WATER SAMPLING AND REPORTING SERVICES

COLUMBIA PUBLIC SCHOOLS
DOUGLASS HIGH SCHOOL
310 NORTH PROVIDENCE ROAD
COLUMBIA, MISSOURI

Prepared for:

COLUMBIA PUBLIC SCHOOLS
COLUMBIA, MISSOURI

Prepared by:

GEOTECHNOLOGY, LLC, DBA UES
ST. LOUIS, MISSOURI

Date:

JULY 19, 2024

Project No.:

J044517.01

SAFETY
TEAMWORK
RESPONSIVENESS
INTEGRITY
VALUE
EXCELLENCE

July 19, 2024

Mr. David Seamon
District Project Manager
Columbia Public Schools
1818 West Worley Street
Columbia, Missouri 65203

Re: Water Sampling and Reporting Services
Columbia Public Schools
Douglass High School
310 North Providence Road
Columbia, Missouri
Project No. J044517.01

Dear Mr. Seamon:

In accordance with Columbia Public Schools' (CPS) Request for Proposal No. C-24043, dated October 10, 2023, Geotechnology, LLC, dba UES, is pleased to provide this drinking water sampling report for the referenced project. Our scope of services included flushing and sampling of drinking water from potable water outlets, laboratory analysis of water samples, and a letter report.

SITE AND PROJECT DESCRIPTION

The subject property consists of the existing Columbia Public Schools Douglass High School, located northeast of the intersection of Park Avenue and North Providence Road in Columbia, Missouri. The purpose of the drinking water sampling was to identify potable water outlets that may require remediation in accordance with the State of Missouri's *Get the Lead out of School Drinking Water Act* (RSMo 160.077).

DRINKING WATER SAMPLING

RSMo 160.077 sets standards for lead concentrations in school drinking water, stating that each Missouri school shall provide drinking water with a lead concentration level below five (5) parts per billion (ppb). This Act requires schools to conduct the inventory, sampling, remediation, and monitoring at all potable drinking water outlets used or potentially used for drinking, food preparation, and cooking or cleaning utensils.

In general conformance with the RSMo 160.077 requirements, and the Environmental Protection Agency's (EPA) *3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities* manual, initial water flushing and sampling activities were conducted on December 21 and 22, 2023, by Mr. Brad Lohrum, a Missouri-licensed lead risk assessor. Mr. Lohrum was assisted by Mr. Robert Haefner, a Missouri-licensed lead risk assessor, and Mr. Seth Lamble, a

Missouri-licensed lead inspector. Copies of training certificates and lead licenses for Messrs. Lohrum, Haefner, and Lamble are included in Appendix A.

An inventory of potable drinking water outlets was provided to UES by CPS. UES personnel sampled the identified outlets utilizing the EPA's "first-draw" methods. The identified outlets were flushed, then allowed to sit undisturbed for a period of 8-18 hours. Following this stagnation period, the first 250 milliliters (ml) of water expelled from the outlets were collected in laboratory-provided containers. A copy of the drinking water sampling form, which includes a list of sample locations, and the times and dates of flushing and sampling activities, is included in Appendix B. Floor plans depicting approximate sample locations are included as Figures 1 and 2.

Using standard chain-of-custody procedures, the drinking water samples were submitted to Teklab, Inc. of Collinsville, Illinois, an independent, certified Missouri Department of Natural Resources (MDNR) Drinking Water and National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, for analysis of lead content via EPA Method 200.8: *Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry*.

RESULTS

Laboratory analyses detected the presence of lead at or above 5 ppb in the following sample.

TABLE 1
DRINKING WATER OUTLETS AT OR ABOVE 5 PARTS PER BILLION

Sample Number / Location and Fixture Type	Results
DHS-26 / Room 241 Ice Machine	157 ppb

Sample DHS-26 was collected from the water outlet feeding the ice machine within Room 241. UES personnel returned to the site on February 8, 2024, to collect an ice sample (DHS-26-2) from within the machine for laboratory analysis. The result of the ice sample analysis was below 5 ppb.

UES will not be able to represent that the site contains no lead-bearing water outlets beyond those detected or observed by UES during flushing and sampling activities. Copies of the drinking water analytical results are included in Appendix C.

RECOMMENDATIONS

Our recommendations are summarized below:

- If additional drinking water outlets not covered by this report should be identified or put into use, further sampling and testing should be conducted.

* * * * * *

The following attachments are included in and complete this report:

Figure 1	-	Drinking Water Sample Locations – First Floor
Figure 2	-	Drinking Water Sample Locations – Second and Third Floors
Appendix A	-	Certificates and Licenses of Environmental Professionals
Appendix B	-	Drinking Water Sampling Form
Appendix C	-	Drinking Water Laboratory Data Sheets
Appendix D	-	Limitations of Report

* * * * * *

We appreciate the opportunity to provide our professional environmental consulting services to Columbia Public Schools on this project. If you have any questions or comments, please contact me at (314) 997-7440.

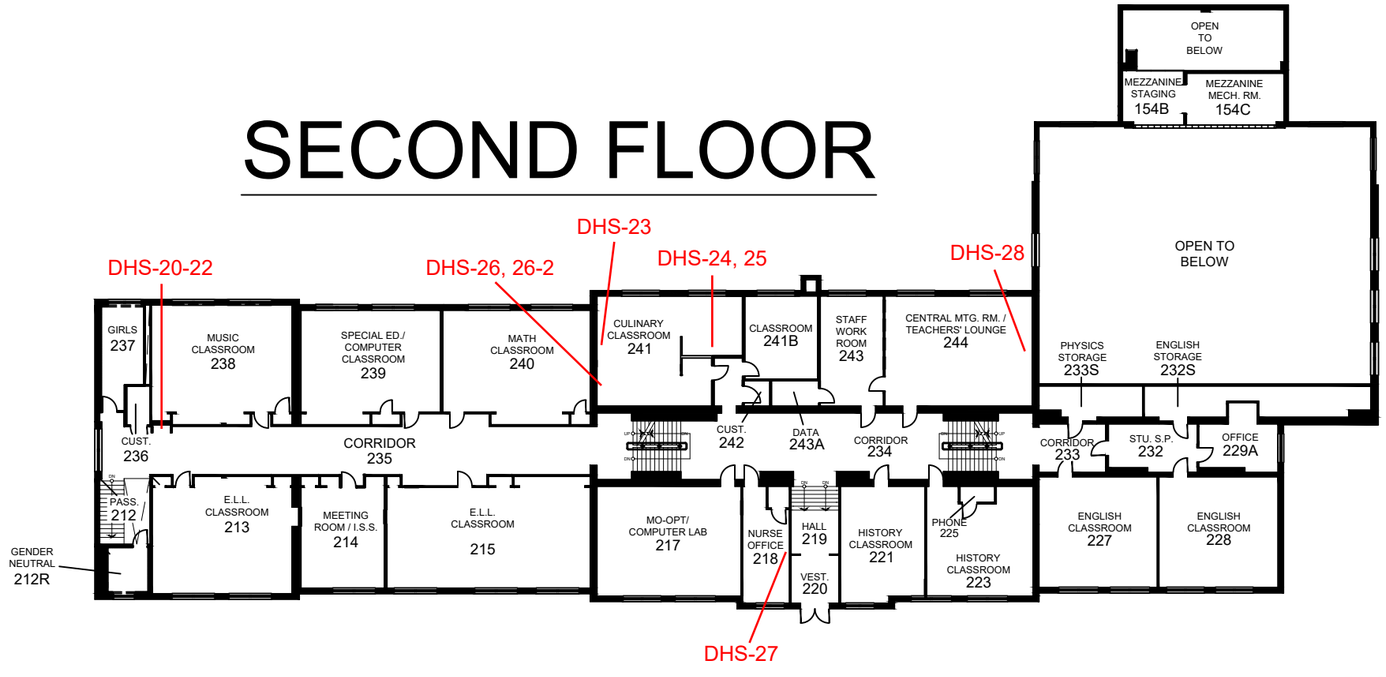
Very truly yours,

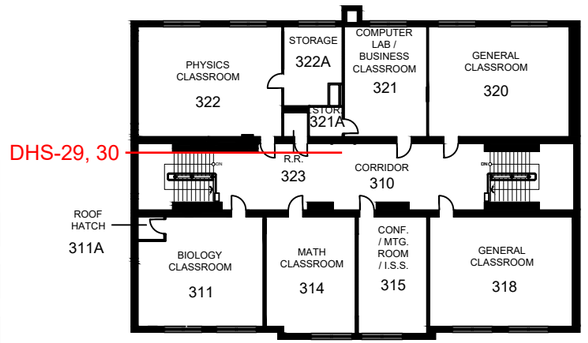
UES

Bradley J. Lohrum
Project Manager

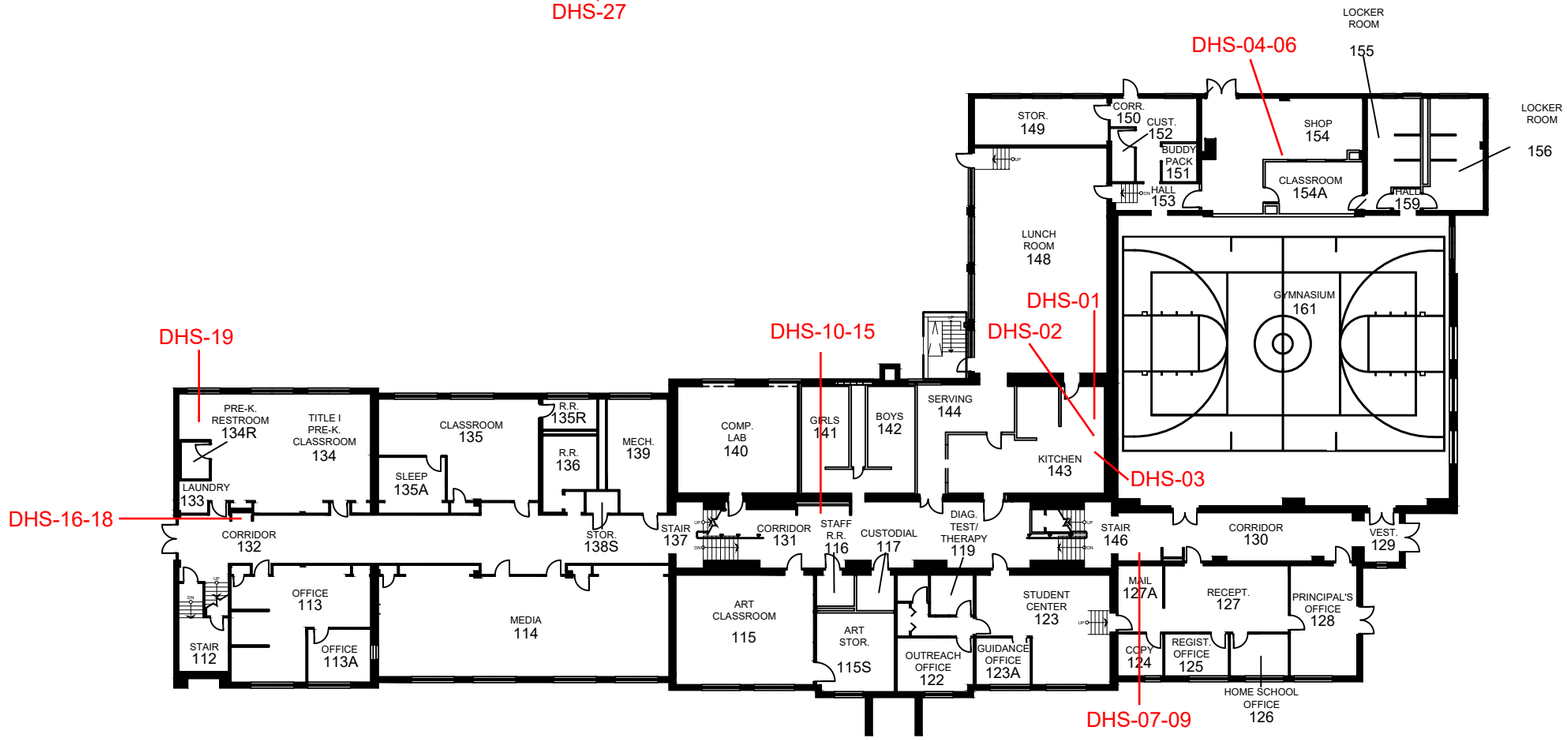
BJL/MSR:bjl/jsj

SECOND FLOOR





THIRD FLOOR



FIRST FLOOR

NOTES

1. Drawing not to scale.
2. Drawing adapted from “Douglass High School Floor Plan”, provided by the client, dated 06/13/2017.
3. Sample locations were identified in the field relative to building features and are approximate only.

Drawn By: BJL	Ck'd By: BJL	App'vd By: MSR
Date: 7-19-24	Date: 7-19-24	Date: 7-19-24

UES

310 North Providence Road
Columbia, Missouri

DRINKING WATER SAMPLING LOCATIONS

Project Number J044517.01	FIGURE 1

APPENDIX A

CERTIFICATES AND LICENSES OF ENVIRONMENTAL PROFESSIONALS

COLLEGE FOR

PUBLIC HEALTH & SOCIAL JUSTICE

SAINT LOUIS UNIVERSITY

CENTER FOR ENVIRONMENTAL EDUCATION AND TRAINING

verifies that

Bradley Lohrum

817 S Sappington Road, Crestwood, MO 63126

has attended 8 contact hours of training and successfully passed an examination

Lead Risk Assessor Refresher

St. Louis, MO

Certificate # CEET 325 - 12/12/2022 - **189152**
Examination Date: 12/12/2022
CEUs: 0.8

Christopher C. King PhD
Director, Center for Environmental Education and Training

Certificate expiration is 3 years from examination date for Illinois Dept. of Public Health

Center for Environmental Education and Training, 3545 Lafayette, St. Louis, MO 63104
(314) 977-8256 slu.edu/x39753.xml

This training course has been accredited by the Illinois Department of Public Health, and by the Missouri Department of Health & Senior Services.

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Bradley J. Lohrum

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**1/20/2023**
Expiration Date:	**1/20/2025**
License Number:	**230120-300006460**

Paula F. Nickelson
Acting Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102

SAINT LOUIS UNIVERSITY

CENTER FOR ENVIRONMENTAL EDUCATION AND TRAINING

verifies that

Robert Haefner

3951 Dover Pl, St. Louis, MO 63116

has attended 8 contact hours of training and successfully passed examination for

Lead Risk Assessor Refresher

St. Louis, MO

Certificate # CEET 325 3/6/2023 118035
Examination Date: 3/6/2023
CEUs: 0.8

Rene Dulle

Rene Dulle, MBA, Director
Center for Environmental Education & Training

Center for Environmental Education and Training | 3545 Lafayette Ave., St. Louis, MO 63104
(314) 977-8256 | slu.edu/public-health-social-justice/centers-institutes/ceet.php

The training course has been accredited by the Missouri Dept. of Health and Senior Services, and by the Illinois Dept. of Public Health. Certificate expiration is 3 years from examination date for Illinois Dept. of Public Health.

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Robert J. Haefner

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**3/28/2023**
Expiration Date:	**3/30/2025**
License Number:	**150330-300004672**

Paula F. Nickelson
Acting Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102

COLLEGE FOR

PUBLIC HEALTH & SOCIAL JUSTICE

SAINT LOUIS UNIVERSITY

CENTER FOR ENVIRONMENTAL EDUCATION AND TRAINING

verifies that

Seth Lamble

12040 Chaparral Drive, Bridgeton, Missouri 63044

has attended 8 contact hours of training and successfully passed an examination

Lead Inspector Refresher

St. Louis, MO

Certificate # CEET 315 - 1/4/2022 - **118633**
Examination Date: 1/4/2022
CEUs: 0.8

Christopher C. King PhD
Director, Center for Environmental Education and Training

Certificate expiration is 3 years from examination date for Illinois Dept. of Public Health

Center for Environmental Education and Training, 3545 Lafayette, St. Louis, MO 63104
(314) 977-8256 slu.edu/x39753.xml

This training course has been accredited by the Illinois Department of Public Health, and by the Missouri Department of Health & Senior Services.

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Seth P. Lamble

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Inspector
Category of License

Issuance Date:	**4/25/2022**
Expiration Date:	**4/25/2024**
License Number:	**160425-300004897**

Paula F. Nickelson
Acting Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

Lead Abatement Contractor License

The person, firm or corporation whose name appears on this certificate is licensed as a Lead Abatement Contractor as set forth in the Missouri Revised Statutes 701.300-701.338 and 19 CSR 30-70.180, as long as not suspended or revoked, and is hereby authorized to engage in lead-bearing substance activities.

Issued to:

Geotechnology, LLC

11816 Lackland Road, Suite 150
St. Louis, MO 63146

Issuance Date:	**2/8/2022**
Expiration Date:	**2/8/2024**
License Number:	**060208-0095**

Donald G. Kauerauf
Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102

APPENDIX B

DRINKING WATER SAMPLING FORM

DRINKING WATER SAMPLING FORM

Project Name: Columbia Public Schools Water Sampling and Reporting Services

Project Number: J044517.01

Address: 310 N Providence Road Columbia, Missouri

Building Name: Douglass High School

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
DHS-01	S	Kitchen - Left	RJH - 12/21/23 - 12:15	RJH - 12/21/23 - 23:53
DHS-02	S	Kitchen - Center	RJH - 12/21/23 - 12:15	RJH - 12/21/23 - 23:53
DHS-03	S	Kitchen - Right	RJH - 12/21/23 - 12:15	RJH - 12/21/23 - 23:53
DHS-04	WF	Room 154 - Left	RJH - 12/21/23 - 12:20	RJH - 12/21/23 - 23:56
DHS-05	BF	Room 154 - Right	RJH -12/21/23 - 12:20	RJH - 12/21/23 - 23:56
DHS-06	WF	Room 154 - Right	RJH - 12/21/23 - 12:20	RJH - 12/21/23 - 23:56
DHS-07	WF	Hallway at Room 127 - Left	RJH - 12/21/23 - 12:25	RJH - 12/22/23 - 24:00
DHS-08	BF	Hallway at Room 127 - Right	RJH - 12/21/23 - 12:25	RJH - 12/22/23 - 24:00
DHS-09	WF	Hallway at Room 127 - Right	RJH - 12/21/23 - 12:25	RJH - 12/22/23 - 24:00
DHS-10	WF	Hallway at Room 140 - Left	RJH - 12/21/23 - 12:28	RJH - 12/22/23 - 24:02
DHS-11	BF	Hallway at Room 140 - Left Center	RJH -12/21/23 - 12:28	RJH - 12/22/23 - 24:02
DHS-12	WF	Hallway at Room 140 - Left Center	RJH - 12/21/23 - 12:28	RJH - 12/22/23 - 24:02
DHS-13	WF	Hallway at Room 140 - Right Center	RJH - 12/21/23 - 12:28	RJH - 12/22/23 - 24:03
DHS-14	BF	Hallway at Room 140 - Right	RJH - 12/21/23 - 12:28	RJH - 12/22/23 - 24:03
DHS-15	WF	Hallway at Room 140 - Right	RJH - 12/21/23 - 12:28	RJH - 12/22/23 - 24:03
DHS-16	WF	Hallway at Room 134 - Left	RJH - 12/21/23 - 12:33	RJH - 12/22/23 - 24:05
DHS-17	BF	Hallway at Room 134 - Right	RJH - 12/21/23 - 12:33	RJH - 12/22/23 - 24:05
DHS-18	WF	Hallway at Room 134 - Right	RJH - 12/21/23 - 12:33	RJH - 12/22/23 - 24:05
DHS-19	S	Room 134	RJH - 12/21/23 - 12:35	RJH - 12/22/23 - 24:06
DHS-20	WF	Hallway at 236 - Left	RJH - 12/21/23 - 12:40	RJH - 12/22/23 - 24:07
DHS-21	BF	Hallway at 236 - Right	RJH - 12/21/23 - 12:40	RJH - 12/22/23 - 24:07
DHS-22	WF	Hallway at 236 - Right	RJH - 12/21/23 - 12:40	RJH - 12/22/23 - 24:07
DHS-23	S	Room 241 North	RJH - 12/21/23 - 12:43	RJH - 12/22/23 - 24:10
DHS-24	S	Room 241 South - Left	RJH - 12/21/23 - 12:43	RJH - 12/22/23 - 24:10
DHS-25	S	Room 241 South - Right	RJH - 12/21/23 - 12:43	RJH - 12/22/23 - 24:10

BF=Bottle Filling
B=Bubbler
FW=Filtered Water
ICE=Ice Machine
S=Classroom/Other Sink
WF=Water Fountain

DRINKING WATER SAMPLING FORM

Project Name: Columbia Public Schools Water Sampling and Reporting Services
Building Name: Douglass High School

Project Number: J044517.01
Address: 310 N Providence Road Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
DHS-26	ICE	Room 241	BJL - 12/21/23 - 12:43	BJL - 12/22/23 - 24:10
DHS-27	S	Room 218	RJH - 12/21//23 - 12:46	RJH - 12/22/23 - 24:18
DHS-28	S	Room 244	RJH - 12/21/23 - 12:49	RJH - 12/22/23 - 24:19
DHS-29	WF	Hallway at Room 321 - Left	RJH - 12/21/23 - 12:51	RJH - 12/22/23 - 24:20
DHS-30	WF	Hallway at Room 321 - Right	RJH - 12/21/23 - 12:51	RJH - 12/22/23 - 24:20
DHS-26-2	ICE	Room 241	N/A	SPL - 2/8/24 - 3:58

BF=Bottle Filling
B=Bubbler
FW=Filtered Water
ICE=Ice Machine
S=Classroom/Other Sink
WF=Water Fountain

APPENDIX C

DRINKING WATER LABORATORY DATA SHEETS

January 11, 2024

Brad Lohrum
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: J044517.01 **WorkOrder:** 23121854

Dear Brad Lohrum:

TEKLAB, INC received 60 samples on 12/22/2023 4:20:00 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

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

Report Contents

Client: Geotechnology, Inc.
Work Order: 23121854
Client Project: J044517.01
Report Date: 11-Jan-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
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Accreditations	6
Laboratory Results	7
Receiving Check List	9
Chain of Custody	Appended

Client: Geotechnology, Inc. **Work Order:** 23121854

Client Project: J044517.01 **Report Date:** 11-Jan-24

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)

Definitions

Client: Geotechnology, Inc.
Work Order: 23121854

Client Project: J044517.01
Report Date: 11-Jan-24

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.
Client Project: J044517.01

Work Order: 23121854
Report Date: 11-Jan-24

Cooler Receipt Temp: NA °C

Locations

Collinsville

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

Springfield

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

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
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

Chicago

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

Client: Geotechnology, Inc. **Work Order:** 23121854

Client Project: J044517.01 **Report Date:** 11-Jan-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	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

Client: Geotechnology, Inc. **Work Order:** 23121854

Client Project: J044517.01 **Report Date:** 11-Jan-24

Matrix: DRINKING WATER

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Date Collected
EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)									
Lead									
23121854-001A	BSES-21	NELAP		1.0	4.0	µg/L	1	01/04/2024 16:24	12/22/2023 0:49
23121854-002A	BSES-22	NELAP		1.0	5.0	µg/L	1	01/04/2024 16:29	12/22/2023 0:50
23121854-003A	BSES-23	NELAP		1.0	4.0	µg/L	1	01/04/2024 16:33	12/22/2023 0:51
23121854-004A	DHS-01	NELAP		1.0	1.5	µg/L	1	01/05/2024 3:19	12/21/2023 23:53
23121854-005A	DHS-02	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 3:49	12/21/2023 23:53
23121854-006A	DHS-03	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 3:23	12/21/2023 23:53
23121854-007A	DHS-04	NELAP		2.5	< 2.5	µg/L	10	01/09/2024 16:19	12/21/2023 23:56
23121854-008A	DHS-05	NELAP		2.5	< 2.5	µg/L	10	01/05/2024 23:21	12/21/2023 23:56
23121854-009A	DHS-06	NELAP		2.5	< 2.5	µg/L	10	01/05/2024 23:26	12/21/2023 23:56
23121854-010A	DHS-07	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 11:44	12/22/2023 0:10
23121854-011A	DHS-08	NELAP		1.0	< 1.0	µg/L	1	01/04/2024 16:37	12/22/2023 0:00
23121854-012A	DHS-09	NELAP		1.0	< 1.0	µg/L	1	01/04/2024 16:42	12/22/2023 0:00
23121854-013A	DHS-10	NELAP		1.0	< 1.0	µg/L	1	01/04/2024 16:46	12/22/2023 0:02
23121854-014A	DHS-11	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 12:06	12/22/2023 0:02
23121854-015A	DHS-12	NELAP		1.0	< 1.0	µg/L	1	01/04/2024 0:55	12/22/2023 0:02
23121854-016A	DHS-13	NELAP		1.0	< 1.0	µg/L	5	01/02/2024 13:49	12/22/2023 0:03
23121854-017A	DHS-14	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:09	12/22/2023 0:03
23121854-018A	DHS-15	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:38	12/22/2023 0:03
23121854-019A	DHS-16	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:42	12/22/2023 0:05
23121854-020A	DHS-17	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:46	12/22/2023 0:05
23121854-021A	DHS-18	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:07	12/22/2023 0:05
23121854-022A	DHS-19	NELAP		1.0	2.4	µg/L	1	01/05/2024 17:51	12/22/2023 0:06
23121854-023A	DHS-20	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 17:54	12/22/2023 0:07
23121854-024A	DHS-21	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 17:58	12/22/2023 0:07
23121854-025A	DHS-22	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 18:02	12/22/2023 0:07
23121854-026A	DHS-23	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:50	12/22/2023 0:10
23121854-027A	DHS-24	NELAP		1.0	< 1.0	µg/L	1	01/05/2024 18:09	12/22/2023 0:10
23121854-028A	DHS-25	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 20:54	12/22/2023 0:10
23121854-029A	DHS-26	NELAP		10.0	157	µg/L	10	01/10/2024 12:24	12/22/2023 0:10
23121854-030A	DHS-27	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:02	12/22/2023 0:18
23121854-031A	DHS-28	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:00	12/22/2023 0:19
23121854-032A	DHS-29	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:31	12/22/2023 0:20
23121854-033A	DHS-30	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:35	12/22/2023 0:20
23121854-034A	EFS-01	NELAP		1.0	7.2	µg/L	1	01/05/2024 3:45	12/21/2023 8:53
23121854-035A	EFS-02	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:52	12/21/2023 8:57
23121854-036A	EFS-03	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 21:56	12/21/2023 8:54
23121854-037A	EFS-04	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:25	12/21/2023 8:55
23121854-038A	EFS-05	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:29	12/21/2023 8:55
23121854-039A	EFS-06	NELAP		1.0	15.2	µg/L	1	01/09/2024 22:33	12/21/2023 8:59
23121854-040A	EFS-07	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:37	12/21/2023 9:00
23121854-041A	EFS-08	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:41	12/21/2023 9:00
23121854-042A	EFS-09	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 22:45	12/21/2023 9:01
23121854-043A	EFS-10	NELAP		1.0	1.2	µg/L	1	01/09/2024 22:49	12/21/2023 9:02
23121854-044A	EFS-11	NELAP		1.0	1.1	µg/L	1	01/09/2024 22:54	12/21/2023 9:02
23121854-045A	EFS-12	NELAP		1.0	1.4	µg/L	1	01/09/2024 23:18	12/21/2023 9:03
23121854-046A	EFS-13	NELAP		1.0	6.2	µg/L	1	01/09/2024 23:47	12/21/2023 9:04
23121854-047A	EFS-14	NELAP		1.0	< 1.0	µg/L	1	01/09/2024 23:23	12/21/2023 9:05
23121854-048A	EFS-15	NELAP		1.0	1.8	µg/L	1	01/09/2024 23:27	12/21/2023 9:06

Client: Geotechnology, Inc. **Work Order:** 23121854

Client Project: J044517.01 **Report Date:** 11-Jan-24

Matrix: DRINKING WATER

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Date Collected
EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)									
Lead									
23121854-049A	EFS-16	NELAP		1.0	**1.2**	µg/L	1	01/09/2024 23:31	12/21/2023 9:08
23121854-050A	EFS-17	NELAP		1.0	**4.5**	µg/L	1	01/09/2024 23:35	12/21/2023 9:08
23121854-051A	EFS-18	NELAP		1.0	**3.6**	µg/L	1	01/09/2024 23:39	12/21/2023 9:09
23121854-052A	EFS-19	NELAP		1.0	**< 1.0**	µg/L	1	01/09/2024 23:43	12/21/2023 9:11
23121854-053A	EFS-20	NELAP		1.0	**< 1.0**	µg/L	1	01/10/2024 0:12	12/21/2023 9:11
23121854-054A	EFS-21	NELAP		1.0	**9.2**	µg/L	1	01/10/2024 0:16	12/21/2023 9:12
23121854-055A	EFS-22	NELAP		1.0	**6.1**	µg/L	1	01/05/2024 10:29	12/21/2023 9:13
23121854-056A	EFS-23	NELAP		1.0	**11.7**	µg/L	1	01/05/2024 9:42	12/21/2023 9:13
23121854-057A	EFS-24	NELAP		1.0	**< 1.0**	µg/L	1	01/05/2024 9:46	12/21/2023 9:14
23121854-058A	EFS-25	NELAP		1.0	**9.1**	µg/L	1	01/05/2024 9:50	12/21/2023 9:15
23121854-059A	EFS-26	NELAP		1.0	**16.4**	µg/L	1	01/05/2024 9:59	12/21/2023 9:15
23121854-060A	EFS-27	NELAP		1.0	**6.9**	µg/L	1	01/05/2024 9:54	12/21/2023 9:16

Dilution required to meet internal standard recovery criteria.
Dilution required to meet internal standard recovery criteria.
Dilution required to meet internal standard recovery criteria.

Receiving Check List

http://www.teklabinc.com/

Client: Geotechnology, Inc.
Client Project: J044517.01

Work Order: 23121854
Report Date: 11-Jan-24

Carrier: Brad Lohrum

Received By: PWR

Completed by: Mary E Kemp
On: 26-Dec-23

Reviewed by: Ellie Hopkins
On: 26-Dec-23

Pages to follow: Chain of custody 6 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	NA
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.

Samples were checked for turbidity and then preserved with nitric acid upon arrival in the laboratory. - MaryKemp - 12/26/2023 8:42:36 AM

CHAIN OF CUSTODY

pg. 1 of 21 Work order # 2312184

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

Client:	Geotechnology, Inc.		
Address:	11816 Lackland Road		
City / State / Zip	St. Louis, MO 63146		
Contact:	Brad Lohrum	**Phone:**	(314) 997-7440
E-Mail:	blohrum@geotechnology.com	**Fax:**	

Samples on: ☐ ICE ☐ BLUE ICE ☒ NO ICE NA °C LTG# _____

Preserved in: ☐ LAB ☐ FIELD

FOR LAB USE ONLY

Lab Notes

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

Project Name/Number	Sample Collector's Name
Jo44617.01	Brad Lohrum

Results Requested

☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ☐ 3 Day (50% Surcharge)

Billing Instructions

Brad will send PO

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: DW Lead
2312184-001	BSES-21	12/22/23 24:49	1									X					X
002	BSES-22	" 24:50	1									X					X
003	BSES-23	" 24:51	1									X					X
004	DHS-01	12/21/23 23:53	1									X					X
005	DHS-02	"	1									X					X
006	DHS-03	"	1									X					X
007	DHS-04	23:56	1									X					X
008	DHS-05	"	1									X					X
009	DHS-06	"	1									X					X
010	DHS-07	12/22/23 24:10	1									X					X

Relinquished By	Date/Time	Received By	Date/Time
Bradley Lohrum	12/22/23 16:20		12/22/23 1620

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: 85820

CHAIN OF CUSTODY

pg. 2 of 21 Work order # 23121854

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

Client:	Geotechnology, Inc.
Address:	11816 Lackland Road
City / State / Zip	St. Louis, MO 63146
Contact:	Brad Lohrum
Phone:	(314) 997-7440
E-Mail:	blohrum@geotechnology.com
Fax:	

Samples on: ☒ ICE ☒ BLUE ICE ☒ NO ICE ____ °C LTG# ____

Preserved in: ☒ LAB ☒ FIELD

FOR LAB USE ONLY

Lab Notes

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

Project Name/Number	Sample Collector's Name
J044517.01	Brad Lohrum

Results Requested: ☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: DW Lead
23121854-011	DHS-08	12/22/23 24:00	1									X					X
012	DHS-09	"	1									X					X
013	DHS-10	24:02	1									X					X
014	DHS-11	"	1									X					X
015	DHS-12	"	1									X					X
016	DHS-13	24:03	1									X					X
017	DHS-14	"	1									X					X
018	DHS-15	"	1									X					X
019	DHS-16	24:05	1									X					X
020	DHS-17	"	1									X					X

Relinquished By	Date/Time	Received By	Date/Time
Brad Lohrum	12/22/23 16:20		12/22/23 1620

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: 85679

CHAIN OF CUSTODY

pg. 3 of 21 Work order # 23121854

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

Client:	Geotechnology, Inc.
Address:	11816 Lackland Road
City / State / Zip	St. Louis, MO 63146
Contact:	Brad Lohrum
Phone:	(314) 997-7440
E-Mail:	blohrum@geotechnology.com
Fax:	

Samples on: ☒ ICE ☒ BLUE ICE ☒ NO ICE ____ °C LTG# ____

Preserved in: ☒ LAB ☒ FIELD

FOR LAB USE ONLY

Lab Notes

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

Project Name/Number	Sample Collector's Name
J044517.01	Brad Lohrum

Results Requested: ☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ____ ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: DW Lead
23121854-021	DHS-18	12/22/23 24:05	1									X					X
022	DHS-19	24:06	1									X					X
023	DHS-20	24:07	1									X					X
024	DHS-21	"	1									X					X
025	DHS-22	"	1									X					X
026	DHS-23	24:10	1									X					X
027	DHS-24	"	1									X					X
028	DHS-25	"	1									X					X
029	DHS-26	24:10	1									X					X
030	DHS-27	24:18	1									X					X

Relinquished By	Date/Time	Received By	Date/Time
[signature]	12/22/23 16:20	[signature]	12/22/23 1620

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: 85679

CHAIN OF CUSTODY

pg. 4 of 21 Work order # 23121854

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

Client:	Geotechnology, Inc.
Address:	11816 Lackland Road
City / State / Zip	St. Louis, MO 63146
Contact:	Brad Lohrum
Phone:	(314) 997-7440
E-Mail:	blohrum@geotechnology.com
Fax:	

Samples on: ☒ ICE ☒ BLUE ICE ☒ NO ICE ____ °C LTG# ____

Preserved in: ☒ LAB ☒ FIELD

FOR LAB USE ONLY

Lab Notes

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

Project Name/Number: [redacted] J044517.01

Sample Collector's Name: Brad Lohrum

Results Requested: ☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: DW Lead
23121854-031	DHS-28	12/22/23 24:19	1									X					X
032	DHS-29	" 24:20	1									X					X
033	DHS-30	" "	1									X					X
034	EFS-01	12/21/23 8:53	1									X					X
035	EFS-02	" 8:57	1									X					X
036	03	" 8:54	1									X					X
037	04	" 8:55	1									X					X
038	05	" "	1									X					X
039	06	" 8:59	1									X					X
040	07	" 9:00	1									X					X

Relinquished By	Date/Time	Received By	Date/Time
Bradley Lohrum	12/22/23 16:20	[signature]	12/22/23 1620

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: 85679

March 11, 2024

Brad Lohrum
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: J044517.01 **WorkOrder:** 24020828

Dear Brad Lohrum:

TEKLAB, INC received 50 samples on 2/12/2024 11:20:00 AM 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

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

Report Contents

Client: Geotechnology, Inc.
Work Order: 24020828
Client Project: J044517.01
Report Date: 11-Mar-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	9
Chain of Custody	Appended

Client: Geotechnology, Inc. **Work Order:** 24020828

Client Project: J044517.01 **Report Date:** 11-Mar-24

Abbr Definition

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)

Definitions

Client: Geotechnology, Inc.
Work Order: 24020828

Client Project: J044517.01
Report Date: 11-Mar-24

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.
Client Project: J044517.01

Work Order: 24020828
Report Date: 11-Mar-24

Cooler Receipt Temp: N/A °C

Locations

Collinsville

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

Springfield

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

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
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

Chicago

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

Client: Geotechnology, Inc. **Work Order:** 24020828

Client Project: J044517.01 **Report Date:** 11-Mar-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	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		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Geotechnology, Inc.
Client Project: J044517.01
Matrix: DRINKING WATER

Work Order: 24020828
Report Date: 11-Mar-24

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Date Collected
EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)									
Lead									
24020828-001A	PES-22-2	NELAP		1.0	< 1.0	µg/L	1	03/06/2024 19:00	02/08/2024 3:46
24020828-002A	DHS-26-2	NELAP		1.0	**< 1.0**	µg/L	1	03/06/2024 19:04	02/08/2024 3:58
24020828-003A	FES-01	NELAP		1.0	2.9	µg/L	1	03/07/2024 16:50	02/08/2024 4:18
24020828-004A	FES-02	NELAP		1.0	< 1.0	µg/L	5	03/04/2024 9:21	02/08/2024 4:20
24020828-005A	FES-03	NELAP		1.0	1.9	µg/L	1	03/07/2024 16:54	02/08/2024 4:20
24020828-006A	FES-04	NELAP		1.0	10.2	µg/L	5	03/04/2024 9:08	02/08/2024 4:21
24020828-007A	FES-05	NELAP		1.0	1.4	µg/L	1	03/07/2024 16:57	02/08/2024 4:21
24020828-008A	FES-06	NELAP		1.0	3.8	µg/L	5	03/04/2024 9:12	02/08/2024 4:22
24020828-009A	FES-07	NELAP		1.0	3.3	µg/L	1	03/07/2024 17:01	02/08/2024 4:22
24020828-010A	FES-08	NELAP		1.0	2.8	µg/L	1	03/07/2024 17:05	02/08/2024 4:22
24020828-011A	FES-09	NELAP		1.0	1.1	µg/L	1	03/07/2024 17:27	02/08/2024 4:22
24020828-012A	FES-10	NELAP		1.0	< 1.0	µg/L	1	03/07/2024 17:30	02/08/2024 4:26
24020828-013A	FES-11	NELAP		1.0	1.3	µg/L	1	03/07/2024 17:34	02/08/2024 4:26
24020828-014A	FES-12	NELAP		1.0	< 1.0	µg/L	1	03/07/2024 17:38	02/08/2024 4:26
24020828-015A	FES-13	NELAP		1.0	< 1.0	µg/L	1	03/07/2024 17:41	02/08/2024 4:28
24020828-016A	FES-14	NELAP		1.0	2.0	µg/L	1	03/07/2024 17:45	02/08/2024 4:28
24020828-017A	FES-15	NELAP		1.0	1.1	µg/L	1	03/07/2024 17:49	02/08/2024 4:28
24020828-018A	FES-16	NELAP		1.0	2.1	µg/L	1	03/07/2024 17:52	02/08/2024 4:28
24020828-019A	FES-17	NELAP		1.0	< 1.0	µg/L	1	03/07/2024 17:56	02/08/2024 4:28
24020828-020A	FES-18	NELAP		1.0	7.3	µg/L	1	03/07/2024 18:11	02/08/2024 4:30
24020828-021A	FES-19	NELAP		1.0	1.3	µg/L	1	03/07/2024 18:22	02/08/2024 4:30
24020828-022A	FES-20	NELAP		1.0	2.1	µg/L	1	03/07/2024 18:25	02/08/2024 4:31
24020828-023A	FES-21	NELAP		1.0	9.7	µg/L	1	03/08/2024 14:07	02/08/2024 4:33
24020828-024A	FES-22	NELAP		1.0	1.4	µg/L	5	03/04/2024 9:17	02/08/2024 4:33
24020828-025A	FES-23	NELAP		1.0	11.5	µg/L	1	03/08/2024 14:10	02/08/2024 4:35
24020828-026A	FES-24	NELAP		1.0	11.9	µg/L	1	03/08/2024 14:14	02/08/2024 4:35
24020828-027A	FES-25	NELAP		1.0	3.1	µg/L	1	03/08/2024 14:18	02/08/2024 4:36
24020828-028A	FES-26	NELAP		1.0	2.9	µg/L	1	03/08/2024 14:21	02/08/2024 4:36
24020828-029A	FES-27	NELAP		1.0	2.3	µg/L	1	03/08/2024 14:32	02/08/2024 4:37
24020828-030A	FES-28	NELAP		1.0	1.1	µg/L	1	03/08/2024 14:36	02/08/2024 4:37
24020828-031A	FES-29	NELAP		1.0	< 1.0	µg/L	1	03/08/2024 14:40	02/08/2024 4:39
24020828-032A	FES-30	NELAP		1.0	2.3	µg/L	1	03/08/2024 14:54	02/08/2024 4:39
24020828-033A	FES-31	NELAP		1.0	2.9	µg/L	1	03/08/2024 14:58	02/08/2024 4:40
24020828-034A	FES-32	NELAP		1.0	5.5	µg/L	1	03/08/2024 15:02	02/08/2024 4:40
24020828-035A	FES-33	NELAP		1.0	4.0	µg/L	5	03/04/2024 12:06	02/08/2024 4:42
24020828-036A	FES-34	NELAP		1.0	2.7	µg/L	5	03/04/2024 12:11	02/08/2024 4:42
24020828-037A	FES-35	NELAP		1.0	< 1.0	µg/L	1	03/08/2024 15:13	02/08/2024 4:43
24020828-038A	FES-36	NELAP		1.0	16.8	µg/L	5	03/04/2024 12:15	02/08/2024 4:45
24020828-039A	FES-37	NELAP		1.0	19.1	µg/L	5	03/04/2024 12:19	02/08/2024 4:45
24020828-040A	FES-38	NELAP		1.0	4.9	µg/L	5	03/04/2024 12:24	02/08/2024 4:46
24020828-041A	FES-39	NELAP		1.0	6.0	µg/L	1	03/08/2024 15:16	02/08/2024 4:46
24020828-042A	FES-40	NELAP		1.0	8.8	µg/L	5	03/04/2024 12:28	02/08/2024 4:46
24020828-043A	FES-41	NELAP		1.0	3.2	µg/L	1	03/07/2024 9:51	02/08/2024 4:48
24020828-044A	FES-42	NELAP		1.0	4.4	µg/L	1	03/07/2024 9:54	02/08/2024 4:48
24020828-045A	FES-43	NELAP		1.0	3.4	µg/L	5	03/04/2024 12:32	02/08/2024 4:49
24020828-046A	FES-44	NELAP		1.0	2.8	µg/L	1	03/07/2024 9:58	02/08/2024 4:49
24020828-047A	FES-45	NELAP		1.0	1.2	µg/L	1	03/07/2024 10:02	02/08/2024 4:50
24020828-048A	FES-46	NELAP		1.0	4.1	µg/L	1	03/07/2024 10:05	02/08/2024 4:54

Client: Geotechnology, Inc.
Work Order: 24020828
Client Project: J044517.01
Report Date: 11-Mar-24
Matrix: DRINKING WATER

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Date Collected
EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)									
Lead									
24020828-049A	FES-47	NELAP		1.0	**1.7**	µg/L	1	03/07/2024 10:16	02/08/2024 4:54
24020828-050A	FES-48	NELAP		1.0	**4.6**	µg/L	1	03/07/2024 10:31	02/08/2024 4:55

Receiving Check List

http://www.teklabinc.com/

Client: Geotechnology, Inc.
Client Project: J044517.01

Work Order: 24020828
Report Date: 11-Mar-24

Carrier: Craig McKinney
Received By: AMD

Completed by: Amber Dilallo
On: 12-Feb-24

Reviewed by: Ellie Hopkins
On: 12-Feb-24

Pages to follow: Chain of custody 5 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	N/A
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.

Samples were checked for turbidity and then preserved with nitric acid upon arrival in the laboratory. - amberdilallo - 2/12/2024 3:14:22 PM

CHAIN OF CUSTODY

pg. 1 of 23 Work order # 24020828

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

Client:	Geotechnology, LLC		
Address:	11816 Lackland Road		
City / State / Zip	St. Louis, MO 63146		
Contact:	Brad Lohrum	**Phone:**	(314) 997-7440
E-Mail:	blohrum@teamues.com	**Fax:**	

Samples on: ☒ ICE ☐ BLUE ICE ☒ NO ICE NA °C LTG# _____

Preserved in: ☒ LAB ☐ FIELD

FOR LAB USE ONLY

Lab Notes

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? ☐ 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

Project Name/Number	Sample Collector's Name
J044517.01	Brad Lohrum

Results Requested
☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ____ ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: DW - Lead E200.8
24020828 001	PES-22-2	2/8/24 3:46	1									X					X
002	DHS-26-2	2/8/24 3:58	1									X					X
003	FES-01	4:18	1									X					X
004	FES-02	4:20	1									X					X
005	03	+	1									X					X
006	04	4:21	1									X					X
007	05	+	1									X					X
008	06	4:22	1									X					X
009	07		1									X					X
010	08		1									X					X

Relinquished By	Date/Time	Received By	Date/Time
	2/12/24 1015		2/12/24 1615
	2/12/24 1120		2/12/24 1120

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: 80481

APPENDIX D

LIMITATIONS OF REPORT

ENVIRONMENTAL SAMPLING
LIMITATIONS OF REPORT

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 UES.

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 UES 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. UES does not and cannot represent that the site contains no hazardous waste or material, or other latent condition beyond that observed by UES.

3. 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 UES' attention. UES will evaluate such information and, based on this evaluation, may modify the conclusions stated in this Report.

4. The conclusions and recommendations contained in this Report are based in part upon the data obtained from a limited number of water samples. The identified presence of contaminated water is limited to the extent that they could be identified by instrumentation and sampling and testing. There is a potential for contaminated water 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.

5. If quantitative laboratory testing was performed as part of the assessment by an outside laboratory, UES has relied upon the data provided, and has not conducted an independent evaluation of the reliability to these data.

6. 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 analyte is not present at the site simply because it was not present at the test locations. The analyte 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 at the site.