

## Analytical Report

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

August 26, 2022

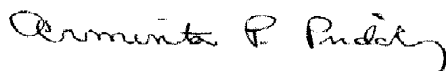
Work Order: 20E0844

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

Dear Samantha Wolber:

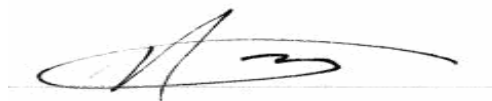
Enclosed are the analytical reports for the EMT Work Order listed. Also included with this analytical report is a copy of the chain of custody associated with these samples. If you have any questions, please contact me.

Sincerely,



Arminta Priddy  
Project Manager  
847.967.6666  
[apriddy@emt.com](mailto:apriddy@emt.com)  
Approved for release: 8/26/2022 4:00:42PM

Approved by,



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



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## Case Narrative

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

**Date:** 08/26/2022

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:

<u>Cooler</u>	<u>Temp C°</u>
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.

### **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:** 08/26/2022

		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	0.0122	0.0125	J	ppm	0.00750	08/18/22 20:07	B2H0705	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:** 08/26/2022

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
<b>E200.8 in Drinking Water</b>		
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
<b>E300 in Water</b>		
Chloride	16887-00-6	DoD, ILEPA, WDNR

**Certified Analyses included in this Report (Continued)**

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

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

Work Order: 20E0844

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 CommentsWork 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



## Analytical Report

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

September 01, 2022

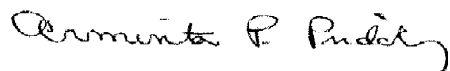
Work Order: 22H1017

RE: NYC Housing Authority, Jacob Riis Houses  
Aug 30 2022 As Special

Dear Samantha Wolber:

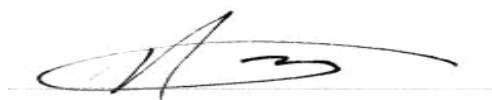
Enclosed are the analytical reports for the EMT Work Order listed. Also included with this analytical report is a copy of the chain of custody associated with these samples. If you have any questions, please contact me.

Sincerely,



Arminta Priddy  
Project Manager  
847.967.6666  
[apriddy@emt.com](mailto:apriddy@emt.com)  
Approved for release: 9/1/2022 9:51:49AM

Approved by,



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



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## Case Narrative

**Client:** LiquiTech, Inc.  
**Project:** NYC Housing Authority, Jacob Riis Houses  
 Aug 30 2022 As Special  
**Work Order:** 22H1017

**Date:** 09/01/2022

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
BLDG 11 Point of Entry	22H1017-01	Drinking Water	08/30/22 11:26	08/31/22 09:40
BLDG 11 POE #2	22H1017-02	Drinking Water	08/30/22 11:27	08/31/22 09:40
BLDG 11 Apt █ Kitchen	22H1017-03	Drinking Water	08/30/22 11:40	08/31/22 09:40
BLDG 11 Apt █ Kitchen Sink	22H1017-04	Drinking Water	08/30/22 11:46	08/31/22 09:40
465 E 10 St Point of Entry	22H1017-05	Drinking Water	08/30/22 11:56	08/31/22 09:40
465 E 10 St Apt █ Kitchen Sink	22H1017-06	Drinking Water	08/30/22 12:05	08/31/22 09:40

## Narrative

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

### **Work Order: 22H1017**

The samples were received on 08/31/22 09:40. The samples arrived in good condition and properly preserved. The temperature of the cooler at receipt was:

<u>Cooler</u>	<u>Temp C°</u>
Default Cooler	23.0

### Client Sample Results

**Client:** LiquiTech, Inc.  
**Project:** NYC Housing Authority, Jacob Riis Houses  
 Aug 30 2022 As Special  
**Work Order:** 22H1017

**Report Date:** 09/01/2022

Analyses	Result	EMT Reporting Limit	Qual	Units	MDL	Date/Time Analyzed	Batch	Analyst
<b>Client Sample ID:</b> BLDG 11 Point of Entry <b>Collection Date:</b> 08/30/2022 11:26 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-01 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	< 0.0125	0.0125		mg/L	0.00750	08/31/22 18:40	B2H1206	KJ1
<b>Client Sample ID:</b> BLDG 11 POE #2 <b>Collection Date:</b> 08/30/2022 11:27 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-02 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	0.0141	0.0125		mg/L	0.00750	08/31/22 18:42	B2H1206	KJ1
<b>Client Sample ID:</b> BLDG 11 Apt [REDACTED] Kitchen <b>Collection Date:</b> 08/30/2022 11:40 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-03 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	0.0136	0.0125		mg/L	0.00750	08/31/22 18:44	B2H1206	KJ1
<b>Client Sample ID:</b> BLDG 11 Apt [REDACTED] Kitchen Sink <b>Collection Date:</b> 08/30/2022 11:46 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-04 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	0.0138	0.0125		mg/L	0.00750	08/31/22 18:50	B2H1206	KJ1
<b>Client Sample ID:</b> 465 E 10 St Point of Entry <b>Collection Date:</b> 08/30/2022 11:56 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-05 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	0.0139	0.0125		mg/L	0.00750	08/31/22 18:52	B2H1206	KJ1
<b>Client Sample ID:</b> 465 E 10 St Apt [REDACTED] Kitchen Sink <b>Collection Date:</b> 08/30/2022 12:05 <b>Matrix:</b> Drinking Water <b>Lab ID:</b> 22H1017-06 <b>Metals by ICP-MS</b> <b>Method: E200.8</b>								
Arsenic	0.0137	0.0125		mg/L	0.00750	08/31/22 18:54	B2H1206	KJ1

### Qualifiers and Definitions

Item	Description
%Rec	Percent Recovery

**Certified Analyses included in this Report**

Analyte	CAS #	Certifications
<b><i>E200.8 in Drinking Water</i></b>		
Arsenic	7440-38-2	ILEPA

**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



FOR ARSENIC ANALYSIS

23.0°C

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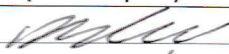

22H1017  
PM: Arminta Priddy  
LiquiTech, Inc.  
LiquiTech DW



Use included Return Label  
Environmental Monitoring and Technologies, Inc  
Ship To: 509 North 3<sup>rd</sup> Ave.  
Des Plaines, IL 60016-1162

**LiquiTech**  
innovation in water security™

**Metals Sampling Chain of Custody**

<b>Organization:</b> New York City Housing Authority		<b>Sample Type Code (All Samples):</b> GRAB	
<b>Sub- Organization:</b> Jacob Riis Houses		<b>Matrix Code (All Samples):</b> 1	
<b>Sampler:</b> R. Kasper		<b>Container Count (All Samples):</b>	
<b>Sampler Signature:</b> 		<b>Preservation Code (All Samples):</b> P::3	
<b>Sampling Date:</b> 08/30/22		<b>Requested Analysis (All Samples):</b> 200.8 As (Arsenic)	
<b>Tracking Number:</b>		<b>Received By:</b> 	
<b>Relinquished By:</b>  1245		<b>Date/Time:</b> 8-30-22 1245	
		<b>Date/Time:</b> 9/31/22 08:40	

#	Building Name	System Group Name (Loop #)	Sample Location (Rm #, sink, tub, shower)	Sample Temp (°F)	Sampled Time	Sample ID (Lab Use Only)
1	Building #11		BLDG 11 Point of Entry	73	1126	01A
2	Building #11		BLDG 11 POE #2	73	1127	02A
3	Building #11		BLDG 11 Apt [redacted] Kitchen Sink	75	1140	03A
4	Building #11		BLDG 11 Apt [redacted] Kitchen Sink	75	1146	04A
5	465 East 10th St.		465 E 10 St. Point of Entry	72	1156	05A
6	465 East 10th St.		465 E 10 St. [redacted] Point of Entry	75	1205	06A
7			Apt [redacted] Kitchen Sink			
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# Sample Receipt Checklist

Work Order: 22H1017

Printed: 8/31/2022 10:31:43AM

Client: LiquiTech, Inc.  
Project: LiquiTech DW

Date Due: Friday, September 2, 2022

Received By: Rida Mughal  
Logged In By: Rida Mughal

Date Received: 08/31/22 09:40  
Date Logged In: 08/31/22 10:27

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 Yes  
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: 22H1017

The samples were received on 08/31/22 09:40. The samples arrived in good condition and properly preserved. The temperature of the cooler at receipt was:

Cooler	Temp C°
Default Cooler	23.0

Samples going out of hold time within 24 hours:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Routine TAT has been entered X  
PM Communicate TAT has been entered \_\_\_\_\_

RMZ

8/31/22

Reviewed By:

Date: