

September 29, 2016

TO Lucy Gonzalez
ASCIP
16550 Bloomfield Avenue
Cerritos CA 90703

gonzalez@ascip.org
Phone: (562) 404-8029

Cc Jeff Dixon
Director of Facilities
Laguna Beach Unified School District
550 Blumont Street
Laguna Beach CA 92651

jdixon@lbusd.org
Phone: 949-497-7700 Ext. 5222

FROM Michelle Rosales
Forensic Analytical Consulting Services
2959 Pacific Commerce Dr.
Rancho Dominguez, CA 90221

mrosales@forensicanalytical.com
Phone: 310-668-5617

RE **Water Testing for Lead – Laguna Beach Unified School District
Additional Drinking Water Quality Assessment; Laguna Beach High School
FACS Project # PJ29827**

Introduction

Forensic Analytical Consulting Services (FACS) was retained by the ASCIP on behalf of Laguna Beach Unified School District (LBUSD) to provide water testing services in selected areas at four LBUSD campuses. The school campuses included Laguna Beach High School, El Morro Elementary School, Thurston Middle School, and Top of the World Elementary School. The scope of work for this project included collecting first draw (single immediate) samples of water from district selected bubblers on the school campus as well as the incoming municipal water supply. The initial water sampling assessment was performed by Charle Johnson of FACS on May 11, 2016.

The purpose of the testing was to determine the concentration of lead in water at select water fountains on the school campuses and to determine additional sampling of areas if levels were found above regulatory action levels.

Results were compared to the California Department for Public Health (CDPH) Action Level (AL) and federal Environmental Protection Agency (EPA) AL for lead in drinking water. If sample results exceed the ALs, additional testing must be performed. The follow-up testing is intended to determine what portion of the water system is contributing the elevated lead (e.g., the fixture, the piping behind the fixture, the branch building piping, the service connection to the water main, the incoming water from the utility). FACS' methodology for testing of the bubblers followed the EPA guidance, but used the more stringent action level recommended by the state of California Department of Public Health. The state recommends follow-up testing for initial samples exceeding 15 ppb (0.015 mg/L).

Prior Findings

Findings of the initial assessment indicated that one of the thirteen samples collected exceeded the CDPH AL. This bubbler (fountain) was located at Laguna Beach High School outside of the Staff Lounge/Theatre (west exterior). No measurable level of lead was identified in any of the remaining samples. Recommendations for further sampling at the high school were provided. Refer to FACS report dated May 27, 2016 for specific information pertaining to the assessment.

At the request of ASCIP on behalf of LBUUSD and FACS recommendations, FACS returned to the Laguna Beach High School site to collect additional water samples to determine what portion of the water system is contributing the lead identified at the Staff Lounge/Theatre drinking fountain. Mr. Mark Smith of FACS performed the additional assessment on June 14, 2016. First (single immediate) and second draw (with the source being purged to allow for water to flow from the connection at the main in the street to the sample collection point) samples were collected at nine locations on campus. Findings of the additional assessment indicated one of the nine locations contained a water sample that exceeded the CDPH AL. The sample was a first draw sample and was collected from one of the bubblers (drinking fountains) at Laguna Beach High School, Staff Lounge/Theatre – West Exterior. The same location identified during the initial assessment as having lead levels above the action level. No measurable level of lead was identified in any of the remaining samples. Based on additional findings from the May 11 and June 14, 2016 assessment, FACS recommended removal and replacement of the Staff Lounge/Theatre drinking water fountain and proximal plumbing work. However, if removal and replacement was deemed unfeasible, FACS recommended a filtration system be added to the direct plumbing line to reduce lead levels. Refer to FACS report dated July 6, 2016 for specific information pertaining to the assessment.

Following the reported replacement of the fountain bubbler, push-button valve and proximal plumbing work, FACS was requested to return to the site to collect additional water samples at the prior water bubbler (Staff Lounge/Theatre, drinking fountain). Mr. Mark Smith of FACS performed the additional assessment on August 15, 2016. A first draw and second draw sample were collected at the water source. Findings of the additional assessment indicated the first draw sample results exceeded the CDPH AL. Recommendations for further removal or filtration were provided verbally to LBUUSD representatives.

Current Findings

FACS was requested to return to the site to collect an additional water sample following the installation of a filtration system at the Staff Lounge/Theatre exterior, drinking fountain (location with prior results that exceeded the CDPH AL). Mr. Mark Smith of FACS performed the additional assessment on September 14, 2016. A first draw sample was collected at the fountain bubbler. No measurable level of lead was identified in the sample.

Based on assessment findings, there are no additional recommendations.

Limitations

This investigation is limited to the conditions and practices observed and information made available to FACS. The methods, conclusions, and recommendations provided are based on FACS' judgment, experience and the standard of practice for professional service. They are subject to the limitations and variability inherent in the methodology employed. As with all environmental investigations, this investigation is limited to the defined scope and does not purport to set forth all hazards, nor indicate that other hazards do not exist.

Please do not hesitate to contact our office at 310-668-5600 if you have any additional questions or concerns. Thank you for the opportunity to assist ASCIP and LBUSD in promoting a more healthful environment.

Respectfully,
FORENSIC ANALYTICAL



Michelle Rosales, MPH, CIH
Senior Project Manager



Attachment A: Laboratory Reports

Attachment A: Laboratory Report



22 August 2016

Michelle Rosales
Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez, CA 90221

RE:PJ29827

Work Order No.: 1608188

Attached are the results of the analyses for samples received by the laboratory on 08/15/16 08:20.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

A handwritten signature in black ink that reads "Richard K. Forsyth". The signature is written in a cursive style and is positioned above a horizontal line.

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accreditation Program (ELAP) No. 2320.



Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
08/22/16 10:21

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| T-1 | 1608188-01 | Water | 08/15/16 07:50 | 08/15/16 08:20 |
| T-1A | 1608188-02 | Water | 08/15/16 07:52 | 08/15/16 08:20 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
08/22/16 10:21

Metals by EPA 200 Series Methods

Sierra Analytical Labs, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|--------------------|-------|----------|---------|----------|----------------|-----------|-------|
| T-1 (1608188-01) Water Sampled: 08/15/16 07:50 Received: 08/15/16 08:20 | | | | | | | | | |
| Lead | 0.018 | 0.0080 | mg/L | 1 | B6H1539 | 08/15/16 | 08/16/16 17:24 | EPA 200.7 | |
| T-1A (1608188-02) Water Sampled: 08/15/16 07:52 Received: 08/15/16 08:20 | | | | | | | | | |
| Lead | ND | 0.0080 | mg/L | 1 | B6H1539 | 08/15/16 | 08/16/16 17:24 | EPA 200.7 | |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Forensic Analytical
 2959 Pacific Commerce
 Rancho Dominguez CA, 90221

Project: PJ29827
 Project Number: LGHS-H2O
 Project Manager: Michelle Rosales

Reported:
 08/22/16 10:21

Metals by EPA 200 Series Methods - Quality Control
Sierra Analytical Labs, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|-------------|---------------|------|-------------|------|-----------|--|
| Batch B6H1539 - EPA 200 Series | | | | | | | | | | |
| Blank (B6H1539-BLK1) | | | | | | | | | | |
| | | | | | | | | | | Prepared: 08/15/16 Analyzed: 08/16/16 |
| Lead | ND | 0.0080 | mg/L | | | | | | | |
| LCS (B6H1539-BS1) | | | | | | | | | | |
| | | | | | | | | | | Prepared: 08/15/16 Analyzed: 08/16/16 |
| Lead | 0.206 | 0.0080 | mg/L | 0.200 | | 103 | 85-115 | | | |
| Matrix Spike (B6H1539-MS1) | | | | | | | | | | |
| | | | | | | | | | | Source: 1608192-01 Prepared: 08/15/16 Analyzed: 08/16/16 |
| Lead | 0.198 | 0.0080 | mg/L | 0.200 | 0.0027 | 97.6 | 70-130 | | | |
| Matrix Spike Dup (B6H1539-MSD1) | | | | | | | | | | |
| | | | | | | | | | | Source: 1608192-01 Prepared: 08/15/16 Analyzed: 08/16/16 |
| Lead | 0.198 | 0.0080 | mg/L | 0.200 | 0.0027 | 97.6 | 70-130 | 0.00 | 20 | |

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Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
08/22/16 10:21

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



SIERRA ANALYTICAL
 TEL: 949 • 348 • 9389
 FAX: 949 • 348 • 9115
 26052 Merit Circle • Suite 105 • Laguna Hills, CA • 92653

CHAIN OF CUSTODY RECORD

Date: 8/15/16 Page: 1 of 1

Client: Forensic Analytical
 Client Address: 2959 Pacific Commerce Drive
Compton, CA 90221

Client Tel. No.: (310) 668-5600
 Client Fax. No.: _____
 Client Proj. Mgr.: Michelle Rosales

Turn Around Time Requested:

Immediate 24 Hour
 48 Hour 72 Hour
 4 Day 5 Day
 Normal Mobile

Client Project ID: P529827

Lab Work Order No.: 1608088

Analyses Requested

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Geotracker EDD Info:
 Client LOGCODE _____
 Site Global ID _____
 Field Point Names / Comments _____

| Client Sample ID. | Sierra No. | Date | Time | Matrix | Preservative | Container Type | No. of Containers |
|-------------------|------------|------|------|--------|--------------|----------------|-------------------|
| T-1 | 01 | 8-15 | 0750 | N/A | N/A | HOPE | 1 |
| T-1A | 02 | 8-15 | 0752 | N/A | N/A | ↓ | 1 |
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Immediate 24 Hour
 48 Hour 72 Hour
 4 Day 5 Day
 Normal Mobile

Total Number of Containers Submitted to Laboratory: **(2)**
 Total Number of Containers Received by Laboratory: **(2)**

The delivery of sample and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
 * - Sample determined to be hazardous by SIERRA will be returned to CLIENT.

Sample Signature: [Signature] Shipped Via: Drop-off (Carrier/Waybill No.)
 Printed Name: MARIE SERRA
 Retained By: [Signature]
 Company: FACS Received By: [Signature] Sierra
 Date: 8/15/16 Date: 8/15/16
 Time: 0819 Time: 8:20

Date: _____ Date: _____
 Time: _____ Time: _____
 Date: _____ Date: _____
 Time: _____ Time: _____

Company: _____ Company: _____
 Company: _____ Company: _____
 Company: _____ Company: _____

Special Instructions:
Pis. email results to mrosales@forensicanalytical.com

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
 Impact Chilled - Temp (°C) 10
 Sample Seals Preservatives - Verified By
 Properly Labelled Other _____
 Appropriate Sample Container Storage Location: (Vial)

DISTRIBUTION: Black - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

T-1 = EXT. THEATER UPPER BOBBEN FINISH DRAW; T-1A = 1 MIN FLUSH



21 September 2016

Michelle Rosales
Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez, CA 90221

RE:PJ29827

Work Order No.: 1609177

Attached are the results of the analyses for samples received by the laboratory on 09/14/16 10:20.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

A handwritten signature in cursive script that reads "Richard K. Forsyth".

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accreditation Program (ELAP) No. 2320.



Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
09/21/16 09:52

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| T-1 | 1609177-01 | Water | 09/14/16 10:16 | 09/14/16 10:20 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
09/21/16 09:52

**Metals by EPA 200 Series Methods
Sierra Analytical Labs, Inc.**

| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|--|--------|--------|--------------------|-------|----------|---------|----------|----------------|-----------|-------|
| T-1 (1609177-01) Water Sampled: 09/14/16 10:16 Received: 09/14/16 10:20 | | | | | | | | | | |
| Lead | ND | 0.0015 | 0.0080 | mg/L | 1 | B611462 | 09/14/16 | 09/15/16 11:56 | EPA 200.7 | |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Forensic Analytical
 2959 Pacific Commerce
 Rancho Dominguez CA, 90221

Project: PJ29827
 Project Number: LGHS-H2O
 Project Manager: Michelle Rosales

Reported:
 09/21/16 09:52

Metals by EPA 200 Series Methods - Quality Control
Sierra Analytical Labs, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch B6I1462 - EPA 200 Series

Blank (B6I1462-BLK1)

Prepared: 09/14/16 Analyzed: 09/15/16

| | | | | | | | | | | |
|------|----|--------|------|--|--|--|--|--|--|--|
| Lead | ND | 0.0080 | mg/L | | | | | | | |
|------|----|--------|------|--|--|--|--|--|--|--|

LCS (B6I1462-BS1)

Prepared: 09/14/16 Analyzed: 09/15/16

| | | | | | | | | | | |
|------|-------|--------|------|-------|--|------|--------|--|--|--|
| Lead | 0.174 | 0.0080 | mg/L | 0.200 | | 87.0 | 85-115 | | | |
|------|-------|--------|------|-------|--|------|--------|--|--|--|

Matrix Spike (B6I1462-MS1)

Source: 1609177-01

Prepared: 09/14/16 Analyzed: 09/15/16

| | | | | | | | | | | |
|------|-------|--------|------|-------|----|------|--------|--|--|--|
| Lead | 0.167 | 0.0080 | mg/L | 0.200 | ND | 83.5 | 70-130 | | | |
|------|-------|--------|------|-------|----|------|--------|--|--|--|

Matrix Spike Dup (B6I1462-MSD1)

Source: 1609177-01

Prepared: 09/14/16 Analyzed: 09/15/16

| | | | | | | | | | | |
|------|-------|--------|------|-------|----|------|--------|------|----|--|
| Lead | 0.165 | 0.0080 | mg/L | 0.200 | ND | 82.5 | 70-130 | 1.20 | 20 | |
|------|-------|--------|------|-------|----|------|--------|------|----|--|

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Forensic Analytical
2959 Pacific Commerce
Rancho Dominguez CA, 90221

Project: PJ29827
Project Number: LGHS-H2O
Project Manager: Michelle Rosales

Reported:
09/21/16 09:52

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



SIERRA ANALYTICAL
 TEL: 949 • 348 • 9389
 FAX: 949 • 348 • 9115
 26052 Merit Circle • Suite 104 • Laguna Hills, CA • 92653

CHAIN OF CUSTODY RECORD

Date: 9/14/16 Page: 1 of 1

LABORATORY USE ONLY - Sample Receipt Conditions:
 Chilled - Temp (°C) 5.00
 Preservatives - Verified By
 Other

Client Project ID: P-529827
 LGHS-H2O

Client: FORENSIC ANALYTICAL
 Client Address: 2959 PACIFIC COMMERCIAL
 COMPTON, CA 90221
 Client Tel. No.: 310-668-5600
 Client Fax. No.:
 Client Proj. Mgr.:

Lab Work Order No.: 160977

Turn Around Time Requested:

24 Hour 48 Hour 72 Hour

Immediate 4 Day 5 Day Mobile

Normal

| Analyses Requested | Geotracker EDD Info: |
|-----------------------------|------------------------------|
| DRINKING WATER X LEAD IN | Client LOGCODE |
| | Site Global ID |
| | Field Point Names / Comments |

| Client Sample ID. | Sierra No. | Date | Time | Matrix | Preservative | Container Type | No. of Containers | Total Number of Containers Submitted to Laboratory | Sample Disposal: |
|--|------------|---------|-------|--------|--------------|----------------|-------------------|--|---|
| T-1 | 01 | 9/14/16 | 10:10 | | W/A | HDPE BOTTLE | 1 | ① | <input type="checkbox"/> Return to Client |
| <p>Shipped Via: DROP OFF</p> <p>Received By: Mary Sierra Company: Sierra Date: 9/14/16 Time: 10:20</p> <p>Received By: Company: Date: Time:</p> | | | | | | | | | |
| <p>Signature: Mark Sierra</p> <p>Signature: FACB</p> | | | | | | | | | |
| <p>Special Instructions:</p> | | | | | | | | | |

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
 * - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
 Intact
 Sample Seals
 Property Labelled
 Appropriate Sample Container
 Storage Location: (A-01)

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy