



**LIMITED PHASE II
ENVIRONMENTAL SAMPLING AND TESTING
545-547 LEFFINGWELL AVENUE AND
516 SOUTH ELLIOT AVENUE
KIRKWOOD, MISSOURI**

Prepared for:
**CITY OF KIRKWOOD
KIRKWOOD, MISSOURI**

Prepared by:
**GEOTECHNOLOGY, LLC
ST. LOUIS, MISSOURI**

Date:
JANUARY 12, 2024

Geotechnology Project No.:
J044955.01

**SAFETY
QUALITY
INTEGRITY
PARTNERSHIP
OPPORTUNITY
RESPONSIVENESS**



Via email: kruegeca@kirkwoodmo.org

January 12, 2024

Mr. Chris Krueger, P.E.
Director of Public Services
139 South Kirkwood Road
Kirkwood, Missouri 63122

Re: Limited Phase II Environmental Sampling and Testing
545-547 Leffingwell Avenue and 516 South Elliot Avenue
Kirkwood, Missouri
Geotechnology Project No. J044955.01

Dear Mr. Krueger:

Geotechnology, LLC (Geotechnology) is pleased to submit the results of our limited Phase II environmental sampling and testing (EST) at the referenced site in accordance with our proposal P044955.01 dated December 11, 2023.

INTRODUCTION AND BACKGROUND

The site consists of two adjoining parcels (Property Locator No. 24M240172 and 24M240161) totaling approximately 9-acres currently developed with A-Mrazek Moving Systems.

Geotechnology reviewed a Phase I Environmental Site Assessment (ESA) summary letter completed by Professional Environmental Engineers, Inc. (PE) dated March 7, 2023. PE identified Recognized Environmental Conditions (RECs) and recommended that a limited Phase II ESA be completed on the subject property related to the historical operation of the garage building for maintenance purposes and the former presence of a diesel underground storage tank (UST) near the northwest side of the garage.

Geotechnology also reviewed a Phase I ESA completed by NPN Environmental dated October 2023. The NPN Environmental report concluded that RECs were not identified on the subject property. NPN Environmental reviewed a No Further Action (NFA) letter for the subject property dated November 2, 1990, as well as a Phase I ESA and limited Phase II environmental sampling and testing report completed by Geotechnology in 2015. The Geotechnology limited Phase II environmental sampling and testing report included four soil borings with soil and groundwater sample collection from around the former UST. The 2015 limited Phase II report did not identify soil or groundwater impacts above the laboratory reporting limits or the Default Target Levels



(DTLs) which are established by the Missouri Department of Natural Resources (MDNR) and are based on unrestricted land use.

After discussions with the City of Kirkwood regarding the work previously completed on the subject property, the City of Kirkwood requested additional environmental sampling and testing be completed on the site. Our scope of services was for screening purposes only.

FIELD SAMPLING

Public utilities were located using the Missouri One-Call system prior to subsurface exploration activities. On December 21, 2023, a contract drilling company (Bulldog Drilling) advanced two environmental borings (EB-1 and EB-2) at the approximate locations shown on Figure 2. Geotechnology proposed drilling three environmental borings, however, due to unknown underground private utility locations, the third boring was not advanced near the north side of the garage.

The two environmental borings were advanced and continuously sampled using direct push drilling methods with a Geoprobe drill rig. Environmental boring EB-1 was advanced to refusal at approximately 19 feet below land surface (bls) and environmental boring EB-2 was advanced to termination at 20 feet bls.

Subsurface materials encountered in the borings generally consisted of tan clayey soils. Bedrock was not encountered during drilling activities. Samples were screened in the field for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). The PID was calibrated to an isobutylene standard of 100 parts per million (ppm) prior to mobilization. The PID field screening results are presented on the boring logs. PID readings did not exceed 1.0 ppm in the samples collected. Copies of the boring logs are included in Appendix A. One soil sample was selected for laboratory analysis from each boring. The soil samples were selected for laboratory analysis based on observed PID readings, visual and olfactory observations, and amount of sample recovery available.

Temporary groundwater monitoring wells were installed in each of the environmental borings to facilitate the collection of groundwater samples. The temporary monitoring wells consisted of approximately 10 feet of 1-inch diameter 0.010-inch slotted PVC screen and riser to the ground surface. Filter sand was placed in the annular space around the screened interval to a level of approximately 2 feet above the top of screen. Hydrated bentonite chips were placed above the filter sand to the ground surface. Following drilling, groundwater was not encountered in the temporary monitoring wells.

The soil samples were placed into laboratory-supplied containers, labeled, and placed on ice in a cooler for subsequent analytical testing. The soil samples were submitted to Teklab, Inc. (Teklab) of Collinsville, Illinois under chain-of-custody procedures for analytical testing. The two soil samples were analyzed for the following:



- Total (full list) VOCs and total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) per United States Environmental Protection Agency (USEPA) Method 5035/8260B;
- Total lead per USEPA Method 6010B;
- Polychlorinated biphenyls (PCBs) per USEPA Method 8082; and
- TPH as diesel and oil range organics (DRO/ORO) per USEPA Method 8270C.

The temporary monitoring wells were recorded and abandoned in accordance with the Missouri Department of Natural Resources (MDNR) guidelines.

RESULTS

A copy of the laboratory analytical report is attached in Appendix B. The soil analytical testing results were compared to the MDNR Missouri Risk-Based Corrective Action (MRBCA) Default Target Levels (DTLs)¹ and lead was compared to the United States Geological Survey (USGS) National Geochemical Database background levels for St. Louis County². The DTLs are used as initial risk-based screening levels for sites and are the most conservative cleanup objectives established by the MDNR.

Lead and acetone were identified in each soil sample collected. It is typical to find these constituents in soil samples as lead is naturally occurring in soils and acetone is commonly used during sample analysis by the laboratory. Lead was detected at 19.9 mg/Kg-dry and 36.4 mg/Kg-dry in EB-1 and EB-2, respectively. The results were below the average background concentration of lead in St. Louis County provided by the USGS which is 40.95 mg/Kg-dry.

Acetone was detected at 0.0078 mg/Kg-dry and 0.0089 mg/Kg-dry in EB-1 and EB-2, respectively. The results were below the DTL of 4.2 mg/Kg-dry.

CONCLUSIONS

Geotechnology conducted limited environmental sampling and testing of soil at 545-547 Leffingwell Avenue and 516 South Elliot Avenue in Kirkwood, Missouri. The purpose of the limited environmental sampling and testing was to assess the potential presence of constituents of concern (COCs) in the soil on the site.

Lead and acetone were the only two constituents detected in each of the soil samples collected. The results were below the USGS background levels as well as the MDNR DTLs.

The limited environmental sampling and testing conducted at the site was for screening purposes. The potential exists for COCs to be present outside of the sampling areas.

¹ Missouri Risk-Based Corrective Action (MRBCA) Departmental Guidance; prepared by the Missouri Department of Natural Resources, April 2006 with subsequent updates.

² States Geological Survey (USGS), National Geochemical Survey database, Average Concentrations of Elements in St. Louis City



* * * * *

The following are made part of and complete this report:

- Figure 1 - Site Location and Topography
- Figure 2 - Aerial Photograph of Site and Boring Locations
- Appendix A - Boring Logs
- Appendix B - Laboratory Analytical Report
- Appendix C - Limitations of Report

* * * * *

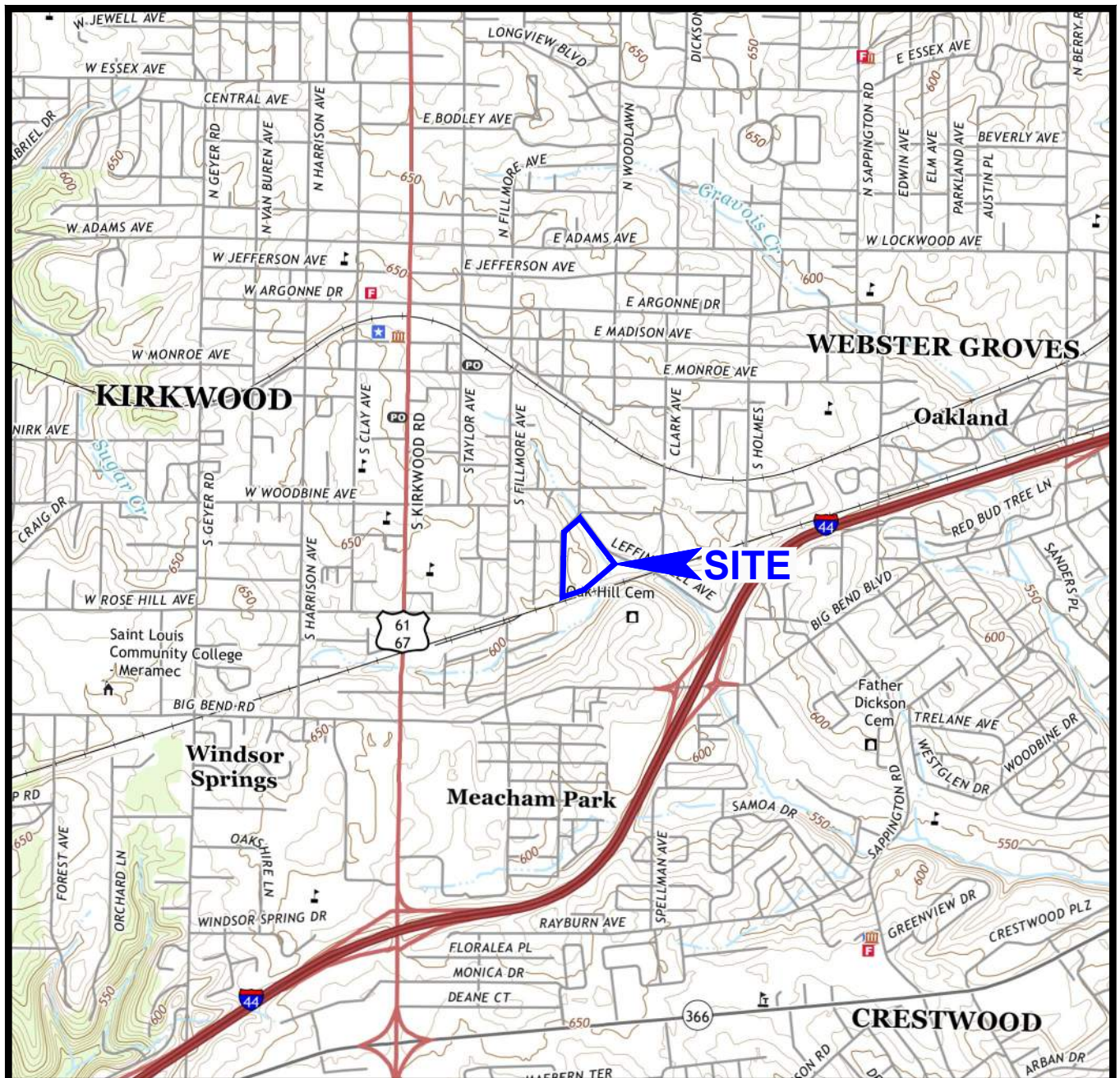
We appreciate the opportunity to provide our services to the City of Kirkwood. If you have any questions or require additional information, please contact the undersigned at (314) 997-7440.

Very truly yours,

GEOTECHNOLOGY, LLC

David Forseth
Senior Scientist


DLF/MSR:dlf/jsj

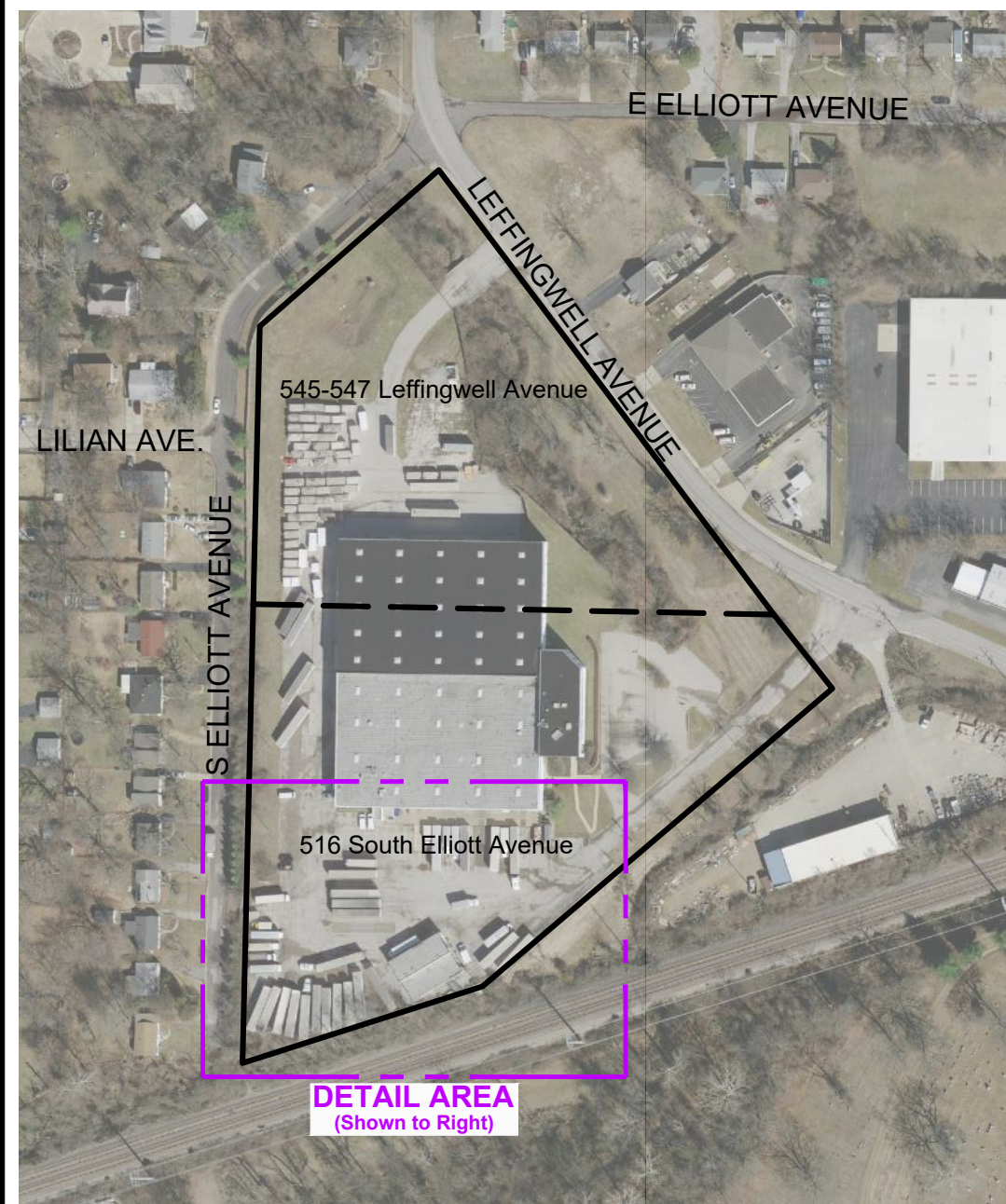


NOTES

1. Plan adapted from a 7.5 minute U.S.G.S. map for Kirkwood, Missouri quadrangle, last revised in 2021.



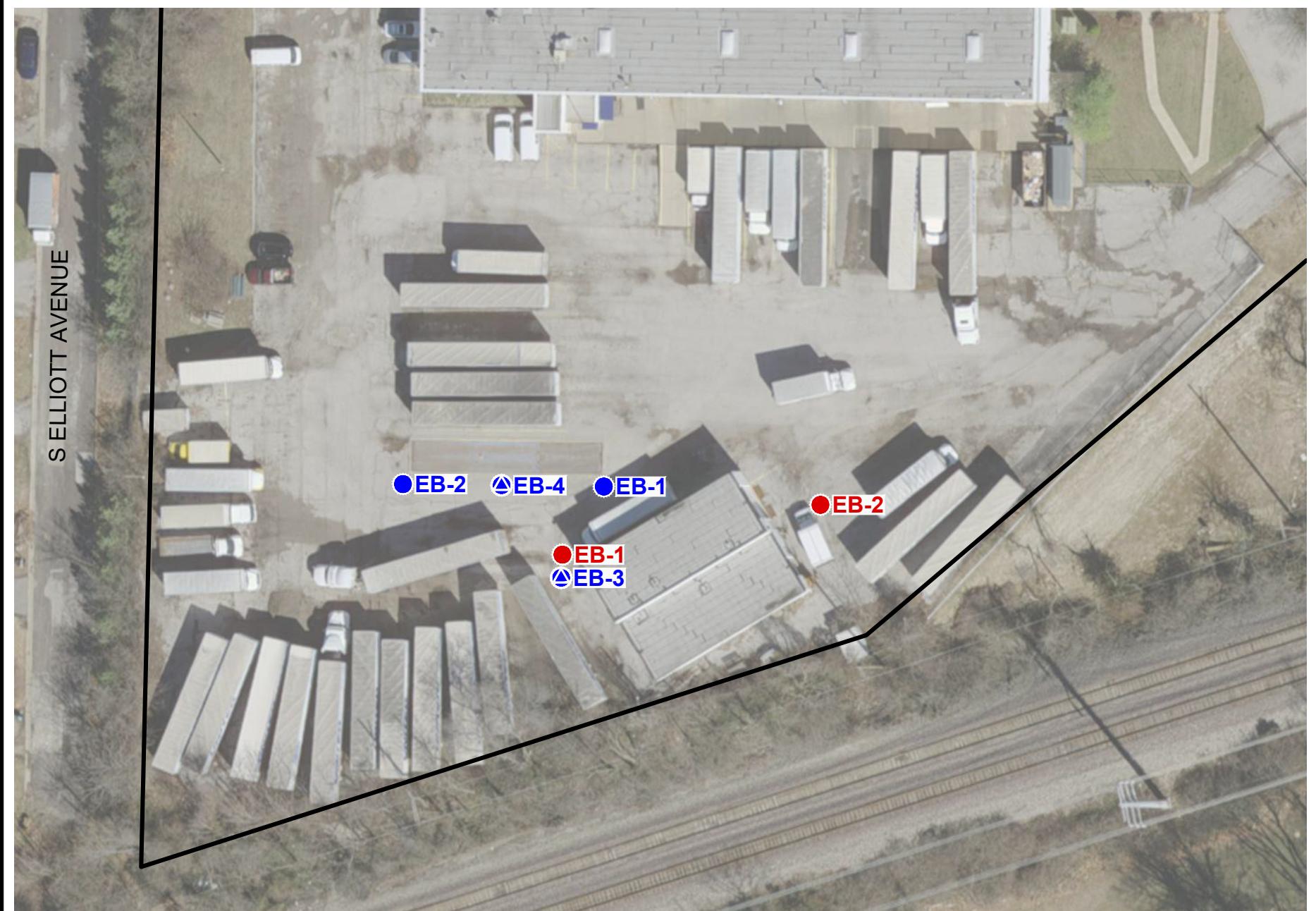
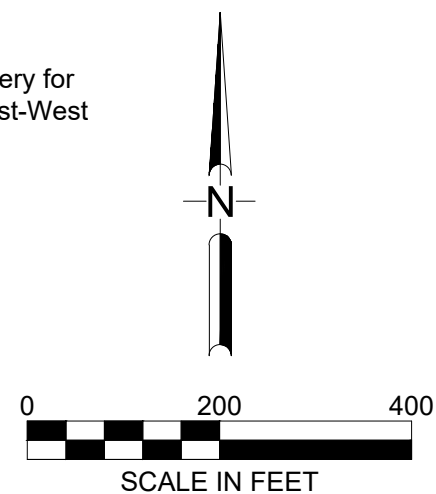
Drawn By: WAH	Ck'd By: DLF	App'vd By: MSR
Date: 1-11-24	Date: 1-8-24	Date: 1-8-24
		
Kirkwood Public Works 545-547 Leffingwell Avenue and 516 South Elliot Avenue Kirkwood, Missouri		
SITE LOCATION AND TOPOGRAPHY		
Project Number J044955.01		FIGURE 1



**AERIAL PHOTOGRAPH OF
SITE AND DETAIL AREA**

NOTES

1. Plan adapted from "2015 Aerial Imagery for the St. Louis Region" supplied by East-West Gateway Council of Governments.



**DETAIL AREA WITH
BORING LOCATIONS**


NOTES

1. Plan adapted from "2015 Aerial Imagery for the St. Louis Region" supplied by East-West Gateway Council of Governments.
2. Borings were located in the field with reference to site features and are shown approximate only.

LEGEND

- Boring Location with Temporary Monitoring Well
- Previous Boring Location (2015 Limited EST)
- ▲ Previous Boring Location with Temporary Monitoring Well (2015 Limited EST)



Drawn By: WAH	Ck'd By: DLF	App'vd By: MSR
Date: 1-4-24	Date: 1-8-24	Date: 1-8-24
		
Kirkwood Public Works 545-547 Leffingwell Avenue and 516 South Elliot Avenue Kirkwood, Missouri		
AERIAL PHOTOGRAPH OF SITE AND BORING LOCATIONS		
Project Number J044955.01		FIGURE 2



APPENDIX A

BORING LOGS



APPENDIX B

LABORATORY ANALYTICAL REPORT

December 28, 2023

David Forseth
Geotechnology, Inc.
11816 Lackland Road
St. Louis, MO 63146
TEL: (314) 997-7440
FAX: (314) 997-2067



Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Kirkwood Public Works J044955.01

WorkOrder: 23121843

Dear David Forseth:

TEKLAB, INC received 2 samples on 12/22/2023 3:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Patrick Riley
Project Manager
(618)344-1004 ex 44
patrickriley@teklabinc.com



Report Contents

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	13
Receiving Check List	28
Chain of Custody	Appended

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

Abbr Definition

* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.

DNI Did not ignite

DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample is a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count (> 200 CFU)

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

Qualifiers

- | | |
|---|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range |
| H - Holding times exceeded | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

Cooler Receipt Temp: 5.8 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Client: Geotechnology, Inc.**Work Order:** 23121843**Client Project:** Kirkwood Public Works J044955.01**Report Date:** 28-Dec-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville



Laboratory Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.
Client Project: Kirkwood Public Works J044955.01
Lab ID: 23121843-001
Matrix: SOLID

Work Order: 23121843
Report Date: 28-Dec-23
Client Sample ID: EB-1 (8-10)
Collection Date: 12/21/2023 9:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA SW846 3550C, 5035A, ASTM D2974								
Percent Moisture	*	0.1		24.9	%	1	12/22/2023 16:07	R340982
SW-846 3050B, 6010B, METALS BY ICP								
Lead	NELAP	1.39		19.9	mg/Kg-dry	1	12/28/2023 11:06	216502
SW-846 3546, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1221	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1232	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1242	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1248	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1254	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Aroclor 1260	NELAP	49.0		ND	µg/Kg-dry	1	12/27/2023 10:43	216436
Surr: Decachlorobiphenyl	*	14.2-114		66.6	%REC	1	12/27/2023 10:43	216436
Surr: Tetrachloro-meta-xylene	*	18.1-113		66.4	%REC	1	12/27/2023 10:43	216436
SW-846 3550B, 8270C SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Anthracene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Benzo(a)anthracene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Benzo(a)pyrene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Benzo(b)fluoranthene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Benzo(k)fluoranthene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Chrysene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Dibenzo(a,h)anthracene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Fluoranthene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Fluorene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Pyrene	NELAP	0.0446		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
TPH-DRO (C10 - C21)	*	15.8		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
TPH-ORO (C21 - C35)	*	15.8		ND	mg/Kg-dry	1	12/27/2023 9:58	216435
Surr: 2-Fluorobiphenyl	*	32.2-97		79.6	%REC	1	12/27/2023 9:58	216435
Surr: Nitrobenzene-d5	*	16.6-83.1		73.0	%REC	1	12/27/2023 9:58	216435
Surr: p-Terphenyl-d14	*	47-120		78.7	%REC	1	12/27/2023 9:58	216435
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1,1-Trichloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1,2,2-Tetrachloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1,2-Trichloro-1,2,2-trifluoroethane	*	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1,2-Trichloroethane	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1-Dichloro-2-propanone	*	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1-Dichloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1-Dichloroethene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,1-Dichloropropene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2,3-Trichlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2,3-Trichloropropane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2,3-Trimethylbenzene	*	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2,4-Trichlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2,4-Trimethylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2-Dibromo-3-chloropropane	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2-Dibromoethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520

Client: Geotechnology, Inc.
 Client Project: Kirkwood Public Works J044955.01
 Lab ID: 23121843-001
 Matrix: SOLID

Work Order: 23121843
 Report Date: 28-Dec-23
 Client Sample ID: EB-1 (8-10)
 Collection Date: 12/21/2023 9:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2-Dichlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2-Dichloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,2-Dichloropropane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,3,5-Trimethylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,3-Dichlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,3-Dichloropropane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1,4-Dichlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
1-Chlorobutane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
2,2-Dichloropropane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
2-Butanone	NELAP	28.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
2-Chlorotoluene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
2-Hexanone	NELAP	28.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
2-Nitropropane	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
4-Chlorotoluene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
4-Methyl-2-pentanone	NELAP	28.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Acetone	NELAP	29	J	7.8	µg/Kg-dry	1	12/26/2023 14:14	216520
Acetonitrile	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Acrolein	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Acrylonitrile	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Allyl chloride	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Benzene	NELAP	1.2		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Bromobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Bromochloromethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Bromodichloromethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Bromoform	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Bromomethane	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Carbon disulfide	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Carbon tetrachloride	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Chlorobenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Chloroethane	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Chloroform	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Chloromethane	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
cis-1,2-Dichloroethene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
cis-1,3-Dichloropropene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Cyclohexanone	*	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Dibromochloromethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Dibromomethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Dichlorodifluoromethane	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Diisopropyl ether	*	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Ethyl ether	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Ethyl methacrylate	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Ethylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Ethyl-tert-butyl ether	*	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Hexachlorobutadiene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Hexachloroethane	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Iodomethane	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Isopropylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520

Client: Geotechnology, Inc.
 Client Project: Kirkwood Public Works J044955.01
 Lab ID: 23121843-001
 Matrix: SOLID

Work Order: 23121843
 Report Date: 28-Dec-23
 Client Sample ID: EB-1 (8-10)
 Collection Date: 12/21/2023 9:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
m,p-Xylenes	NELAP	4.6		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Methacrylonitrile	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Methyl Methacrylate	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Methyl tert-butyl ether	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Methylacrylate	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Methylene chloride	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Naphthalene	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
n-Butylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
n-Heptane	*	23.0		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
n-Hexane	*	23.0		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Nitrobenzene	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
n-Propylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
o-Xylene	NELAP	4.6		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Pentachloroethane	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
p-Isopropyltoluene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Propionitrile	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
sec-Butylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Styrene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
tert-Amyl methyl ether	*	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
tert-Butyl alcohol	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
tert-Butylbenzene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Tetrachloroethene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Tetrahydrofuran	NELAP	11.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Toluene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
TPH - GRO (C6 - C10)	*	575		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
trans-1,2-Dichloroethene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
trans-1,3-Dichloropropene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
trans-1,4-Dichloro-2-butene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Trichloroethene	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Trichlorofluoromethane	NELAP	5.8		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Vinyl acetate	NELAP	57.5		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Vinyl chloride	NELAP	2.3		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Xylenes, Total	NELAP	9.2		ND	µg/Kg-dry	1	12/26/2023 14:14	216520
Surr: 1,2-Dichloroethane-d4	*	80-120		100.6	%REC	1	12/26/2023 14:14	216520
Surr: 4-Bromofluorobenzene	*	80-120		99.4	%REC	1	12/26/2023 14:14	216520
Surr: Toluene-d8	*	80-120		103.7	%REC	1	12/26/2023 14:14	216520

Allowable Marginal Exceedance of 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene in the laboratory control sample is verified per the TNI Standard.

Client: Geotechnology, Inc.
 Client Project: Kirkwood Public Works J044955.01
 Lab ID: 23121843-002
 Matrix: SOLID

Work Order: 23121843
 Report Date: 28-Dec-23
 Client Sample ID: EB-2 (10-12)
 Collection Date: 12/21/2023 10:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA SW846 3550C, 5035A, ASTM D2974								
Percent Moisture	*	0.1		19.8	%	1	12/22/2023 16:07	R340982
SW-846 3050B, 6010B, METALS BY ICP								
Lead	NELAP	1.42		36.4	mg/Kg-dry	1	12/28/2023 11:08	216502
SW-846 3546, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1221	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1232	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1242	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1248	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1254	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Aroclor 1260	NELAP	46.6		ND	µg/Kg-dry	1	12/27/2023 11:31	216436
Surr: Decachlorobiphenyl	*	14.2-114		44.4	%REC	1	12/27/2023 11:31	216436
Surr: Tetrachloro-meta-xylene	*	18.1-113		44.9	%REC	1	12/27/2023 11:31	216436
SW-846 3550B, 8270C SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Anthracene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Benzo(a)anthracene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Benzo(a)pyrene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Benzo(b)fluoranthene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Benzo(k)fluoranthene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Chrysene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Dibenzo(a,h)anthracene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Fluoranthene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Fluorene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Pyrene	NELAP	0.0424		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
TPH-DRO (C10 - C21)	*	15.0		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
TPH-ORO (C21 - C35)	*	15.0		ND	mg/Kg-dry	1	12/27/2023 10:37	216435
Surr: 2-Fluorobiphenyl	*	32.2-97		80.0	%REC	1	12/27/2023 10:37	216435
Surr: Nitrobenzene-d5	*	16.6-83.1		76.6	%REC	1	12/27/2023 10:37	216435
Surr: p-Terphenyl-d14	*	47-120		78.3	%REC	1	12/27/2023 10:37	216435
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1,1-Trichloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1,2,2-Tetrachloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1,2-Trichloro-1,2,2-trifluoroethane	*	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1,2-Trichloroethane	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1-Dichloro-2-propanone	*	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1-Dichloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1-Dichloroethene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,1-Dichloropropene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2,3-Trichlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2,3-Trichloropropane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2,3-Trimethylbenzene	*	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2,4-Trichlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2,4-Trimethylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2-Dibromo-3-chloropropane	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2-Dibromoethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520

Client: Geotechnology, Inc.
 Client Project: Kirkwood Public Works J044955.01
 Lab ID: 23121843-002
 Matrix: SOLID

Work Order: 23121843
 Report Date: 28-Dec-23
 Client Sample ID: EB-2 (10-12)
 Collection Date: 12/21/2023 10:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2-Dichlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2-Dichloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,2-Dichloropropane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,3,5-Trimethylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,3-Dichlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,3-Dichloropropane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1,4-Dichlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
1-Chlorobutane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
2,2-Dichloropropane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
2-Butanone	NELAP	22.6		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
2-Chlorotoluene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
2-Hexanone	NELAP	22.6		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
2-Nitropropane	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
4-Chlorotoluene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
4-Methyl-2-pentanone	NELAP	22.6		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Acetone	NELAP	23	J	8.9	µg/Kg-dry	1	12/26/2023 14:43	216520
Acetonitrile	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Acrolein	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Acrylonitrile	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Allyl chloride	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Benzene	NELAP	0.9		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Bromobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Bromochloromethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Bromodichloromethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Bromoform	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Bromomethane	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Carbon disulfide	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Carbon tetrachloride	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Chlorobenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Chloroethane	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Chloroform	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Chloromethane	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
cis-1,2-Dichloroethene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
cis-1,3-Dichloropropene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Cyclohexanone	*	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Dibromochloromethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Dibromomethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Dichlorodifluoromethane	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Diisopropyl ether	*	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Ethyl ether	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Ethyl methacrylate	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Ethylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Ethyl-tert-butyl ether	*	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Hexachlorobutadiene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Hexachloroethane	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Iodomethane	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Isopropylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520

Client: Geotechnology, Inc.
 Client Project: Kirkwood Public Works J044955.01
 Lab ID: 23121843-002
 Matrix: SOLID

Work Order: 23121843
 Report Date: 28-Dec-23
 Client Sample ID: EB-2 (10-12)
 Collection Date: 12/21/2023 10:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
m,p-Xylenes	NELAP	3.6		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Methacrylonitrile	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Methyl Methacrylate	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Methyl tert-butyl ether	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Methylacrylate	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Methylene chloride	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Naphthalene	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
n-Butylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
n-Heptane	*	18.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
n-Hexane	*	18.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Nitrobenzene	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
n-Propylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
o-Xylene	NELAP	3.6		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Pentachloroethane	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
p-Isopropyltoluene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Propionitrile	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
sec-Butylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Styrene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
tert-Amyl methyl ether	*	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
tert-Butyl alcohol	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
tert-Butylbenzene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Tetrachloroethene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Tetrahydrofuran	NELAP	9.1		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Toluene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
TPH - GRO (C6 - C10)	*	453		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
trans-1,2-Dichloroethene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
trans-1,3-Dichloropropene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
trans-1,4-Dichloro-2-butene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Trichloroethene	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Trichlorofluoromethane	NELAP	4.5		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Vinyl acetate	NELAP	45.3		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Vinyl chloride	NELAP	1.8		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Xylenes, Total	NELAP	7.2		ND	µg/Kg-dry	1	12/26/2023 14:43	216520
Surr: 1,2-Dichloroethane-d4	*	80-120		104.0	%REC	1	12/26/2023 14:43	216520
Surr: 4-Bromofluorobenzene	*	80-120		95.5	%REC	1	12/26/2023 14:43	216520
Surr: Toluene-d8	*	80-120		98.4	%REC	1	12/26/2023 14:43	216520

Allowable Marginal Exceedance of 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene in the laboratory control sample is verified per the TNI Standard.



Quality Control Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

EPA SW846 3550C, 5035A, ASTM D2974

Batch R340982		SampType: LCS		Units %							
SampID: LCS											Date
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Percent Moisture	*	0.1		99.0	99.00	0	100.0	90	110	12/22/2023	

Batch R340982		SampType: LCSQC		Units %							
SampID: LCSQC											Date
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Percent Moisture	*	0.1		99.0	99.00	0	100.0	90	110	12/22/2023	

SW-846 3050B, 6010B, METALS BY ICP

Batch 216502		SampType: MBLK		Units mg/Kg-dry							
SampID: MBLK-216502											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Lead		1.50		< 1.50	0.5900	0	0	-100	100	12/27/2023	

Batch 216502		SampType: LCS		Units mg/Kg-dry							
SampID: LCS-216502											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Lead		1.50		50.0	50.00	0	100.0	85	115	12/27/2023	

Batch 216502		SampType: MS		Units mg/Kg-dry							
SampID: 23121462-001AMS											Date
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
Lead		1.50		97.5	50.00	50.77	93.4	75	125	12/27/2023	

Batch 216502		SampType: MSD		Units mg/Kg-dry					RPD Limit 20		
SampID: 23121462-001AMSD											
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Lead			1.50		97.9	50.00	50.77	94.2	97.46	0.42	12/27/2023

Batch 216502		SampType: MS		Units mg/Kg-dry							
SampID: 23121843-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Lead		1.50		66.8	50.00	19.87	93.8	75	125	12/28/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 3050B, 6010B, METALS BY ICP

Batch 216502		SampType: MSD		Units mg/Kg-dry				RPD Limit 20			
SampleID: 23121843-001AMSD											Date
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed
Lead			1.47		69.7	49.02	19.87	101.6	66.75	4.26	12/28/2023

SW-846 3546, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch	216436	SampType:	MBLK	Units µg/Kg							
SampID: MBLK-216436											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Aroclor 1016		37.5		ND						12/27/2023	
Aroclor 1221		37.5		ND						12/27/2023	
Aroclor 1232		37.5		ND						12/27/2023	
Aroclor 1242		37.5		ND						12/27/2023	
Aroclor 1248		37.5		ND						12/27/2023	
Aroclor 1254		37.5		ND						12/27/2023	
Aroclor 1260		37.5		ND						12/27/2023	
Surr: Decachlorobiphenyl	*			5.4	8.300		64.8	49.8	114	12/27/2023	
Surr: Tetrachloro-meta-xylene	*			5.1	8.300		61.7	44	99.4	12/27/2023	

Batch 216436		SampType: LCS		Units µg/Kg						
SampleID: LCSPCB-216436										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		37.5		131	166.7	0	78.8	50	150	12/27/2023
Aroclor 1260		37.5		130	166.7	0	78.1	50	150	12/27/2023
Surr: Decachlorobiphenyl	*			5.9	8.300		71.3	49.8	114	12/27/2023
Surr: Tetrachloro-meta-xylene	*			5.7	8.300		69.2	44	99.4	12/27/2023

Batch 216436		SampType: MS	Units µg/Kg-dry							
SampID: 23121843-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		49.1		163	218.5	0	74.4	35.3	143	12/27/2023
Aroclor 1260		49.1		162	218.5	0	74.0	40.8	140	12/27/2023
Surr: Decachlorobiphenyl	*			7.6	10.88		70.2	14.2	114	12/27/2023
Surr: Tetrachloro-meta-xylene	*			7.6	10.88		69.6	18.1	113	12/27/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 3546, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 216436		SampType: MSD		Units µg/Kg-dry				RPD Limit 56.5		
SampID: 23121843-001AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		48.7		152	216.5	0	70.4	162.5	6.45	12/27/2023
Aroclor 1260		48.7		154	216.5	0	71.2	161.7	4.84	12/27/2023
Surr: Decachlorobiphenyl	*			6.8	10.78		63.1			12/27/2023
Surr: Tetrachloro-meta-xylene	*			6.8	10.78		62.7			12/27/2023

SW-846 3550B, 8270C SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216435		SampType: MBLK		Units mg/Kg							Date Analyzed	
SampID: MBLK-216435												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit			
Acenaphthene		0.0340		ND							12/26/2023	
Anthracene		0.0340		ND							12/26/2023	
Benzo(a)anthracene		0.0340		ND							12/26/2023	
Benzo(a)pyrene		0.0340		ND							12/26/2023	
Benzo(b)fluoranthene		0.0340		ND							12/26/2023	
Benzo(k)fluoranthene		0.0340		ND							12/26/2023	
Chrysene		0.0340		ND							12/26/2023	
Dibenzo(a,h)anthracene		0.0340		ND							12/26/2023	
Fluoranthene		0.0340		ND							12/26/2023	
Fluorene		0.0340		ND							12/26/2023	
Pyrene		0.0340		ND							12/26/2023	
TPH-DRO (C10 - C21)	*	12.0		ND							12/26/2023	
TPH-ORO (C21 - C35)	*	12.0		ND							12/26/2023	
Surr: 2-Fluorobiphenyl	*			0.715	0.8350		85.6	54.2	104		12/26/2023	
Surr: Nitrobenzene-d5	*			0.678	0.8350		81.2	38.2	114		12/26/2023	
Surr: p-Terphenyl-d14	*			0.670	0.8350		80.2	54	110		12/26/2023	

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 3550B, 8270C SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216435 SampType: LCS Units mg/Kg										
SampleID: LCS-216435										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.0340		1.54	1.670	0	92.1	48.5	106	12/26/2023
Anthracene		0.0340		1.56	1.670	0	93.3	54.3	108	12/26/2023
Benzo(a)anthracene		0.0340		1.59	1.670	0	95.2	57.7	110	12/26/2023
Benzo(a)pyrene		0.0340		1.69	1.670	0	101.1	55	118	12/26/2023
Benzo(b)fluoranthene		0.0340		1.68	1.670	0	100.7	54.4	115	12/26/2023
Benzo(k)fluoranthene		0.0340		1.73	1.670	0	103.3	57.4	122	12/26/2023
Chrysene		0.0340		1.52	1.670	0	91.1	59.3	110	12/26/2023
Dibenzo(a,h)anthracene		0.0340		1.36	1.670	0	81.3	52	113	12/26/2023
Fluoranthene		0.0340		1.58	1.670	0	94.6	61.3	111	12/26/2023
Fluorene		0.0340		1.56	1.670	0	93.1	54.3	109	12/26/2023
Pyrene		0.0340		1.59	1.670	0	95.0	61.9	111	12/26/2023
Surr: 2-Fluorobiphenyl	*			0.709	0.8350		85.0	54.2	104	12/26/2023
Surr: Nitrobenzene-d5	*			0.802	0.8350		96.0	38.2	114	12/26/2023
Surr: p-Terphenyl-d14	*			0.713	0.8350		85.4	54	110	12/26/2023

Batch 216435 SampType: LCSG Units mg/Kg										
SampleID: LCSDRO-216435										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH-DRO (C10 - C21)	*	12.0		26.6	33.40	0	79.6	44.7	111	12/26/2023
Surr: 2-Fluorobiphenyl	*			0.699	0.8350		83.8	54.2	104	12/26/2023
Surr: Nitrobenzene-d5	*			0.690	0.8350		82.6	38.2	114	12/26/2023
Surr: p-Terphenyl-d14	*			0.672	0.8350		80.5	54	110	12/26/2023

Batch 216435 SampType: MS Units mg/Kg-dry										
SampleID: 23121654-008AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH-DRO (C10 - C21)	*	15.4		31.3	42.85	0	73.0	9.4	145	12/26/2023
Surr: 2-Fluorobiphenyl	*			0.846	1.071		78.9	32.2	97	12/26/2023
Surr: Nitrobenzene-d5	*			0.798	1.071		74.5	16.6	83.1	12/26/2023
Surr: p-Terphenyl-d14	*			0.818	1.071		76.4	47	120	12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 3550B, 8270C SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216435		SampType: MSD		Units mg/Kg-dry				RPD Limit 30			Date Analyzed
SampID: 23121654-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
TPH-DRO (C10 - C21)	*	15.1		32.1	41.98	0	76.4	31.27	2.54		
Surr: 2-Fluorobiphenyl	*			0.900	1.049		85.7				
Surr: Nitrobenzene-d5	*			0.819	1.049		78.1				
Surr: p-Terphenyl-d14	*			0.844	1.049		80.4				

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS
Batch 216520 **SampType:** MBLK **Units** µg/Kg

SampID: MBLK-AF231226A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		ND						12/26/2023
1,1,1-Trichloroethane	*	2.0		ND						12/26/2023
1,1,2,2-Tetrachloroethane	*	2.0		ND						12/26/2023
1,1,2-Trichloro-1,2,2-trifluoroethane	*	2.0		ND						12/26/2023
1,1,2-Trichloroethane	*	5.0		ND						12/26/2023
1,1-Dichloro-2-propanone	*	50.0		ND						12/26/2023
1,1-Dichloroethane	*	2.0		ND						12/26/2023
1,1-Dichloroethene	*	2.0		ND						12/26/2023
1,1-Dichloropropene	*	2.0		ND						12/26/2023
1,2,3-Trichlorobenzene	*	2.0		ND						12/26/2023
1,2,3-Trichloropropane	*	2.0		ND						12/26/2023
1,2,3-Trimethylbenzene	*	2.0		ND						12/26/2023
1,2,4-Trichlorobenzene	*	2.0		ND						12/26/2023
1,2,4-Trimethylbenzene	*	2.0		ND						12/26/2023
1,2-Dibromo-3-chloropropane	*	5.0		ND						12/26/2023
1,2-Dibromoethane	*	2.0		ND						12/26/2023
1,2-Dichlorobenzene	*	2.0		ND						12/26/2023
1,2-Dichloroethane	*	2.0		ND						12/26/2023
1,2-Dichloropropane	*	2.0		ND						12/26/2023
1,3,5-Trimethylbenzene	*	2.0		ND						12/26/2023
1,3-Dichlorobenzene	*	2.0		ND						12/26/2023
1,3-Dichloropropane	*	2.0		ND						12/26/2023
1,4-Dichlorobenzene	*	2.0		ND						12/26/2023
1-Chlorobutane	*	2.0		ND						12/26/2023
2,2-Dichloropropane	*	2.0		ND						12/26/2023
2-Butanone	*	25.0		ND						12/26/2023
2-Chlorotoluene	*	2.0		ND						12/26/2023
2-Hexanone	*	25.0		ND						12/26/2023
2-Nitropropane	*	50.0		ND						12/26/2023
4-Chlorotoluene	*	2.0		ND						12/26/2023
4-Methyl-2-pentanone	*	25.0		ND						12/26/2023
Acetone	*	25.0		ND						12/26/2023
Acetonitrile	*	50.0		ND						12/26/2023
Acrolein	*	50.0		ND						12/26/2023
Acrylonitrile	*	5.0		ND						12/26/2023
Allyl chloride	*	2.0		ND						12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS
Batch 216520 **SampType:** MBLK **Units** µg/Kg

SampleID: MBLK-AF231226A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Benzene	*	1.0		ND						12/26/2023
Bromobenzene	*	2.0		ND						12/26/2023
Bromochloromethane	*	2.0		ND						12/26/2023
Bromodichloromethane	*	2.0		ND						12/26/2023
Bromoform	*	5.0		ND						12/26/2023
Bromomethane	*	10.0		ND						12/26/2023
Carbon disulfide	*	2.0		ND						12/26/2023
Carbon tetrachloride	*	2.0		ND						12/26/2023
Chlorobenzene	*	2.0		ND						12/26/2023
Chloroethane	*	10.0		ND						12/26/2023
Chloroform	*	2.0		ND						12/26/2023
Chloromethane	*	10.0		ND						12/26/2023
cis-1,2-Dichloroethene	*	2.0		ND						12/26/2023
cis-1,3-Dichloropropene	*	2.0		ND						12/26/2023
Cyclohexanone	*	50.0		ND						12/26/2023
Dibromochloromethane	*	2.0		ND						12/26/2023
Dibromomethane	*	2.0		ND						12/26/2023
Dichlorodifluoromethane	*	10.0		ND						12/26/2023
Diisopropyl ether	*	5.0		ND						12/26/2023
Ethyl ether	*	2.0		ND						12/26/2023
Ethyl methacrylate	*	2.0		ND						12/26/2023
Ethylbenzene	*	2.0		ND						12/26/2023
Ethyl-tert-butyl ether	*	2.0		ND						12/26/2023
Hexachlorobutadiene	*	2.0		ND						12/26/2023
Hexachloroethane	*	2.0		ND						12/26/2023
Iodomethane	*	10.0		ND						12/26/2023
Isopropylbenzene	*	2.0		ND						12/26/2023
m,p-Xylenes	*	4.0		ND						12/26/2023
Methacrylonitrile	*	5.0		ND						12/26/2023
Methyl Methacrylate	*	5.0		ND						12/26/2023
Methyl tert-butyl ether	*	2.0		ND						12/26/2023
Methylacrylate	*	5.0		ND						12/26/2023
Methylene chloride	*	10.0		ND						12/26/2023
Naphthalene	*	5.0		ND						12/26/2023
n-Butylbenzene	*	2.0		ND						12/26/2023
n-Heptane	*	20.0		ND						12/26/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520	SampType: MBLK	Units µg/Kg								
SampID: MBLK-AF231226A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
n-Hexane	*	20.0		ND						12/26/2023
Nitrobenzene	*	50.0		ND						12/26/2023
n-Propylbenzene	*	2.0		ND						12/26/2023
o-Xylene	*	4.0		ND						12/26/2023
Pentachloroethane	*	5.0		ND						12/26/2023
p-Isopropyltoluene	*	2.0		ND						12/26/2023
Propionitrile	*	50.0		ND						12/26/2023
sec-Butylbenzene	*	2.0		ND						12/26/2023
Styrene	*	2.0		ND						12/26/2023
tert-Amyl methyl ether	*	2.0		ND						12/26/2023
tert-Butyl alcohol	*	50.0		ND						12/26/2023
tert-Butylbenzene	*	2.0		ND						12/26/2023
Tetrachloroethene	*	2.0		ND						12/26/2023
Tetrahydrofuran	*	10.0		ND						12/26/2023
Toluene	*	2.0		ND						12/26/2023
trans-1,2-Dichloroethene	*	2.0		ND						12/26/2023
trans-1,3-Dichloropropene	*	2.0		ND						12/26/2023
trans-1,4-Dichloro-2-butene	*	2.0		ND						12/26/2023
Trichloroethene	*	2.0		ND						12/26/2023
Trichlorofluoromethane	*	5.0		ND						12/26/2023
Vinyl acetate	*	50.0		ND						12/26/2023
Vinyl chloride	*	2.0		ND						12/26/2023
Xylenes, Total	*	8.0		ND						12/26/2023
TPH - GRO (C6 - C10)	*	500		ND						12/26/2023
Surr: 1,2-Dichloroethane-d4	*			46.1	50.00		92.3	80	120	12/26/2023
Surr: 4-Bromofluorobenzene	*			48.0	50.00		95.9	80	120	12/26/2023
Surr: Toluene-d8	*			52.5	50.00		105.0	80	120	12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520	SampType: LCS	Units µg/Kg									Date Analyzed
SampID: LCS-AF231226A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
1,1,1,2-Tetrachloroethane	*	2.0		57.4	50.00	0	114.9	81.1	128	12/26/2023	
1,1,1-Trichloroethane	*	2.0		54.6	50.00	0	109.2	65.1	140	12/26/2023	
1,1,2,2-Tetrachloroethane	*	2.0		50.6	50.00	0	101.2	69.7	131	12/26/2023	
1,1,2-Trichloro-1,2,2-trifluoroethane	*	2.0		52.8	50.00	0	105.7	49.7	159	12/26/2023	
1,1,2-Trichloroethane	*	5.0		51.5	50.00	0	103.1	81.7	118	12/26/2023	
1,1-Dichloro-2-propanone	*	50.0		117	125.0	0	93.5	69.7	128	12/26/2023	
1,1-Dichloroethane	*	2.0		52.6	50.00	0	105.1	75.2	127	12/26/2023	
1,1-Dichloroethene	*	2.0		50.1	50.00	0	100.2	56.8	144	12/26/2023	
1,1-Dichloropropene	*	2.0		55.2	50.00	0	110.4	60.5	143	12/26/2023	
1,2,3-Trichlorobenzene	*	2.0		68.7	50.00	0	137.5	65	147	12/26/2023	
1,2,3-Trichloropropane	*	2.0		50.0	50.00	0	100.1	71.7	125	12/26/2023	
1,2,3-Trimethylbenzene	*	2.0		60.7	50.00	0	121.3	70.4	130	12/26/2023	
1,2,4-Trichlorobenzene	*	2.0	S	85.0	50.00	0	170.1	54.9	169	12/26/2023	
1,2,4-Trimethylbenzene	*	2.0		61.1	50.00	0	122.2	66.3	137	12/26/2023	
1,2-Dibromo-3-chloropropane	*	5.0		51.5	50.00	0	103.0	68.4	128	12/26/2023	
1,2-Dibromoethane	*	2.0		52.5	50.00	0	105.1	84.3	123	12/26/2023	
1,2-Dichlorobenzene	*	2.0		63.4	50.00	0	126.9	76.5	129	12/26/2023	
1,2-Dichloroethane	*	2.0		43.8	50.00	0	87.6	73.7	125	12/26/2023	
1,2-Dichloropropane	*	2.0		48.1	50.00	0	96.1	79.7	126	12/26/2023	
1,3,5-Trimethylbenzene	*	2.0		62.9	50.00	0	125.7	65.7	137	12/26/2023	
1,3-Dichlorobenzene	*	2.0	S	68.7	50.00	0	137.4	70.2	135	12/26/2023	
1,3-Dichloropropane	*	2.0		51.0	50.00	0	102.1	80.1	122	12/26/2023	
1,4-Dichlorobenzene	*	2.0		68.5	50.00	0	136.9	70.3	140	12/26/2023	
1-Chlorobutane	*	2.0		52.8	50.00	0	105.6	64.5	141	12/26/2023	
2,2-Dichloropropane	*	2.0		54.7	50.00	0	109.4	66.8	144	12/26/2023	
2-Butanone	*	25.0		121	125.0	0	97.0	70	131	12/26/2023	
2-Chlorotoluene	*	2.0		61.7	50.00	0	123.4	66.5	133	12/26/2023	
2-Hexanone	*	25.0		124	125.0	0	98.9	64.9	137	12/26/2023	
2-Nitropropane	*	50.0		440	500.0	0	87.9	69.5	138	12/26/2023	
4-Chlorotoluene	*	2.0		63.0	50.00	0	125.9	65	136	12/26/2023	
4-Methyl-2-pentanone	*	25.0		130	125.0	0	104.1	71	133	12/26/2023	
Acetone	*	25.0		119	125.0	0	95.0	63	153	12/26/2023	
Acetonitrile	*	50.0		487	500.0	0	97.5	65.8	148	12/26/2023	
Acrolein	*	50.0		345	500.0	0	69.1	30.6	165	12/26/2023	
Acrylonitrile	*	5.0		49.6	50.00	0	99.1	76.1	133	12/26/2023	
Allyl chloride	*	2.0		53.3	50.00	0	106.5	72	147	12/26/2023	

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520		SampType: LCS		Units µg/Kg						
SampID: LCS-AF231226A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Benzene	*	1.0		53.0	50.00	0	105.9	76.1	129	12/26/2023
Bromobenzene	*	2.0		60.8	50.00	0	121.6	77.3	127	12/26/2023
Bromochloromethane	*	2.0		44.4	50.00	0	88.8	75.4	129	12/26/2023
Bromodichloromethane	*	2.0		46.7	50.00	0	93.3	85.8	129	12/26/2023
Bromoform	*	5.0		53.3	50.00	0	106.6	75.9	118	12/26/2023
Bromomethane	*	10.0		36.4	50.00	0	72.8	1	262	12/26/2023
Carbon disulfide	*	2.0		53.7	50.00	0	107.4	58.3	155	12/26/2023
Carbon tetrachloride	*	2.0		54.9	50.00	0	109.8	58.5	146	12/26/2023
Chlorobenzene	*	2.0		59.1	50.00	0	118.3	78.3	124	12/26/2023
Chloroethane	*	10.0		45.9	50.00	0	91.8	55.3	136	12/26/2023
Chloroform	*	2.0		49.2	50.00	0	98.4	78.4	124	12/26/2023
Chloromethane	*	10.0		42.2	50.00	0	84.3	38.4	143	12/26/2023
cis-1,2-Dichloroethene	*	2.0		54.8	50.00	0	109.5	78.9	131	12/26/2023
cis-1,3-Dichloropropene	*	2.0		51.9	50.00	0	103.8	85.9	133	12/26/2023
Cyclohexanone	*	50.0		485	500.0	0	96.9	59.4	142	12/26/2023
Dibromochloromethane	*	2.0		55.0	50.00	0	110.1	82.1	120	12/26/2023
Dibromomethane	*	2.0		48.1	50.00	0	96.2	84.8	125	12/26/2023
Dichlorodifluoromethane	*	10.0		46.4	50.00	0	92.7	22.1	161	12/26/2023
Diisopropyl ether	*	5.0		48.0	50.00	0	96.0	76.3	133	12/26/2023
Ethyl ether	*	2.0		44.6	50.00	0	89.1	76.3	128	12/26/2023
Ethyl methacrylate	*	2.0		53.2	50.00	0	106.4	77.5	130	12/26/2023
Ethylbenzene	*	2.0		60.6	50.00	0	121.2	70.2	131	12/26/2023
Ethyl-tert-butyl ether	*	2.0		47.6	50.00	0	95.2	82.4	129	12/26/2023
Hexachlorobutadiene	*	2.0		74.4	50.00	0	148.8	46.7	157	12/26/2023
Hexachloroethane	*	2.0		60.2	50.00	0	120.4	62.6	125	12/26/2023
Iodomethane	*	10.0		58.2	50.00	0	116.3	51.2	166	12/26/2023
Isopropylbenzene	*	2.0		61.0	50.00	0	122.1	68.7	135	12/26/2023
m,p-Xylenes	*	4.0		122	100.0	0	122.0	70.2	131	12/26/2023
Methacrylonitrile	*	5.0		44.4	50.00	0	88.9	78.6	135	12/26/2023
Methyl Methacrylate	*	5.0		41.9	50.00	0	83.8	73	136	12/26/2023
Methyl tert-butyl ether	*	2.0		47.3	50.00	0	94.5	84.1	129	12/26/2023
Methylacrylate	*	5.0		51.8	50.00	0	103.6	82.7	130	12/26/2023
Methylene chloride	*	10.0		46.7	50.00	0	93.5	69.1	131	12/26/2023
Naphthalene	*	5.0		56.7	50.00	0	113.4	78.1	130	12/26/2023
n-Butylbenzene	*	2.0		70.8	50.00	0	141.6	49.4	153	12/26/2023
n-Heptane	*	20.0		66.4	50.00	0	132.9	51.1	184	12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520		SampType: LCS		Units µg/Kg						
SampleID: LCS-AF231226A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
n-Hexane	*	20.0		55.4	50.00	0	110.7	44.7	157	12/26/2023
Nitrobenzene	*	50.0		580	500.0	0	116.0	49.4	149	12/26/2023
n-Propylbenzene	*	2.0		63.4	50.00	0	126.8	59.2	139	12/26/2023
o-Xylene	*	4.0		58.2	50.00	0	116.4	76.5	129	12/26/2023
Pentachloroethane	*	5.0		58.7	50.00	0	117.4	66	136	12/26/2023
p-Isopropyltoluene	*	2.0		62.5	50.00	0	124.9	69.9	135	12/26/2023
Propionitrile	*	50.0		501	500.0	0	100.1	76.5	137	12/26/2023
sec-Butylbenzene	*	2.0		64.9	50.00	0	129.7	59.5	141	12/26/2023
Styrene	*	2.0		60.7	50.00	0	121.4	79.1	131	12/26/2023
tert-Amyl methyl ether	*	2.0		47.1	50.00	0	94.2	84.6	130	12/26/2023
tert-Butyl alcohol	*	50.0		234	250.0	0	93.7	71.5	129	12/26/2023
tert-Butylbenzene	*	2.0		58.6	50.00	0	117.3	60.7	136	12/26/2023
Tetrachloroethene	*	2.0		64.3	50.00	0	128.5	55.8	142	12/26/2023
Tetrahydrofuran	*	10.0		44.6	50.00	0	89.1	66.6	129	12/26/2023
Toluene	*	2.0		59.7	50.00	0	119.3	73.6	125	12/26/2023
trans-1,2-Dichloroethene	*	2.0		51.9	50.00	0	103.8	68.2	134	12/26/2023
trans-1,3-Dichloropropene	*	2.0		55.1	50.00	0	110.2	79.2	131	12/26/2023
trans-1,4-Dichloro-2-butene	*	2.0		51.3	50.00	0	102.6	58.8	147	12/26/2023
Trichloroethene	*	2.0		56.8	50.00	0	113.5	69.2	136	12/26/2023
Trichlorofluoromethane	*	5.0		53.4	50.00	0	106.9	50.1	147	12/26/2023
Vinyl acetate	*	50.0		51.9	50.00	0	103.8	77.6	136	12/26/2023
Vinyl chloride	*	2.0		49.5	50.00	0	99.0	40.3	160	12/26/2023
Xylenes, Total	*	8.0		180	150.0	0	120.1	72.6	130	12/26/2023
Surr: 1,2-Dichloroethane-d4	*			42.3	50.00		84.6	80	120	12/26/2023
Surr: 4-Bromofluorobenzene	*			46.5	50.00		93.1	80	120	12/26/2023
Surr: Toluene-d8	*			51.8	50.00		103.6	80	120	12/26/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520	SampType: LCSD	Units µg/Kg		RPD Limit 20							Date Analyzed
SampleID: LCSD-AF231226A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
1,1,1,2-Tetrachloroethane	*	2.0		57.9	50.00	0	115.8	57.44	0.81		12/26/2023
1,1,1-Trichloroethane	*	2.0		59.4	50.00	0	118.8	54.62	8.37		12/26/2023
1,1,2,2-Tetrachloroethane	*	2.0		51.9	50.00	0	103.9	50.58	2.65		12/26/2023
1,1,2-Trichloro-1,2,2-trifluoroethane	*	2.0		56.6	50.00	0	113.1	52.83	6.80		12/26/2023
1,1,2-Trichloroethane	*	5.0		51.9	50.00	0	103.8	51.53	0.73		12/26/2023
1,1-Dichloro-2-propanone	*	50.0		138	125.0	0	110.2	116.9	16.40		12/26/2023
1,1-Dichloroethane	*	2.0		56.5	50.00	0	113.1	52.57	7.26		12/26/2023
1,1-Dichloroethene	*	2.0		56.2	50.00	0	112.4	50.09	11.51		12/26/2023
1,1-Dichloropropene	*	2.0		60.4	50.00	0	120.8	55.21	8.99		12/26/2023
1,2,3-Trichlorobenzene	*	2.0		71.6	50.00	0	143.2	68.73	4.09		12/26/2023
1,2,3-Trichloropropane	*	2.0		52.5	50.00	0	105.0	50.03	4.80		12/26/2023
1,2,3-Trimethylbenzene	*	2.0		61.2	50.00	0	122.5	60.67	0.92		12/26/2023
1,2,4-Trichlorobenzene	*	2.0	S	87.2	50.00	0	174.4	85.03	2.52		12/26/2023
1,2,4-Trimethylbenzene	*	2.0		62.4	50.00	0	124.9	61.12	2.12		12/26/2023
1,2-Dibromo-3-chloropropane	*	5.0		53.2	50.00	0	106.5	51.51	3.30		12/26/2023
1,2-Dibromoethane	*	2.0		53.8	50.00	0	107.6	52.53	2.37		12/26/2023
1,2-Dichlorobenzene	*	2.0	S	64.7	50.00	0	129.4	63.45	1.94		12/26/2023
1,2-Dichloroethane	*	2.0		48.3	50.00	0	96.7	43.82	9.79		12/26/2023
1,2-Dichloropropane	*	2.0		51.0	50.00	0	102.0	48.07	5.90		12/26/2023
1,3,5-Trimethylbenzene	*	2.0		65.0	50.00	0	129.9	62.86	3.30		12/26/2023
1,3-Dichlorobenzene	*	2.0	S	70.6	50.00	0	141.3	68.71	2.78		12/26/2023
1,3-Dichloropropane	*	2.0		51.2	50.00	0	102.3	51.04	0.23		12/26/2023
1,4-Dichlorobenzene	*	2.0	S	70.6	50.00	0	141.3	68.46	3.12		12/26/2023
1-Chlorobutane	*	2.0		58.7	50.00	0	117.4	52.78	10.64		12/26/2023
2,2-Dichloropropane	*	2.0		59.8	50.00	0	119.6	54.71	8.86		12/26/2023
2-Butanone	*	25.0		140	125.0	0	111.9	121.2	14.34		12/26/2023
2-Chlorotoluene	*	2.0		63.2	50.00	0	126.4	61.70	2.43		12/26/2023
2-Hexanone	*	25.0		126	125.0	0	101.1	123.6	2.20		12/26/2023
2-Nitropropane	*	50.0		485	500.0	0	97.0	439.7	9.81		12/26/2023
4-Chlorotoluene	*	2.0		64.5	50.00	0	129.1	62.97	2.45		12/26/2023
4-Methyl-2-pentanone	*	25.0		140	125.0	0	111.8	130.1	7.20		12/26/2023
Acetone	*	25.0		140	125.0	0	112.2	118.8	16.56		12/26/2023
Acetonitrile	*	50.0		566	500.0	0	113.2	487.3	14.92		12/26/2023
Acrolein	*	50.0		386	500.0	0	77.1	345.4	10.97		12/26/2023
Acrylonitrile	*	5.0		56.7	50.00	0	113.4	49.57	13.45		12/26/2023
Allyl chloride	*	2.0		57.0	50.00	0	114.0	53.26	6.77		12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch	216520	SampType:	LCSD	Units µg/Kg				RPD Limit 20		
SampID:		LCSD-AF231226A-1								
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Benzene	*	1.0		55.7	50.00	0	111.4	52.96	5.08	12/26/2023
Bromobenzene	*	2.0		62.2	50.00	0	124.3	60.80	2.21	12/26/2023
Bromochloromethane	*	2.0		48.7	50.00	0	97.4	44.38	9.30	12/26/2023
Bromodichloromethane	*	2.0		49.7	50.00	0	99.5	46.66	6.37	12/26/2023
Bromoform	*	5.0		55.3	50.00	0	110.6	53.29	3.67	12/26/2023
Bromomethane	*	10.0		35.6	50.00	0	71.3	36.40	2.08	12/26/2023
Carbon disulfide	*	2.0		57.2	50.00	0	114.3	53.68	6.28	12/26/2023
Carbon tetrachloride	*	2.0		60.1	50.00	0	120.2	54.92	9.01	12/26/2023
Chlorobenzene	*	2.0		60.0	50.00	0	120.0	59.14	1.48	12/26/2023
Chloroethane	*	10.0		50.9	50.00	0	101.8	45.91	10.33	12/26/2023
Chloroform	*	2.0		53.1	50.00	0	106.2	49.18	7.67	12/26/2023
Chloromethane	*	10.0	R	52.7	50.00	0	105.4	42.16	22.22	12/26/2023
cis-1,2-Dichloroethene	*	2.0		57.0	50.00	0	114.0	54.76	3.97	12/26/2023
cis-1,3-Dichloropropene	*	2.0		54.8	50.00	0	109.5	51.88	5.38	12/26/2023
Cyclohexanone	*	50.0		542	500.0	0	108.4	484.7	11.14	12/26/2023
Dibromochloromethane	*	2.0		56.1	50.00	0	112.1	55.04	1.85	12/26/2023
Dibromomethane	*	2.0		50.4	50.00	0	100.7	48.10	4.61	12/26/2023
Dichlorodifluoromethane	*	10.0		52.0	50.00	0	103.9	46.36	11.41	12/26/2023
Diisopropyl ether	*	5.0		52.3	50.00	0	104.5	48.01	8.50	12/26/2023
Ethyl ether	*	2.0		48.0	50.00	0	96.1	44.55	7.54	12/26/2023
Ethyl methacrylate	*	2.0		52.9	50.00	0	105.9	53.20	0.49	12/26/2023
Ethylbenzene	*	2.0		61.5	50.00	0	123.1	60.60	1.52	12/26/2023
Ethyl-tert-butyl ether	*	2.0		49.8	50.00	0	99.7	47.60	4.62	12/26/2023
Hexachlorobutadiene	*	2.0		78.5	50.00	0	157.0	74.40	5.39	12/26/2023
Hexachloroethane	*	2.0		62.3	50.00	0	124.5	60.21	3.36	12/26/2023
Iodomethane	*	10.0		57.8	50.00	0	115.6	58.17	0.66	12/26/2023
Isopropylbenzene	*	2.0		63.3	50.00	0	126.7	61.05	3.68	12/26/2023
m,p-Xylenes	*	4.0		124	100.0	0	123.9	122.0	1.51	12/26/2023
Methacrylonitrile	*	5.0		48.8	50.00	0	97.6	44.45	9.29	12/26/2023
Methyl Methacrylate	*	5.0		48.9	50.00	0	97.7	41.88	15.38	12/26/2023
Methyl tert-butyl ether	*	2.0		49.6	50.00	0	99.2	47.26	4.85	12/26/2023
Methylacrylate	*	5.0		53.6	50.00	0	107.2	51.81	3.36	12/26/2023
Methylene chloride	*	10.0		50.4	50.00	0	100.8	46.73	7.56	12/26/2023
Naphthalene	*	5.0		59.9	50.00	0	119.8	56.69	5.47	12/26/2023
n-Butylbenzene	*	2.0		73.0	50.00	0	146.0	70.80	3.06	12/26/2023
n-Heptane	*	20.0		71.2	50.00	0	142.4	66.44	6.89	12/26/2023

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 216520		SampType: LCSG		Units µg/Kg				RPD Limit 20			Date Analyzed
SampID: LCSG-AF231226A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
n-Hexane	*	20.0		58.8	50.00	0	117.5	55.37	5.92	12/26/2023	
Nitrobenzene	*	50.0		633	500.0	0	126.6	580.1	8.68	12/26/2023	
n-Propylbenzene	*	2.0		65.5	50.00	0	131.0	63.40	3.29	12/26/2023	
o-Xylene	*	4.0		60.3	50.00	0	120.5	58.18	3.53	12/26/2023	
Pentachloroethane	*	5.0		60.0	50.00	0	120.1	58.71	2.24	12/26/2023	
p-Isopropyltoluene	*	2.0		64.4	50.00	0	128.7	62.46	2.98	12/26/2023	
Propionitrile	*	50.0		564	500.0	0	112.8	500.6	11.96	12/26/2023	
sec-Butylbenzene	*	2.0		66.6	50.00	0	133.2	64.87	2.62	12/26/2023	
Styrene	*	2.0		63.0	50.00	0	126.0	60.71	3.67	12/26/2023	
tert-Amyl methyl ether	*	2.0		48.6	50.00	0	97.2	47.08	3.18	12/26/2023	
tert-Butyl alcohol	*	50.0		265	250.0	0	106.1	234.4	12.38	12/26/2023	
tert-Butylbenzene	*	2.0		60.3	50.00	0	120.7	58.63	2.86	12/26/2023	
Tetrachloroethene	*	2.0		68.1	50.00	0	136.3	64.26	5.85	12/26/2023	
Tetrahydrofuran	*	10.0		51.2	50.00	0	102.4	44.55	13.89	12/26/2023	
Toluene	*	2.0		62.0	50.00	0	124.0	59.67	3.86	12/26/2023	
trans-1,2-Dichloroethene	*	2.0		57.0	50.00	0	114.1	51.92	9.40	12/26/2023	
trans-1,3-Dichloropropene	*	2.0		55.7	50.00	0	111.5	55.09	1.17	12/26/2023	
trans-1,4-Dichloro-2-butene	*	2.0		53.0	50.00	0	106.1	51.28	3.39	12/26/2023	
Trichloroethene	*	2.0		60.3	50.00	0	120.6	56.75	6.08	12/26/2023	
Trichlorofluoromethane	*	5.0		60.0	50.00	0	120.0	53.43	11.60	12/26/2023	
Vinyl acetate	*	50.0		54.5	50.00	0	109.0	51.89	4.89	12/26/2023	
Vinyl chloride	*	2.0		60.2	50.00	0	120.3	49.52	19.39	12/26/2023	
Xylenes, Total	*	8.0		184	150.0	0	122.8	180.2	2.17	12/26/2023	
Surr: 1,2-Dichloroethane-d4	*			45.9	50.00		91.9			12/26/2023	
Surr: 4-Bromofluorobenzene	*			46.3	50.00		92.6			12/26/2023	
Surr: Toluene-d8	*			52.9	50.00		105.8			12/26/2023	

Batch 216520		SampType: LCSG		Units µg/Kg							Date Analyzed
SampID: LCSG-AF231226A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
TPH - GRO (C6 - C10)	*	500		1960	2000	0	98.1	70	130		
Surr: 1,2-Dichloroethane-d4	*			41.6	50.00		83.2	80	120		
Surr: 4-Bromofluorobenzene	*			47.6	50.00		95.3	80	120		
Surr: Toluene-d8	*			52.7	50.00		105.3	80	120		



Quality Control Results

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch	216520	SampType:	LCSGD	Units µg/Kg					RPD Limit 20		
SampID: LCSGD-AF231226A-1											
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)		*	500		2010	2000	0	100.3	1961	2.26	12/26/2023
Surr: 1,2-Dichloroethane-d4		*			41.5	50.00		83.1			12/26/2023
Surr: 4-Bromofluorobenzene		*			47.6	50.00		95.1			12/26/2023
Surr: Toluene-d8		*			52.5	50.00		105.1			12/26/2023



Receiving Check List

<http://www.teklabinc.com/>

Client: Geotechnology, Inc.

Work Order: 23121843

Client Project: Kirkwood Public Works J044955.01

Report Date: 28-Dec-23

Carrier: Craig McKinney

Received By: MEK

Completed by:

On:

22-Dec-23

Mary E Kemp

Reviewed by:

On:

26-Dec-23

Ellie Hopkins

Pages to follow:

Chain of custody

1

Extra pages included

0

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Temp °C 5.8

Type of thermal preservation?

None ☐

Ice ☒

Blue Ice ☐

Dry Ice ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Reported field parameters measured:

Field ☐

Lab ☐

NA ☒

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?

Yes ☐

No ☐

No VOA vials ☒

Water - TOX containers have zero headspace?

Yes ☐

No ☐

No TOX containers ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

NA ☒

NPDES/CWA TCN interferences checked/treated in the field?

Yes ☐

No ☐

NA ☒

Any No responses must be detailed below or on the COC.

pg. 1 of 1 Work order # 23121843

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client:	Geotechnology, Inc.		Samples on: <input checked="" type="checkbox"/> ICE	<input type="checkbox"/> BLUE ICE	<input type="checkbox"/> NO ICE	5.8 °C	LTG# 3
Address:	11816 Lackland Road		Preserved in: <input type="checkbox"/> LAB	<input type="checkbox"/> FIELD	FOR LAB USE ONLY		
City / State / Zip	St. Louis, MO 63146		Lab Notes				
Contact:	David Forseth	Phone:	(314) 997-7440				
E-Mail:	dforseth@geotechnology.com	Fax:					
			Client Comments:				

Are these samples known to be involved in litigation? If yes, a surcharge will apply. ☐ Yes ☒ No

Are these samples known to be hazardous? If yes, include details of the hazard. ☐ Yes ☒ No

Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. ☐ Yes ☒ No

TEKLAB

[illegible]

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 85813





APPENDIX C

LIMITATIONS OF REPORT

ENVIRONMENTAL SAMPLING AND TESTING LIMITATIONS

1. The Report has been prepared on behalf of and for the exclusive use of the addressee, solely for use in documenting specific sample results. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of Geotechnology. Unless other contractual agreements were made, the services described in the report were carried out in accordance with the Terms for Geotechnology's Services which accompanied the proposal.
2. The sampling was performed in accordance with generally accepted practices of other consultants undertaking similar projects at the same time and in the same geographical area, and Geotechnology endeavored to observe that degree of care and skill ordinarily exercised by other consultants under similar circumstances and conditions. The findings and conclusions stated herein must be considered not as scientific certainties, but rather as professional opinions concerning the significance of the limited data gathered during the course of the project. Geotechnology does not and cannot represent that the site contains no hazardous waste or material, oil (including petroleum products) or other latent condition beyond that observed by Geotechnology.
3. It is recommended that Geotechnology be retained to provide further services during construction and/or implementation of any remedial measures recommended in this report. This is to allow Geotechnology to observe compliance with the concepts and recommendations contained herein, and to allow the development of design changes in the event that subsurface conditions differ from those anticipated.
4. In the event that information is developed relative to environmental or hazardous waste or material issues at the site and not contained in this report, such information shall be brought to Geotechnology's attention. Geotechnology will evaluate such information and, based on this evaluation, may modify the conclusions stated in this Report.
5. The conclusions and recommendations contained in this Report are based in part upon the data obtained from a limited number of air, water, soil and/or groundwater samples obtained from widely spaced sampling. The identified presence of contaminated water, soil and/or groundwater is limited to the extent that they could be identified by color, smell, instrumentation and sampling and testing. There is a potential for contaminated water, soil and/or groundwater above the indicated concentrations to occur elsewhere on the site. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, and/or if changes are made in regulations, it will be necessary to reevaluate the conclusions and recommendations of this report.
6. Quantitative laboratory testing was performed as part of the assessment by an outside laboratory, Geotechnology has relied upon the data provided, and has not conducted an independent evaluation of the reliability to these data.
7. Chemical analyses have been performed for specific parameters during the course of this sampling as described in the text. Do not assume that a given chemical is not present at the site simply because it was not present at the test locations. The chemical may exist on the site where tests were not performed. In addition, it should be noted that additional chemical constituents not tested for during the sampling could be present in water, soil and/or groundwater at the site.