



August 17, 2021

Mr. James Shuttleworth, Principal  
DiNisco Design  
99 Chauncy Street, Suite 901  
Boston, Massachusetts 02111

**Re: Playground Subsoil Sampling and Arsenic Analysis Results  
Charles C. Cashman Elementary School  
193 Lions Mouth Road  
Amesbury, Massachusetts 01913  
ECMS Project No. 1009.073**

Dear Mr. Shuttleworth:

Pursuant to your request, *Environmental & Construction Management Services, Inc. (ECMS)* has completed the collection of subsoils samples from beneath the Cashman School playground for laboratory analysis for arsenic.

On July 29, 2021, *ECMS* personnel collected four (4) surficial soil samples below the playground surface (mulch, filter fabric and crushed stone) from 18 to 24 inches below surface grade. The soils were found to be very dense brown silty sand consistent with the soils sampled throughout the Cashman School property. The soil samples were analyzed under chain of custody (COC) by Massachusetts approved laboratory *Eurofins Environment Testing New England* of North Kingstown, Rhode Island for arsenic under EPA Method 6010D.

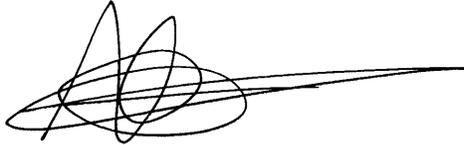
**Concentrations of arsenic in all four (4) soil samples submitted were detected above their applicable RCS-1 of 20 milligrams per kilogram (mg/kg).** The concentrations of arsenic ranged between 28.4 mg/kg and 62 mg/kg with an RCS-1 of 20 mg/kg and an imminent hazard concentration of 40 mg/kg. No concentrations of arsenic were detected above their applicable upper concentration limit (UCL) of 500 mg/kg. While these concentrations are above their respective RCS-1 under MOHML, they are not reportable under the Massachusetts Contingency Plan (MCP) since the arsenic detected in the Cashman Elementary School soils is naturally occurring.

A copy of the laboratory results and their respective MCP RCS-1 reporting concentrations (RCs) are presented in Tables 1 and the approximate locations of the soil samples are presented on Figure 1, Soil Sample Location Plan.

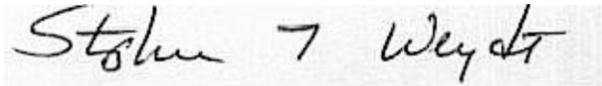
Should you have any further questions or comments, please do not hesitate to contact us at (617) 338-2121.

Sincerely,

*For Environmental & Construction Management Services, Inc. by*



Kevin J. Kavanaugh, LSP, CHMM  
Principal Environmental Engineer



Stephen T. Weydt  
Principal Environmental Engineer

Attachments:

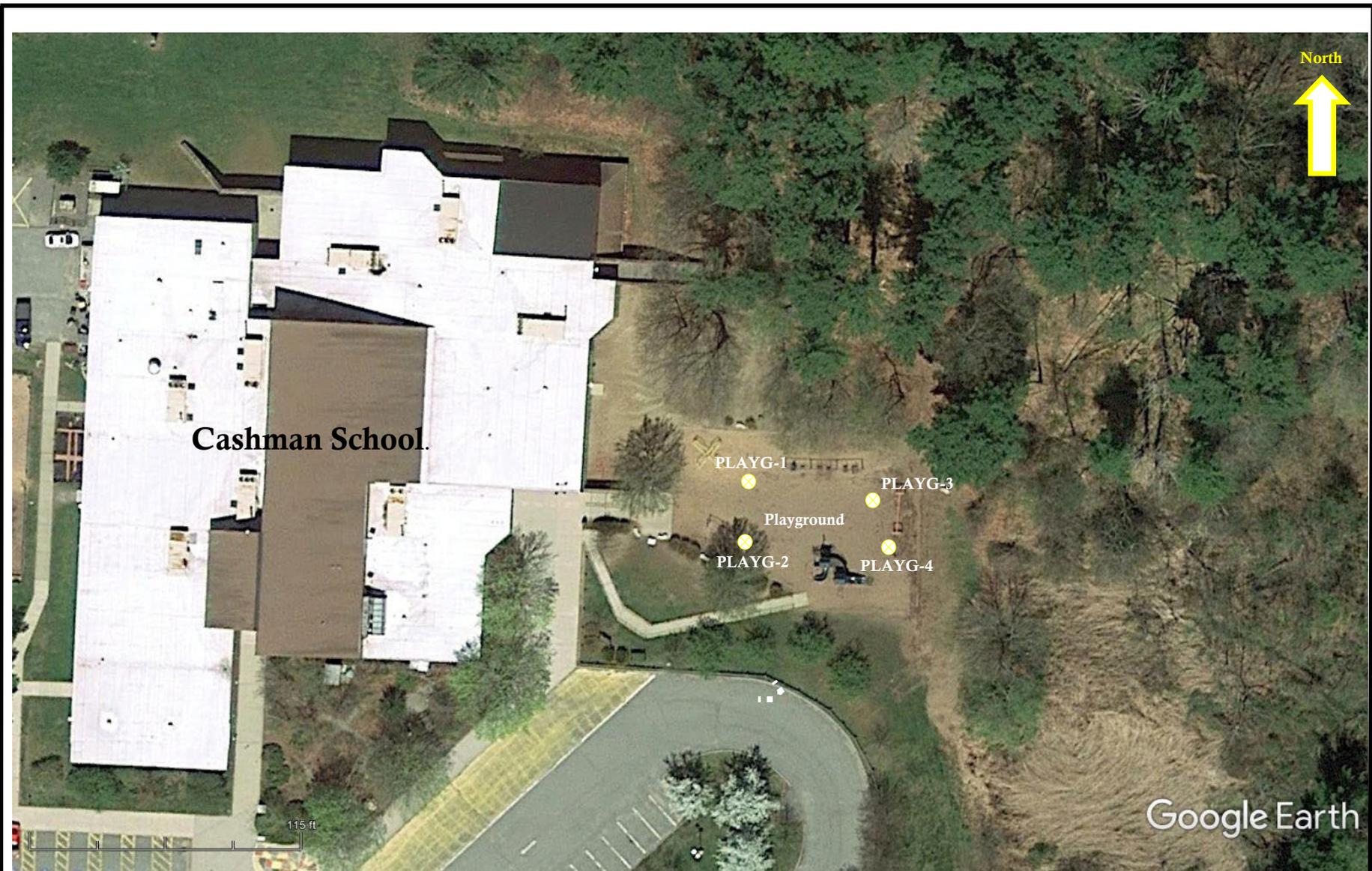
Figure 1 –Soil Sample Location Plan dated July 29, 2021

Table 1 – Summary of Subsoils Laboratory Analysis for Arsenic

Appendix A – Soil Laboratory Analysis Report

Appendix B – Qualifications/Limitations

**FIGURE**



**Cashman Elementary School**  
 193 Lions Mouth Road  
 Amesbury, Massachusetts  
 01913



**Environmental & Construction  
 Management Services, Inc.**

**Project No.**  
 1009.073

**Figure 1**

**Cashman Playground Soil Sample  
 Location Plan**

**Drawn By:** KJK

**Date:** 7/29/2021

**TABLE**

## TABLE 1

### SUMMARY OF PLAYGROUND SUBSOIL SAMPLES FOR ARSENIC

**Cashman School  
Amesbury, Massachusetts  
ECMS Project No. 1009.073**

Sample Location		PLAYG-1	PLAYG-2	PLAYG-3	PLAYG-4	MassDEP Reportable Concentrations RCS-1	MassDEP Imminent Hazard
Laboratory ID		620-622-1	620-622-2	620-622-3	620-622-4		
Sample Date		7/29/2021	7/29/2021	7/29/2021	7/29/2021		
Sample Depth		24"	22"	22"	18"		
7440-38-2	<b>Arsenic</b>	<b>44.4</b>	<b>43.6</b>	<b>62</b>	28.4	20	40

< indicates less than the respective method detection limit.

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

Boldfaced type indicates an exceedance.

Pursuant to MCP 310 CMR 40.0975(6)(a-c): MCP Method 1 Soil Standards, and Massachusetts Oil and Hazardous Materials List (MOHML) revised (effective) 2014



**APPENDIX A**

**SOIL LABORATORY ANALYSIS REPORT**

## ANALYTICAL REPORT

Eurofins Environment Testing New England  
646 Camp Ave  
North Kingstown, RI 02852  
Tel: (413)789-9018

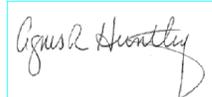
Laboratory Job ID: 620-622-1

Client Project/Site: Cashman School - Amesbury, MA

**For:**

ECMS, Inc.  
288 Grove St #391  
Braintree, Massachusetts 02184

Attn: Kevin Kavanaugh



Authorized for release by:  
8/9/2021 9:40:33 PM

Agnes Huntley, Project Manager  
(401)372-3482  
[agnes.huntley@eurofinset.com](mailto:agnes.huntley@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Definitions/Glossary

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Environment Testing New England Project #: 620-622-1

Project Location: Cashman School - Amesbury, MA RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
620-622-1 through 620-622-4

Matrices:  Groundwater/Surface Water  Soil/Sediment  Drinking Water  Air  Other:

**CAM Protocol** (check all that apply below:)

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH (GC/PID/FID) CAM IV A <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP VPH (GC/MS) CAM IV C <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

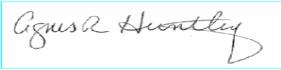
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
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**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were <b>all</b> QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All negative responses must be addressed in an attached laboratory narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.**

Signature:  Position: Project Manager

Printed Name: Agnes Huntley Date: 08/09/2021

# Case Narrative

Client: ECMS, Inc.  
Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

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## Job ID: 620-622-1

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### Laboratory: Eurofins Environment Testing New England

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#### Narrative

#### Job Narrative 620-622-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/30/2021 6:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.4° C.

#### Metals

Methods 6010, 6010D: The continuing calibration verification (CCV) associated with batch 620-2837 recovered above the upper control limit for boron, beryllium, cadmium, molybdenum, antimony, selenium, and thallium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (620-615-D-1-A).

Methods 6010, 6010D: The continuing calibration verification (CCV) associated with batch 620-2837 recovered outside acceptance criteria, low biased, for silver. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Methods 6010, 6010D: The laboratory control sample duplicate (LCSD) for preparation batch 620-2713 and analytical batch 620-2837 recovered outside control limits for the following analytes: barium and nickel. These analytes were within criteria in the LCS; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

## Client Sample ID: PLAYG-1

Lab Sample ID: 620-622-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	44.4		1.65	mg/Kg	1	✳	6010D	Total/NA

## Client Sample ID: PLAYG-2

Lab Sample ID: 620-622-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	43.6		1.73	mg/Kg	1	✳	6010D	Total/NA

## Client Sample ID: PLAYG-3

Lab Sample ID: 620-622-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	62.0		1.43	mg/Kg	1	✳	6010D	Total/NA

## Client Sample ID: PLAYG-4

Lab Sample ID: 620-622-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	28.4		1.60	mg/Kg	1	✳	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing New England

# Client Sample Results

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

**Client Sample ID: PLAYG-1**

**Lab Sample ID: 620-622-1**

**Date Collected: 07/29/21 11:55**

**Matrix: Solid**

**Date Received: 07/30/21 15:00**

**Percent Solids: 87.4**

**Method: 6010D - Metals (ICP)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	44.4		1.65	mg/Kg	☼	08/03/21 09:26	08/09/21 17:02	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
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- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Client Sample Results

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

**Client Sample ID: PLAYG-2**

**Lab Sample ID: 620-622-2**

**Date Collected: 07/29/21 12:15**

**Matrix: Solid**

**Date Received: 07/30/21 15:00**

**Percent Solids: 82.6**

**Method: 6010D - Metals (ICP)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	43.6		1.73	mg/Kg	✱	08/03/21 09:26	08/09/21 17:07	1

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# Client Sample Results

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

**Client Sample ID: PLAYG-3**

**Lab Sample ID: 620-622-3**

**Date Collected: 07/29/21 12:40**

**Matrix: Solid**

**Date Received: 07/30/21 15:00**

**Percent Solids: 82.6**

**Method: 6010D - Metals (ICP)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	62.0		1.43	mg/Kg	☼	08/03/21 09:26	08/09/21 17:12	1

1

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3

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# Client Sample Results

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

**Client Sample ID: PLAYG-4**

**Lab Sample ID: 620-622-4**

**Date Collected: 07/29/21 13:10**

**Matrix: Solid**

**Date Received: 07/30/21 15:00**

**Percent Solids: 86.5**

**Method: 6010D - Metals (ICP)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28.4		1.60	mg/Kg	✳	08/03/21 09:26	08/09/21 17:17	1

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# QC Sample Results

Client: ECMS, Inc.  
 Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 620-2713/1-A**  
**Matrix: Solid**  
**Analysis Batch: 2837**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 2713**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.35	mg/Kg		08/03/21 09:26	08/09/21 16:00	1

**Lab Sample ID: LCDSRM 620-2713/3-A**  
**Matrix: Solid**  
**Analysis Batch: 2837**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 2713**

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	162	180.9		mg/Kg		111.7	82.7 - 117.9	15	

**Lab Sample ID: LCSSRM 620-2713/2-A**  
**Matrix: Solid**  
**Analysis Batch: 2837**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 2713**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	162	154.9		mg/Kg		95.6	82.7 - 117.9		

# QC Association Summary

Client: ECMS, Inc.  
Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

## Metals

### Prep Batch: 2713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-622-1	PLAYG-1	Total/NA	Solid	3050B	
620-622-2	PLAYG-2	Total/NA	Solid	3050B	
620-622-3	PLAYG-3	Total/NA	Solid	3050B	
620-622-4	PLAYG-4	Total/NA	Solid	3050B	
MB 620-2713/1-A	Method Blank	Total/NA	Solid	3050B	
LCDSRM 620-2713/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 620-2713/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 2837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-622-1	PLAYG-1	Total/NA	Solid	6010D	2713
620-622-2	PLAYG-2	Total/NA	Solid	6010D	2713
620-622-3	PLAYG-3	Total/NA	Solid	6010D	2713
620-622-4	PLAYG-4	Total/NA	Solid	6010D	2713
MB 620-2713/1-A	Method Blank	Total/NA	Solid	6010D	2713
LCDSRM 620-2713/3-A	Lab Control Sample Dup	Total/NA	Solid	6010D	2713
LCSSRM 620-2713/2-A	Lab Control Sample	Total/NA	Solid	6010D	2713

## General Chemistry

### Analysis Batch: 2721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-622-1	PLAYG-1	Total/NA	Solid	Moisture	
620-622-2	PLAYG-2	Total/NA	Solid	Moisture	
620-622-3	PLAYG-3	Total/NA	Solid	Moisture	
620-622-4	PLAYG-4	Total/NA	Solid	Moisture	
620-622-1 DU	PLAYG-1	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: ECMS, Inc.  
Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

## Client Sample ID: PLAYG-1

Date Collected: 07/29/21 11:55

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	2721	08/03/21 12:25	BJJ	ENE

## Client Sample ID: PLAYG-1

Date Collected: 07/29/21 11:55

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-1

Matrix: Solid

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2713	08/03/21 09:26	EDT	ENE
Total/NA	Analysis	6010D		1	2837	08/09/21 17:02	EDT	ENE

## Client Sample ID: PLAYG-2

Date Collected: 07/29/21 12:15

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	2721	08/03/21 12:25	BJJ	ENE

## Client Sample ID: PLAYG-2

Date Collected: 07/29/21 12:15

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-2

Matrix: Solid

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2713	08/03/21 09:26	EDT	ENE
Total/NA	Analysis	6010D		1	2837	08/09/21 17:07	EDT	ENE

## Client Sample ID: PLAYG-3

Date Collected: 07/29/21 12:40

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	2721	08/03/21 12:25	BJJ	ENE

## Client Sample ID: PLAYG-3

Date Collected: 07/29/21 12:40

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-3

Matrix: Solid

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2713	08/03/21 09:26	EDT	ENE
Total/NA	Analysis	6010D		1	2837	08/09/21 17:12	EDT	ENE

## Client Sample ID: PLAYG-4

Date Collected: 07/29/21 13:10

Date Received: 07/30/21 15:00

Lab Sample ID: 620-622-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	2721	08/03/21 12:28	BJJ	ENE

# Lab Chronicle

Client: ECMS, Inc.  
Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

**Client Sample ID: PLAYG-4**

**Lab Sample ID: 620-622-4**

**Date Collected: 07/29/21 13:10**

**Matrix: Solid**

**Date Received: 07/30/21 15:00**

**Percent Solids: 86.5**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3050B			2713	08/03/21 09:26	EDT	ENE
Total/NA	Analysis	6010D		1	2837	08/09/21 17:17	EDT	ENE

**Laboratory References:**

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

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# Accreditation/Certification Summary

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

## Laboratory: Eurofins Environment Testing New England

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-RI907	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010D	3050B	Solid	Arsenic
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# Method Summary

Client: ECMS, Inc.

Job ID: 620-622-1

Project/Site: Cashman School - Amesbury, MA

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	ENE
Moisture	Percent Moisture	EPA	ENE
3050B	Preparation, Metals	SW846	ENE

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

ENE = Eurofins Environment Testing New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018



# Sample Summary

Client: ECMS, Inc.  
Project/Site: Cashman School - Amesbury, MA

Job ID: 620-622-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
620-622-1	PLAYG-1	Solid	07/29/21 11:55	07/30/21 15:00
620-622-2	PLAYG-2	Solid	07/29/21 12:15	07/30/21 15:00
620-622-3	PLAYG-3	Solid	07/29/21 12:40	07/30/21 15:00
620-622-4	PLAYG-4	Solid	07/29/21 13:10	07/30/21 15:00

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Environment Testing  
New England

# CHAIN OF CUSTODY RECORD

## Special Handling:

- Standard TAT - 5 business days
- Rush TAT - Date Needed

All TATs subject to laboratory approval  
Min. 24-hr notification needed for rushes  
Samples disposed after 60 days unless otherwise instructed.

Page 1 of 1

Report To: ECMS, Inc  
288 Grove Street #391  
Braintree, MA 02184  
 Telephone #: 817-338-2121  
 Project Mgr: Kevin Kavanaugh

Invoice To: Same  
  
  
 P O No.  Quote #

Project No: 1009.073  
 Site Name: Cashman School  
 Location: Amesbury State: MA  
 Sampler(s): Kevin Kavanaugh

F=Field Filtered 1=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 2=HCl 3=H<sub>2</sub>SO<sub>4</sub> 4=HNO<sub>3</sub> 5=NaOH 6=Ascorbic Acid  
 7=CH<sub>3</sub>OH 8=NaHSO<sub>4</sub> 9=Deionized Water 10=H<sub>2</sub>PO<sub>4</sub> 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=

Lab ID:	Sample ID:	C-Composite	
		Date:	Time:
	PLAYG-1 through PLAYG-4	7/29/2021	11:55 PM

### Containers

# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Reactivity	Cyanide/Sulfide & pH
3	2				

### List Preservative Code below:

7	Analysis
	8151 Herbicides
	8260 Full List
	8270 Full List
	Legitimability-1030
	MCP 14 Metals Total
	TPH 8100 by GC

### QA/QC Reporting Notes:

\* additional charges may apply

MA DEP/MCP CAM Report?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CT DPH/RCP Report?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> No QC	
<input type="checkbox"/> DQA*	
<input type="checkbox"/> ASP A*	<input type="checkbox"/> ASP B*
<input type="checkbox"/> NJ Reduced*	<input type="checkbox"/> NJ Full*
<input type="checkbox"/> Tier 1*	<input type="checkbox"/> Tier IV*
<input type="checkbox"/> Other:	
State-specific reporting standards:	
	MA RCS-1

Please Hold this sample until after Arsenic.  
 Results from PLAYG-1 through PLAYG-4  
 have been completed. Approval  
 needed to run this disposal suite  
 after K. Kavanaugh review.

Matrix	Date:	Time:	Temp °C
	7/29/21	3:00 pm	Observed 1.5
	7/30/21	11:17	Correction Factor
	7/26/21	18:51	Corrected 2.5
			IR ID # C

Relinquished by:	Received by:

Condition upon receipt:  Present  Intact  Broken  
 Ambient  Iced  Refrigerated  D/VOA Frozen  Soil Jar Frozen

BIDD format. xcel  
 E-mail to kevin.kavanaugh@ecmsinc.com



# Login Sample Receipt Checklist

Client: ECMS, Inc.

Job Number: 620-622-1

**Login Number: 622**

**List Number: 1**

**Creator: Makhoul, Elie**

**List Source: Eurofins Environment Testing New England**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**APPENDIX B**

**QUALIFICATIONS/LIMITATIONS**

## QUALIFICATIONS/LIMITATIONS

*Environmental & Construction Management Services, Inc. (ECMS)* professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. *ECMS* is not responsible for the independent conclusions, opinions or recommendations made by others based on the records review, site inspection, field exploration, and laboratory test data presented in this report.

Factual information regarding on-site business operations, conditions, and historical data provided to *ECMS* is assumed to be correct and complete. *ECMS* assumes no responsibility for hidden or latent conditions or misrepresentation by the property owner, its representatives, public information officials or any authority consulted in connection with the compilation of this report.

The findings set forth in the attached Site assessment report are strictly limited in time and scope to the date of the evaluation(s). The conclusions presented in the Report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed upon services or the time and budgeting restraints imposed by the client.

The purpose of this report was to assess the physical characteristics of the subject Site with respect to the presence in the environment of hazardous material or oil. No specific attempt was made to check on the compliance of present or past owners or operators or of the Site with Federal, State or local laws and regulations, environmental, or otherwise.

Partial findings of this investigation are based on data provided by others. No warranty is expressed or implied with the usage of such data. Much of the information provided in this report is based upon personal interviews and research of all available documents, records and maps held by the appropriate government and private agencies. This is subject to the limitations of historical documentation, availability and accuracy of pertinent records, and the personal recollection of those persons contacted by *ECMS* personnel. *ECMS* is not a professional title insurance firm and makes no guarantee, explicit or implied that the listing, which was reviewed, represented a comprehensive delineation of past Site ownership or tenancy for legal purposes.

Observations were made of the Site and of structures on the Site as indicated within the Report. Where access to portions of the Site or to structures on the Site was unavailable or limited, *ECMS* is unable to render an opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the Site or structure. In addition, *ECMS* renders no opinion as to the presence of hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a Site was obstructed by objects or coverings on or over these surfaces.

The initial site investigation took into account the natural and man-made features of the Site, including any unusual or suspect phenomenon. These factors combined with the Site's geology, hydrology, topography, and past and present land uses served as a basis for choosing a methodology and location for subsurface exploration as well as ground water and subsurface sampling, if done. The subsurface data, if provided, is meant as a representative overview of the Site.

The conclusions and recommendations contained in this report may be based in part upon various types of chemical data and are contingent upon their validity. As indicated within the Report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. It should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional data or variations of current data become available in the future, these data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses may have been performed for specific parameters during the course of this Site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study might be present in soil and/or ground water at the Site.

