

- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

Report Date:
24-May-16 11:13

Laboratory Report

South Hadley School Department
116 Main Street
South Hadley, MA 01075
Attn: Bruce Mailhott

Project: Plains School - S. Hadley, MA
Project #: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC21403-01	Plains School by Gym	Drinking Water	16-May-16 21:00	17-May-16 09:45
SC21403-02	Plains School by Top of Stairs	Drinking Water	16-May-16 21:00	17-May-16 09:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435



Authorized by:



June O'Connor
Laboratory Director

Eurofins Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 21.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Acceptance Check Form

Client: South Hadley School Department
 Project: Plains School - S. Hadley, MA / [none]
 Work Order: SC21403
 Sample(s) received on: 5/17/2016

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC21403-01

Client ID: Plains School by Gym

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.0129		0.00050	mg/l	EPA 200.8

Lab ID: SC21403-02

Client ID: Plains School by Top of Stairs

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.0145		0.00050	mg/l	EPA 200.8

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

Plains School by Gym

SC21403-01

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	17-May-16		LNB	1608282	
Total Metals by EPA 200 Series Methods													
7440-50-8	Copper	0.0129		mg/l	0.00050	0.00010	1	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	"	"	"	X

Sample Identification

Plains School by Top of Stairs

SC21403-02

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	17-May-16		LNB	1608282	
Total Metals by EPA 200 Series Methods													
7440-50-8	Copper	0.0145		mg/l	0.00050	0.00010	1	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	"	"	"	X

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1608565 - EPA 200 Series										
<u>Blank (1608565-BLK1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>					
Lead	< 0.00050		mg/l	0.00050						
Copper	< 0.00050		mg/l	0.00050						
<u>LCS (1608565-BS1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>					
Lead	0.0260		mg/l	0.00050	0.0250		104	85-115		
Copper	0.0247		mg/l	0.00050	0.0250		99	85-115		
<u>Duplicate (1608565-DUP1)</u>					<u>Source: SC21403-01</u>		<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>			
Lead	< 0.00050		mg/l	0.00050		0.00005				20
Copper	0.0114		mg/l	0.00050		0.0129			12	20
<u>Matrix Spike (1608565-MS1)</u>					<u>Source: SC21403-01</u>		<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>			
Lead	0.0739	D	mg/l	0.00500	0.100	0.00005	74	70-130		
Copper	0.0844	D	mg/l	0.00500	0.100	0.0129	71	70-130		
<u>Matrix Spike (1608565-MS2)</u>					<u>Source: SC21403-02</u>		<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>			
Lead	0.0973	D	mg/l	0.00500	0.100	0.00011	97	70-130		
Copper	0.109	D	mg/l	0.00500	0.100	0.0145	95	70-130		

Notes and Definitions

D	Data reported from a dilution
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Jackie Clement



eurofins

Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: 5 days
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: So, Hadley Supt.

Telephone # (413) 885 2234
Project Mgr:

Invoice To: So, Hadley School Dept
116 Maple St
So, Hadley MA

P.O. No.: 439776 Quote #:

Project No:
Site Name: Plains School
Location:
Sampler(s):

State:

F=Field Filtered 1=Na₂SO₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 11=12=
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1=

X2=

X3=

G= Grab C= Composite

Matrix

Type

Time:

Date:

Sample ID:

Lab ID:

Time:

Date:

Sample ID:

Lab ID:

Lab ID:

X1=

X2=

X3=

Matrix

Type

Time:

Date:

Sample ID:

Lab ID:

X1=

X2=

X3=

Matrix

Type

Time:

Date:

Sample ID:

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Lab ID:

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Matrix

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Sample ID:

Lab ID:

X1=

X2=

X3=

- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

Report Date:
 24-May-16 11:13

Laboratory Report

South Hadley School Department
 116 Main Street
 South Hadley, MA 01075
 Attn: Bruce Mailhott

Project: Mosier School - S. Hadley, MA
 Project #: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC21405-01	Mosier School Sink (Kitchen)	Drinking Water	16-May-16 21:00	17-May-16 09:45
SC21405-02	Mosier Bubbler (Cafe)	Drinking Water	16-May-16 21:00	17-May-16 09:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
 All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
 Connecticut # PH-0777
 Florida # E87936
 Maine # MA138
 New Hampshire # 2538
 New Jersey # MA011
 New York # 11393
 Pennsylvania # 68-04426/68-02924
 Rhode Island # LAO00098
 USDA # S-51435



Authorized by:



June O'Connor
 Laboratory Director

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 21.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA 200.8

Samples:

SC21405-01 *Mosier School Sink (Kitchen)*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Copper

SC21405-02 *Mosier Bubbler (Cafe)*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Copper

Sample Acceptance Check Form

Client: South Hadley School Department
Project: Mosier School - S. Hadley, MA / [none]
Work Order: SC21405
Sample(s) received on: 5/17/2016

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC21405-01

Client ID: Mosier School Sink (Kitchen)

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.439	GS1, D0.00500		mg/l	EPA 200.8
Lead	0.0114		0.00050	mg/l	EPA 200.8

Lab ID: SC21405-02

Client ID: Mosier Bubbler (Cafe)

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.195	GS1, D0.00250		mg/l	EPA 200.8

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

Mosier School Sink (Kitchen)

SC21405-01

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	17-May-16		LNB	1608282	
Total Metals by EPA 200 Series Methods													
7440-50-8	Copper	0.439	GS1, D	mg/l	0.00500	0.00096	10	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	0.0114		mg/l	0.00050	0.00004	1	"	"	23-May-16	"	"	X

Sample Identification

Mosier Bubbler (Cafe)

SC21405-02

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Total Metals by EPA 200 Series Methods													
7440-50-8	Copper	0.195	GS1, D	mg/l	0.00250	0.00048	5	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	23-May-16	"	"	X

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 1608565 - EPA 200 Series									
<u>Blank (1608565-BLK1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>				
Lead	< 0.00050		mg/l	0.00050					
Copper	< 0.00050		mg/l	0.00050					
<u>LCS (1608565-BS1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>				
Lead	0.0260		mg/l	0.00050	0.0250		104	85-115	
Copper	0.0247		mg/l	0.00050	0.0250		99	85-115	

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

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Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Jackie Clement

☒ Final Report
☐ Re-Issued Report
☐ Revised Report

Report Date:
24-May-16 11:09

Laboratory Report

South Hadley School Department
116 Main Street
South Hadley, MA 01075
Attn: Bruce Mailhott

Project: Middle School - S. Hadley, MA
Project #: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC21407-01	Middle School Bubbler by Cafe	Drinking Water	16-May-16 21:00	17-May-16 09:45
SC21407-02	Middle Bubbler by Bottom Ramp	Drinking Water	16-May-16 21:00	17-May-16 09:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435



Authorized by:



June O'Connor
Laboratory Director

Eurofins Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 21.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA 200.8

Samples:

SC21407-02 *Middle Bubbler by Bottom Ramp*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Copper

Sample Acceptance Check Form

Client: South Hadley School Department
 Project: Middle School - S. Hadley, MA / [none]
 Work Order: SC21407
 Sample(s) received on: 5/17/2016

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC21407-01

Client ID: Middle School Bubbler by Cafe

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.0924		0.00050	mg/l	EPA 200.8

Lab ID: SC21407-02

Client ID: Middle Bubbler by Bottom Ramp

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.206	GS1, D0.00250		mg/l	EPA 200.8
Lead	0.00290		0.00050	mg/l	EPA 200.8

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification**Middle School Bubbler by Cafe**

SC21407-01

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
---------	------------	--------	------	-------	------	-----	----------	-------------	----------	----------	---------	-------	-------

Total Metals by EPA 200/6000 Series Methods

Preservation

Lab
Preserved

N/A

1

EPA 200/6000
methods17-May-1
6

LNB

1608282

Total Metals by EPA 200 Series Methods

7440-50-8	Copper	0.0924		mg/l	0.00050	0.00010	1	EPA 200.8	20-May-1 6	23-May-1 6	edt	1608565	X
-----------	--------	--------	--	------	---------	---------	---	-----------	---------------	---------------	-----	---------	---

7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	"	"	"	X
-----------	------	-----------	--	------	---------	---------	---	---	---	---	---	---	---

Sample Identification**Middle Bubbler by Bottom Ramp**

SC21407-02

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
---------	------------	--------	------	-------	------	-----	----------	-------------	----------	----------	---------	-------	-------

Total Metals by EPA 200/6000 Series Methods

Preservation

Lab
Preserved

N/A

1

EPA 200/6000
methods17-May-1
6

LNB

1608282

Total Metals by EPA 200 Series Methods

7440-50-8	Copper	0.206	GS1, D	mg/l	0.00250	0.00048	5	EPA 200.8	20-May-1 6	23-May-1 6	edt	1608565	X
-----------	--------	-------	--------	------	---------	---------	---	-----------	---------------	---------------	-----	---------	---

7439-92-1	Lead	0.00290		mg/l	0.00050	0.00004	1	"	"	23-May-1 6	"	"	X
-----------	------	---------	--	------	---------	---------	---	---	---	---------------	---	---	---

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1608565 - EPA 200 Series										
<u>Blank (1608565-BLK1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>					
Lead	< 0.00050		mg/l	0.00050						
Copper	< 0.00050		mg/l	0.00050						
<u>LCS (1608565-BS1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>					
Lead	0.0260		mg/l	0.00050	0.0250		104	85-115		
Copper	0.0247		mg/l	0.00050	0.0250		99	85-115		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Jackie Clement



eurofins

Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page _____ of _____

Report To: Se, Hadley Sept

Telephone #: 413 885-2034

Invoice To: Se, Hadley School Dept
116 Main St

P.O. No.: 429776 Quote #:

Project No: _____
Site Name: Middle School
Location: _____
Sampler(s): _____

State: _____

Special Handling:

☐ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: 3 days

All TATs subject to laboratory approval

Min. 24-hr notification needed for rushes

Samples disposed after 60 days unless otherwise instructed.

F=Field Filtered 1=Na₂SO₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= _____ X2= _____ X3= _____

List Preservative Code below:

QA/QC Reporting Notes:

* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DEP RCP Report? ☐ Yes ☐ No

☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
☐ State-specific reporting standards:

Check if chlorinated

Containers

of VOA Vials _____
of Amber Glass _____
of Clear Glass _____
of Plastic _____
Lead & Copper _____

Matrix

Type

C=Composite

G=Grab

Lab ID: 502140701 Sample ID: Middle School by Lake Date: 5/16/16 Time: 9:00 PM

02 Bottom Ramp Middle Bubbler by 5/16/16 9:00 PM DW

Relinquished by: [Signature]

Received by: [Signature]

Date: 5/17/16

Time: 9:45

Temp °C: 21.5

EDD format: ☐ ☐ E-mail to: BMA.Hott@SHSchoools.com

Condition upon receipt: ☒ Ambient ☐ Ice ☐ Refrigerated ☐ Dry Ice ☐ Frozen ☐ Broken ☐ Intact

- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

Report Date:
 24-May-16 11:10

Laboratory Report

South Hadley School Department
 116 Main Street
 South Hadley, MA 01075
 Attn: Bruce Mailhott

Project: High School - S. Hadley, MA
 Project #: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC21408-01	High School by Art Room	Drinking Water	16-May-16 21:00	17-May-16 09:45
SC21408-02	High School by Gym	Drinking Water	16-May-16 21:00	17-May-16 09:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
 All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
 Connecticut # PH-0777
 Florida # E87936
 Maine # MA138
 New Hampshire # 2538
 New Jersey # MA011
 New York # 11393
 Pennsylvania # 68-04426/68-02924
 Rhode Island # LAO00098
 USDA # S-51435



Authorized by:



June O'Connor
 Laboratory Director

Eurofins Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 21.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA 200.8

Samples:

SC21408-01 *High School by Art Room*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Copper

SC21408-02 *High School by Gym*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Copper

Sample Acceptance Check Form

Client: South Hadley School Department
Project: High School - S. Hadley, MA / [none]
Work Order: SC21408
Sample(s) received on: 5/17/2016

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples cooled on ice upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC21408-01

Client ID: High School by Art Room

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.184		GS1, D0.00250	mg/l	EPA 200.8

Lab ID: SC21408-02

Client ID: High School by Gym

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Copper	0.198		GS1, D0.00250	mg/l	EPA 200.8

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

High School by Art Room

SC21408-01

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	17-May-16		LNB	1608282	
Total Metals by EPA 200 Series Methods													
7440-50-8	Copper	0.184	GS1, D	mg/l	0.00250	0.00048	5	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	23-May-16	"	"	X

Sample Identification

High School by Gym

SC21408-02

Client Project #

[none]

Matrix

Drinking Water

Collection Date/Time

16-May-16 21:00

Received

17-May-16

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 200/6000 Series Methods													
	Preservation	Lab Preserved		N/A			1	EPA 200/6000 methods	17-May-16		LNB	1608282	
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7440-50-8	Copper	0.198	GS1, D	mg/l	0.00250	0.00048	5	EPA 200.8	20-May-16	23-May-16	edt	1608565	X
7439-92-1	Lead	< 0.00050		mg/l	0.00050	0.00004	1	"	"	23-May-16	"	"	X

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 1608565 - EPA 200 Series									
<u>Blank (1608565-BLK1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>				
Lead	< 0.00050		mg/l	0.00050					
Copper	< 0.00050		mg/l	0.00050					
<u>LCS (1608565-BS1)</u>					<u>Prepared: 20-May-16 Analyzed: 23-May-16</u>				
Lead	0.0260		mg/l	0.00050	0.0250		104 85-115		
Copper	0.0247		mg/l	0.00050	0.0250		99 85-115		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

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Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

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Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Jackie Clement



eurofins

Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: 5 days
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: So. Hadley Sept.

Telephone #: (413) 585 2934

Project Mgr: _____

Invoice To: So. Hadley School Dept

116 main st

So. Hadley MA

P.O. No.: 429776 Quote #: _____

Project No: _____

Site Name: High School

Location: _____

Sampler(s): _____

State: _____

F=Field Filtered 1=Na₂SO₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= _____ X2= _____ X3= _____

List Preservative Code below:

Containers

Analysis

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☒ No
CT DPH RCP Report? ☐ Yes ☒ No

☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards: _____

Check if chlorinated

G= Grab C=Composite

Matrix

Type

Sample ID: _____ Date: _____ Time: _____

Received by: _____

Relinquished by: _____

Temp °C

Observed

Calculated

Condition upon receipt: _____

Custody Seals: _____

Present ☐ Intact ☐ Broken ☐

Ambient ☒ Ice ☐ Refrigerated ☐ D/VOA Frozen ☐ Soil Jar Frozen ☐

E-mail to: B.Mailhott@SHSchools.org

Condition upon receipt: _____

Custody Seals: _____

Present ☐ Intact ☐ Broken ☐

Ambient ☒ Ice ☐ Refrigerated ☐ D/VOA Frozen ☐ Soil Jar Frozen ☐

E-mail to: _____

Condition upon receipt: _____

Custody Seals: _____

Present ☐ Intact ☐ Broken ☐

Ambient ☒ Ice ☐ Refrigerated ☐ D/VOA Frozen ☐ Soil Jar Frozen ☐

E-mail to: _____

Condition upon receipt: _____

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