regulations. White goods including air conditioner compressors, hot-water heaters and heating units were observed throughout the building. White goods should be properly maintained and when not in use recycled or disposed of in accordance with regulations. Minimal quantities of chemical containers were identified during the Survey and included 'typical' household maintenance and cleaning chemicals. The contents identified appeared to be in good condition with no evidence of release. These materials should be used until spent, or disposed in accordance with applicable federal, state, and local regulations.

5.0 LIMITATIONS

5.1 ACM Survey Limitations

This assessment was conducted by an AHERA-Certified Kansas Asbestos Inspector. The conclusions presented in this report are based solely upon the reported analytical results from an independent laboratory. It is possible that ACMs may be concealed in wall cavities and other inaccessible areas. If these areas are exposed during construction, remodeling, or demolition, these areas should either be tested or treated as asbestos-containing.

EWI did not conduct a sampling of the roofing materials due to scope of work, in addition, to avoid damaging the roof. ACMs may be present in the subsurface layers of the roof. It is recommended that in the event of any future work to the roof is to be completed; a roofing contractor would need to be hired to repair coring activities from a full inspection of the roofing materials at the Site.

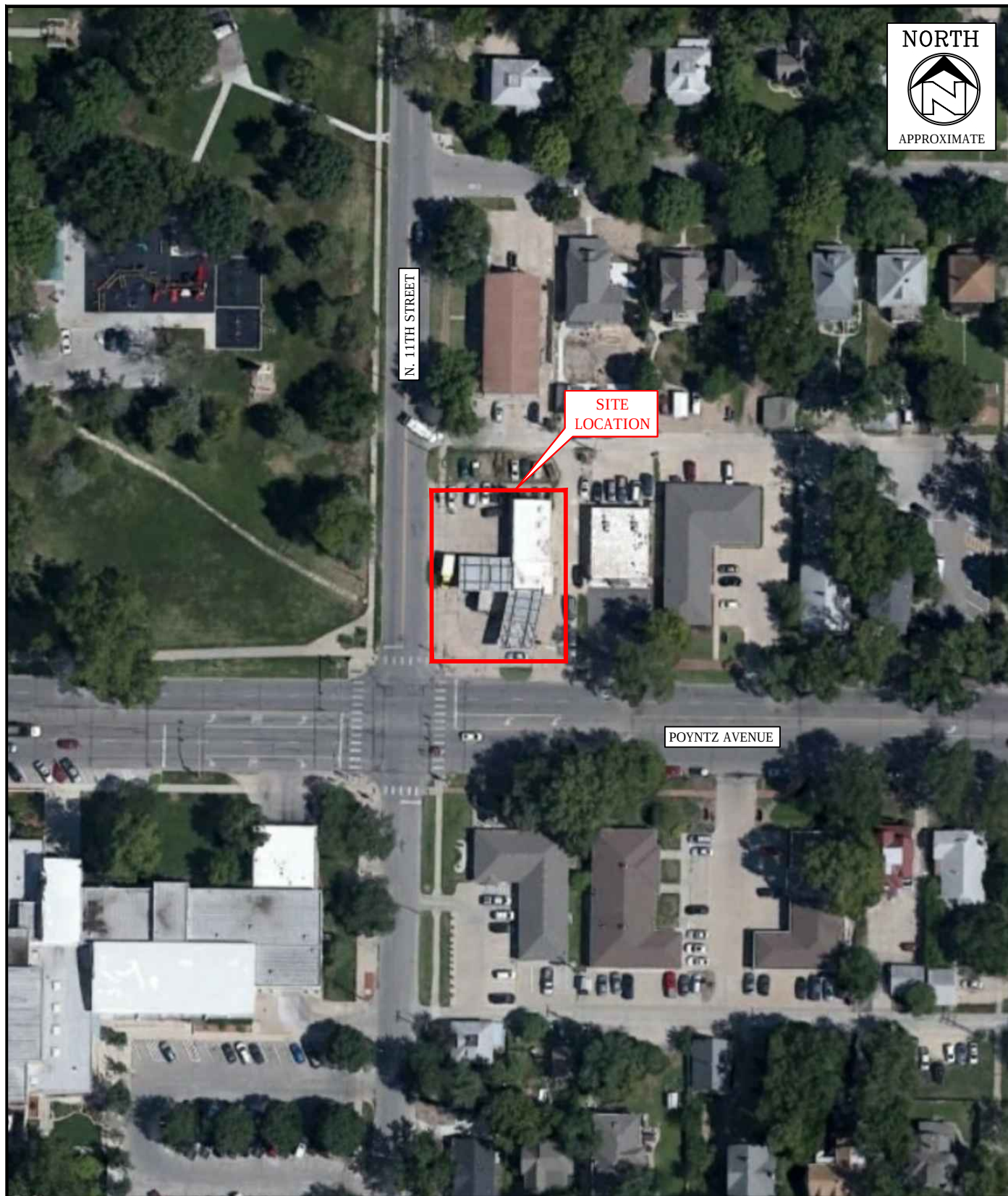
5.2 LBP Survey Limitations

This assessment was conducted by a Lead Inspector licensed in the state of Kansas. The conclusions presented in this report are based solely upon the reported analytical results from the XRF readings for LBP. It is possible that LBP may be concealed in wall cavities and other inaccessible areas. If these areas are exposed during construction, remodeling, or demolition, these areas shall either be tested or treated as lead-containing.

This report was prepared based on interpretation of information obtained during the survey of the Site. The conclusions of this report are professional opinions based solely upon those visual site observations, information supplied by the client during the time of the Survey and interpretations of sample findings as described in our report. Locations where sampling was performed were described are as approximate locations. The data collected during the limited inspection and short-term sample collection only allows us to determine if the results correspond to the characteristics of a building at the time of the survey. Our opinions and recommendations are intended exclusively for client use. Additionally, the opinions presented herein apply to the Site conditions existing at the time of our inspection. Therefore, our opinions may not apply to future conditions that may develop at the Site, which we have not had the opportunity to evaluate.

This assessment was performed at the request of Stantec Consulting Corporation utilizing methods and procedures consistent with good commercial or customary practices designed to conform with acceptable industry standards and is not for use of other parties without the expressed written authorization of EWI. The independent conclusions represent Environmental Works, Inc.'s best professional judgment based on the conditions that existed and the information and data available to

us during the course of this assignment. Factual information regarding operations, conditions, and test data provided to Reliant Parties, or their representative has been assumed to be correct and complete.

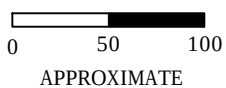


SOURCE: Google Earth (2014)

CHECKED BY:
N. LOUNSBERRY

EWI# 213533
DRAWN BY: NML
Dec. 16, 2021

SCALE (FEET)



SITE LOCATION MAP

1026 POYNTZ AVENUE
MANHATTAN, KANSAS

FIGURE
1.0

LEGEND
● = NEGATIVE ASBESTOS SAMPLE NOTE: A,B,C,D INDICATE "SIDE"

NOTE: A,B,C,D INDICATE "SIDE"

5-1

5-1

C

●2-1

● 1-1

4-2●

5-2

STORAGE

BATH

● 2-2

● 6-1

● 1-2

4-1

CANOPY



1455 E. Chestnut Expressway, Springfield, MO 65802

2.0

Table 1.0 **Asbestos Sample Summary**

Asbestos Inspection **Former Retail Petroleum Facility** **1026 Poyntz Avenue, Manhattan, Kansas**

Sample determined to contain >1% asbestos
 Sample determined to contain <1% asbestos
 ND = Non Detect, asbestos was not identified

Sample ID	Material	Sample Location	Analytical Results - Laboratory Description
1-1	Cream Floor Tile + Mastic	Gas Station- Lobby Main Area Floor	ND-Cream Floor Tile
			ND-Yellow Mastic
1-2	Cream Floor Tile + Mastic	Gas Station- Lobby Main Area Floor	ND-Cream Floor Tile
			ND-Yellow Mastic
2-1	Drywall/Joint/Tape	Gas Station- Garage Main Area Ceiling	ND-White Compound with Gray Paint
			ND-Cream Tape
			ND-White Joint Compound
			ND-White Drywall with Brown Paper
2-2	Drywall/Joint/Tape	Gas Station- Lobby Main Area Ceiling	ND-White Compound with Gray Paint
			ND-Cream Tape
			ND-White Joint Compound
			ND-White Drywall with Brown Paper
3-1	Duct Tape	Gas Station-Garage Storage Area Duct	ND-Off-White Tape
3-2	Duct Tape	Gas Station-Garage Storage Area Duct	ND-Off-White Tape
4-1	Expansion Caulk	Gas Station-Main Area Wall	ND-Gray Caulk
			ND-Gray Cementitious Material
4-2	Expansion Caulk	Gas-HVAC Wall	ND-Gray Caulk
			ND-White Foam
5-1	Door Caulk	Gas Station-North Door	ND-Gray Caulk with White Paint
			ND-Gray Cementitious Material
5-2	Door Caulk	Gas Station-South Door	ND-Gray Caulk
6-1	Wall Mastic	Gas Station-Lobby Main Area Wall	ND-Tan Mastic
			ND-White Caulk

Table 2.0
Lead-Based Paint Survey Record Sheet with XRF Results

Hazardous Materials Survey
1026 Poyntz Avenue
Manhattan, Kansas

Greater than or equal to 1.0 mg/cm ² - Considered Lead-Based Paint									
Inspection Dates: 11/30/2021									
Sample #	Room	Component	Substrate	Side	Paint color	Positive/ Negative	Analysis (mg/cm ²)	Pb +/-	Condition
523	CALIBRATION					Negative	0.9	0.3	
524	CALIBRATION					Negative	0.9	0.2	
525	CALIBRATION					Positive	1.1	0.1	
526	Garage	Wall	Concrete	C	White	Negative	0.4	0.1	Intact
527	Garage	Wall	Concrete	C	White	Negative	0.5	0.1	Intact
528	Garage	Wall	Concrete	C	Black	Negative	0.5	0.3	Intact
529	Garage	Wall	Concrete	D	Black	Negative	0.4	0.2	Intact
530	Garage	Wall	Concrete	D	White	Negative	0.28	0.13	Intact
531	Garage	Wall	Concrete	B	White	Negative	0.2	0.1	Intact
532	CALIBRATION					Positive	1.01	0	
533	Garage	Wall	Concrete	B	White	Negative	0.3	0.11	Intact
534	Garage	Wall	Concrete	B	BLACK	Negative	0.4	0.2	Intact
535	Garage	Trim	Metal	B	White	Negative	0.27	0.35	Poor
536	Garage	Door	Metal	B	White	Negative	0	0.02	Intact
537	Garage	Door	Wood	A	GREY	Negative	0.23	0.21	Intact
538	Garage	Trim	Metal	D	White	Negative	0.24	0.41	Intact
539	Garage	Trim	Metal	D	White	Negative	0.12	0.2	Intact
540	Garage	Trim	Metal	D	BLACK	Negative	0.16	0.18	Intact
541	Garage	Wall	Concrete	C	White	Negative	0.3	0.09	Intact
542	Garage	Wall	Concrete	D	White	Negative	0.25	0.07	Intact
543	Garage	Wall	Concrete	A	White	Negative	0.4	0.1	Intact
544	Garage	Trim	Metal	A	GREY	Negative	0.27	0.27	Intact
545	Garage	Trim	Metal	A	GREY	Negative	0.22	0.21	Intact
546	Garage	Trim	Metal	D	GREY	Negative	0.3	0.28	Intact
547	Garage	Trim	Concrete	D	GREY	Negative	0.01	0.03	Intact
548	Storage Room	Wall	Concrete	B	White	Negative	0.23	0.21	Intact
549	Storage Room	Wall	Concrete	C	White	Negative	0.3	0.19	Intact
550	Storage Room	Wall	Concrete	C	White	Negative	0.4	0.3	Intact
551	Lobby	Wall	Wood	C	White	Negative	0	0.04	Intact
552	Lobby	Trim	Metal	B	GREY	Negative	0.16	0.18	Intact
553	Lobby	Trim	Metal	B	GREY	Negative	0.13	0.16	Intact
554	Lobby	Trim	Metal	D	White	Negative	0	0.02	Intact
555	Garage	Beam	Metal	UPPER	White	Negative	0.4	1.5	Intact
556	Garage	Beam	Metal	UPPER	White	Negative	0.4	0.7	Intact
557	Lobby	Trim	Wood	D	White	Negative	0.14	0.16	Intact
558	Lobby	Wall	Drywall	D	White	Negative	0.4	0.4	Intact
559	Lobby	Trim	Wood	A	White	Negative	0.5	0.4	Intact
560	Lobby	Wall	Concrete	A	White	Negative	0.5	1.2	Intact
561	Lobby	Wall	Concrete	A	White	Negative	0.5	0.3	Intact
562	Garage	Ceiling	Drywall	A	White	Negative	0.24	0.15	Intact
563	Exterior	Trim	Metal	A	Red	Negative	-0.59	1.58	Intact
564	Exterior	Trim	Metal	A	Red	Negative	-0.66	1.65	Intact
565	Exterior	Trim	Concrete	A	Red	Negative	0.2	0.05	Intact
566	Exterior	Trim	Metal	A	Red	Negative	0.26	0.09	Intact
567	Exterior	Wall	Concrete	A	White	Negative	0.24	0.21	Intact
568	Exterior	Trim	Metal	A	White	Negative	0.01	0.03	Intact
569	Exterior	Wall	Concrete	B	White	Negative	0.25	0.39	Intact
570	Exterior	Pipe	Metal	B	White	Negative	0.06	0.16	Intact
571	Exterior	Door	Metal	B	White	Negative	0	0.02	Intact
572	Exterior	Trim	Metal	B	White	Negative	0.24	0.34	Intact
573	Exterior	Trim	Metal	B	White	Negative	0.19	0.26	Intact
574	Exterior	Wall	Concrete	C	White	Negative	0.17	0.22	Intact
575	Exterior	Pipe	Metal	C	White	Negative	0	0.02	Intact
576	Exterior	Door	Metal	C	Red	Negative	0	0.02	Intact
577	Exterior	Trim	Wood	C	Red	Negative	0	0.02	Intact
578	Exterior	Trim	Metal	C	Red	Negative	-0.72	1.5	Intact
579	Exterior	Trim	Metal	C	Red	Negative	-0.02	1.01	Intact
580	Exterior	Door	Metal	C	Red	Negative	0.26	0.2	Intact
581	Exterior	Trim	Metal	D	Red	Negative	-0.33	1.29	Intact
582	Exterior	Trim	Metal	D	Red	Negative	-0.15	1.11	Intact
583	Exterior	Trim	Metal	D	Red	Negative	-0.02	1.01	Intact
584	CALIBRATION					Positive	1.11	0	

Table 2.0
Lead-Based Paint Survey Record Sheet with XRF Results

Hazardous Materials Survey
1026 Poyntz Avenue
Manhattan, Kansas

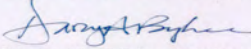
Greater than or equal to 1.0 mg/cm ² - Considered Lead-Based Paint									
Inspection Dates: 11/30/2021									
Sample #	Room	Component	Substrate	Side	Paint color	Positive/ Negative	Analysis (mg/cm ²)	Pb +/-	Condition
585	Storage Room	Ceiling	Drywall	UPPER	White	Negative	0.07	0.17	Intact
586	Storage Room	Ceiling	Drywall	UPPER	White	Negative	0.11	0.19	Intact
587	Exterior	Trim	Metal	A	Red	Negative	0.4	0.4	Intact
588	Exterior	Trim	Metal	A	Red	Negative	0.29	0.31	Intact
589	Exterior	Trim	Metal	D	Red	Negative	-0.29	1.27	Intact
590	Exterior	Trim	Metal	D	Red	Negative	0.15	0.18	Intact
591	Exterior	Column	Concrete	D	Red	Negative	0.07	0.13	Intact
592	Exterior	Column	Concrete	A	Red	Negative	0.08	0.14	Intact
593	Exterior	Overhang	Wood	A	White	Negative	0.16	0.46	Intact
594	Exterior	Overhang	Metal	A	Red	Negative	0.1	0.4	Intact
595	Exterior	Overhang	Metal	A	White	Negative	0.01	0.06	Intact
596	Exterior	Overhang	Metal	A	White	Negative	0.02	0.07	Intact
597	Exterior	Overhang	Metal	A	Red	Negative	0.05	0.14	Intact
598	CALIBRATION					Positive	1.1	0.3	
599	CALIBRATION					Positive	1	0.1	
600	CALIBRATION					Positive	1	0.1	

CERTIFICATION NUMBER:
7011040220MOIR17997

THIS CERTIFIES
Andrew J. Barchak
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Inspector

APPROVED: **04/20/2020**
EXPIRES: **04/20/2021**

TRAINING DATE: **04/02/2020**



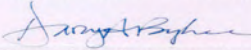
Director of Air Pollution Control Program

CERTIFICATION NUMBER:
7011010621MOSR17997

THIS CERTIFIES
Andrew J. Barchak
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Supervisor

APPROVED: **01/29/2021**
EXPIRES: **01/29/2022**

TRAINING DATE: **01/06/2021**



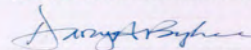
Director of Air Pollution Control Program

CERTIFICATION NUMBER:
7011022820MOMPI17997

THIS CERTIFIES
Andrew J. Barchak
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Management Planner

APPROVED: **03/12/2020**
EXPIRES: **03/12/2021**

TRAINING DATE: **02/28/2020**



Director of Air Pollution Control Program

CERTIFICATION NUMBER:
7000121720MOAS17997

THIS CERTIFIES
Andrew J. Barchak
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Air Sampling Professional

APPROVED: **12/17/2020**



Director of Air Pollution Control Program

Kansas Department of Health and Environment

Be it known, that having properly filed application with the Kansas Department of Health and Environment,

Andrew Barchak

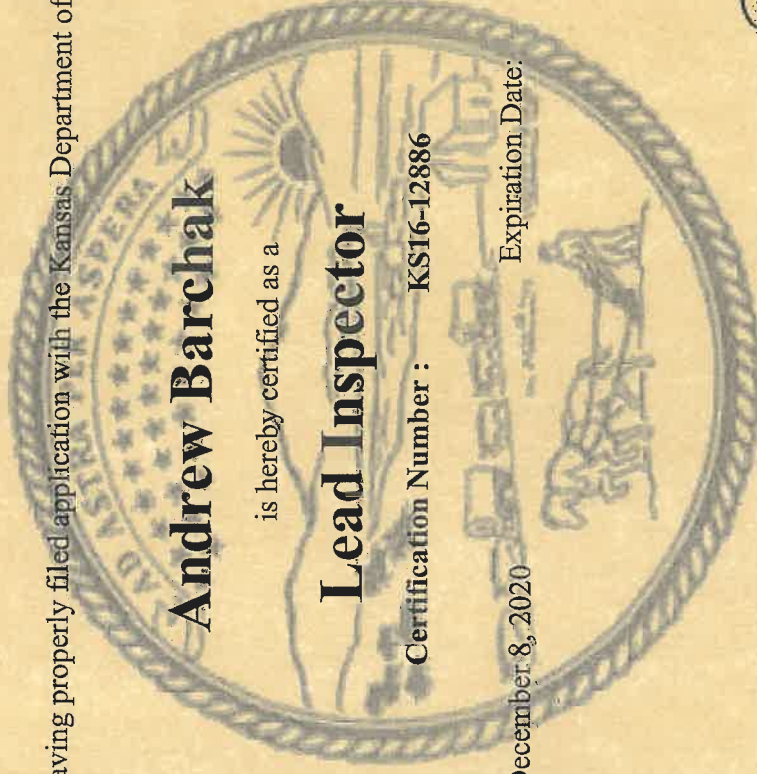
is hereby certified as a

Lead Inspector

Certification Number : KS16-12886

Issue Date: December 8, 2020

Expiration Date: December 4, 2022



Lee A. Norman M.D.

Lee A. Norman, M.D., Secretary
Kansas Department of Health and Environment

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 500031-0

Eurofins EMLab P&K

Phoenix, AZ

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2021-01-01 through 2021-12-31

Effective Dates



A handwritten signature in blue ink, reading "Peter S. Lander".

For the National Voluntary Laboratory Accreditation Program

CERTIFICATION NUMBER:
7011012121MOIR19647

THIS CERTIFIES
Nicole M Lounsberry
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Inspector



APPROVED: **05/14/2021**

TRAINING DATE: **01/21/2021**

EXPIRES: **01/21/2022**

A handwritten signature in blue ink, appearing to read "Amy A. Byrnes".

Director of Air Pollution Control Program

Kansas Department of Health and Environment

Be it known, that having properly filed application with the Kansas Department of Health and Environment,

Nicole Lounsberry

is hereby certified as a

Lead Inspector

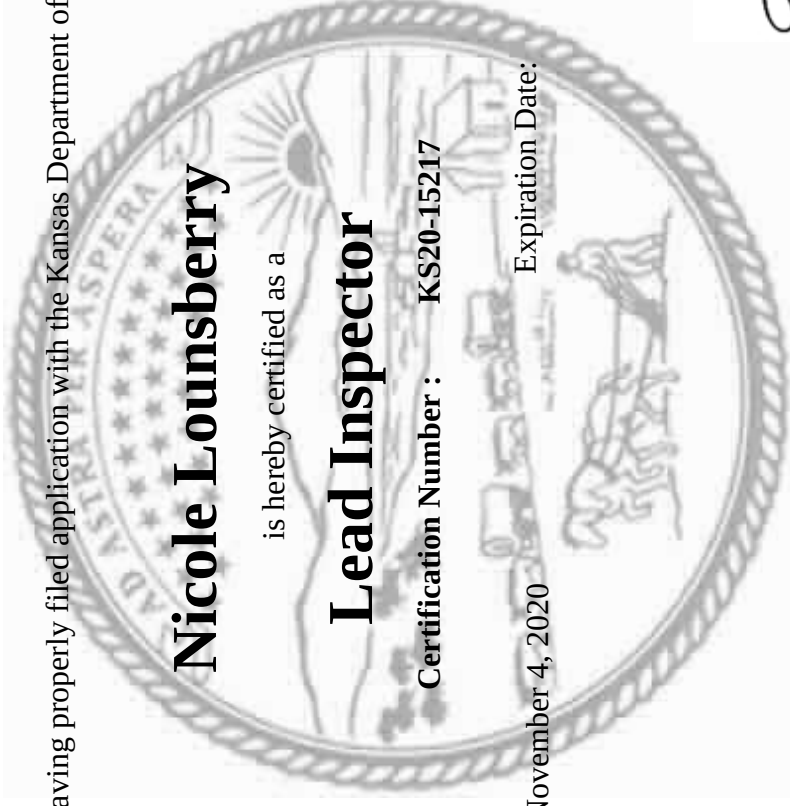
Certification Number : **KS20-15217**

Issue Date:

November 4, 2020

Expiration Date:

October 30, 2022



Lee A. Norman M.D.

Lee A. Norman, M.D., Secretary
Kansas Department of Health and Environment

APPENDIX B

Photographic Documentation

Hazardous Materials Survey

**1026 Poyntz Avenue
Manhattan, Kansas**

**Photographed by: Andrew Barchak
on November 30, 2021**



1. View of onsite retail petroleum structure.



2. View of drywall joint compound (Sample 2-2) containing <1% chrysotile asbestos.

Hazardous Materials Survey

**1026 Poyntz Avenue
Manhattan, Kansas**

**Photographed by: Andrew Barchak
on November 30, 2021**



3. View of door caulking (Samples 5-2) containing <1% chrysotile asbestos.



4. Representative view of the fire extinguishers and paint storage located at the site.

Hazardous Materials Survey

1026 Poyntz Avenue
Manhattan, Kansas

Photographed by: Andrew Barchak
on November 30, 2021



5. Representative view of the historical thermostat located within the gasoline station.



6. View of chemicals storage within the garage storage area.

Hazardous Materials Survey

1026 Poyntz Avenue
Manhattan, Kansas

Photographed by: Andrew Barchak
on November 30, 2021



7. Representative view of retail HVAC within the building.



8. View of oil/water separator in the north bay of the building.

Hazardous Materials Survey

**1026 Poyntz Avenue
Manhattan, Kansas**

**Photographed by: Andrew Barchak
on November 30, 2021**



9. Representative view of hot water heaters at the site.



10. Representative view of underground hydraulic lift observed at the site.

Hazardous Materials Survey

**1026 Poyntz Avenue
Manhattan, Kansas**

**Photographed by: Andrew Barchak
on November 30, 2021**



11. Representative view of 55-gallon used oil storage at the site.



12. Representative view of ceiling mounted heating units, light bulbs/ballast and air compressor observed at the site.

APPENDIX C

Laboratory Analytical Results and Chain of Custody

Report for:

Mr Andrew Barchak, Nicole Lounsberry, Gracie Tiffany
Environmental Works
1731 Locust Street
Kansas City, MO 64108

Regarding: Project: 213533; Asbestos Inspection - 1026 Poyntz Avenue, Manhattan, Kansas
EML ID: 2798967

Approved by:

Dates of Analysis:
Asbestos PLM: 12-06-2021



Approved Signatory
Renee Luna-Trepczynski

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 500031-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received and tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Environmental Works
 C/O: Mr Andrew Barchak, Nicole Lounsberry,
 Gracie
 Tiffany
 Re: 213533; Asbestos Inspection - 1026 Poyntz
 Avenue, Manhattan, Kansas

Eurofins EMLab P&K
 1501 West Knudsen Drive, Phoenix, AZ 85027
 (800) 651-4802 Fax (623) 780-7695 www.emlab.com
 Date of Sampling: 11-30-2021
 Date of Receipt: 12-03-2021
 Date of Report: 12-06-2021

ASBESTOS PLM REPORT

Total Samples Submitted: 11

Total Samples Analyzed: 11

Total Samples with Layer Asbestos Content > 1%: 0

Location: 1-1, Cream Floor Tile + Mastic

Lab ID-Version‡: 13401362-1

Sample Layers	Asbestos Content
Cream Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 1-2, Cream Floor Tile + Mastic

Lab ID-Version‡: 13401363-1

Sample Layers	Asbestos Content
Cream Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 2-1, Composite Drywall System (Drywall/Joint Compound/Tape)

Lab ID-Version‡: 13401364-1

Sample Layers	Asbestos Content
White Compound with Gray Paint	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Poor

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Environmental Works
C/O: Mr Andrew Barchak, Nicole Lounsberry,
Gracie
Tiffany
Re: 213533; Asbestos Inspection - 1026 Poyntz
Avenue, Manhattan, Kansas

Eurofins EMLab P&K
1501 West Knudsen Drive, Phoenix, AZ 85027
(800) 651-4802 Fax (623) 780-7695 www.emlab.com
Date of Sampling: 11-30-2021
Date of Receipt: 12-03-2021
Date of Report: 12-06-2021

ASBESTOS PLM REPORT

Location: 2-2, Composite Drywall System (Drywall/Joint Compound/Tape)

Lab ID-Version‡: 13401365-1

Sample Layers	Asbestos Content
Off-White Compound with Gray Paint	< 1% Chrysotile
Cream Tape	ND
Off-White Joint Compound	< 1% Chrysotile
White Drywall with Brown Paper	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Poor

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

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C/O: Mr Andrew Barchak, Nicole Lounsberry,
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Re: 213533; Asbestos Inspection - 1026 Poyntz
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Eurofins EMLab P&K
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Date of Sampling: 11-30-2021
Date of Receipt: 12-03-2021
Date of Report: 12-06-2021

ASBESTOS PLM REPORT

Location: 3-1, Duct Tape

Lab ID-Version‡: 13401366-1

Sample Layers	Asbestos Content
Off-White Tape	ND
Composite Non-Asbestos Content:	30% Cotton
Sample Composite Homogeneity:	Moderate

Location: 3-2, Duct Tape

Lab ID-Version‡: 13401367-1

Sample Layers	Asbestos Content
Off-White Tape	ND
Composite Non-Asbestos Content:	30% Cotton
Sample Composite Homogeneity:	Moderate

Location: 4-1, Expansion Caulk

Lab ID-Version‡: 13401368-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Moderate

Location: 4-2, Expansion Caulk

Lab ID-Version‡: 13401369-1

Sample Layers	Asbestos Content
Gray Caulk	ND
White Foam	ND
Sample Composite Homogeneity:	Moderate

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Eurofins EMLab P&K
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Date of Sampling: 11-30-2021
Date of Receipt: 12-03-2021
Date of Report: 12-06-2021

ASBESTOS PLM REPORT

Location: 5-1, Door Caulk

Lab ID-Version‡: 13401370-1

Sample Layers	Asbestos Content
Gray Caulk with White Paint	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity: Moderate	

Location: 5-2, Door Caulk

Lab ID-Version‡: 13401371-1

Sample Layers	Asbestos Content
Gray Caulk	< 1% Chrysotile
Composite Non-Asbestos Content:	2% Talc
Sample Composite Homogeneity: Good	

Location: 6-1, Wall Mastic

Lab ID-Version‡: 13401372-1

Sample Layers	Asbestos Content
Tan Mastic	ND
White Caulk	ND
Sample Composite Homogeneity: Moderate	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

CHAIN OF CUSTODY

www.EMLabPK.com

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * (866) 871-1984

Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * (800) 651-4802

SSF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 * (866) 888-6653

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☒	☒	☒	☒	☒
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

EMLab ID
2798967

REQUESTED SERVICES (Use checkboxes below)						
Asbestos PLM	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
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	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

CONTACT INFORMATION							
Company:	Environmental Works (30602)		Address: 1731 Locust Street Kansas City, MO 64108				
Contact:	Andrew Barchak, Gracie Tiffany, Nicole Lounsberry		Special Instructions:				
Phone:	816-285-8433						
PROJECT INFORMATION				TURN AROUND TIME CODES (TAT)			
Project ID:	213533		STD – Standard (DEFAULT)		Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.		
Project Description:	Asbestos Inspection - 1026 Poyntz Avenue, Manhattan, Kansas		ND – Next Business Day				
Project Zip Code:	66502	Sampling Date & Time:	11/30/2021 10:00 AM				SD – Same Business Day Rush
PO Number:	213533	Sampled By: Andrew Barchak		WH – Weekend / Holiday			
Sample ID	Description	Sample Type (Below)	TAT (Above)	Volume / Area (as applicable)	.ISO Class (as applicable)	Notes (Time of day, Temp, RH, etc.)	
1-1	Cream Floor Tile + Mastic	B	STD	N/A			
1-2	Cream Floor Tile + Mastic	B	STD	N/A			
2-1	Composite Drywall System (Drywall/Joint Compound/Tape)	B	STD	N/A			
2-2	Composite Drywall System (Drywall/Joint Compound/Tape)	B	STD	N/A			
3-1	Duct Tape	B	STD	N/A			
3-2	Duct Tape	B	STD	N/A			
4-1	Expansion Caulk	B	STD	N/A			
4-2	Expansion Caulk	B	STD	N/A			
5-1	Door Caulk	B	STD	N/A			
5-2	Door Caulk	B	STD	N/A			
5-3	Wall Mastic	B	STD	N/A			

SAMPLE TYPE CODES		RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
B - Bulk sample		Andrew Barchak	12/1/2021 11:00 AM		

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at <http://www.emlab.com/s/main/serviceterms.html>

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APPENDIX D

XRF Performance Characteristic Sheet

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLp 300

Source: ^{109}Cd

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.

XLp 300A, XLp 301A, XLp 302A and XLp 303A.

XLi 700A, XLi 701A, XLi 702A and XLi 703A.

XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

Note: The XLi and XLp versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

APPENDIX E

Interpretation of XRF Field Data

INTERPRETATION OF XRF FIELD DATA

PAINT CONDITIONS

During the inspection, the paint is categorized as being in one of three conditions: Intact, Fair or Poor. The categorization of paint condition is based on total area of deteriorated paint on each component pursuant to the HUD chart below:

Type Of Building Component	Intact	Fair	Poor / Defective
Large Exterior Surfaces	Entire Surface is intact	Less than or equal to 10 sq/ft	More than 10 sq/ft
Interior Components of large surfaces: ceiling walls, doors, ceilings	Entire Surface is intact	Less than or equal to 2 sq/ft	More than 2 sq/ft
Interior & Exterior small surface areas: windows sills, baseboards, etc	Entire Surface is intact	Less than or equal to 10% of total surface areas	More than 10% of total surface area

Intact - Intact is defined as paint, which is not flaking, peeling or chalking (i.e. you cannot lift the paint from the substrate with your fingernail). Components coated with intact LBP do not pose a lead hazard to the occupants. However, since conditions can change over time, the owner should inspect the lead positive components periodically for indications of damage. Moreover, the owner should possess an Operations & Maintenance Plan describing safe ways reducing the likelihood of developing lead hazards.

Fair - Fair surfaces should be repaired but are not yet considered a lead hazard.

Poor/Defective Surface - LBP in poor condition (i.e. flaking or peeling) poses a lead hazard and should be corrected. Poor paint will continue to erode, increasing the likelihood of lead dust or paint chips falling to the ground. At a minimum, poor surfaces should be stabilized via wet scraping or sanding and then repainted. We recommend that the owner retain a Department of Health Services certified lead abatement worker or contractor supervisor to perform the wet sanding or scraping.

BUILDING DESCRIPTIONS

Each side of the building is assigned a letter (Side 'A', Side 'B', Side 'C', and Side 'D'). The side of the building where the front entrance is located is designated Side 'A'. The three remaining sides of the building are labeled clockwise as follows: standing inside the building, with back to the front entrance (the 'A' side), the side on the left is 'B', the rear side is 'C', and the side to the right is 'D'. For exterior surfaces, when facing the front entrance of the building, the front entrance side is 'A', and, proceeding clockwise, the left side is 'B', the rear side is 'C', and the right side is 'D'.

Within the building, the sides of each room are assigned letters in the same way as the interior as a whole. That is, when standing in any interior room, with the front entrance of the building behind where one is standing, the side which is parallel to the front entrance is designated side 'A', and, again proceeding clockwise, the side on the left is 'B', the side one is facing (parallel to the rear side of the building) is 'C', and the right side is 'D'.

ROOM DESIGNATIONS

Each room is assigned a number. The number assigned each room is provided on Figures and is indicated as the room on the LBP Survey Record Sheet.

SUBSTRATE

The material to which a coating such as paint is applied. Residential substrates are usually wood, plaster, masonry, gypsum board, or metal, including components such as doors and door frames, windows and window trim, other trim, walls, ceilings, cabinets, and other built-in storage.

SURFACE

The outer or topmost boundary of a substrate.

"LEAD SPEAK" – A BRIEF GLOSSARY

Lead-Based Paint: Paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter or 0.5 percent by weight or 5,000 parts per million (ppm) by weight.

Lead-Containing Paint – Paint or other surface coatings that contain lead greater than 0.0 mg/cm² of lead, but less than 1.0 mg/cm² of lead, as determined by XRF.

Lead-Based Paint Hazards: Any condition that causes exposure to lead from dust-lead hazards, soil-lead hazards, or lead-based paint that is deteriorated or present in chewable surfaces, friction surfaces, or impact surfaces, and that would result in adverse human health effects.

Visual Assessment: A visual inspection of interior and exterior surfaces to identify specific conditions that may be lead-based paint hazards. A visual inspection does not identify lead-based paint. The assessment may be performed by a person trained in visual assessment. Training for visual assessment is available on HUD's website at www.hud.gov/offices/lead.

LEAD HAZARD EVALUATION

Paint Testing: Testing of specific surfaces, by XRF (x-ray fluorescence) or lab analysis, to determine the lead content of these surfaces, performed by a federal or state-certified lead-based paint inspector or risk assessor.

Lead-Based Paint Inspection: A surface-by-surface investigation to determine the presence of lead-based paint and the provision of a report explaining the results of the investigation. It is performed by a certified paint inspector or risk assessor.

Risk Assessment: A comprehensive evaluation for lead-based paint hazards that includes paint testing, dust and soil sampling, and a visual evaluation. The risk assessment report identifies lead hazards and appropriate lead hazard reduction methods. A certified risk assessor must conduct the assessment.

Lead Hazard Screen: A limited risk assessment activity that can be performed instead of a risk assessment in units that meet certain criteria (e.g. good condition). The screen must be performed by a certified risk assessor. If the unit fails the lead hazard screen, a full risk assessment must be performed.

Clearance Examination: Clearance is performed after hazard reduction, rehabilitation or maintenance activities to determine if a unit is safe for occupancy. It involves a visual assessment, analysis of dust samples, and preparation of report. The certified risk assessor, paint inspector, or lead sampling technician (called a clearance technician in the HUD regulation) performing clearance must be independent from the entity/individual conducting paint stabilization or hazard reduction.

LEAD HAZARD REDUCTION

Paint Stabilization: An interim control method that stabilizes painted surfaces and addressed the underlying cause of deterioration. Steps include repairing defective surfaces, removing loose paint and applying new paint.

Interim Controls: Set of measures to temporarily control lead-based paint hazards. Interim control methods must be completed by qualified workers using safe work practices. Follow-up monitoring is needed.

Standard Treatments: A complete set of interim control methods that when used together temporarily control all potential lead hazards in a unit. Because they address all conditions, a risk assessment or other evaluation is not needed. Standard treatments must be completed by qualified workers using safe work practices. As with interim controls, follow-up monitoring is needed.

Abatement: Measures to permanently control (i.e., 20 years or more) lead-based paint or lead-based paint hazards. EPA regulations exclude from the definition of abatement "renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards, but instead are designed to repair, restore, or remodel a given structure or dwelling, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards." [40 CFR 745.223]

Action Level: Employee exposure, without regard to the use of respirators, to an airborne concentration of lead in micrograms per cubic meter of air (µg/m³) calculated as an eight hour time-weighted average (TWA). The action level for lead is 30 µg/m³.

Permissible Exposure Limit: Employee exposure, the maximum exposure level to an airborne concentration of lead in micrograms per cubic meter of air (µg/m³) calculated as an eight hour time-weighted average (TWA). The PEL for lead is 50 µg/m³.

LEAD POISONING

Environmental Intervention Blood Lead Level: The level of lead in blood that requires intervention in a child under age six. This is defined as a blood lead level of 20 µg/dL (micrograms per deciliter) of whole blood or above for a single test, or blood lead levels of 15-19 µg/dL in two tests taken at least three months apart.

Lead: The word "lead" when used in these projects means elemental lead, all inorganic lead compounds and a class of organic lead compounds called lead soaps. Lead is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form lead compounds.

KEY UNITS OF MEASUREMENT

µg (Microgram): A microgram is 1/1000th of a milligram (or one millionth of a gram).

*To put this unit into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into 2 million pieces. A microgram is one of those two million pieces.

ft² (Square foot): One square foot is equal to an area that has a length of one foot (12 inches) and a width of one foot (12 inches).

µg/dL: Micrograms per deciliter used to measure the level of lead in children's blood to establish whether intervention is needed. A deciliter (1/10th of liter) is a little less than half a cup.

*As noted above, a microgram is the same weight as one penny divided into two million parts.

µg/gram: Micrograms per gram of sample, equivalent to parts per million (ppm) by weight.
Used to measure lead in soil.

µg/ft²: Micrograms per square feet is the measurement used to measure levels of lead in dust samples.
The clearance report should have the dust sampling results listed in µg/ft² (micrograms per square foot).

mg/cm²: Milligrams per square centimeter. Used to measure lead in paint.

percent: Percent by weight, used usually for lead-based paint (1 percent = 10,000 µg/gram)

ppm: Parts per million by weight, equivalent to µg/gram (10,000 ppm = 1 percent).
Used to measure lead in paint and soil.

LEAD-BASED PAINT STANDARDS

Paint – Definition of Lead-Based Paint

Paint coating that contains at least:

- 1 mg/cm² of lead (HUD);
- 0.5 percent lead; or 5,000 parts per million lead by dry weight.

Paint – Definition of Lead-Containing Paint

Paint coating that contains at least:

- Any amount above 0.0 mg/cm² of lead (OSHA);

* In 1978 the Consumer Product Safety Commission banned the residential use of lead-based paint that contained greater than or equal to 0.06 percent or 600 ppm of lead.

Dust – Federal Thresholds for Lead-Contamination (Risk Assessment/Clearance)

- | | |
|-----------------------------------|------------------------|
| ➤ Floors | 10 µg/ft ² |
| ➤ Interior window sills | 100 µg/ft ² |
| ➤ Window troughs (Clearance only) | 100 µg/ft ² |

Soil – Federal Thresholds for Bare Soil Contamination

- | | |
|--|---------------|
| ➤ Play areas used by children under age 6 | 400 µg/gram |
| ➤ Other areas, if more than 9ft ² in total area of bare soil per property | 1,200 µg/gram |
| ➤ Abatement required by HUD | 5,000 µg/gram |

LIST OF ACRONYMS

AIHA:	American Industrial Hygiene Association
AL:	Action Level
ANSI:	American National Standards Institute
ASA:	American Standards Association
ASTM:	American Society for Testing & Materials
CFR:	Code of Federal Regulations
CERCLA:	Comprehensive Environmental Response, Compensation & Liability Act (42 USC 9601ff)
CIH:	Certified Industrial Hygienist
DOT:	U.S. Department of Transportation
EPA:	U.S. Environmental Protection Agency
FR:	Federal Register
GFCI:	Ground Fault Circuit Interrupter
GISO:	General Industry Safety Orders
HEPA:	High Efficiency Particulate Air (filter with 99.97% efficiency to 0.3 microns)
HVAC:	Heating, ventilation and air conditioning system
HUD:	U.S. Department of Housing and Urban Development
IH:	Industrial Hygienist
LBP:	Lead-Based Paint
LCP:	Lead-Containing Paint
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible Exposure Limit
NAM:	Negative Air (Filtration) Machine
NEA:	Negative Exposure Assessment
NEC:	National Electrical Code
NESHAPS:	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61 M)
NFPA:	National Fire Protection Association
NIOSH:	National Institute of Occupational Safety and Health
PAPR:	Powered Air-Purifying Respirator
PEL:	Permissible Exposure Limit
RCRA:	Resource Conservation and Recovery Act
SDS:	Safety Data Sheet
TWA:	Time Weighted Average
XRF:	X-ray Fluorescence