

## **REPORT OF FINDINGS**

POTABLE WATER SAMPLING STUDY  
CRYSTAL LAKE ELEMENTARY SCHOOL DISTRICT 47  
**RICHARD BERNOTAS MIDDLE SCHOOL**  
170 N OAK STREET  
CRYSTAL LAKE, IL 60014

Prepared by

PEPPER ENVIRONMENTAL TECHNOLOGIES, INC.  
411 Lake Zurich Road, Barrington, Illinois 60010

July 22, 2025

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## **INTRODUCTION**

### ***Brief overview of the consultant's responsibilities:***

Pepper Environmental Technologies, Inc. (PET) was contracted by Crystal Lake Elementary School District 47 representative, Mr. David Schuh, to perform a water quality study within Richard Bernotas Middle School, located at 170 N. Oak St., Crystal Lake, Illinois 60014.

### ***Date of water sampling performed:***

July 21, 2025, by Michael J. Grant – CIEC, CMI

### ***Name of Crystal Lake Elementary School District 47 point of contact.***

Mr. David Schuh  
Director of Operations  
Operations Center  
221 Liberty Rd.  
Crystal Lake, Illinois 60014  
Phone (815) 788-5061

### ***Name and address of sample media and Lab Analysis:***

EMSL Analytical Lab Houston Texas (Lab 15)  
5950 Fairbanks N. Houston Road  
Houston Texas 77050

## **TEST PERFORMED/SCOPE OF WORK**

Potable water sources tested for Legionella Bacteria throughout Richard Bernotas Middle School. *Legionella Bacteria* can be found in a variety of engineered water systems that support biofilm growth, including drinking water distribution systems, building plumbing systems, faucets, shower heads, cooling towers, hot tubs and fountain features. These water systems are sometimes characterized by warm temperatures, stagnant water, excess nutrients due to pipe corrosion and lack of chemical disinfectants – conditions that promote the growth of bio film, their associated protozoa, and consequently *Legionella*. When these built environments generate contaminated aerosols, humans in the vicinity can be exposed to Legionella via inhalation, aspiration, or ingestion. Most *Legionnaires* disease cases (greater than 95 percent) are sporadic cases for which the primary exposure source is never identified.

***Substances, Media types, Methods of Analysis***

<b>Analysis</b>	<b>Media Type</b>	<b>Method/Model</b>
Legionella Bacteria	Water	M-346 Identification and enumeration of Legionella Sp.

***Summary of Findings, Task and Sampling Locations***

<b>Analysis</b>	<b>Task</b>	<b>Location(s)</b>
Legionella Bacteria	Water samples collected from food prep rooms, main kitchen and all drinking fountains	See Sample Location Maps Attached.

**SUMMARY OF WATER SAMPLING RESULTS**

Please find the attached tables containing the EMSL Lab findings taken at Richard Bernotas Middle School in Crystal Lake, Illinois on July 21, 2025.

**CONCLUSIONS AND RECOMMENDATIONS**

Based on our water sampling results, we find that the indoor potable water sources tested during this study for *Legionella Bacteria* appear to be at safe levels for occupancy all potable water sources tested were non- detectable for *Legionella Bacteria*.

**CONFIDENTIALITY**

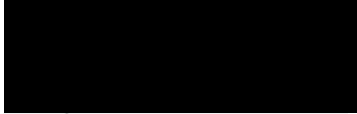
Pepper Environmental Technologies, Inc. has treated all aspects of this study as strictly confidential.

This study was not intended to include every health hazard or exposure that may be present in the building; only those items specifically addressed in the report were evaluated. Results are based on conditions observed during our survey. Substantial changes in conditions, methods of operation, or materials used can alter the outcome of an environmental survey. If you have any questions concerning this study, please let us know.

Pepper Environmental Technologies Inc. has conducted this study in the interest of Crystal Lake Elementary School District 47 to assist in preventing occupant illness and in meeting environmental obligations. In this respect, we hope the results of this study are useful.

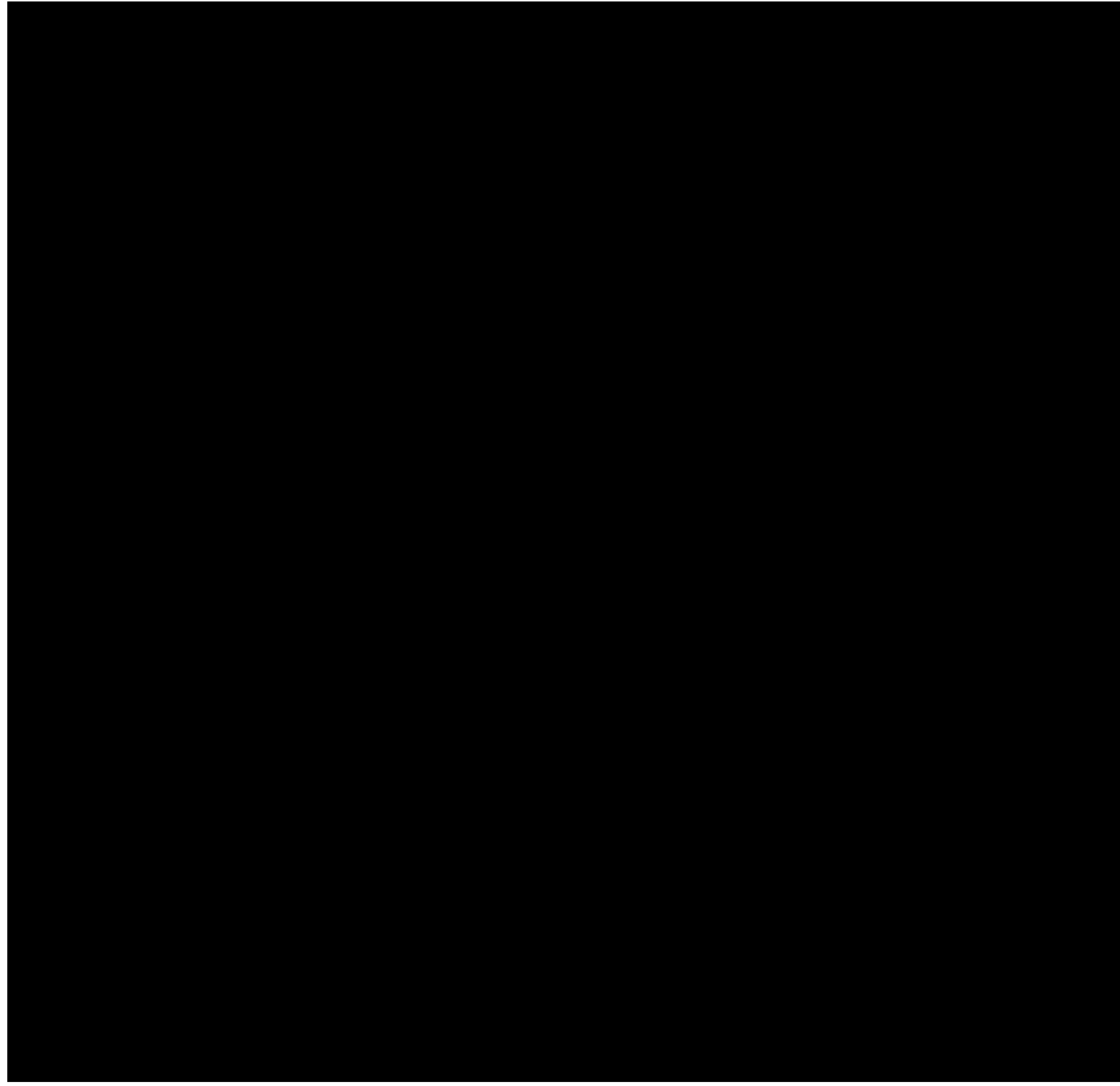
Respectfully submitted,

**Pepper Environmental Technologies, Inc.**



Michael Grant – CIEC, CMI  
Vice President

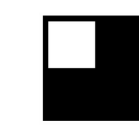
*Forms Attached:  
Sample Location Map, EMSL Lab Results Table*



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**LOWER LEVEL FLOOR PLAN**

SCALE: 1" = 20'-0"



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Architecture Engineering Planning Interiors

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**A1.0**

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01/14/20  
REVISIONS

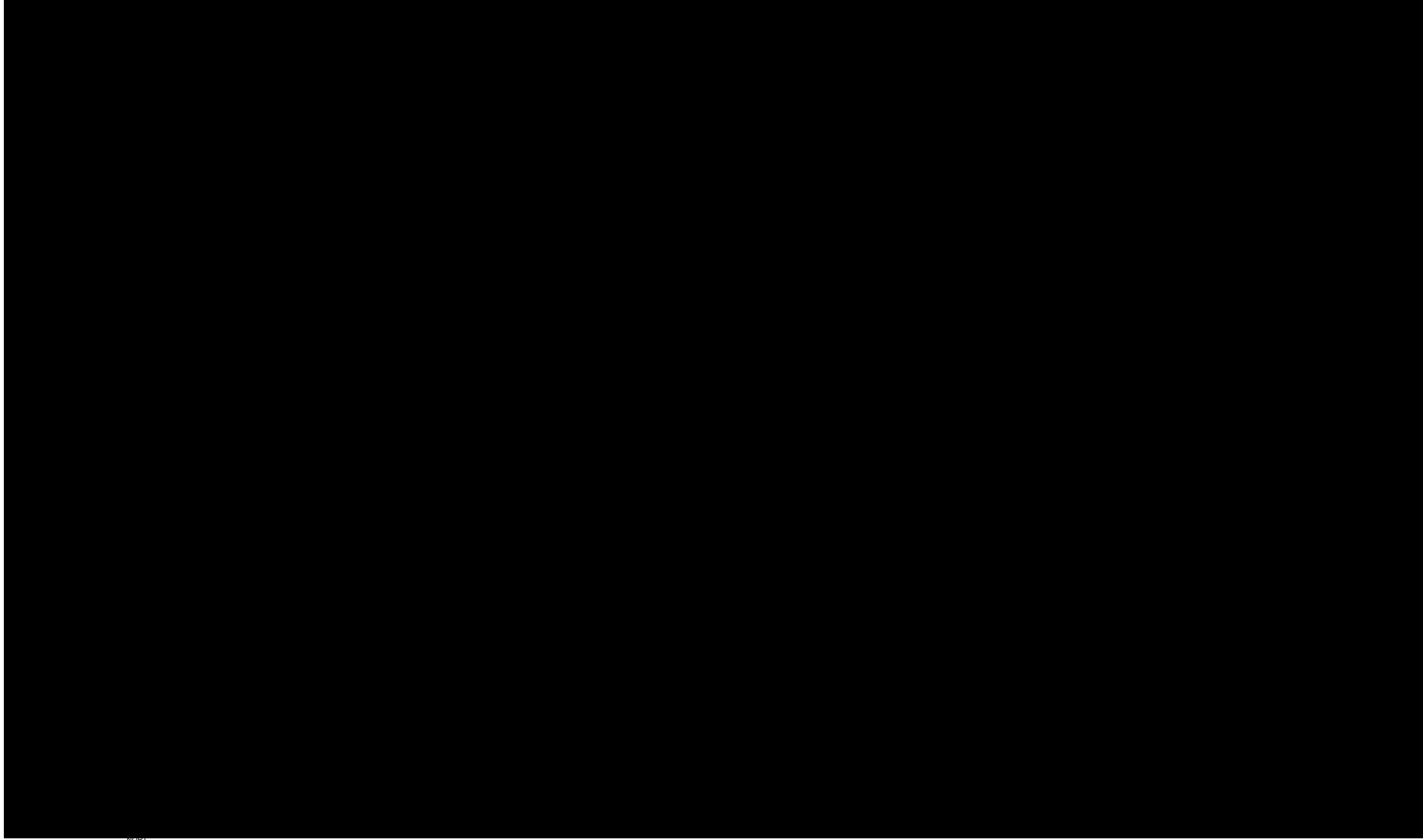
LOWER LEVEL FLOOR PLAN

**RICHARD BERNOTAS MIDDLE**  
2020 HEALTH/LIFE SAFETY WORK

RICHARD BERNOTAS MIDDLE  
170 North Oak Street  
Crystal Lake, IL 60014

DISTRICT ADDRESS  
300 COMMERCE DRIVE  
CRYSTAL LAKE, IL 60014

FOR REFERENCE  
ONLY



NORT







# Legionella Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.  
200 Route 130 North  
Cinnaminson, NJ 08077

152503204

PHONE: (800) 220-3675

EMAIL: CinnMicroLab@EMSL.com

EMSL ANALYTICAL, INC.  
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If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information	Customer ID:	2400913 000	Billing Information	Billing ID:	2400913 000
	Company Name:	Pepper Environmental Technologies, Inc.		Company Name:	Pepper Environmental Technologies, Inc.
	Contact Name:	Mike Grant		Billing Contact:	Kim Hamilton
	Street Address:	411 Lake Zurich Road		Street Address:	411 Lake Zurich Road
	City, State, Zip:	Barrington, IL 600109		Country:	USA
	Phone:	847-343-2974		City, State, Zip:	Barrington, IL 60010
Email(s) for Report:			Email(s) for Invoice:		
mgrant@pepperenvironmental.com			Khamilton@pepperconstruction.com		

### Project Information

Project Name/No: **Richard Bernotas Middle School** Purchase Order:

EMSL LIMS Project ID\* (If applicable, EMSL will provide): \_\_\_\_\_ US State where samples collected: **IL** State of Connecticut (CT) must select project location:  Commercial (Taxable)  Residential (Non-Taxable)

Sampled By Name: **Mike Grant** Sampled By Signature: \_\_\_\_\_ No. of Samples in Shipment: \_\_\_\_\_

Sterile, Sodium Thiosulfate Preserved Bottled Used  Biocide Used In Source (If Checked, Please Specify Type)

Bottles Chilled on Frozen Ice Packs  Public Water Supply Samples Note: All results may automatically be reported to DOH if required by State.

**Legionella Analysis (Performed by ISO 11731:2017 Culture Method) - TAT's are subject to methodology requirements.**

M341: *Legionella pneumophila* confirmation and enumeration. Individual serotyping not included. Other species reported as *Legionella sp.*

M342: *Legionella pneumophila* confirmation and enumeration of individual serotypes 1-14. Other species reported as *Legionella sp.*

M343: *Legionella* Species confirmation and individual enumeration of 11 *Legionella* species (*L. anisa*, *L. bozmannii*, *L. dumoffii*, *L. feeleii*, *L. gormanii*, *L. jordanis*, *L. longbeachae*, *L. maceachernii*, *L. micdadei*, *L. pneumophila*, and *L. sainthelensi*) and their individual serotypes. Other species can be requested at an additional charge.

M344: ISO filter direct for water expected to have low bacterial concentrations (bottled water water for dialysis, distilled water.) 11 *Legionella* species (above) and their respective serotypes, identified and enumerated individually. Other species reported as *Legionella sp.*

M345: Identification and enumeration of *L. pneumophila* serotype 1, *L. pneumophila* serotypes 2-14, and *Legionella sp.*

M214: Pure Culture Preparation and Storage

M215: Pure Culture Preparation and Shipping

*m-346*  *TU 7/22/25*

**Heterotrophic Plate Count (HPC) Analysis (Check one below if requested) Test Code M015 Heterotrophic Plate Count (HPC) Standard Method 9215**

Plate count agar, 35°C, 48 hour incubation  R2A agar, 25°C, 5-7 day incubation

Sample #	Sample Location	Sample Type	Potable / Non-Potable	Test Code	Volume	Date / Time Collected	Temperature (Lab Use Only)
Example: Sample 1	Kitchen	Water	Potable	M343	1,000 ml	1/1/2021 3:30pm	
B-1	Bottle Fountain	X	X	M-346			
B-2	Fountain	}	}				
B-3	Bottle Fountain						
B-4	11A N. Sink						
B-5	11A S. Sink						
B-6	Bottle Fountain						
B-7	Fountain						
B-8	Bottle Fountain						

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

*Fed Ex 3912 5496 8021 20-9°C Pack*

Method of Shipment: \_\_\_\_\_ Sample Condition Upon Receipt: \_\_\_\_\_ Received on Ice?  Check if Yes:

Relinquished by: \_\_\_\_\_ Date/Time: *7/22/25 1pm* Received by: *TERRI VANCE* Date/Time: *7/22/25 9:00 AM*

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received by: *Terri Vance* Date/Time: \_\_\_\_\_

Controlled Document - COC-26 Legionella R10 11/07/2023

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



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EMAIL: CinnMicroLab@EMSL.com

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Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

TV 7/22/25

Sample #	Sample Location	Sample Type	Potable / Non-Potable	Test Code	Volume	Date / Time Collected	Temperature (Lab Use Only)
B-9	Fountain	Water	Potable	M3/C			
B-10	Rm 31 EAST Sink	↓	↓				
B-11	Rm 31 WEST Sink						
B-13	Boyle fountain CAFETERIA						
B-12	Boyle fountain						
B-14	N Kitchen Sink						
B-15	S-Kitchen Sink						
B-16	Boyle fountain						
B-17	Gym fountain						
B-18	LLBoyle fountain						

Method of Shipm	Relinquished by: [Redacted]	Date/Time: 7/21/25	Sample Condition Upon Receipt:	Received on Ice? <input type="checkbox"/>
Relinquished by:	Date/Time: 1 PM	Received by: TERRI VANCE	Date/Time: 7/22/25	Check if Yes:
Relinquished by:	Date/Time:	Received by: Terri Vance	Date/Time: 9:00 AM	

Controlled Document - COC-26 Legionella R10 11/07/2023

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