## Engineering + Environmental

November 22, 2016

Jeremy Miller
Maintenance Manager
Department of Administrative Services
Enterprise Asset Management Division
1225 Ferry Street SE
Salem, Oregon 97301
Via email: Jeremy.W.MILLER@oregon.gov
Regarding: Drinking Water Sampling for Lead Justice Building 1162 Court Street NE
Salem, Oregon 97301
PBS Project \# 25103.003 Phase 0015
Dear Mr. Miller:
On October 12 and 13, 2016, PBS Engineering and Environmental Inc. (PBS) performed drinking water sampling at the Justice building located at1162 Court Street NE in Salem, Oregon. The testing was requested by State of Oregon Department of Administrative Services in an effort to ensure that concentrations of lead in drinking water remain below the EPA action level.

Sampling methodology and the interpretation of laboratory results were based on the EPA Lead and Copper Rule (LCR). Following LCR sampling guidelines, PBS collected the first 1000 milliliters ( mL ) of water from each test location (first draw) early in the morning following an overnight stagnation period. The LCR's stagnation period, and sampling protocol specifying the first 1000 mL samples, is designed to maximize the likelihood that the highest concentrations of lead are identified in water used for consumption. At each sample location, immediately following first draw sampling, a flush sample was collected after the water had been allowed to run for 30 seconds.

The water sampling process was supervised by a certified industrial hygienist (CIH) who is also an Oregon Health Authority certified lead risk assessor.

The action level set by the EPA for lead is 15 parts per billion (ppb). If the action level is exceeded in more than 10 percent of taps sampled, then action must be taken to control plumbing-material corrosion.

Forty-four first draw and flush drinking water samples were collected and delivered under chain of custody to BSK Laboratories in Vancouver, Washington for lead analysis. Initially, only first draw samples were analyzed. Any first draw sample that exceeded the EPA action level for lead had its associated flush sample analyzed.

Lead concentrations in all of the first draw samples were undetectable according to laboratory analysis, indicating that all of these drinking water samples contained lead well below the EPA action level of 15 ppb .

The following table presents all first draw sample locations and lead concentrations in ppb.

First Draw Drinking Water Sample Locations and Lead Concentrations

| Sample Number | Sample Location | Lead <br> Concentration <br> (ppb) <br> SK-JUB-001-FD Executive services break room kitchen sink fifth floor |
| :--- | :--- | :--- |
| SK-JUB-003-FD | Room 503 conference room 505 break room kitchen sink fifth floor | ND |
| WF-JUB-005-FD | Upper water fountain next to custodial/electrical room fifth floor | ND |
| WF-JUB-007-FD | Lower water fountain next to custodial/electrical room fifth floor | ND |
| S-JUB-009-FD | Supply room sink fourth floor | ND |
| SK-JUB-011-FD | Coffee / break room kitchen sink fourth floor | ND |
| WF-JUB-013-FD | Upper water fountain next to custodial/electrical room fourth floor | ND |
| WF-JUB-015-FD | Lower water fountain next to custodial/electrical room fourth floor | ND |
| SK-JUB-017-FD | Room 303 conference room 305 break room kitchen sink third floor | ND |
| WF-JUB-019-FD | Upper water fountain next to custodial/electrical room third floor | ND |
| WF-JUB-021-FD | Lower water fountain next to custodial/electrical room third floor | ND |
| SK-JUB-023-FD | Kitchenette kitchen sink second floor | ND |
| WF-JUB-025-FD | Upper water fountain next to custodial/electrical room second floor | ND |
| WF-JUB-027-FD | Lower water fountain next to custodial/electrical room second floor | ND |
| SK-JUB-029-FD | Kitchenette sink first floor | ND |
| WF-JUB-031-FD | Upper water fountain between men's room and kitchenette first floor | ND |
| WF-JUB-033-FD | Lower water fountain between men's room and kitchenette first floor | ND |
| WF-JUB-035-FD | Water fountain near main entry first floor | ND |
| WF-JUB-037-FD | Basement lower water fountain between men's and women's bathroom | ND |
| WF-JUB-039-FD | Basement upper water fountain between men's and women's bathroom | ND |
| SK-JUB-041-FD | Basement coffee station kitchen sink | ND |
| SK-JUB-043-FD | Coffee room district attorney's office, third floor kitchen sink | ND |
| ND:Ne |  |  |

ND: None Detected
Please refer to the attached Chain of Custody form and laboratory data for greater details. It should be noted that quality control (QC) sample results are included at the end of laboratory information. The QC samples are both laboratory blanks and spiked samples used internally by the laboratory to assess accuracy.

Please feel free to contact me at 503.417.7602 or derek.may@pbsenv.com with any questions or comments.

Sincerely,
PBS Engineering and Environmental Inc.


Derek May, Principal
Attachments: Laboratory Results
Chain of Custody Form
DM::bmp

The information contained in this document is proprietary and shall not be duplicated, used, or disclosed in whole or in part to other parties without the permission of PBS.

Derek May<br>PBS Environmental<br>4412 SW Corbett Ave<br>Portland, OR 97239

## RE: Report for A6J1886 Oregon DAS - Lead

## Dear Derek May,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on $10 / 13 / 2016$. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the tests) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

If additional clarification of any information is required, please contact your Project Manager, Debra Karlsson , at 559-497-2888.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty .

Sincerely,

Debra Karlsson, Project Coordinator


Accredited in Accordance with NELAP
ORELAP \#4021

## Case Narrative

Project and Report Details
Client: PBS Environmental
Report To: Derek May
Project \#: Justice Building \#25103.003 PH 15
Received: 10/13/2016-09:00
Report Due: 10/27/2016

## Invoice Details

Invoice To: PBS Environmental
Invoice Attn: Accounts Payable
Project PO\#: -

## Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt ${ }^{\circ} \mathrm{C}$ : 20.2

Containers Intact COC/Labels Agree
Received with no thermal preservation.
Sample(s) split after receipt at the laboratory. Initial receipt at BSK-VAL

## Data Qualifiers

The following qualifiers have been applied to one or more analytical results:
${ }^{* * *}$ None applied ${ }^{* * *}$

Report Distribution

| Recipient(s) | Report Format | CC: |
| :--- | :--- | :--- |
| Derek May | FINAL.RPT |  |

A6J1886
Oregon DAS - Lead

## Certificate of Analysis

Sample ID: A6J1886-01
Sampled By: Client
Sample Description: SK-JUB-001-FD // Executive services breakroom kitchen sink 5th Floor

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 0/19/16 |  |

## Certificate of Analysis

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: WF-JUB-005-FD // Upper water fountain next to

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw custodial/electrical room 5th Floor

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sampled By: Client
Sample Description: WF-JUB-007-FD // Lower water fountain next to custodial/electrical room 5th Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | $\begin{gathered} \hline \text { RL } \\ \text { Mult } \\ \hline \end{gathered}$ | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-09
Sampled By: Client
Sample Description: S-JUB-009-FD // Supply room sink 4th Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

A6J1886
Oregon DAS - Lead

## Certificate of Analysis

Sample ID: A6J1886-11
Sampled By: Client
Sample Description: SK-JUB-011-FD // Coffee/Breakroom kitchen sink 4th Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: WF-JUB-013-FD // Upper water fountain next to

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw custodial/electrical room 4th Floor

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: WF-JUB-015-FD // Lower water fountain next to

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw custodial/electrical room 4th Floor

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 010 | mg/L | 1 | 614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-19
Sampled By: Client
Sample Description: WF-JUB-019-FD // Upper water fountain next to custodial/electrical room 3rd Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | $\begin{gathered} \hline \text { RL } \\ \text { Mult } \\ \hline \end{gathered}$ | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-21
Sampled By: Client
Sample Description: WF-JUB-021-FD // Lower water fountain next to custodial/electrical room 3rd Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | $\begin{gathered} \hline \text { RL } \\ \text { Mult } \\ \hline \end{gathered}$ | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-23
Sampled By: Client
Sample Description: SK-JUB-023-FD // Kitchenette kitchen sink 2nd Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: WF-JUB-025-FD // Upper water fountain next to

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw custodial/electrical room 2nd Floor

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: WF-JUB-027-FD // Lower water fountain next to

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw custodial/electrical room 2nd Floor

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-31
Sampled By: Client
Sample Description: WF-JUB-031-FD // Upper water fountain between men's room and kitchenette 1st Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | $\begin{gathered} \hline \text { RL } \\ \text { Mult } \\ \hline \end{gathered}$ | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-33
Sampled By: Client
Sample Description: WF-JUB-033-FD // Lower water fountain between men's room and kitchenette 1st Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

| BSK Associates Fresno |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metals |  |  |  |  |  |  |  |  |  |
| Analyte | Method | Result | RL | Units | $\begin{gathered} \hline \text { RL } \\ \text { Mult } \\ \hline \end{gathered}$ | Batch | Prepared | Analyzed | Qual |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-35
Sampled By: Client
Sample Description: WF-JUB-035-FD // Water fountain near main entry 1st Floor

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-37
Sampled By: Client
Sample Description: WF-JUB-037-FD // Basement lower water fountain between men's and women's bathroom

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL <br> Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614373 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample ID: A6J1886-39
Sampled By: Client
Sample Description: WF-JUB-039-FD // Basement upper water fountain between men's and women's bathroom

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

BSK Associates Fresno
Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614384 | 10/19/16 | 10/19/16 |  |

A6J1886
Oregon DAS - Lead

## Certificate of Analysis

Sample ID: A6J1886-41
Sampled By: Client
Sample Description: SK-JUB-041-FD // Basement coffee station kitchen sink

Sample Date - Time: 10/12/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614384 | 10/19/16 | 10/19/16 |  |

## Certificate of Analysis

Sample Description: SK-JUB-043-FD // Coffee room District Attorney Office, 3rd Floor kitchen sink

Sample Date - Time: 10/13/16-00:00
Matrix: Drinking Water
Sample Type: First Draw

## BSK Associates Fresno

Metals

| Analyte | Method | Result | RL | Units | RL Mult | Batch | Prepared | Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lead | EPA 200.8 | ND | 0.0010 | mg/L | 1 | A614535 | 10/21/16 | 10/21/16 |  |

Metals Quality Control Report

|  |  |  | Spike | Source |  | \%REC | RPD | Date |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Analyte | Result | RL | Units | Level | Result | \%REC | Limits | RPD | Limit | Analyzed |

Batch: A614373
Prep Method: EPA 200.2

## EPA 200.8-Quality Control

Blank (A614373-BLK1)

| Lead | ND |
| :--- | ---: |
| Blank Spike (A614373-BS1) |  |
| Lead | 0.11 |
| Blank Spike Dup (A614373-BSD1) |  |
| Lead | 0.11 |
| Matrix Spike (A614373-MS1), Source: A6J1885-01 |  |
| Lead | 0.20 |

Matrix Spike (A614373-MS2), Source: A6J1886-19
Lead 0.21

Matrix Spike Dup (A614373-MSD1), Source: A6J1885-01

| Lead | 0.21 |
| :--- | :---: |
| Matrix Spike Dup (A614373-MSD2), Source: A6J1886-19 |  | Matrix Spike Dup (A614373-MSD2), Source: A6J1886-19

$$
0.21
$$

ND

Blank Spike (A614384-BS1)
Lead
Blank Spike Dup (A614384-BSD1)

Spike Dup (A614384-BSD1)

Matrix Spike (A614384-MS1), Source: A6J1785-21
Lead 0.20

Matrix Spike (A614384-MS2), Source: A6J1750-01
Lead 0.20

Matrix Spike Dup (A614384-MSD1), Source: A6J1785-21

| Lead | 0.20 |
| :--- | :---: |
| Matrix Spike Dup (A614384-MSD2), Source: A6J1750-01 |  |

ike Dup (A614384-MSD2), Source:


Metals Quality Control Report

| Analyte | Result | RL | Units | Spike <br> Level | Source <br> Result | \%REC | \%REC <br> Limits | RPD | RPD <br> Limit | Date Analyzed | Qual |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EPA 200.8-Quality Control |  |  |  |  |  |  |  |  |  |  |  |
| Batch: A614535 |  |  |  |  |  |  |  |  |  | Prepared: 10/21/2016 |  |
| Prep Method: EPA 200.2 - Pb/Cu Rule |  |  |  |  |  |  |  |  |  | Analyst: GNG |  |
| Blank (A614535-BLK1) |  |  |  |  |  |  |  |  |  |  |  |
| Lead | ND | 0.0010 | mg/L |  |  |  |  |  |  | 10/21/16 |  |
| Blank Spike (A614535-BS1) |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.11 | 0.0010 | mg/L | 0.10 |  | 110 | 85-115 |  |  | 10/21/16 |  |
| Blank Spike Dup (A614535-BSD1) |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.11 | 0.0010 | mg/L | 0.10 |  | 110 | 85-115 | 1 | 20 | 10/21/16 |  |
| Matrix Spike (A614535-MS1), Source: A6J1886-43 |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.21 | 0.0020 | mg/L | 0.20 | ND | 105 | 70-130 |  |  | 10/21/16 |  |
| Matrix Spike (A614535-MS2), Source: A6J2165-01 |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.22 | 0.0020 | mg/L | 0.20 | ND | 108 | 70-130 |  |  | 10/21/16 |  |
| Matrix Spike Dup (A614535-MSD1), Source: A6J1886-43 |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.21 | 0.0020 | mg/L | 0.20 | ND | 105 | 70-130 | 0 | 20 | 10/21/16 |  |
| Matrix Spike Dup (A614535-MSD2), Source: A6J2165-01 |  |  |  |  |  |  |  |  |  |  |  |
| Lead | 0.22 | 0.0020 | mg/L | 0.20 | ND | 108 | 70-130 | 0 | 20 | 10/21/16 |  |

## Certificate of Analysis

## Notes:

The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed

Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
$J$-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
(1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.

Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte

## Definitions

| $\mathrm{mg} / \mathrm{L}:$ | Milligrams/Liter (ppm) | MDL: | Method Detection Limit | MDA95: | Min. Detected Activity |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{mg} / \mathrm{Kg}:$ | Milligrams/Kilogram $(\mathrm{ppm})$ | RL: | Reporting Limit: DL x Dilution | MPN: | Most Probable Number |
| $\mu \mathrm{g} / \mathrm{L}:$ | Micrograms/Liter $(\mathrm{ppb})$ | ND: | None Detected at RL | CFU: | Colony Forming Unit |
| $\mu \mathrm{Fg}:$ | Micrograms/Kilogram $(\mathrm{ppb})$ | pCi/L: | Picocuries per Liter | Absent: | Less than $1 \mathrm{CFU} / 100 \mathrm{mLs}$ |
| $\%:$ | Percent Recovered (surrogates) | RL Mult: | RL Multiplier | Present: | 1 or more CFU/100mLs |
| NR: | Non-Reportable | MCL: | Maximum Contaminant Limit |  |  |

## Please see the individual Subcontract Lab's report for applicable certifications.

BSK is not accredited under the NELAP program for the following parameters:

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

| Fresno |  |  |  |
| :--- | :--- | :--- | :--- |
| State of California - ELAP 1180 State of Hawaii | 4021 |  |  |
| State of Nevada <br> EPA - UCMR3 | CA000792016-1 | State of Oregon - NELAP | 4021 |
| Sacramento <br> State of California - ELAP <br> San Bernardino <br> State of California - ELAP <br> Vancouver <br> State of Oregon - NELAP | 2435 | CA00079 | 2993 |



Engineering + Co $P$ w addition
Environmental
A6J1886
PBSEN1939

Justice Building

ANALYSIS REQUESTED:

LEAD (PB) IN DRINKING WATER
COPPER (CU) IN DRINKING WATER
Relinq'd byISignaturg. Mike faglden fin as en
$205^{\circ}$ Received byisignature: \%eneal angel $10 / 7 / 16$
EmAIL RESULTS TO: $\qquad$

DATE: $10 / 12 / 18$

TURN AROUND TIME: - -10 days


## Sample Integrity


$\qquad$ @

## PBS Environmental

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## Sample Integrity





Yes No (NA)
Yes No (NX
Yen No
Yes No
Yes No (NA)


Dissolved Oxygen 300 ml (g)

| - | - |
| :---: | :---: |
| - | - |


$\frac{1}{2}$ None (AG) 608180818B082,625, 63218321,8151, 8270

| $\mathrm{HCl}(\mathrm{AG})^{\text {li Blue Label }} \mathrm{O} \& \mathrm{G}$, Diesel |
| :--- |
| Ascorbic, EDTA, $\mathrm{KH}_{2} \mathrm{Cl}$ (AG) Pink Label 525 |

$\mathrm{Na}_{2} \mathrm{OSS}_{3} 250 \mathrm{~mL}$ (AG) Peon Green abel 515
$\mathrm{Na}_{2} \mathrm{~S}_{2} \mathrm{O}_{3} 1$ Liter (Brown P) 549

| $\mathrm{Na}_{2} \mathrm{~S}_{2} \mathrm{O}_{3}$ (AG) |  |
| :--- | :--- |
| $\mathrm{Na}^{\text {give Label }}$ | 548, TM, 524 |
| $\mathrm{Na}_{2} \mathrm{~S}_{2} \mathrm{O}_{3}$ (CG) |  |
| Blue Label | $504,505,547$ |



EDA (AG) Brown Label DBPS
HCL (CG) 524.2,BTEX, Gas, NTBE, 8260/624
Buffer pH 4 (CG)
$\mathrm{H}_{3} \mathrm{PO}_{4}(\mathrm{CG})$ Salmon Label:
: Other:
Asbestos 1 Liter Plastic w/ Foil Low Level Hg / Metals Double Baggie Bottled Water
Clear Glass $250 \mathrm{~mL} / 500 \mathrm{~mL} / 1$ Liter Soil Tube Brass 1. Steel 1 Plastic


