



## **WATER SAMPLING AND REPORTING SERVICES**

**COLUMBIA PUBLIC SCHOOLS  
OAKLAND MIDDLE SCHOOL  
3405 OAKLAND PLACE  
COLUMBIA, MISSOURI**

Prepared for:

**COLUMBIA PUBLIC SCHOOLS  
COLUMBIA, MISSOURI**

Prepared by:

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

Date:

**DECEMBER 21, 2024**

Project No.:

**J044517.01**

**SAFETY  
TEAMWORK  
RESPONSIVENESS  
INTEGRITY  
VALUE  
EXCELLENCE**



December 21, 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  
Oakland Middle School  
3405 Oakland Place  
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 revised 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 Oakland Middle School, located southwest of the intersection of Blue Ridge Road and Oakland Place 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 11 and 12, 2024, 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. Copies of the drinking water sampling forms, which include a list of sample locations, and the times and dates of flushing and sampling activities, are 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
OMS-08 / Hallway at Cafeteria/Gym – Left-hand Bottle Filler	6.6 ppb
OMS-10 / Hallway at Cafeteria/Gym – Right-hand Bottle Filler	5.5 ppb
OMS-12 / Girl's Locker Room Water Fountain	5.6 ppb
OMS-17 / Room 174 Green Right-hand Sink	42.2 ppb
OMS-20 / Boy's Locker Room Water Fountain	7.1 ppb
OMS-21 / Room 117 Sink	26.2 ppb
OMS-23 / Hallway at Room 158 – Left-hand Water Fountain	8 ppb
OMS-24 / Hallway at Room 158 – Right-hand Water Fountain	6.7 ppb
OMS-25 / Hallway at Room 142 – Left-hand Water Fountain	6.9 ppb
OMS-29 / Room 147 Right-hand Sink	5.3 ppb

UES personnel returned to the site on June 25 and 26, 2024, to resample the locations listed in Table 1, except for OMS-21. At the time of resampling, OMS-25 had been replaced by a bottle filler and water fountain combination unit. This unit was sampled as OMS-39 and OMS-40. Laboratory analysis detected the presence of lead at or above 5 ppb in the following sample.



**TABLE 2**  
**RESAMPLED DRINKING WATER OUTLETS AT OR ABOVE 5 PARTS PER BILLION**

Sample Number / Location and Fixture Type	Results
OMS-29-2 / Room 147 Right-hand Sink	5.6 ppb

UES personnel returned to the site on September 19, 2024, to resample the sink located within Room 147 (OMS-29-3). Laboratory analysis of the submitted sample detected the presence of lead at the level below.

**TABLE 3**  
**RESAMPLED DRINKING WATER OUTLETS AT OR ABOVE 5 PARTS PER BILLION**

Sample Number / Location and Fixture Type	Results
OMS-29-3 / Room 147 Right-hand Sink	15.8 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 outlets identified OMS-21 and OMS-29 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 Sampling Locations – Ground Floor         |
| Figure 2   | - Drinking Water Sampling Locations – Main 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                                    |

\* \* \* \* \*



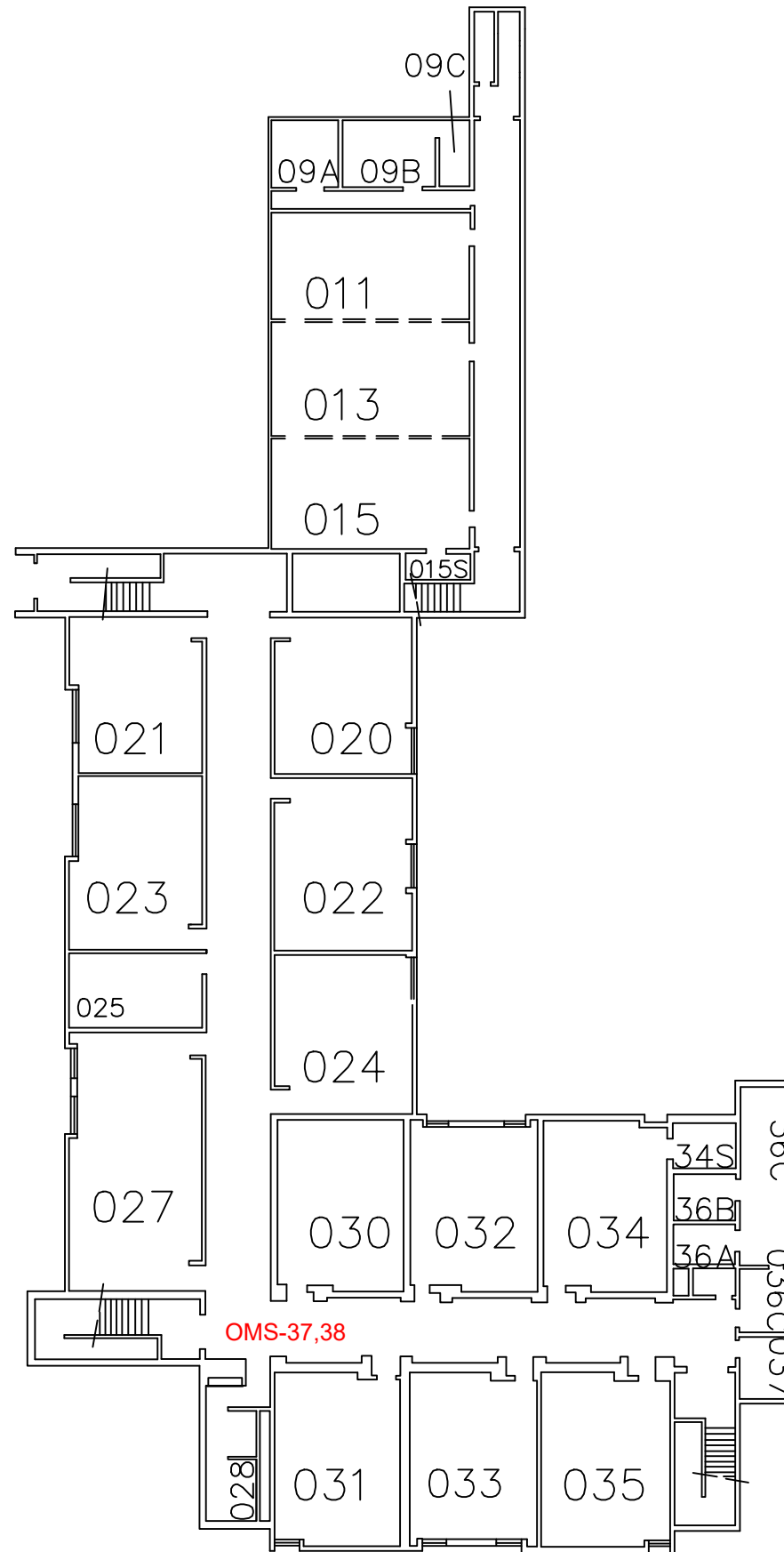
We appreciate the opportunity to provide our professional environmental consulting services to Columbia Public Schools on this project. If you have any questions or comments, please contact me at (314) 997-7440.

Very truly yours,

**UES**


Bradley J. Lohrum  
Project Manager

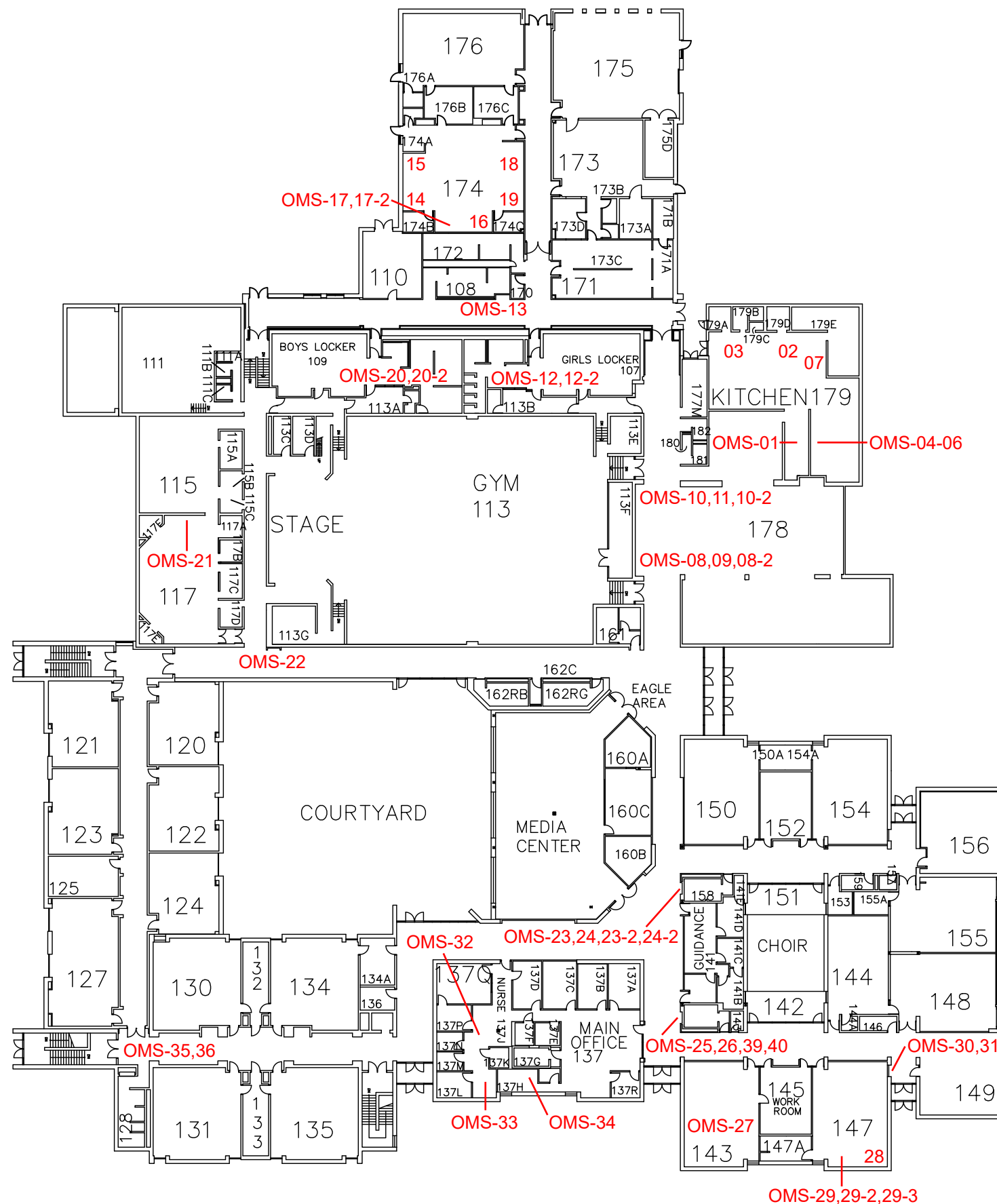
BJL/MSR:bjl/jsj



#### NOTES


1. Drawing not to scale.
2. Drawing adapted from "Oakland Middle School Floor Plan", provided by the client, dated 06/11/2019.
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: 12-21-24	Date: 12-21-24	Date: 12-21-24
		
3405 Oakland Place Columbia, Missouri		
<b>DRINKING WATER SAMPLING LOCATIONS - GROUND FLOOR</b>		
Project Number J044517.01	FIGURE 1	



**NOTES**

1. Drawing not to scale.
2. Drawing adapted from "Oakland Middle School Floor Plan", provided by the client, dated 06/11/2019.
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: 12-21-24	Date: 12-21-24	Date: 12-21-24
		
3405 Oakland Place Columbia, Missouri		
<b>DRINKING WATER SAMPLING LOCATIONS - MAIN FLOOR</b>		
Project Number J044517.01	<b>FIGURE 2</b>	



## **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](http://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*

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



# 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, 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](http://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:	<b>3/28/2023</b>
Expiration Date:	<b>3/30/2025</b>
License Number:	<b>150330-300004672</b>

*Paula F. Nickelson*

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](http://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

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



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**

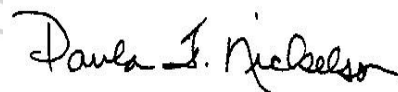
The person, firm or corporation whose name appears on this certificate is licensed as a Lead Abatement Contractor as set forth in the Missouri Revised Statutes 701.300-701.338 and 19 CSR 30-70.180, as long as not suspended or revoked, and is hereby authorized to engage in lead-bearing substance activities.

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 2

Project Name: Columbia Public Schools WaterProject Number: J044517.01Sampling and Reporting ServicesAddress: 3405 Oakland PlaceBuilding Name: Oakland Middle SchoolColumbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
OMS-01	S	Kitchen - KF9	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-02	S	Kitchen - KF4	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-03	S	Kitchen - KF1	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-04	S	Kitchen - KF 5/6 - Left	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-05	S	Kitchen - KF 5/6 - Center	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-06	S	Kitchen KF 5/6 - Right	RJH - 1/11/24 - 17:25	RJH - 1/12/24 - 3:44
OMS-07	ICE	Kitchen	SPL - 1/11/24 - 17:25	SPL - 1/12/24 - 3:44
OMS-08	BF	Hallway at Cafeteria/Gym - Left	SPL - 1/11/24 - 17:31	RJH - 1/12/24 - 3:47
OMS-09	WF	Hallway at Cafeteria/Gym - Left	SPL - 1/11/24 - 17:31	RJH - 1/12/24 - 3:47
OMS-10	BF	Hallway at Cafeteria/Gym - Right	RJH - 1/11/24 - 17:31	SPL - 1/12/24 - 3:47
OMS-11	WF	Hallway at Cafeteria/Gym - Right	RJH - 1/11/24 - 17:31	SPL - 1/12/24 - 3:47
OMS-12	WF	Girl's Locker Room	RJH - 1/11/24 - 17:35	RJH - 1/12/24 - 3:49
OMS-13	WF	Hallway at Room 108 - Left	RJH - 1/11/24 - 17:36	RJH - 1/12/24 - 3:51
OMS-14	S	Room 174 Blue - Left	SPL - 1/11/24 - 17:40	BJL - 1/12/24 - 3:54
OMS-15	S	Room 174 Blue - Right	SPL - 1/11/24 - 17:40	BJL - 1/12/24 - 3:54
OMS-16	S	Room 174 Green - Left	SPL - 1/11/24 - 17:40	SPL - 1/12/24 - 3:54
OMS-17	S	Room 174 Green - Right	SPL - 1/11/24 - 17:40	SPL - 1/12/24 - 3:54
OMS-18	S	Room 174 Red - Left	RJH - 1/11/24 - 17:40	RJH - 1/12/24 - 3:54
OMS-19	S	Room 174 Red - Right	RJH - 1/11/24 - 17:40	RJH - 1/12/24 - 3:54
OMS-20	WF	Boy's Locker Room	RJH - 1/11/24 - 17:45	RJH - 1/12/24 - 3:56
OMS-21	S	Room 117	RJH - 1/11/24 - 17:49	RJH - 1/12/24 - 3:57
OMS-22	WF	Hallway at Room 113G	RJH - 1/11/24 - 17:50	RJH - 1/12/24 - 3:58
OMS-23	WF	Hallway at Room 158 - Left	RJH - 1/11/24 - 17:52	RJH - 1/12/24 - 4:00
OMS-24	WF	Hallway at Room 158 - Right	SPL - 1/11/24 - 17:52	RJH - 1/12/24 - 4:00
OMS-25	WF	Hallway at Room 142 - Left	SPL - 1/11/24 - 17:53	SPL - 1/12/24 - 4:00

BF=Bottle Filling

FW=Filtered Water

S=Classroom/Other Sink

B=Bubbler

ICE=Ice Machine

WF=Water Fountain

**DRINKING WATER SAMPLING FORM**

Page 2 of 2

Project Name: Columbia Public Schools Water  
Sampling and Reporting Services  
Building Name: Oakland Middle School

Project Number: J044517.01  
Address: 3405 Oakland Place  
Columbia, Missouri

Sample ID	Fixture Type	Location	Flushed By - Date - Time	Sampled By - Date - Time
OMS-26	WF	Hallway at Room 142 - Right	SPL - 1/11/24 - 17:53	SPL - 1/12/24 - 4:00
OMS-27	S	Room 143	RJH - 1/11/24 - 17:55	RJH - 1/12/24 - 4:02
OMS-28	S	Room 147 - Left	RJH - 1/11/24 - 17:56	RJH - 1/12/24 - 4:03
OMS-29	S	Room 147 - Right	SPL - 1/11/24 - 17:56	SPL - 1/12/24 - 4:03
OMS-30	BF	Hallway at Room 149	RJH - 1/11/24 - 17:57	SPL - 1/12/24 - 4:04
OMS-31	WF	Hallway at Room 149	RJH - 1/11/24 - 17:57	RJH - 1/12/24 - 4:04
OMS-32	S	Nurse at Room 137N	SPL - 1/11/24 - 18:01	RJH - 1/12/24 - 4:07
OMS-33	S	Nurse at Room 137 L	SPL - 1/11/24 - 18:01	BJL - 1/12/24 - 4:07
OMS-34	S	Kitchenette at Room 137H	RJH - 1/11/24 - 18:01	RJH - 1/12/24 - 4:07
OMS-35	WF	Hallway at Room 127 - Left	RJH - 1/11/24 - 18:07	RJH - 1/12/24 - 4:09
OMS-36	WF	Hallway at Room 127 - Right	RJH - 1/11/24 - 18:07	SPL - 1/12/24 - 4:09
OMS-37	WF	Hallway at Room 27 - Left	RJH - 1/11/24 - 18:09	RJH - 1/12/24 - 4:10
OMS-38	WF	Hallway at Room 27 - Right	RJH - 1/11/24 - 18:09	SPL - 1/12/24 - 4:10
OMS-08-2	BF	Hallway at Cafeteria/Gym - Left	BJL - 6/25/24 - 23:55	BJL - 6/26/24 - 7:55
OMS-10-2	BF	Hallway at Cafeteria/Gym - Right	BJL - 6/25/24 - 23:56	BJL - 6/26/24 - 7:56
OMS-12-2	WF	Girl's Locker Room	BJL - 6/25/24 - 23:57	BJL - 6/26/24 - 7:57
OMS-17-2	S	Room 174 Green - Right	BJL - 6/26/24 - 24:00	BJL - 6/26/24 - 8:00
OMS-20-2	WF	Boy's Locker Room	BJL - 6/26/24 - 24:07	BJL - 6/26/24 - 8:07
OMS-23-2	WF	Hallway at Room 158 - Left	BJL - 6/26/24 - 24:11	BJL - 6/26/24 - 8:11
OMS-24-2	WF	Hallway at Room 158 - Right	BJL - 6/26/24 - 24:11	BJL - 6/26/24 - 8:11
OMS-29-2	S	Room 147 - Right	BJL - 6/26/24 - 24:13	BJL - 6/26/24 - 8:13
OMS-39	BF	Hallway at Room 142	BJL - 6/26/24 - 24:10	BJL - 6/26/24 - 8:10
OMS-40	WF	Hallway at Room 142	BJL - 6/26/24 - 24:10	BJL - 6/26/24 - 8:10
OMS-29-3	S	Room 147 - Right	CPS Staff - 9/18/24	BJL - 9/19/24 - 6:00

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**

February 14, 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: 24011314**

Dear Brad Lohrum:

TEKLAB, INC received 60 samples on 1/19/2024 10:12:00 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,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

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

**Client:** Geotechnology, Inc.

**Work Order:** 24011314

**Client Project:** J044517.01

**Report Date:** 14-Feb-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:** 24011314

**Client Project:** J044517.01

**Report Date:** 14-Feb-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:** 24011314

**Client Project:** J044517.01

**Report Date:** 14-Feb-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:** 24011314

**Client Project:** J044517.01

**Report Date:** 14-Feb-24

**Cooler Receipt Temp:** N/A °C

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### 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

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#### 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:** 24011314**Client Project:** J044517.01**Report Date:** 14-Feb-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: 24011314

Client Project: J044517.01

Report Date: 14-Feb-24

Matrix: DRINKING WATER

Sample ID	Client Sample ID	Certification	Qual	RL	Result	Units	DF	Date Analyzed	Date Collected
<b>EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)</b>									
<b>Lead</b>									
24011314-001A	JMS-66	NELAP		1.0	1.1	µg/L	1	02/02/2024 22:24	01/11/2024 7:25
24011314-002A	JMS-67	NELAP		1.0	1.1	µg/L	1	02/02/2024 22:53	01/11/2024 7:25
24011314-003A	JMS-68	NELAP		1.0	19.1	µg/L	1	02/02/2024 22:57	01/11/2024 7:26
24011314-004A	AAB-14-2	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:01	01/11/2024 7:40
24011314-005A	OMS-01	NELAP		1.0	2.7	µg/L	1	02/02/2024 23:22	01/12/2024 3:44
24011314-006A	OMS-02	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:06	01/12/2024 3:44
24011314-007A	OMS-03	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:10	01/12/2024 3:44
24011314-008A	OMS-04	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:14	01/12/2024 3:44
24011314-009A	OMS-05	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:18	01/12/2024 3:44
24011314-010A	OMS-06	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:47	01/12/2024 3:44
24011314-011A	OMS-07	NELAP		1.0	< 1.0	µg/L	1	02/02/2024 23:51	01/12/2024 3:44
24011314-012A	OMS-08	NELAP		1.0	6.6	µg/L	1	02/02/2024 23:55	01/12/2024 3:47
24011314-013A	OMS-09	NELAP		1.0	1.8	µg/L	1	02/02/2024 23:59	01/12/2024 3:47
24011314-014A	OMS-10	NELAP		1.0	5.5	µg/L	1	02/03/2024 0:03	01/12/2024 3:47
24011314-015A	OMS-11	NELAP		1.0	1.3	µg/L	1	02/03/2024 0:16	01/12/2024 3:47
24011314-016A	OMS-12	NELAP		1.0	5.6	µg/L	1	02/03/2024 0:53	01/12/2024 3:49
24011314-017A	OMS-13	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 0:57	01/12/2024 3:51
24011314-018A	OMS-14	NELAP		1.0	1.9	µg/L	5	02/14/2024 7:18	01/12/2024 3:54
24011314-019A	OMS-15	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 1:01	01/12/2024 3:54
24011314-020A	OMS-16	NELAP		1.0	3.6	µg/L	5	02/14/2024 7:22	01/12/2024 3:54
24011314-021A	OMS-17	NELAP		1.0	42.2	µg/L	5	02/14/2024 7:48	01/12/2024 3:54
24011314-022A	OMS-18	NELAP		1.0	2.5	µg/L	1	02/03/2024 1:05	01/12/2024 3:54
24011314-023A	OMS-19	NELAP		1.0	2.2	µg/L	5	02/14/2024 7:27	01/12/2024 3:54
24011314-024A	OMS-20	NELAP		1.0	7.1	µg/L	1	02/03/2024 1:10	01/12/2024 3:56
24011314-025A	OMS-21	NELAP		1.0	26.2	µg/L	1	02/03/2024 1:34	01/12/2024 3:57
24011314-026A	OMS-22	NELAP		1.0	3.0	µg/L	1	02/03/2024 1:39	01/12/2024 3:58
24011314-027A	OMS-23	NELAP		1.0	8.0	µg/L	5	02/14/2024 7:31	01/12/2024 4:00
24011314-028A	OMS-24	NELAP		1.0	6.7	µg/L	5	02/14/2024 7:35	01/12/2024 4:00
24011314-029A	OMS-25	NELAP		1.0	6.9	µg/L	5	02/14/2024 7:40	01/12/2024 4:00
24011314-030A	OMS-26	NELAP		1.0	4.8	µg/L	5	02/14/2024 7:44	01/12/2024 4:00
24011314-031A	OMS-27	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 1:43	01/12/2024 4:02
24011314-032A	OMS-28	NELAP		1.0	2.5	µg/L	1	02/03/2024 1:47	01/12/2024 4:03
24011314-033A	OMS-29	NELAP		1.0	5.3	µg/L	1	02/03/2024 2:03	01/12/2024 4:03
24011314-034A	OMS-30	NELAP		1.0	4.4	µg/L	1	02/03/2024 1:51	01/12/2024 4:04
24011314-035A	OMS-31	NELAP		1.0	1.9	µg/L	1	02/03/2024 1:55	01/12/2024 4:04
24011314-036A	OMS-32	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 1:59	01/12/2024 4:07
24011314-037A	OMS-33	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:28	01/12/2024 4:07
24011314-038A	OMS-34	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:32	01/12/2024 4:07
24011314-039A	OMS-35	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:37	01/12/2024 4:09
24011314-040A	OMS-36	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:57	01/12/2024 4:09
24011314-041A	OMS-37	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:41	01/12/2024 4:10
24011314-042A	OMS-38	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:45	01/12/2024 4:10
24011314-043A	LMS-01	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:49	01/12/2024 4:27
24011314-044A	LMS-02	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 2:53	01/12/2024 4:28
24011314-045A	LMS-03	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:30	01/12/2024 4:28
24011314-046A	LMS-04	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:35	01/12/2024 4:28
24011314-047A	LMS-05	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:39	01/12/2024 4:28
24011314-048A	LMS-06	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:43	01/12/2024 4:28



## Laboratory Results

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

Client: Geotechnology, Inc.

Work Order: 24011314

Client Project: J044517.01

Report Date: 14-Feb-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									
24011314-049A	LMS-07	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:47	01/12/2024 4:28
24011314-050A	LMS-08	NELAP		1.0	6.9	µg/L	1	02/03/2024 3:59	01/12/2024 4:31
24011314-051A	LMS-09	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:51	01/12/2024 4:31
24011314-052A	LMS-10	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 3:55	01/12/2024 4:32
24011314-053A	LMS-11	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:24	01/12/2024 4:32
24011314-054A	LMS-12	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:28	01/12/2024 4:33
24011314-055A	LMS-13	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:33	01/12/2024 4:33
24011314-056A	LMS-14	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:37	01/12/2024 4:34
24011314-057A	LMS-15	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:41	01/12/2024 4:34
24011314-058A	LMS-16	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:45	01/12/2024 4:35
24011314-059A	LMS-17	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:49	01/12/2024 4:35
24011314-060A	LMS-18	NELAP		1.0	< 1.0	µg/L	1	02/03/2024 4:53	01/12/2024 4:37

Client: Geotechnology, Inc.

Work Order: 24011314

Client Project: J044517.01

Report Date: 14-Feb-24

Carrier: Employee

Received By: NR

Completed by:

On:

19-Jan-24

Amber Dilallo

Reviewed by:

On:

19-Jan-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 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 - 1/19/2024 11:05:42 AM

pg. 19 of 74 Work order # 24011314

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

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]



pg. 21 of 74 Work order # 24011314

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

## Lab Notes

**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

[illegible]

BottleOrder: 80481





pg. 27 of 74 Work order # 24011314

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

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

[illegible]

BottleOrder: 80481





pg. 24 of 74 Work order # 24011314

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

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

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																		
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		UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER													
24011314 051	LMS - 09	1/12/24 4:31											X											
052	LMS - 10	4:32											X											
053	11	+											X											
054	12	4:33											X											
055	13	+											X											
056	14	4:34											X											
057	15	+											X											
058	16	4:35											X											
059	17	+											X											
060	18	4:37											X											
Relinquished By		Date/Time		Received By		Date/Time																		
Brad Lohrum		1/18/24		R-J K		1/18/24																		
R-J K		1/19/24 10:00		Mick Reed		1/19/24 10:12																		

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](http://www.teklabinc.com) for terms and conditions.

Bottle Order: 80481



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](mailto: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
Accreditations	6
Laboratory Results	7
Receiving Check List	9
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
<b>EPA 600 4.1.4, 200.8 R5.4, METALS BY ICPMS (TOTAL)</b>									
<b>Lead</b>									
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	EFS-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 <b>NA</b>
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. 1 of 6 Work order # 24062359

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

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

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

**TEKLAB  
Courier**

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)			UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER							
Lab Use Only	Sample Identification	Date/Time Sampled															
24062359-001	SMS-01-2	6/26/24 3:07	1														
-002	02-2	3:08	1														
-003	58-2	3:11	1														
-004	59-2	3:12	1														
-005	60-2	3:13	1														
-006	61-2	3:14	1														
-007	62-2	3:15	1														
-008	74-2	3:18	1														
-009	PKE-66-2	3:52	1														
-010	PKE-67-2	3:52	1														

Relinquished By	Date/Time	Received By	Date/Time
<i>Brad Lohrum</i>	6/27/24 17:30	<i>Mike Reed</i>	6/28/24 1400
	6/28/24 1550		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](http://www.teklabinc.com) for terms and conditions.

BottleOrder: 80481



# 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

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

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										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)			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															X		X																
-012	RBE-68-2	4:06	1															X		X																
-013	RBE-11-2	4:07	1															X		X																
-014	FES-52-2	4:16	1															X		X																
-015	BRH-82	4:33	1															X		X																
-016	BRH-83	4:36	1															X		X																
-017	MCE-09-2	4:51	1															X		X																
-018	MCE-87	4:54	1															X		X																
-019	MCE-88	+	1															X		X																
-020	RBH-30-2	5:17	1															X		X																

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



pg. 3 of 6 Work order # 24062353

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

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
<i>Paul [Signature]</i>	6/27/24 17:30	<i>[Signature]</i>	6/28/24 12:00
	6/28/24 1550	<i>Trish Reed</i>	6/28/24 1550



pg. 4 of 6 Work order # 24062353

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

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

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](http://www.teklabinc.com) for terms and conditions.

BottleOrder: 80481





# CHAIN OF CUSTODY

pg. 5 of 6 Work order # 24062353

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

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

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		Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	DW - Lead E200.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Relinquished By	Date/Time	Received By	Date/Time
<i>Brad Lohrum</i>	6/27/24 17:30	<i>Trish Reed</i>	6/28/24 1400
	6/28/24 1550		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](http://www.teklabinc.com) for terms and conditions.

BottleOrder: 80481



pg. 6 of 6

Work order # 2466 2353

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

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

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]

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Bottle Order: 80481



September 30, 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: 24091622**

Dear Brad Lohrum:

TEKLAB, INC received 7 samples on 9/20/2024 1:13:00 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](mailto:patrickriley@teklabinc.com)



## Report Contents

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

**Client:** Geotechnology, Inc.

**Work Order:** 24091622

**Client Project:** J044517.01

**Report Date:** 30-Sep-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	8
Chain of Custody	Appended

**Client:** Geotechnology, Inc.

**Work Order:** 24091622

**Client Project:** J044517.01

**Report Date:** 30-Sep-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:** 24091622

**Client Project:** J044517.01

**Report Date:** 30-Sep-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:** 24091622

**Client Project:** J044517.01

**Report Date:** 30-Sep-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

#### 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:** 24091622**Client Project:** J044517.01**Report Date:** 30-Sep-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	12/31/2024	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: 24091622

Client Project: J044517.01

Report Date: 30-Sep-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									
24091622-001A	SMS-58-3	NELAP		1.0	13.5	µg/L	1	09/26/2024 12:20	09/19/2024 5:37
24091622-002A	SMS-60-3	NELAP		1.0	12.8	µg/L	1	09/26/2024 12:24	09/19/2024 5:39
24091622-003A	SMS-61-3	NELAP		1.0	2.7	µg/L	1	09/26/2024 12:28	09/19/2024 5:39
24091622-004A	SMS-62-3	NELAP		1.0	3.7	µg/L	1	09/26/2024 12:57	09/19/2024 5:40
24091622-005A	OMS-29-3	NELAP		1.0	15.8	µg/L	1	09/26/2024 12:32	09/19/2024 6:00
24091622-006A	EFS-01-3	NELAP		1.0	1.9	µg/L	1	09/26/2024 13:01	09/19/2024 6:13
24091622-007A	RAC-08-3	NELAP		1.0	< 1.0	µg/L	1	09/26/2024 13:05	09/19/2024 6:27

Client: Geotechnology, Inc.

Work Order: 24091622

Client Project: J044517.01

Report Date: 30-Sep-24

Carrier: John Duarte

Received By: NR

Completed by:

On:

20-Sep-24

Amber Dilallo

Reviewed by:

On:

20-Sep-24

Ellie Hopkins

Pages to follow:

Chain of custody

1

Extra pages included

0

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Temp °C 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 - 9/20/2024 1:42:56 PM

# CHAIN OF CUSTODY

pg. 1 of 1

Work order # 24091622

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

<b>Client:</b> Geotechnology, LLC, dba UES <b>Address:</b> 11816 Lackland Road <b>City / State / Zip:</b> St. Louis, MO 63146 <b>Contact:</b> Brad Lohrum <b>Phone:</b> (314) 997-7440 <b>E-Mail:</b> blohrum@teamues.com <b>Fax:</b>	<b>Samples on:</b> <input type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input checked="" type="checkbox"/> NO ICE <u>11/1</u> °C LTG# <b>Preserved in:</b> <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> <b>Lab Notes</b> <b>Client Comments:</b>
---	--

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																												
24091622	SMS-58-3	9/19/24 5:37	1										X				X	<div style="font-size: 2em; font-weight: bold;">TEKLAB</div> <div style="font-size: 1.5em; font-weight: bold;">Courier</div>												
002	SMS-60-3	5:39	1										X				X													
003	SMS-61-3	+	1										X				X													
004	SMS-62-3	5:40	1										X				X													
005	SMS-29-3	6:00	1										X				X													
006	EFS-01-3	6:13	1										X				X													
007	RAC-08-3	6:27	1										X				X													
			1										X				X													
			1										X				X													
			1										X				X													

Relinquished By		Date/Time	Received By		Date/Time
		9/20/24 / 11:30			9/20/24 / 1225
		9/20/24 / 1313			9/20/24 / 1313

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BottleOrder: 80481



9/20



## **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.