

REPORT OF DRINKING WATER SAMPLING FOR LEAD CONTENT:

**ECE WEST
5323 VILLA MARIE DRIVE
HAZELWOOD, MO 63042**



PREPARED FOR:

**MR. DAVID DUDLEY
DIRECTOR OF MAINTENANCE
HAZELWOOD SCHOOL DISTRICT
15875 NEW HALLS FERRY RD
FLORISSANT, MISSOURI 63031**

PREPARED BY:

**ENPAQ, LLC
3130 GRAVOIS AVENUE
ST. LOUIS, MISSOURI 63139**

JULY 2023

DOCUMENT TO BE RETAINED INDEFINITELY

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Drinking Water Sampling for Lead
Hazelwood School District
ECE West
5323 Villa Marie Drive
Hazelwood, MO 63042

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EXECUTIVE SUMMARY

ENPAQ, LLC performed lead testing of multiple drinking fountain water sources at the West Early Childhood Education located at 5323 Villa Marie Drive in Hazelwood, Missouri. The sampling was performed by trained and licensed personnel in accordance with USEPA, HUD, and State of Missouri Regulations and Guidelines.

All inspectors involved with sampling activities had EPA-approved training in Lead. Credentials for our firm and the inspector collecting the samples are included in Attachment C to this document.

All samples were collected on a “first draw” basis. “First draw” is achieved by allowing the water system to rest for at least eight hours prior to sampling in order to collect any existing debris or settlement within the sample. The intent of this sampling is to replicate “worst-case scenario” conditions. As such, ENPAQ inspectors met at the school to collect water samples before the systems were used by staff or students. A second sample from each water source was collected as a “follow-up” sample basis. “Follow-up” sampling is achieved by allowing the water system to run for thirty (30) seconds after the first draw sampling. The intent of this sampling is to determine if lead contamination may be in the water lines connected to the water sources and not just at the fixture. The sampling was completed in accordance with the Missouri SB681 *Get the Lead Out of Schools Drinking Water Act* requirements. The Missouri SB681 *Get the Lead Out of Schools Drinking Water Act* and other regulatory agencies recommend that water sources run for at least thirty seconds and as long as two minutes prior to use to avoid settling within the water system.

Drinking water samples were collected from three (3) different locations throughout West Early Childhood Education during the sampling event. The water samples were collected from drinking fountains utilized for drinking activities at the campus. After sample collection, samples were immediately delivered to Teklab, Inc. located in Collinsville, Illinois following strict chain of custody procedures. Teklab is a NELAP-accredited and State of Missouri-licensed laboratory specializing in drinking water analysis. Detailed sampling locations and sample results are located in Attachment A of this report.

Any samples reported over 5.0 ppb should be re-sampled on an annual basis at a minimum.

CONCLUSION/RECOMMENDATIONS

At this time, ENPAQ recommends that all water sources testing at 5.0 ppb or above be removed from service. These sources are subject to additional maintenance activities and remediation prior to use. Before being put back into service, it is recommended these sources be re-tested to confirm compliance with acceptable levels.

Remediation includes decreasing lead concentrations below 5 parts per billion using methods such as replacement of plumbing, solder, fittings, or fixtures, installation of filters and filter devices, or other effective methods in accordance with Missouri SB681 *Get the Lead Out of Schools Drinking Water Act*.

In addition, all sources will be subject to an ongoing maintenance program and re-testing at appropriate intervals. **Any samples reported over 5.0 ppb should be re-sampled on an annual basis at a minimum.**

Although no additional samples were identified above the action level, ENPAQ recommends that all water sources run for at least thirty seconds prior to use as recommended by the USEPA.

APPENDIX A

SAMPLE LOCATIONS & RESULTS

Prep Day: 7/25/23

Sample Day: 7/26/23

To Lab -----> 7/26/23

* Reporting Limit

# to Test =	
# Disabled =	0
# of Samples =	6
# > 10.0 ppb =	0
# > 0.5 ppb =	0

Source	Sample ID #	Sample Type	Sample Location	Source Notes	RL *	Lead Test Result
01	(A)	S	Nurse Office Sink Rm 111		1.0	<1.0 ppb
	(B)	S	Nurse Office Sink Rm 111		1.0	<1.0 ppb
	(C)				1.0	N/A ppb
02	(A)	F	Fountain O/S Nurse Office		1.0	<1.0 ppb
	(B)	F	Fountain O/S Nurse Office		1.0	<1.0 ppb
03	(A)	S	Teachers Lounge Rm 117		1.0	<1.0 ppb
	(B)	S	Teachers Lounge Rm 117		1.0	<1.0 ppb

Sample ID Coding Key:

- F = Fountain
- S = Sink
- (A) = 1st Sample
- (B) = 2nd Sample (30 Seconds Later)
- (C) = 3rd Sample (3 Minutes Later)

APPENDIX B

LABORATORY ANALYSIS

August 31, 2023

Tony Hagerty
ENPAQ, LLC
3130 Gravois Ave
St. Louis, MO 63118
TEL: (314) 449-1976
FAX:



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

RE: Hazelwood SD/ 23-170 ECE West

WorkOrder: 23071870

Dear Tony Hagerty:

TEKLAB, INC received 6 samples on 7/26/2023 12:27:00 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,



Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com



Report Contents

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

Client: ENPAQ, LLC

Work Order: 23071870

Client Project: Hazelwood SD/ 23-170 ECE West

Report Date: 31-Aug-23

This reporting package includes the following:

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Chain of Custody	Appended

Client: ENPAQ, LLC**Work Order:** 23071870**Client Project:** Hazelwood SD/ 23-170 ECE West**Report Date:** 31-Aug-23**Abbr Definition**

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)

Client: ENPAQ, LLC

Work Order: 23071870

Client Project: Hazelwood SD/ 23-170 ECE West

Report Date: 31-Aug-23

Qualifiers

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



Case Narrative

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

Client: ENPAQ, LLC

Work Order: 23071870

Client Project: Hazelwood SD/ 23-170 ECE West

Report Date: 31-Aug-23

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: ENPAQ, LLC**Work Order:** 23071870**Client Project:** Hazelwood SD/ 23-170 ECE West**Report Date:** 31-Aug-23

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



Laboratory Results

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

Client: ENPAQ, LLC

Work Order: 23071870

Client Project: Hazelwood SD/ 23-170 ECE West

Report Date: 31-Aug-23

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									
23071870-001A	01A	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 2:54	07/26/2023 0:00
23071870-002A	01B	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 3:08	07/26/2023 0:00
23071870-003A	02A	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 3:23	07/26/2023 0:00
23071870-004A	02B	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 3:27	07/26/2023 0:00
23071870-005A	03A	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 3:30	07/26/2023 0:00
23071870-006A	03B	NELAP		1.0	< 1.0	µg/L	1	08/31/2023 3:34	07/26/2023 0:00



Receiving Check List

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

Client: ENPAQ, LLC

Work Order: 23071870

Client Project: Hazelwood SD/ 23-170 ECE West

Report Date: 31-Aug-23

Carrier: Anthony Hagerty

Received By: MBP

Completed by:

Reviewed by:

On:

On:

27-Jul-23

27-Jul-23

Timothy W. Mathis

Ellie Hopkins

Pages to follow:

Chain of custody

1

Extra pages included

1

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. - TMathis - 7/27/2023 1:17:26 PM

ECE west

Prep Day: 7/25/23

Sample Day: 7/26/23

To Lab -----> 7/26/23

* Reporting Limit

to Test =

Disabled =

of Samples =

> 10.0 ppb =

> 0.5 ppb =

Source	Sample ID #	Sample Type	Sample Location	Source Notes	RL *	Lead Test Result
01	(A)	S	Nurse Office Sink Rm 111		1.0	ppb
	(B)	S	Nurse Office Sink Rm 111		1.0	ppb
	(C)				1.0	ppb
02	(A)	F	Fountain O/S Nurse Office		1.0	ppb
	(B)	F	Fountain O/S Nurse Office		1.0	ppb
03	(A)	S	Teachers Lounge Rm 117		1.0	ppb
	(B)	S	Teachers Lounge Rm 117		1.0	ppb
04	(A)				1.0	ppb
	(B)				1.0	ppb
05	(A)				1.0	ppb
	(B)				1.0	ppb
06	(A)				1.0	ppb
	(B)				1.0	ppb
07	(A)				1.0	ppb
	(B)				1.0	ppb
08	(A)				1.0	ppb
	(B)				1.0	ppb
09	(A)				1.0	ppb
	(B)				1.0	ppb
10	(A)				1.0	ppb
	(B)				1.0	ppb
11	(A)				1.0	ppb

123071870

APPENDIX C

CREDENTIALS

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

Lead Abatement Contractor License

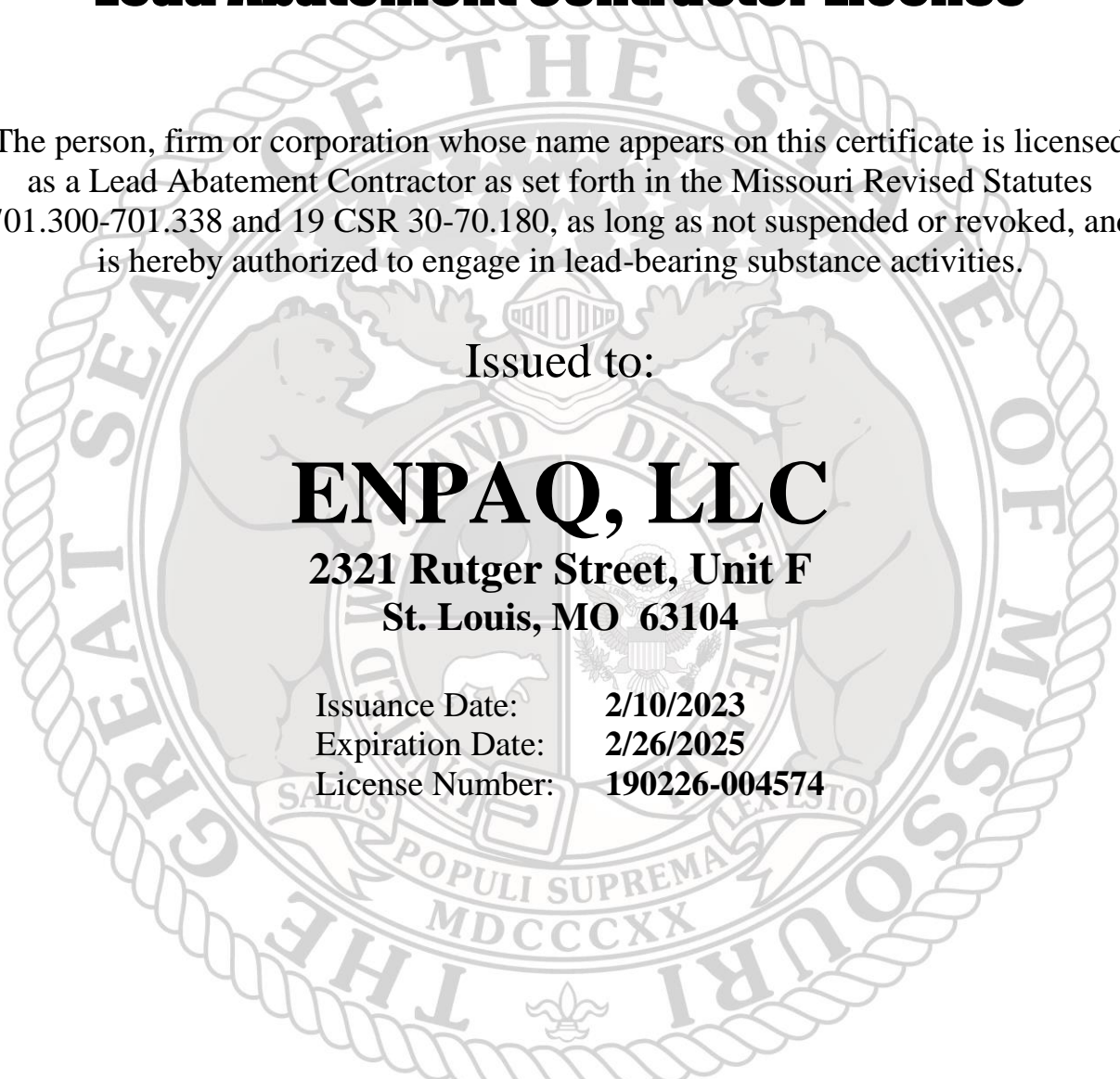
The person, firm or corporation whose name appears on this certificate is licensed as a Lead Abatement Contractor as set forth in the Missouri Revised Statutes 701.300-701.338 and 19 CSR 30-70.180, as long as not suspended or revoked, and is hereby authorized to engage in lead-bearing substance activities.

Issued to:

ENPAQ, LLC

**2321 Rutger Street, Unit F
St. Louis, MO 63104**

Issuance Date: **2/10/2023**
Expiration Date: **2/26/2025**
License Number: **190226-004574**



Paula F. Nickelson

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

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Anthony W. Hagerty

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: **10/17/2022**
Expiration Date: **10/31/2024**
License Number: **161031-300005062**



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

Anthony Hagerty

3959 McDonald Ave, St. Louis, MO 63116

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

Lead Risk Assessor Refresher

St. Louis, MO

Certificate # CEET 325 - 3/7/2022 - 190510

Examination Date: 3/7/2022

CEUs: 0.8

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.

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

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

James T. Earle

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: **7/30/2022**
Expiration Date: **7/30/2024**
License Number: **180730-300005561**



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

James Earle

7484 Ahern Ct., University City, MO 63130

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

Lead Risk Assessor Refresher

St. Louis, MO

Certificate # CEET 325 - 3/7/2022 - 117401
Examination Date: 3/7/2022
CEUs: 0.8

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 sltu.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.

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

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Zachary A. Haselhorst

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

Lead Risk Assessor
Category of License

Issuance Date: **3/1/2022**
Expiration Date: **3/1/2024**
License Number: **160229-300004899**



A handwritten signature in black ink, appearing to read "Richard W. Moore", is positioned above the printed name.

Richard W. Moore
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

Zachary Haselhorst

209 E 5th St, Trenton, IL 62293

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

Lead Risk Assessor Refresher

St. Louis, MO

Certificate # CEET 325 - 3/7/2022 - 117400
Examination Date: 3/7/2022
CEUs: 0.8

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.

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

State of Missouri
Department of Natural Resources

Certificate of Approval
for Chemical Laboratory Service

This is to certify that

Teklab, Incorporated

is hereby approved to perform the analysis of drinking water as specified on the
Certified Parameter List, which must accompany this certificate to be valid.

Certification Number 930

Date Issued December 13, 2021

Expiration Date January 31, 2025



Laboratory Certification Authority, Public Drinking Water Branch
Missouri Department of Natural Resources



Laboratory Certification Officer, Environmental Services Program
Missouri Department of Natural Resources

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DRINKING WATER LABORATORY
CERTIFIED PARAMETER LIST

This is to certify that

Teklab, Incorporated

located at

5445 Horseshoe Lake Road, Collinsville, IL 62234

has been approved to perform the indicated procedures on drinking water under the Missouri Public Drinking Water Regulations (10 CSR 60-5.020). Specific method numbers or references are included in parenthesis when appropriate.

INORGANIC

EPA 335.4

Total Cyanide

EPA 353.2

Nitrate, Nitrite, Total Nitrate and Nitrite

EPA 245.1

Mercury

EPA 200.7

Barium, Beryllium, Cadmium, Chromium, Copper, Nickel

EPA 200.8

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Thallium

SM4500F-C

Fluoride

SM4500NO2-B

Nitrite

Teklab, Incorporated

Expiration Date: January 31, 2025

Missouri Certificate No.: 930

Original Certifying State: Illinois