

Analytical Report

Samantha Wolber
LiquiTech, Inc.
421 Eisenhower Lane
Lombard, IL 60148

September 08, 2022

Work Order: 20E0844

RE: Broad Spectra Testing
NYC HA Jacob Riis Housing Aug 13 2022

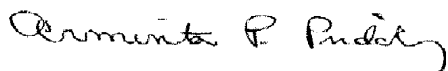
Dear Samantha Wolber:

Enclosed are the analytical reports for the EMT Work Order listed. Also included with this analytical report is a copy of the chain of custody associated with these samples. If you have any questions, please contact me.

This is a revised report, that supersedes all previous reports. Please see case narrative for an explanation of revision.

Sincerely,

Approved by,



Arminta Priddy
Project Manager
847.967.6666
apriddy@emt.com
Approved for release: 9/8/2022 8:49:52PM



Nathan Fey
Laboratory Operations Manager

The contents of this report apply to the sample(s) analyzed. No duplication is allowed except in its entirety. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

State of Illinois, NELAP Accredited Lab No. 100256, Cert No. 1002562021-6



Table of Contents

<i>Cover Letter</i>	<i>1</i>
<i>Case Narrative</i>	<i>3</i>
<i>Client Sample Results</i>	<i>4</i>
<i>Qualifiers and Definitions</i>	<i>5</i>
<i>Certified Analyses</i>	<i>5</i>
<i>List of Certifications</i>	<i>6</i>
<i>Chain of Custody</i>	<i>7</i>

Case Narrative

Client: LiquiTech, Inc.
Project: Broad Spectra Testing
 NYC HA Jacob Riis Housing Aug 13 2022
Work Order: 20E0844

Date: 09/08/2022

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Point of Entry	20E0844-01	Drinking Water	08/13/22 13:00	08/16/22 09:38

Narrative

Sample results only relate to the to the sample received at the laboratory and analytes of interest tested.

Work Order: 20E0844

The samples were received on 08/16/22 09:38. The temperature of the cooler(s) at receipt was:

Cooler	Temp C°
Default Cooler	23.8

The following coolers were received above 6° C and ice was not present: Default Cooler.
 The cooler temperature exceeded the required criteria.

Sample -01 arrived out of hold for pH.

Version 2

200.8 Arsenic was re-analyzed and re-reported on 9/8/2022. Initial results were incorrect.

Under investigation, it was found that low levels of arsenic had been inadvertently added during the digestion process as a contaminant in the original report. Arsenic was analyzed on the undigested sample for this revised report.

Inorganics

4500 SULFIDE-MB

B2H0774-BS1 and BS2 had elevated recoveries and reported sample is non-detected even if a potential high bias exists in the analysis. The sample would be past hold time before a re-run could be performed.

B2H0774-MS1 had spike recovery above the laboratory control limits. The elevated recovery may be partially attributed to a bias in the analysis. With the potential high bias, the sample is non-detected.

Client Sample Results

Client: LiquiTech, Inc.
Project: Broad Spectra Testing
 NYC HA Jacob Riis Housing Aug 13 2022
Work Order: 20E0844

Report Date: 09/08/2022

		EMT Reporting						
Analyses	Result	Limit	Qual	Units	MDL	Date/Time Analyzed	Batch	Analyst
Client Sample ID: Point of Entry						Matrix: Drinking Water		
Collection Date: 08/13/2022 13:00						Lab ID: 20E0844-01		
Metals by ICP-MS								
Method: E200.8								
Arsenic	< 0.00600	0.0100		ppm	0.00600	09/08/22 13:11	B2I0250	KJ1
Cadmium	< 0.125	0.625		ppb	0.125	08/18/22 20:07	B2H0705	KJ1
Calcium	5.56	1.88		ppm	0.625	08/19/22 11:38	B2H0705	KJ1
Copper	0.00276	0.00625	J	ppm	0.00100	08/18/22 20:07	B2H0705	KJ1
Iron	0.0870	0.0312		ppm	0.00200	08/18/22 20:07	B2H0705	KJ1
Lead	< 0.625	6.25		ppb	0.625	08/18/22 20:07	B2H0705	KJ1
Magnesium	1.02	0.625		ppm	0.0750	08/19/22 11:38	B2H0705	KJ1
Manganese	32.7	6.25		ppb	1.12	08/18/22 20:07	B2H0705	KJ1
Silver	< 0.138	0.625		ppb	0.138	08/18/22 20:07	B2H0705	KJ1
Tin	< 0.375	6.25		ppb	0.375	08/18/22 20:07	B2H0705	KJ1
Zinc	0.00257	0.00625	J	ppm	0.00238	08/18/22 20:07	B2H0705	KJ1
Method: E200.8 / SM2340 B								
Calcium Hardness (as CaCO3)	13.9	4.68		mg/L	1.56	08/19/22 11:38	[CALC]	KJ1
Total Hardness (as CaCO3)	18.1	7.26		mg/L	1.87	08/19/22 11:38	[CALC]	KJ1
Anions by Ion Chromatography								
Method: E300								
Chloride	12.0	0.500		ppm	0.200	08/17/22 13:17	B2H0632	CP1
Nitrogen, Nitrate	< 0.250	0.250	H	ppm	0.100	08/17/22 13:17	B2H0632	CP1
Sulfate	3.30	1.50		ppm	0.500	08/17/22 13:17	B2H0632	CP1
Wet Chemistry								
Method: SM 4500-H B 1996								
pH	7.36	0.05	H	pH Units	0.04	08/20/22 09:17	B2H0784	CS3
Method: SM2320 B 2011								
Alkalinity, Bicarbonate (As CaCO3)	17.9	10.0		mg CaCO3/L	2.40	08/23/22 16:34	B2H0905	AL1
Alkalinity, Carbonate (As CaCO3)	< 2.40	10.0		mg CaCO3/L	2.40	08/23/22 16:34	B2H0905	AL1
Alkalinity, Total (As CaCO3)	17.9	10.0		mg CaCO3/L	2.40	08/23/22 16:34	B2H0905	AL1
Method: SM2540C 2011								
Total Dissolved Solids (Residue, Filterable)	61.0	10.0		ppm	2.00	08/18/22 05:05	B2H0615	MKP
Method: SM2540D 2011								
Suspended Solids (Residue, Non-filterable)	< 2.00	10.0		ppm	2.00	08/18/22 07:28	B2H0635	MKP
Method: SM4500-P E 2011								
Phosphorus, Total (As P)	0.780	0.500	J2	ppm	0.100	08/26/22 14:02	B2H1071	LAA

Client Sample Results

(Continued)

Client: LiquiTech, Inc.
Project: Broad Spectra Testing
 NYC HA Jacob Riis Housing Aug 13 2022
Work Order: 20E0844

Report Date: 09/08/2022

Analyses		Result	EMT	Qual	Units	MDL	Date/Time	Batch	Analyst
			Reporting Limit				Analyzed		
Client Sample ID:	Point of Entry						Matrix:	Drinking Water	
Collection Date:	08/13/2022 13:00						Lab ID:	20E0844-01 (Continued)	
Wet Chemistry (Continued)									
Method: SM4500-S2 D 2011									
Sulfide	< 0.0500	1.00	J1, Q, S1	ppm		0.0500	08/19/22 17:14	B2H0774	DM1
Method: SM5310 B 2011									
Organic Carbon, Total	1.80	2.00	J	ppm		0.700	08/19/22 02:37	B2H0675	GLB

Qualifiers and Definitions

Item	Description
H	Sample prepared and/ or analyzed past recommended holdtime.
J	The reported result is an estimated value.
J1	The reported result is an estimated value based on discrepancies in the MS/MSD sample (e.g. matrix interference was observed).
J2	The MS/MSD or duplicate recoveries are outside the quality control criteria due to difficult sample matrix.
Q	One or more quality control results were outside of the acceptance limits (e.g. LCS recovery, surrogate spike recovery, or CCV recovery).
S1	The percent recovery is above the limits (e.g. LCS recovery, surrogate spike recovery, or CCV recovery), but the analyte was not detected in the sample. Data is acceptable.
%Rec	Percent Recovery

Certified Analyses included in this Report

Analyte	CAS #	Certifications
E200.8 in Drinking Water		
Arsenic	7440-38-2	ILEPA
Cadmium	7440-43-9	ILEPA
Copper	7440-50-8	ILEPA
Lead	7439-92-1	ILEPA
Manganese	7439-96-5	ILEPA
Silver	7440-22-4	ILEPA
Zinc	7440-66-6	ILEPA
E300 in Water		
Chloride	16887-00-6	DoD, ILEPA, WDNR

Certified Analyses included in this Report (Continued)

Analyte	CAS #	Certifications
<i>E300 in Water (Continued)</i>		
Nitrogen, Nitrate	14797-55-8	DoD, ILEPA, WDNR
Sulfate	14808-79-8	DoD, ILEPA, WDNR
<i>SM 4500-H B 1996 in Drinking Water</i>		
pH		ILEPA
<i>SM2320 B 2011 in Water</i>		
Alkalinity, Bicarbonate (As CaCO ₃)	71-52-3	ILEPA, WDNR, DoD
Alkalinity, Carbonate (As CaCO ₃)	3812-32-6	ILEPA, WDNR, DoD
Alkalinity, Total (As CaCO ₃)	10001	ILEPA, WDNR, DoD
<i>SM2540C 2011 in Water</i>		
Total Dissolved Solids (Residue, Filterable)		DoD, ILEPA, WDNR
<i>SM2540D 2011 in Water</i>		
Suspended Solids (Residue, Non-filterable)		DoD, WDNR, ILEPA
<i>SM4500-P E 2011 in Water</i>		
Phosphorus, Total (As P)	7723-14-0	DoD, ILEPA, WDNR
<i>SM5310 B 2011 in Water</i>		
Organic Carbon, Total	7440-44-0	DoD, ILEPA, WDNR

List of Certifications

Code	Description	Number	Expires
AKDEC	State of Alaska, Dept. Environmental Conservation	17-011	04/30/2024
CPSC	US Consumer Product Safety Commission, Accredited by PJLA Lab No. 1050	L18-184-R1	03/31/2024
DoD	Department of Defense, Accredited by PJLA	L20-164-R2	03/31/2024
ILEPA	State of Illinois, NELAP Accredited Lab No. 100256	1002562021-6	07/27/2023
ISO	ISO/IEC 17025:2017, Accredited by PJLA	L20-165	03/31/2024
NEFAP	TNI National Environmental Field Activities Program	L20-166	03/31/2024
TX	Texas Commission of Environmental Quality	T104704554-20-5	10/31/2022
WA	Washington State Department of Ecology	C1057	01/06/2023
WDNR	State of Wisconsin Dept of Natural Resources	999888890	08/31/2022

T=23.8



20E0844

Environmental
Monitoring and
Technologies, Inc.

Use included Return Label

Environmental Monitoring and Technologies, Inc

Ship To: 509 North 3rd Avenue

Des Plaines, IL 60016-1162

LiquiTech
innovation in water security™

Organization: <u>New York City Housing Authority</u>			Sample Type Code (All Samples): GRAB			
Sub-Organization: <u>Jacob Riis Houses</u>			Matrix Code (All Samples): 1			
Sampler: <u>R. Kasper</u>			Container Count (All Samples): 1			
Sampler Signature: <u>[Signature]</u>			Preservation Code (All Samples): P::3;P::1;GA::2;P::4;G::5			
Sampling Date: <u>8-13-22</u>			Requested Analysis (All Samples): Broad Spectrum			
Tracking Number:			Received By: <u>[Signature]</u>			
Relinquished By: <u>[Signature]</u>			Date/Time: <u>08/16/2022 @ 0938</u>			

#	Building Name	System Group Name (Loop #)	Sample Location (Rm #, sink, tub, shower)	Sample Temp (°F)	Sampled Time	Sample ID (Lab Use Only)
1	<u>Building 11</u>	<u>CU</u>	<u>Point of Entry</u>	<u>72</u>	<u>1300</u>	<u>01A-E</u>
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						



www.liquitech.com



1.800.635.7873



customerservice@liquitech.net

Sample Receipt Checklist**Work Order: 20E0844**

Printed: 8/16/2022 10:46:38AM

Client: **LiquiTech, Inc.**Project: **Broad Spectra Testing**Date Due: **Tuesday, August 23, 2022**Received By: **Jennifer Schultz**Logged In By: **Jennifer Schultz**Date Received: **08/16/22 09:38**Date Logged In: **08/16/22 10:43**How were samples received? **UPS**Cooler temperature at or below 6 degrees Celsius **No**Chain of Custody present and properly completed **Yes**Turn Around Time is indicated and specified **No**Chain of Custody agrees with sample labels **Yes**Samples received within hold time **No**Proper sample containers received intact **Yes**Containers properly preserved **Yes**Sufficient Sample Volume **Yes**Custody seals present **No**Volatile water vials received **No****Sample Receipt Comments****Work Order: 20E0844**

The samples were received on 08/16/22 09:38. The temperature of the cooler(s) at receipt was:

Cooler	Temp C°
Default Cooler	23.8

The following coolers were received above 6° C and ice was not present: Default Cooler.

The cooler temperature exceeded the required criteria.

Sample -01 arrived out of hold for pH.

Samples going out of hold time within 24 hours:

Routine TAT has been entered X

PM Communicate TAT has been entered

Reviewed By: JS

Date:

08/16/2022