

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Phoenix

4625 East Cotton Ctr Blvd

Suite 189

Phoenix, AZ 85040

Tel: (602)437-3340

TestAmerica Job ID: 550-84033-1

TestAmerica SDG: Lincoln Elementary School Confirmation  
Sampling

Client Project/Site: Pb in DW / Mesa Unified District

For:

Arizona Dept of Environmental Quality

1110 W. Washington St., MC5415B-1

Phoenix, Arizona 85007

Attn: David A Burchard



Authorized for release by:

6/15/2017 5:15:54 PM

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### LINKS

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*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: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

### 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

## Case Narrative

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

**Job ID: 550-84033-1**

**Laboratory: TestAmerica Phoenix**

### Narrative

#### Job Narrative 550-84033-1

### Comments

No additional comments.

### Receipt

The samples were received on 6/8/2017 8:26 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 22.8° C.

### Receipt Exceptions

The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: 1 Confirmation-First Draw (550-84033-1), 2 Confirmation-Flush (550-84033-2) and 3 Confirmation-First Draw Day Two (550-84033-3). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion.

### Metals

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

## Sample Summary

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-84033-1	1 Confirmation-First Draw	Drinking Water	06/01/17 09:28	06/08/17 08:26
550-84033-2	2 Confirmation-Flush	Drinking Water	06/01/17 09:31	06/08/17 08:26
550-84033-3	3 Confirmation-First Draw Day Two	Drinking Water	06/02/17 06:30	06/08/17 08:26

## Detection Summary

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

### Client Sample ID: 1 Confirmation-First Draw

Lab Sample ID: 550-84033-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lead	470		0.50	ppb	1		200.8	Total/NA

### Client Sample ID: 2 Confirmation-Flush

Lab Sample ID: 550-84033-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lead	5.7		0.50	ppb	1		200.8	Total/NA

### Client Sample ID: 3 Confirmation-First Draw Day Two

Lab Sample ID: 550-84033-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lead	21		0.50	ppb	1		200.8	Total/NA

This Detection Summary does not include radiochemical test results.

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## Client Sample Results

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

### Client Sample ID: 1 Confirmation-First Draw

Date Collected: 06/01/17 09:28

Date Received: 06/08/17 08:26

### Lab Sample ID: 550-84033-1

Matrix: Drinking Water

#### Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	470		0.50	ppb		06/11/17 11:44	06/14/17 23:33	1

### Client Sample ID: 2 Confirmation-Flush

Date Collected: 06/01/17 09:31

Date Received: 06/08/17 08:26

### Lab Sample ID: 550-84033-2

Matrix: Drinking Water

#### Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5.7		0.50	ppb		06/11/17 12:08	06/14/17 22:20	1

### Client Sample ID: 3 Confirmation-First Draw Day Two

Date Collected: 06/02/17 06:30

Date Received: 06/08/17 08:26

### Lab Sample ID: 550-84033-3

Matrix: Drinking Water

#### Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	21		0.50	ppb		06/11/17 12:13	06/15/17 00:07	1

# QC Sample Results

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

## Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 550-119638/1-A  
Matrix: Water  
Analysis Batch: 120045

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 119638

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.50	ppb		06/11/17 11:44	06/14/17 23:12	1

Lab Sample ID: LCS 550-119638/4-A  
Matrix: Water  
Analysis Batch: 120045

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 119638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	97.7		ppb		98	85 - 115

Lab Sample ID: LCSD 550-119638/5-A  
Matrix: Water  
Analysis Batch: 120045

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 119638

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	100	98.6		ppb		99	85 - 115	1	20

Lab Sample ID: 550-84040-A-4-B MS  
Matrix: Water  
Analysis Batch: 120045

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 119638

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	280		100	375		ppb		100	70 - 130

Lab Sample ID: 550-84040-A-4-C MSD  
Matrix: Water  
Analysis Batch: 120045

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 119638

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	280		100	369		ppb		94	70 - 130	2	20

Lab Sample ID: MB 550-119643/1-A  
Matrix: Water  
Analysis Batch: 120043

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 119643

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.50	ppb		06/11/17 12:08	06/14/17 21:57	1

Lab Sample ID: LCS 550-119643/4-A  
Matrix: Water  
Analysis Batch: 120043

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 119643

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	95.6		ppb		96	85 - 115

Lab Sample ID: LCSD 550-119643/5-A  
Matrix: Water  
Analysis Batch: 120043

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 119643

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	100	95.1		ppb		95	85 - 115	0	20

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# QC Sample Results

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

Lab Sample ID: 550-84040-A-3-B MS

Matrix: Water

Analysis Batch: 120043

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 119643

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	73		100	161		ppb		89	70 - 130

Lab Sample ID: 550-84040-A-3-C MSD

Matrix: Water

Analysis Batch: 120043

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 119643

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	73		100	161		ppb		88	70 - 130	0	20

Lab Sample ID: MB 550-119644/1-A

Matrix: Water

Analysis Batch: 120046

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 119644

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.50	ppb		06/11/17 12:13	06/14/17 23:44	1

Lab Sample ID: LCS 550-119644/4-A

Matrix: Water

Analysis Batch: 120046

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 119644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	94.8		ppb		95	85 - 115

Lab Sample ID: LCSD 550-119644/5-A

Matrix: Water

Analysis Batch: 120046

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 119644

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	100	98.0		ppb		98	85 - 115	3	20

Lab Sample ID: 550-84120-A-3-B MS

Matrix: Water

Analysis Batch: 120046

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 119644

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.7		100	94.4		ppb		93	70 - 130

Lab Sample ID: 550-84120-A-3-C MSD

Matrix: Water

Analysis Batch: 120046

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 119644

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	1.7		100	94.0		ppb		92	70 - 130	0	20

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# QC Association Summary

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

## Metals

### Prep Batch: 119638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-1	1 Confirmation-First Draw	Total/NA	Drinking Water	200.8	
MB 550-119638/1-A	Method Blank	Total/NA	Water	200.8	
LCS 550-119638/4-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 550-119638/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	
550-84040-A-4-B MS	Matrix Spike	Total/NA	Water	200.8	
550-84040-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	

### Prep Batch: 119643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-2	2 Confirmation-Flush	Total/NA	Drinking Water	200.8	
MB 550-119643/1-A	Method Blank	Total/NA	Water	200.8	
LCS 550-119643/4-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 550-119643/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	
550-84040-A-3-B MS	Matrix Spike	Total/NA	Water	200.8	
550-84040-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	

### Prep Batch: 119644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-3	3 Confirmation-First Draw Day Two	Total/NA	Drinking Water	200.8	
MB 550-119644/1-A	Method Blank	Total/NA	Water	200.8	
LCS 550-119644/4-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 550-119644/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	
550-84120-A-3-B MS	Matrix Spike	Total/NA	Water	200.8	
550-84120-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	

### Analysis Batch: 120043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-2	2 Confirmation-Flush	Total/NA	Drinking Water	200.8	119643
MB 550-119643/1-A	Method Blank	Total/NA	Water	200.8	119643
LCS 550-119643/4-A	Lab Control Sample	Total/NA	Water	200.8	119643
LCSD 550-119643/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	119643
550-84040-A-3-B MS	Matrix Spike	Total/NA	Water	200.8	119643
550-84040-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	119643

### Analysis Batch: 120045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-1	1 Confirmation-First Draw	Total/NA	Drinking Water	200.8	119638
MB 550-119638/1-A	Method Blank	Total/NA	Water	200.8	119638
LCS 550-119638/4-A	Lab Control Sample	Total/NA	Water	200.8	119638
LCSD 550-119638/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	119638
550-84040-A-4-B MS	Matrix Spike	Total/NA	Water	200.8	119638
550-84040-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	119638

### Analysis Batch: 120046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-84033-3	3 Confirmation-First Draw Day Two	Total/NA	Drinking Water	200.8	119644
MB 550-119644/1-A	Method Blank	Total/NA	Water	200.8	119644
LCS 550-119644/4-A	Lab Control Sample	Total/NA	Water	200.8	119644
LCSD 550-119644/5-A	Lab Control Sample Dup	Total/NA	Water	200.8	119644
550-84120-A-3-B MS	Matrix Spike	Total/NA	Water	200.8	119644
550-84120-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	119644

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## Lab Chronicle

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

### Client Sample ID: 1 Confirmation-First Draw

Date Collected: 06/01/17 09:28

Date Received: 06/08/17 08:26

Lab Sample ID: 550-84033-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			119638	06/11/17 11:44	EXZ	TAL PHX
Total/NA	Analysis	200.8		1	120045	06/14/17 23:33	KLH	TAL PHX

### Client Sample ID: 2 Confirmation-Flush

Date Collected: 06/01/17 09:31

Date Received: 06/08/17 08:26

Lab Sample ID: 550-84033-2

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			119643	06/11/17 12:08	EXZ	TAL PHX
Total/NA	Analysis	200.8		1	120043	06/14/17 22:20	KLH	TAL PHX

### Client Sample ID: 3 Confirmation-First Draw Day Two

Date Collected: 06/02/17 06:30

Date Received: 06/08/17 08:26

Lab Sample ID: 550-84033-3

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			119644	06/11/17 12:13	EXZ	TAL PHX
Total/NA	Analysis	200.8		1	120046	06/15/17 00:07	KLH	TAL PHX

#### Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

## Accreditation/Certification Summary

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

### Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Arizona	State Program	9	AZ0728	06-09-18

Analysis Method	Prep Method	Matrix	Analyte
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## Method Summary

Client: Arizona Dept of Environmental Quality  
Project/Site: Pb in DW / Mesa Unified District

TestAmerica Job ID: 550-84033-1  
SDG: Lincoln Elementary School Confirmation Sampling

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL PHX

### Protocol References:

EPA = US Environmental Protection Agency

### Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340



## Login Sample Receipt Checklist

Client: Arizona Dept of Environmental Quality

Job Number: 550-84033-1

SDG Number: Lincoln Elementary School Confirmation Sampling

**Login Number: 84033**

**List Source: TestAmerica Phoenix**

**List Number: 1**

**Creator: Gravlin, Andrea**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
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?	False	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.