



WATER SAMPLING AND REPORTING SERVICES

**COLUMBIA PUBLIC SCHOOLS
PAXTON KEELEY ELEMENTARY SCHOOL
201 PARK DEVILLE DRIVE
COLUMBIA, MISSOURI**

Prepared for:

**COLUMBIA PUBLIC SCHOOLS
COLUMBIA, MISSOURI**

Prepared by:

**GEOTECHNOLOGY, LLC, DBA UES
ST. LOUIS, MISSOURI**

Date:

SEPTEMBER 18, 2024

Project No.:

J044517.01

**SAFETY
TEAMWORK
RESPONSIVENESS
INTEGRITY
VALUE
EXCELLENCE**



September 18, 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
Paxton Keeley Elementary School
201 Park DeVille Drive
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 Paxton Keeley Elementary School, located northwest of the intersection of West Ash Street and Park DeVille Drive 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 January 31 and February 1, 2024, by Mr. Brad Lohrum, a Missouri-licensed lead risk assessor. Mr. Lohrum was assisted by Mr. Seth Lambie, a Missouri-licensed lead inspector. Copies of training certificates and lead licenses for Messrs. Lohrum and Lambie 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 forms, which include 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 samples.

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

Sample Number / Location and Fixture Type	Results
PKE-04 / Room 105 Center Sink	7.0 ppb
PKE-07 / Room 104 Center Sink	5.1 ppb
PKE-08 / Room 104 Right Sink	9.6 ppb
PKE-11 / Room 102 Right Sink	8.3 ppb
PKE-14 / Room 103 Right Sink	5.2 ppb
PKE-66 / Hallway at Room 124 – Left Water Fountain	23 ppb
PKE-67 / Hallway at Room 124 – Right Water Fountain	5.7 ppb
PKE-70 / Kitchen Dishwash – Right Sink	5.8 ppb

UES personnel returned to the site on June 25 and 26, 2024, to resample the water fountains located within the hallway at Room 124 and the right-hand dishwashing sink within the Kitchen (PKE-66-2, PKE-67-2, and PKE-70-2). The results of the water sample analyses were 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:

- It is our understanding that the remaining outlets identified in Table 1 that have not been resampled have either been removed, marked as non-potable, or have otherwise been taken out of service. Should these fixtures be put back into service following remediation activities, or if replacement fixtures are to be put into service, 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 Floor |
| Appendix A | - Certificates and Licenses of Environmental Professionals |
| Appendix B | - Drinking Water Sampling Forms |
| 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

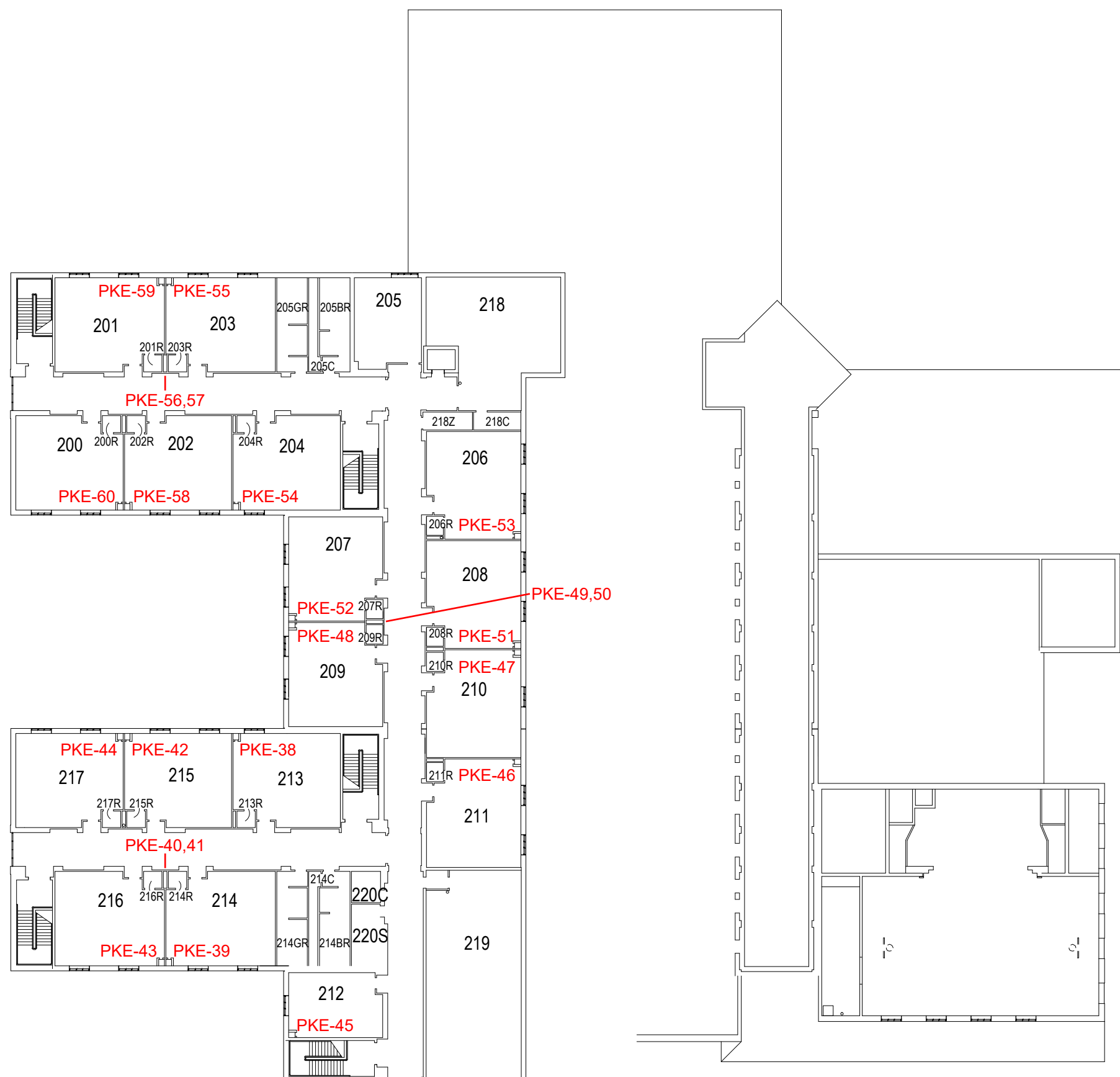
BJL/MSR:bjl/jsj



NOTES


1. Drawing not to scale.
2. Drawing adapted from "Paxton Keeley Elementary First Floor", provided by the client, dated 07/23/2015.
3. Sample locations were identified in the field relative to building features and are approximate only.

Drawn By: BJJ	Ck'd By: BJJ	App'vd By: MSR
Date: 9-20-24	Date: 9-20-24	Date: 9-20-24
		
201 Park DeVille Drive Columbia, Missouri		
DRINKING WATER SAMPLE LOCATIONS - FIRST FLOOR		
Project Number J044517.01	FIGURE 1	



NOTES

1. Drawing not to scale.
2. Drawing adapted from "Paxton Keeley Elementary Second Floor", provided by the client, dated 08/21/2013.
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: 9-20-24	Date: 9-20-24	Date: 9-20-24
		
201 Park DeVille Drive Columbia, Missouri		
DRINKING WATER SAMPLE LOCATIONS - SECOND FLOOR		
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 shu.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:

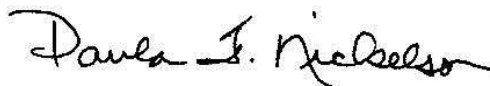
Bradley J. Lohrum

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

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

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

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



A handwritten signature in black ink, reading 'Donald G. Kauerauf', is positioned above the printed name.

Donald G. Kauerauf
Director

Department of Health and Senior Services

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

Lead Abatement Contractor License

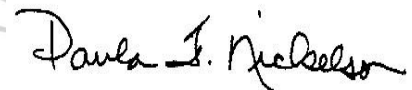
The person, firm or corporation whose name appears on this certificate is licensed as a Lead Abatement Contractor as set forth in the Missouri Revised Statutes 701.300-701.338 and 19 CSR 30-70.180, as long as not suspended or revoked, and is hereby authorized to engage in lead-bearing substance activities.

Issued to:

Geotechnology LLC (UES)

**11816 Lackland Rd Suite 150
St. Louis, MO 63146**

Issuance Date: **2/28/2024**
Expiration Date: **2/28/2026**
License Number: **240229-4652**



Paula F. Nickelson
Director
Department of Health and Senior Services



APPENDIX B

DRINKING WATER SAMPLING FORMS

**DRINKING WATER SAMPLING FORM**

Page 1 of 4

Project Name: Columbia Public Schools Water
Sampling and Reporting Services
Building Name: Paxton Keeley Elementary

Project Number: J044517.01
Address: 201 Park DeVille Drive
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
PKE-01	S	Nurse's Office	SPL - 1/31/24 - 17:26	SPL - 2/1/24 - 3:05
PKE-02	S	Teachers' Lounge	SPL - 1/31/24 - 17:28	BJL - 2/1/24 - 3:05
PKE-03	S	Room 105 - Left	SPL - 1/31/24 - 17:30	SPL - 2/1/24 - 3:09
PKE-04	S	Room 105 - Center	SPL - 1/31/24 - 17:30	SPL - 2/1/24 - 3:09
PKE-05	S	Room 105 - Right	SPL - 1/31/24 - 17:30	BJL - 2/2/24 - 3:09
PKE-06	S	Room 104 - Left	SPL - 1/31/24 - 17:31	SPL - 2/1/24 - 3:11
PKE-07	S	Room 104 - Center	SPL - 1/31/24 - 17:31	SPL - 2/1/24 - 3:11
PKE-08	S	Room 104 - Right	SPL - 1/31/24 - 17:31	BJL - 2/1/24 - 3:11
PKE-09	S	Room 102 - Left	SPL - 1/31/24 - 17:32	SPL - 2/1/24 - 3:13
PKE-10	S	Room 102 - Center	SPL - 1/31/24 - 17:32	SPL - 2/1/24 - 3:13
PKE-11	S	Room 102 - Right	SPL - 1/31/24 - 17:32	BJL - 2/1/24 - 3:13
PKE-12	S	Room 103 - Left	SPL - 1/31/24 - 17:33	SPL - 2/1/24 - 3:15
PKE-13	S	Room 103 - Center	SPL - 1/31/24 - 17:33	SPL - 2/1/24 - 3:15
PKE-14	S	Room 103 - Right	SPL - 1/31/24 - 17:33	BJL - 2/1/24 - 3:15
PKE-15	WF	Hallway at Room 103 - Left	SPL - 1/31/24 - 17:35	SPL - 2/1/24 - 3:16
PKE-16	WF	Hallway at Room 103 - Right	SPL - 1/31/24 - 17:35	SPL - 2/1/24 - 3:16
PKE-17	S	Room 101 - Left	SPL - 1/31/24 - 17:36	SPL - 2/1/24 - 3:17
PKE-18	S	Room 101 - Center	SPL - 1/31/24 - 17:36	SPL - 2/1/24 - 3:17
PKE-19	S	Room 101 - Right	SPL - 1/31/24 - 17:36	BJL - 2/1/24 - 3:17
PKE-20	S	Room 106	SPL - 1/31/24 - 17:38	SPL - 2/1/24 - 3:19
PKE-21	S	Room 107	SPL - 1/31/24 - 17:39	BJL - 2/1/24 - 3:21
PKE-22	WF	Hallway at Room 107 - Left	SPL - 1/31/24 - 17:40	SPL - 2/1/24 - 3:21
PKE-23	WF	Hallway at Room 107 - Right	SPL - 1/31/24 - 17:40	SPL - 2/1/24 - 3:21
PKE-24	S	Room 108	SPL - 1/31/24 - 17:41	SPL - 2/1/24 - 3:23
PKE-25	S	Room 109	SPL - 1/31/24 - 17:41	BJL - 2/1/24 - 3:23

BF=Bottle Filling
B=Bubbler

FW=Filtered Water
ICE=Ice Machine

S=Classroom/Other Sink
WF=Water Fountain

**DRINKING WATER SAMPLING FORM**

Page 2 of 4

Project Name: Columbia Public Schools Water
Sampling and Reporting Services
Building Name: Paxton Keeley Elementary

Project Number: J044517.01
Address: 201 Park DeVille Drive
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
PKE-26	S	Room 110	SPL - 1/31/24 - 17:42	SPL - 2/1/24 - 3:24
PKE-27	S	Room 112	SPL - 1/31/24 - 17:44	BJL - 2/1/24 - 3:26
PKE-28	WF	Hallway at Room 112- Left	SPL - 1/31/24 - 17:45	SPL - 2/1/24 - 3:26
PKE-29	WF	Hallway at Room 112 - Right	SPL - 1/31/24 - 17:45	SPL - 2/1/24 - 3:26
PKE-30	S	Room 116	SPL - 1/31/24 - 17:47	SPL - 2/1/24 - 3:28
PKE-31	S	Room 117	SPL - 1/31/24 - 17:49	SPL - 2/1/24 - 3:29
PKE-32	S	Room 118	SPL - 1/31/24 - 17:50	BJL - 2/1/24 - 3:30
PKE-33	WF	Hallway at Room 118 - Left	SPL - 1/31/24 - 17:51	SPL - 2/1/24 - 3:30
PKE-34	WF	Hallway at Room 118 - Right	SPL - 1/31/24 - 17:51	SPL - 2/1/24 - 3:30
PKE-35	S	Room 119	SPL - 1/31/24 - 17:51	SPL - 2/1/24 - 3:32
PKE-36	S	Room 120	SPL - 1/31/24 - 17:52	BJL - 2/1/24 - 3:32
PKE-37	S	Room 121	SPL - 1/31/24 - 17:53	SPL - 2/1/24 - 3:33
PKE-38	S	Room 213	SPL - 1/31/24 - 17:55	SPL - 2/1/24 - 3:38
PKE-39	S	Room 214	SPL - 1/31/24 - 17:56	BJL - 2/1/24 - 3:39
PKE-40	WF	Hallway at Room 214 - Left	SPL - 1/31/24 - 17:56	SPL - 2/1/24 - 3:39
PKE-41	WF	Hallway at Room 214 - Right	SPL - 1/31/24 - 17:56	SPL - 2/1/24 - 3:39
PKE-42	S	Room 215	SPL - 1/31/24 - 17:57	SPL - 2/1/24 - 3:42
PKE-43	S	Room 216	SPL - 1/31/24 - 17:58	BJL - 2/1/24 - 3:42
PKE-44	S	Room 217	SPL - 1/31/24 - 17:58	SPL - 2/1/24 - 3:42
PKE-45	S	Room 212	SPL - 1/31/24 - 18:00	SPL - 2/1/24 - 3:44
PKE-46	S	Room 211	SPL - 1/31/24 - 18:01	SPL - 2/1/24 - 3:44
PKE-47	S	Room 210	SPL - 1/31/24 - 18:02	SPL - 2/1/24 - 3:45
PKE-48	S	Room 209	SPL - 1/31/24 - 18:02	BJL - 2/1/24 - 3:45
PKE-49	WF	Hallway at Room 209 - Left	SPL - 1/31/24 - 18:03	SPL - 2/1/24 - 3:47
PKE-50	WF	Hallway at Room 209 - Right	SPL - 1/31/24 - 18:03	SPL - 2/1/24 - 3:47

BF=Bottle Filling
B=Bubbler

FW=Filtered Water
ICE=Ice Machine

S=Classroom/Other Sink
WF=Water Fountain

**DRINKING WATER SAMPLING FORM**

Page 3 of 4

Project Name: Columbia Public Schools Water
Sampling and Reporting Services
Building Name: Paxton Keeley Elementary

Project Number: J044517.01
Address: 201 Park DeVille Drive
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
PKE-51	S	Room 208	SPL - 1/31/24 - 18:04	SPL - 2/1/24 - 3:48
PKE-52	S	Room 207	SPL - 1/31/24 - 18:05	BJL - 2/1/24 - 3:48
PKE-53	S	Room 206	SPL - 1/31/24 - 18:06	SPL - 2/1/24 - 3:49
PKE-54	S	Room 204	SPL - 1/31/24 - 18:07	SPL - 2/1/24 - 3:50
PKE-55	S	Room 203	SPL - 1/31/24 - 18:08	BJL - 2/1/24 - 3:52
PKE-56	WF	Hallway at Room 203 - Left	SPL - 1/31/24 - 18:09	SPL - 2/1/24 - 3:52
PKE-57	WF	Hallway at Room 203 - Right	SPL - 1/31/24 - 18:09	SPL - 2/1/24 - 3:52
PKE-58	S	Room 202	SPL - 1/31/24 - 18:09	SPL - 2/1/24 - 3:54
PKE-59	S	Room 201	SPL - 1/31/24 - 18:10	SPL - 2/1/24 - 3:55
PKE-60	S	Room 200	SPL - 1/31/24 - 18:11	BJL - 2/1/24 - 3:55
PKE-61	S	Room 122- Left	SPL - 1/31/24 - 18:14	SPL - 2/1/24 - 4:00
PKE-62	S	Room 122 - Center	SPL - 1/31/24 - 18:14	SPL - 2/1/24 - 4:00
PKE-63	S	Room 122 - Right	SPL - 1/31/24 - 18:14	BJL - 2/1/24 - 4:00
PKE-64	WF	Hallway Across From Gym - Left	SPL - 1/31/24 - 18:16	SPL - 2/1/24 - 4:01
PKE-65	WF	Hallway Across From Gym - Right	SPL - 1/31/24 - 18:16	SPL - 2/1/24 - 4:01
PKE-66	WF	Hallway at Room 124 - Left	SPL - 1/31/24 - 18:17	SPL - 2/1/24 - 4:02
PKE-67	WF	Hallway at Room 124 - Right	SPL - 1/31/24 - 18:17	SPL - 2/1/24 - 4:02
PKE-68	S	Kitchen Dishwash - Left	SPL - 1/31/24 - 18:20	SPL - 2/1/24 - 4:05
PKE-69	S	Kitchen Dishwash - Center	SPL - 1/31/24 - 18:20	SPL - 2/1/24 - 4:05
PKE-70	S	Kitchen Dishwash - Right	SPL - 1/31/24 - 18:20	SPL - 2/1/24 - 4:05
PKE-71	S	Kitchen Food Prep South	SPL - 1/31/24 - 18:21	SPL - 2/1/24 - 4:06
PKE-72	S	Kitchen Food Prep North	SPL - 1/31/24 - 18:21	SPL - 2/1/24 - 4:06
PKE-73	ICE	Kitchen	SPL - 1/31/24 - 18:21	SPL - 2/1/24 - 4:07
PKE-74	WF	Hallway Across From Cafeteria - Left	SPL - 1/31/24 - 18:24	BJL - 2/1/24 - 4:08
PKE-75	WF	Hallway Across From Cafeteria - Right	SPL - 1/31/24 - 18:24	BJL - 2/1/24 - 4:08

BF=Bottle Filling
B=Bubbler

FW=Filtered Water
ICE=Ice Machine

S=Classroom/Other Sink
WF=Water Fountain

S=Classroom/Other Sink
WF=Water Fountain



APPENDIX C

DRINKING WATER LABORATORY DATA SHEETS

March 05, 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: 24020196

Dear Brad Lohrum:

TEKLAB, INC received 60 samples on 2/2/2024 3:40:00 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,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com



Report Contents

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

Client: Geotechnology, Inc.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-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:** 24020196**Client Project:** J044517.01**Report Date:** 05-Mar-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)

Client: Geotechnology, Inc.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-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.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-Mar-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

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:** 24020196**Client Project:** J044517.01**Report Date:** 05-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



Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-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									
24020196-001A	RKB-52	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:47	01/31/2024 6:20
24020196-002A	RKB-53	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:50	01/31/2024 6:20
24020196-003A	RKB-54	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:54	01/31/2024 6:21
24020196-004A	RKB-55	NELAP		1.0	2.4	µg/L	1	03/01/2024 14:16	01/31/2024 6:22
24020196-005A	RKB-56	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 14:20	01/31/2024 6:24
24020196-006A	RKB-57	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 14:23	01/31/2024 6:24
24020196-007A	RKB-58	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 14:27	01/31/2024 6:24
24020196-008A	RKB-59	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 10:44	01/31/2024 6:24
24020196-009A	RKB-60	NELAP		1.0	4.6	µg/L	1	03/01/2024 10:49	01/31/2024 6:26
24020196-010A	RKB-61	NELAP		1.0	8.8	µg/L	1	03/01/2024 10:53	01/31/2024 6:26
24020196-011A	RKB-62	NELAP		1.0	17.2	µg/L	1	03/01/2024 11:10	01/31/2024 6:26
24020196-012A	RKB-63	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 10:57	01/31/2024 6:28
24020196-013A	RKB-64	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:01	01/31/2024 6:28
24020196-014A	RKB-65	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:06	01/31/2024 6:28
24020196-015A	RKB-66	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:40	01/31/2024 6:28
24020196-016A	RKB-67	NELAP		1.0	2.5	µg/L	1	03/01/2024 12:10	01/31/2024 6:29
24020196-017A	RKB-68	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:45	01/31/2024 5:41
24020196-018A	PKE-01	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:49	02/01/2024 3:05
24020196-019A	PKE-02	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:53	02/01/2024 3:05
24020196-020A	PKE-03	NELAP		1.0	1.9	µg/L	5	02/23/2024 18:56	02/01/2024 3:09
24020196-021A	PKE-04	NELAP		1.0	7.0	µg/L	5	02/23/2024 19:00	02/01/2024 3:09
24020196-022A	PKE-05	NELAP		1.0	2.5	µg/L	5	02/23/2024 19:03	02/01/2024 3:09
24020196-023A	PKE-06	NELAP		1.0	3.8	µg/L	5	03/02/2024 7:32	02/01/2024 3:11
24020196-024A	PKE-07	NELAP		1.0	5.1	µg/L	5	03/02/2024 7:36	02/01/2024 3:11
24020196-025A	PKE-08	NELAP		1.0	9.6	µg/L	5	03/02/2024 7:40	02/01/2024 3:11
24020196-026A	PKE-09	NELAP		1.0	1.8	µg/L	5	03/02/2024 7:45	02/01/2024 3:13
24020196-027A	PKE-10	NELAP		1.0	2.0	µg/L	5	03/02/2024 8:06	02/01/2024 3:13
24020196-028A	PKE-11	NELAP		1.0	8.3	µg/L	5	03/02/2024 8:35	02/01/2024 3:13
24020196-029A	PKE-12	NELAP		1.0	< 1.0	µg/L	5	02/23/2024 19:07	02/01/2024 3:15
24020196-030A	PKE-13	NELAP		1.0	1.7	µg/L	5	02/23/2024 19:11	02/01/2024 3:15
24020196-031A	PKE-14	NELAP		1.0	5.2	µg/L	5	02/23/2024 19:14	02/01/2024 3:15
24020196-032A	PKE-15	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 9:41	02/01/2024 3:16
24020196-033A	PKE-16	NELAP		1.0	1.0	µg/L	1	03/04/2024 9:45	02/01/2024 3:16
24020196-034A	PKE-17	NELAP		1.0	3.6	µg/L	5	02/23/2024 19:18	02/01/2024 3:17
24020196-035A	PKE-18	NELAP		1.0	1.3	µg/L	5	02/23/2024 19:32	02/01/2024 3:17
24020196-036A	PKE-19	NELAP		1.0	1.2	µg/L	5	02/23/2024 19:36	02/01/2024 3:17
24020196-037A	PKE-20	NELAP		1.0	< 1.0	µg/L	5	02/23/2024 19:40	02/01/2024 3:19
24020196-038A	PKE-21	NELAP		1.0	1.9	µg/L	1	03/04/2024 9:48	02/01/2024 3:21
24020196-039A	PKE-22	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:10	02/01/2024 3:21
24020196-040A	PKE-23	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:14	02/01/2024 3:21
24020196-041A	PKE-24	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:18	02/01/2024 3:23
24020196-042A	PKE-25	NELAP		1.0	1.1	µg/L	1	03/04/2024 10:21	02/01/2024 3:23
24020196-043A	PKE-26	NELAP		1.0	< 1.0	µg/L	5	02/23/2024 19:43	02/01/2024 3:24
24020196-044A	PKE-27	NELAP		1.0	1.2	µg/L	1	03/04/2024 10:32	02/01/2024 3:26
24020196-045A	PKE-28	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:36	02/01/2024 3:26
24020196-046A	PKE-29	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:40	02/01/2024 3:26
24020196-047A	PKE-30	NELAP		1.0	2.0	µg/L	1	03/04/2024 10:54	02/01/2024 3:28
24020196-048A	PKE-31	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 11:58	02/01/2024 3:29



Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-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									
24020196-049A	PKE-32	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:02	02/01/2024 3:30
24020196-050A	PKE-33	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:33	02/01/2024 3:30
24020196-051A	PKE-34	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:36	02/01/2024 3:30
24020196-052A	PKE-35	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:41	02/01/2024 3:32
24020196-053A	PKE-36	NELAP		1.0	2.8	µg/L	1	03/01/2024 12:45	02/01/2024 3:32
24020196-054A	PKE-37	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:49	02/01/2024 3:33
24020196-055A	PKE-38	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:54	02/01/2024 3:38
24020196-056A	PKE-39	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 12:58	02/01/2024 3:39
24020196-057A	PKE-40	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:37	02/01/2024 3:39
24020196-058A	PKE-41	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:02	02/01/2024 3:39
24020196-059A	PKE-42	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:41	02/01/2024 3:42
24020196-060A	PKE-43	NELAP		1.0	1.1	µg/L	1	03/01/2024 13:45	02/01/2024 3:42

Client: Geotechnology, Inc.

Work Order: 24020196

Client Project: J044517.01

Report Date: 05-Mar-24

Carrier: Craig McKinney

Received By: LM

Completed by:

On:

05-Feb-24

Amber Dilallo

Reviewed by:

On:

06-Feb-24

Ellie Hopkins

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.

pg. 14 of 40 Work order # 24020196

Client: Geotechnology, LLC	Samples on: <input type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE _____ °C LTG# _____
Address: 11816 Lackland Road	Preserved in: <input type="checkbox"/> LAB <input type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u>
City / State / Zip St. Louis, MO 63146	Lab Notes
Contact: Brad Lohrum	Client Comments:
E-Mail: blohrum@teamues.com	
Phone: (314) 997-7440	
Fax:	

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

[illegible]

Relinquished By	Date/Time	Received By	Date/Time
Bruce A. Smith	2/2/24 1230	John L. Smith	2/2/24 1230
John L. Smith	2/2/24 1540	John L. Smith	2/2/24 1540



pg. 15 of 40 Work order # 24020196

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:	

FOR LAB USE ONLY

Client Comments:

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		MATRIX		INDICATE ANALYSIS REQUESTED																																			
J044517.01		Brad Lohrum																																							
Results Requested		Billing Instructions		# and Type of Containers								Aqueous		Drinking Water		Soil		Sludge		Special Waste		Groundwater		DW - Lead E200.8																	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)																																									
Lab Use Only		Sample Identification		Date/Time Sampled																																					
2402019		PKE-04		2/1/24 3:09		1								X												X															
021		PKE-05		+		1								X												X															
023		06		3:11		1								X												X															
024		07		L		1								X												X															
025		08		L		1								X												X															
026		09		3:13		1								X												X															
027		10		L		1								X												X															
028		11		L		1								X												X															
029		12		3:15		1								X												X															
030		13		+		1								X												X															
Relinquished By				Date/Time				Received By				Date/Time																													
Brad Lohrum				2/2/24 1230				[Signature]				2/2/24 1230																													
				2/2/24 1540				[Signature]				2/2/24 1540																													

BottleOrder: 80481



pg. 16 of 40 Work order # 24020196

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:	

Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY

Client Comments:

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		MATRIX		INDICATE ANALYSIS REQUESTED																	
J044517.01		Brad Lohrum		Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	DW - Lead E200.8													
Results Requested		Billing Instructions																					# and Type of Containers
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)				UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER												
Lab	Use Only	Sample Identification		Date/Time Sampled																			
2402034	031	PKE-14		2/1/24 3:15		1																	
	032	PKE-15		3:16		1																	
	033	16		+		1																	
	034	17		3:17		1																	
	035	18		1		1																	
	036	19		1		1																	
	037	20		3:19		1																	
	038	21		3:21		1																	
	039	22		1		1																	
	040	23		1		1																	
Relinquished By				Date/Time		Received By				Date/Time													
Brad Lohrum				2/2/24 1230		Amy				2/2/24 1230													
				2/2/24 1231540						2/2/24 1540													



CHAIN OF CUSTODY

pg. 17 of 40 Work order # 24020196

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 _____ °C LTG# _____
Preserved in: ☒ LAB ☒ FIELD **FOR LAB USE ONLY**
Lab Notes

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

Client Comments:

Project Name/Number		Sample Collector's Name		MATRIX										INDICATE ANALYSIS REQUESTED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
J044517.01		Brad Lohrum																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Relinquished By	Date/Time	Received By	Date/Time
Brad Lohrum	2/2/24 1230	Cam	2/2/24 1230
	2/2/24 1540	Cam	2/2/24 1540

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.

Bottle Order: 80481



pg. 18 of 40 Work order # 24020196

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

Client: <u>Geotechnology, LLC</u> Address: <u>11816 Lackland Road</u> City / State / Zip <u>St. Louis, MO 63146</u> Contact: <u>Brad Lohrum</u> Phone: <u>(314) 997-7440</u> E-Mail: <u>blohrum@teamues.com</u> Fax: _____	Samples on: <input checked="" type="checkbox"/> ICE <input checked="" type="checkbox"/> BLUE ICE <input checked="" type="checkbox"/> NO ICE _____ °C LTG# _____ Preserved in: <input checked="" type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> 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

[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.

Bottle Order: 80481



March 05, 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: 24020197

Dear Brad Lohrum:

TEKLAB, INC received 60 samples on 2/2/2024 3:40:00 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,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com



Report Contents

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

Client: Geotechnology, Inc.

Work Order: 24020197

Client Project: J044517.01

Report Date: 05-Mar-24

This reporting package includes the following:

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Client: Geotechnology, Inc.**Work Order:** 24020197**Client Project:** J044517.01**Report Date:** 05-Mar-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)

Client: Geotechnology, Inc.

Work Order: 24020197

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Report Date: 05-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.

Work Order: 24020197

Client Project: J044517.01

Report Date: 05-Mar-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

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:** 24020197**Client Project:** J044517.01**Report Date:** 05-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.

Work Order: 24020197

Client Project: J044517.01

Report Date: 05-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									
24020197-001A	PKE-44	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:50	02/01/2024 3:42
24020197-002A	PKE-45	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 9:19	02/01/2024 3:44
24020197-003A	PKE-46	NELAP		1.0	1.2	µg/L	1	03/01/2024 13:54	02/01/2024 3:44
24020197-004A	PKE-47	NELAP		1.0	< 1.0	µg/L	1	03/01/2024 13:58	02/01/2024 3:45
24020197-005A	PKE-48	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 9:30	02/01/2024 3:45
24020197-006A	PKE-49	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 9:34	02/01/2024 3:47
24020197-007A	PKE-50	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 9:37	02/01/2024 3:47
24020197-008A	PKE-51	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 10:58	02/01/2024 3:48
24020197-009A	PKE-52	NELAP		1.0	1.3	µg/L	1	03/04/2024 11:02	02/01/2024 3:48
24020197-010A	PKE-53	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:05	02/01/2024 3:49
24020197-011A	PKE-54	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:09	02/01/2024 3:50
24020197-012A	PKE-55	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:13	02/01/2024 3:52
24020197-013A	PKE-56	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:24	02/01/2024 3:52
24020197-014A	PKE-57	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:27	02/01/2024 3:52
24020197-015A	PKE-58	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:42	02/01/2024 3:54
24020197-016A	PKE-59	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:46	02/01/2024 3:55
24020197-017A	PKE-60	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:49	02/01/2024 3:55
24020197-018A	PKE-61	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:53	02/01/2024 4:00
24020197-019A	PKE-62	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 11:57	02/01/2024 4:00
24020197-020A	PKE-63	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:08	02/01/2024 4:00
24020197-021A	PKE-64	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:11	02/01/2024 4:01
24020197-022A	PKE-65	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:15	02/01/2024 4:01
24020197-023A	PKE-66	NELAP		1.0	23.0	µg/L	5	03/02/2024 8:10	02/01/2024 4:02
24020197-024A	PKE-67	NELAP		1.0	5.7	µg/L	5	03/02/2024 8:14	02/01/2024 4:02
24020197-025A	PKE-68	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:30	02/01/2024 4:05
24020197-026A	PKE-69	NELAP		1.0	3.1	µg/L	5	03/02/2024 8:18	02/01/2024 4:05
24020197-027A	PKE-70	NELAP		1.0	5.8	µg/L	5	03/02/2024 8:22	02/01/2024 4:05
24020197-028A	PKE-71	NELAP		1.0	1.2	µg/L	5	03/02/2024 8:26	02/01/2024 4:06
24020197-029A	PKE-72	NELAP		1.0	2.1	µg/L	1	03/04/2024 12:33	02/01/2024 4:06
24020197-030A	PKE-73	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:37	02/01/2024 4:07
24020197-031A	PKE-74	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:41	02/01/2024 4:08
24020197-032A	PKE-75	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:44	02/01/2024 4:08
24020197-033A	JWM-01	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:48	02/01/2024 4:42
24020197-034A	JWM-02	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:52	02/01/2024 4:42
24020197-035A	JWM-03	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:55	02/01/2024 4:42
24020197-036A	JWM-04	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 12:59	02/01/2024 4:43
24020197-037A	JWM-05	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 13:21	02/01/2024 4:44
24020197-038A	JWM-06	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 13:25	02/01/2024 4:45
24020197-039A	JWM-07	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 13:28	02/01/2024 4:45
24020197-040A	JWM-08	NELAP		1.0	1.6	µg/L	1	03/04/2024 13:32	02/01/2024 4:46
24020197-041A	JWM-09	NELAP		1.0	1.9	µg/L	1	03/04/2024 13:43	02/01/2024 4:49
24020197-042A	JWM-10	NELAP		1.0	1.6	µg/L	1	03/04/2024 13:47	02/01/2024 4:49
24020197-043A	JWM-11	NELAP		1.0	1.2	µg/L	1	03/04/2024 13:50	02/01/2024 4:49
24020197-044A	JWM-12	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:05	02/01/2024 4:52
24020197-045A	JWM-13	NELAP		1.0	1.4	µg/L	5	03/02/2024 8:30	02/01/2024 4:52
24020197-046A	JWM-14	NELAP		1.0	1.2	µg/L	1	03/04/2024 14:08	02/01/2024 4:53
24020197-047A	JWM-15	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:12	02/01/2024 4:53
24020197-048A	JWM-16	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:16	02/01/2024 4:54



Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24020197

Client Project: J044517.01

Report Date: 05-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									
24020197-049A	JWM-17	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:19	02/01/2024 4:58
24020197-050A	JWM-18	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:23	02/01/2024 4:58
24020197-051A	JWM-19	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:27	02/01/2024 4:58
24020197-052A	JWM-20	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:30	02/01/2024 5:00
24020197-053A	JWM-21	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:34	02/01/2024 5:00
24020197-054A	JWM-22	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 14:38	02/01/2024 5:00
24020197-055A	JWM-23	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 15:00	02/01/2024 5:04
24020197-056A	JWM-24	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 15:03	02/01/2024 5:04
24020197-057A	JWM-25	NELAP		1.0	< 1.0	µg/L	1	03/04/2024 15:07	02/01/2024 5:04
24020197-058A	JWM-26	NELAP		1.0	4.7	µg/L	1	03/04/2024 15:11	02/01/2024 5:06
24020197-059A	JWM-27	NELAP		1.0	1.6	µg/L	1	03/04/2024 15:14	02/01/2024 5:06
24020197-060A	JWM-28	NELAP		1.0	2.8	µg/L	1	03/04/2024 15:18	02/01/2024 5:06

Client: Geotechnology, Inc.

Work Order: 24020197

Client Project: J044517.01

Report Date: 05-Mar-24

Carrier: Craig McKinney

Received By: LM

Completed by:

Reviewed by:

On:

On:

05-Feb-24

06-Feb-24

Amber Dilallo

Ellie Hopkins

Pages to follow: Chain of custody

6

Extra pages included

0

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C NA
Type of thermal preservation?	None <input checked="" type="checkbox"/>	Ice <input type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input type="checkbox"/>	Lab <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		

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 <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

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.

pg. 19 of 40 Work order # 24020197

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

Client: <u>Geotechnology, LLC</u> Address: <u>11816 Lackland Road</u> City / State / Zip <u>St. Louis, MO 63146</u> Contact: <u>Brad Lohrum</u> Phone: <u>(314) 997-7440</u> E-Mail: <u>blohrum@teamues.com</u> Fax: _____	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input checked="" type="checkbox"/> NO ICE <u>NA</u> °C LTG# _____ Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> Lab Notes Client Comments:
---	--

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

[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: 80481



pg. 20 of 40 Work order # 24020197

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

Client: <u>Geotechnology, LLC</u> Address: <u>11816 Lackland Road</u> City / State / Zip <u>St. Louis, MO 63146</u> Contact: <u>Brad Lohrum</u> Phone: <u>(314) 997-7440</u> E-Mail: <u>blohrum@teamues.com</u> Fax: _____	Samples on: <input type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE _____ °C LTG# _____ Preserved in: <input type="checkbox"/> LAB <input type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> 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

[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.

Bottle Order: 80481



pg. 21 of 40 Work order # 24020197

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:	

Preserved in: ☒ LAB ☐ FIELD **FOR LAB USE ONLY**

Client Comments:

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

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.



pg. 22 of 40 Work order # 24020197

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:	

Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY

Client Comments:

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								MATRIX	INDICATE ANALYSIS REQUESTED																					
J044517.01		Brad Lohrum																														
Results Requested		Billing Instructions	# and Type of Containers								Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	DW - Lead E200.8															
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge)			UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER																						
<input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)																																
Laboratory Only	Sample Identification	Date/Time Sampled																														
O31	PKE-74	2/1/24 4:08	1								X								X													
O32	PKE-75	+	1								X								X													
O33	JWM-01	4:42	1								X								X													
O34	JWM-02	I	1								X								X													
O35	O3	I	1								X								X													
O36	O4	4:43	1								X								X													
O37	O5	4:44	1								X								X													
O3P	O6	4:45	1								X								X													
O39	O7	I	1								X								X													
O4D	I O8	I 4:46	1								X								X													

Relinquished By	Date/Time	Received By	Date/Time
	2/2/24 1230 2/2/24 1540		2/2/24 1230 2/2/24 1540



July 11, 2024

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



Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: J044517.01

WorkOrder: 24062353

Dear Brad Lohrum:

TEKLAB, INC received 57 samples on 6/28/2024 3:50:00 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: 24062353

Client Project: J044517.01

Report Date: 11-Jul-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
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Laboratory Results	7
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Chain of Custody	Appended

Client: Geotechnology, Inc.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-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)

Client: Geotechnology, Inc.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-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.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-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

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:** 24062353**Client Project:** J044517.01**Report Date:** 11-Jul-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville



Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-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									
24062353-001A	SMS-01-2	NELAP		1.0	4.6	µg/L	1	07/03/2024 17:08	06/26/2024 15:07
24062353-002A	SMS-02-2	NELAP		1.0	3.5	µg/L	1	07/03/2024 17:23	06/26/2024 15:08
24062353-003A	SMS-58-2	NELAP		1.0	7.5	µg/L	1	07/03/2024 17:26	06/26/2024 15:11
24062353-004A	SMS-59-2	NELAP		1.0	3.3	µg/L	1	07/03/2024 17:30	06/26/2024 15:12
24062353-005A	SMS-60-2	NELAP		1.0	8.7	µg/L	1	07/03/2024 17:34	06/26/2024 15:13
24062353-006A	SMS-61-2	NELAP		1.0	6.9	µg/L	1	07/03/2024 17:37	06/26/2024 15:14
24062353-007A	SMS-62-2	NELAP		1.0	7.4	µg/L	1	07/08/2024 22:34	06/26/2024 15:15
24062353-008A	SMS-74-2	NELAP		1.0	1.9	µg/L	1	07/03/2024 17:52	06/26/2024 15:18
24062353-009A	PKE-66-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 17:56	06/26/2024 15:52
24062353-010A	PKE-67-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 18:10	06/26/2024 15:52
24062353-011A	PKE-70-2	NELAP		1.0	2.2	µg/L	1	07/03/2024 18:14	06/26/2024 15:55
24062353-012A	RBE-08-2	NELAP		1.0	1.3	µg/L	1	07/03/2024 18:18	06/26/2024 16:06
24062353-013A	RBE-11-2	NELAP		1.0	1.6	µg/L	1	07/03/2024 18:21	06/26/2024 16:07
24062353-014A	FES-52-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 18:25	06/26/2024 16:16
24062353-015A	BRH-82	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 18:29	06/26/2024 16:33
24062353-016A	BRH-83	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 18:33	06/26/2024 16:36
24062353-017A	MCE-09-2	NELAP		1.0	1.3	µg/L	1	07/08/2024 22:45	06/26/2024 16:51
24062353-018A	MCE-87	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 18:58	06/26/2024 16:54
24062353-019A	MCE-88	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 19:02	06/26/2024 16:54
24062353-020A	RBH-30-2	NELAP		1.0	12.4	µg/L	1	07/03/2024 19:05	06/26/2024 17:17
24062353-021A	RBH-103	NELAP		1.0	1.9	µg/L	1	07/03/2024 19:09	06/26/2024 17:21
24062353-022A	RBH-104	NELAP		1.0	3.6	µg/L	1	07/03/2024 19:13	06/26/2024 17:21
24062353-023A	RBH-105	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 19:16	06/26/2024 17:22
24062353-024A	RBH-106	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 19:20	06/26/2024 17:22
24062353-025A	NHE-10-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 19:24	06/26/2024 17:44
24062353-026A	NHE-16-2	NELAP		1.0	3.7	µg/L	1	07/03/2024 19:28	06/26/2024 17:46
24062353-027A	CRE-70	NELAP		1.0	< 1.0	µg/L	1	07/05/2024 12:13	06/26/2024 18:01
24062353-028A	CRE-71	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 19:53	06/26/2024 18:03
24062353-029A	RAC-08-2	NELAP		1.0	13.2	µg/L	1	07/03/2024 19:57	06/26/2024 18:20
24062353-030A	SBE-02-2	NELAP		1.0	4.6	µg/L	1	07/03/2024 20:01	06/26/2024 18:35
24062353-031A	LSE-06-2	NELAP		1.0	2.1	µg/L	1	07/03/2024 20:04	06/26/2024 18:54
24062353-032A	JMS-11-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:08	06/26/2024 19:07
24062353-033A	EF5-01-2	NELAP		1.0	6.4	µg/L	1	07/03/2024 20:12	06/26/2024 19:19
24062353-034A	HHS-18-2	NELAP		1.0	2.7	µg/L	1	07/03/2024 20:15	06/26/2024 19:32
24062353-035A	OMS-08-2	NELAP		1.0	< 1.0	µg/L	1	07/05/2024 12:35	06/26/2024 19:55
24062353-036A	OMS-10-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:41	06/26/2024 19:56
24062353-037A	OMS-12-2	NELAP		1.0	1.1	µg/L	1	07/03/2024 20:45	06/26/2024 19:57
24062353-038A	OMS-17-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:48	06/26/2024 20:00
24062353-039A	OMS-20-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:52	06/26/2024 20:07
24062353-040A	OMS-39	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:56	06/26/2024 20:10
24062353-041A	OMS-40	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 20:59	06/26/2024 20:10
24062353-042A	OMS-23-2	NELAP		1.0	< 1.0	µg/L	1	07/05/2024 12:46	06/26/2024 20:11
24062353-043A	OMS-24-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 21:25	06/26/2024 20:11
24062353-044A	OMS-29-2	NELAP		1.0	5.6	µg/L	1	07/03/2024 21:29	06/26/2024 20:13
24062353-045A	EBE-35-3	NELAP		1.0	17.7	µg/L	1	07/03/2024 21:32	06/26/2024 20:39
24062353-046A	EBE-63	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 21:36	06/26/2024 20:43
24062353-047A	BHS-83-2	NELAP		1.0	17.6	µg/L	1	07/08/2024 23:07	06/26/2024 21:10
24062353-048A	BHS-122-2	NELAP		1.0	4.3	µg/L	1	07/03/2024 21:51	06/26/2024 21:20



Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-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									
24062353-049A	BHS-125-2	NELAP		1.0	8.8	µg/L	1	07/03/2024 21:54	06/26/2024 21:20
24062353-050A	BHS-126-2	NELAP		1.0	5.9	µg/L	1	07/03/2024 22:09	06/26/2024 21:20
24062353-051A	BHS-130-2	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 22:13	06/26/2024 21:26
24062353-052A	BHS-222	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 22:16	06/26/2024 21:30
24062353-053A	BHS-223	NELAP		1.0	1.1	µg/L	1	07/03/2024 22:20	06/26/2024 21:30
24062353-054A	BHS-224	NELAP		1.0	< 1.0	µg/L	1	07/03/2024 22:24	06/26/2024 21:30
24062353-055A	BHS-225	NELAP		1.0	1.3	µg/L	1	07/03/2024 22:27	06/26/2024 21:30
24062353-056A	BHS-226	NELAP		1.0	3.0	µg/L	1	07/03/2024 22:31	06/26/2024 21:15
24062353-057A	BHS-227	NELAP		1.0	2.8	µg/L	1	07/03/2024 22:35	06/26/2024 21:15



Receiving Check List

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

Client: Geotechnology, Inc.

Work Order: 24062353

Client Project: J044517.01

Report Date: 11-Jul-24

Carrier: Craig McKinney

Received By: NR

Completed by:

Reviewed by:

On:

On:

28-Jun-24

28-Jun-24

Paul Schultz

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C NA
Type of thermal preservation?	None <input checked="" type="checkbox"/>	Ice <input type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input type="checkbox"/>	Lab <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		

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 <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

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. - pschultz - 6/28/2024 4:49:24 PM

CHAIN OF CUSTODY

pg. 2 of 6 Work order # 24062553

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: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE °C LTG# Preserved in: <input type="checkbox"/> LAB <input type="checkbox"/> 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		MATRIX		INDICATE ANALYSIS REQUESTED																			
J044517.01		Brad Lohrum																							
Results Requested		Billing Instructions		# and Type of Containers										Drinking Water		Soil		Sludge		Special Waste		Groundwater		DW - Lead E200.8	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)				UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER														
Lab Use Only	Sample Identification	Date/Time Sampled																							
24062553-011	PKE-70-2	6/26/24 3:55	1																						
-012	RBE-68-2	4:06	1																						
-013	RBE-11-2	4:07	1																						
-014	FES-52-2	4:16	1																						
-015	BRH-82	4:33	1																						
-016	BRH-83	4:36	1																						
-017	MCE-09-2	4:51	1																						
-018	MCE-87	4:54	1																						
-019	MCE-88	+	1																						
-020	RBH-30-2	5:17	1																						

Relinquished By	Date/Time	Received By	Date/Time
Brad Lohrum	6/27/24 17:30	Nick Reed	6/28/24 1400
	6/28/24 1350		6/28/24 1550

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.

Bottle Order: 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.