



**Engineering +
Environmental**

January 3, 2017

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
Revenue Building
955 Center Street NE
Salem, Oregon 97301
PBS Project # 25103.003 Phase 0025

Dear Mr. Miller:

On October 15, 17, and 18, and November 1, 2016, PBS Engineering and Environmental Inc. (PBS) performed drinking water sampling at the Revenue building located at 955 Center 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.

Fifty-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.

Concentrations of lead in the first draw samples ranged from none detected to 100 ppb. Laboratory analysis indicates that one drinking water sample contained lead at a concentration above the EPA action level. The associated flush sample taken at the same location fell below the action level at 4.8 ppb. PBS is recommending that this fixture be replaced followed by re-testing.

The following tables present all first draw samples that fell below and exceeded the EPA action level of 15 ppb.

4412 SW Corbett Avenue, Portland, OR 97239
503.248.1939 Main
866.727.0140 Fax
888.248.1939 Toll-Free
www.pbsenv.com

Lead Concentrations below 15 ppb

Sample Number	Sample Location	Lead Concentration (ppb)
WF-REV-001-FD	Water fountain spigot fourth floor between men's/women's bathrooms SE 470/471	ND
WF-REV-003-FD	Water fountain spigot fourth floor Tower Room	ND
WF-REV-005-FD	Water fountain spigot second floor SE between men's/women's bathrooms, south of stairs	ND
WF-REV-007-FD	Upper water fountain cafe across from west stairs to first floor	ND
WF-REV-011-FD	Water fountain basement across from mechanical room 4	ND
SK-REV-013-FD	Lactation room fifth floor kitchen sink	1.6
WF-REV-015-FD	Water fountain fifth floor adjacent to south stairs	ND
SK-REV-017-FD	Employee lunch room fifth floor kitchen sink	ND
WF-REV-019-FD	Water fountain fifth floor adjacent to west	ND
WF-REV-021-FD	Water fountain fifth floor tower room between men's/women's bathrooms	ND
WF-REV-023-FD	Water fountain fourth floor adjacent to west stairs	ND
WF-REV-025-FD	Water fountain third floor adjacent to south stairs	ND
WF-REV-027-FD	Water fountain third floor adjacent to west stairs	ND
WF-REV-029-FD	Water fountain third floor tower room between men's/women's bathrooms	ND
WF-REV-031-FD	Water fountain second floor tower room between men's/women's bathrooms	ND
SK-REV-033-FD	Employee lunch room second floor across from mapping unit	ND
WF-REV-035-FD	Water fountain second floor adjacent to west stairs	ND
WF-REV-037-FD	Water fountain first floor lobby outside of room 135	ND
WF-REV-039-FD	Water fountain first floor vending machine area near lobby	ND
WF-REV-041-FD	Room 101 water fountain adjacent to first floor north stairs tower room	ND
SK-REV-043-FD	Cafe hand wash station kitchen sink	ND
SK-REV-045-FD	Cafe dish wash area, kitchen sink	1.3

Sample Number	Sample Location	Lead Concentration (ppb)
SK-REV-047-FD	Cafe food prep area, 1 kitchen sink	ND
SK-REV-049-FD	Cafe Food prep area, 2 kitchen sink	ND
SK-REV-051-FD	Cafe Food prep area, 3 kitchen sink	ND
SK-REV-053-FD	Room 357 third floor break room kitchenette sink	ND

ND: None Detected

Lead Concentration above 15 ppb and Associated Flush Sample

Sample Location	First Draw Sample Number	First Draw Lead Concentration (ppb)	Flush Draw Sample Number	Flush Draw Lead Concentration (ppb)
Lower water fountain cafe across from west stairs to first floor	WF-REV-009-FD	100	WF-REV-010-FL	4.8

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.



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA 93706
559-497-2888 (Main)
559-485-6935 (FAX)



A6J2696
11/11/2016

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

RE: Report for A6J2696 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 10/20/2016. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) 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 **Invoice Details**

Client: PBS Environmental
Report To: Derek May
Project #: Revenue #25103.003 PH 25
Received: 10/20/2016 - 17:36
Report Due: 11/04/2016

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

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 19.6

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	beth.powers@pbsenv.com



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-01

Sampled By: Client

Sample Description: WF-REV-001-FD // Water fountain spigot 4th Floor between men's/women's bathrooms SE 470/471

Sample Date - Time: 10/17/16 - 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	A614919	10/28/16	10/28/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-03
Sampled By: Client
Sample Description: WF-REV-003-FD // Water fountain spigot 4th Floor Tower Room

Sample Date - Time: 10/17/16 - 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	A614919	10/28/16	10/28/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-05

Sampled By: Client

Sample Description: WF-REV-005-FD // Water fountain spigot 2nd Floor SE between men's/women's bathrooms South of stairs

Sample Date - Time: 10/17/16 - 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	A614919	10/28/16	10/28/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-07

Sampled By: Client

Sample Description: WF-REV-007-FD // Upper water fountain cafe across from West stairs to 1st Floor

Sample Date - Time: 10/17/16 - 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	A614919	10/28/16	10/28/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-09
Sampled By: Client
Sample Description: WF-REV-009-FD // Lowerr water fountain cafe across from West stairs to 1st Floor

Sample Date - Time: 10/17/16 - 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	0.10	0.0010	mg/L	1	A614923	10/31/16	11/03/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-10

Sampled By: Client

Sample Description: WF-REV-010-FL // Lowerr water fountain cafe across from West stairs to 1st Floor

Sample Date - Time: 10/17/16 - 00:00

Matrix: Drinking Water

Sample Type: First Flush

BSK Associates Fresno

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	0.0048	0.0010	mg/L	1	A615447	11/09/16	11/09/16	



A6J2696

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2696-11
Sampled By: Client
Sample Description: WF-REV-011-FD // Water fountain basement across from Mech Room 4

Sample Date - Time: 10/17/16 - 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	A614919	10/28/16	10/28/16	

BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A614919

Prepared: 10/28/2016

Prep Method: EPA 200.2 - Pb/Cu Rule

Analyst: GNG

Blank (A614919-BLK1)

Lead	ND	0.0010	mg/L							10/28/16	
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Blank Spike (A614919-BS1)

Lead	0.10	0.0010	mg/L	0.10		105	85-115			10/28/16	
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Blank Spike Dup (A614919-BSD1)

Lead	0.11	0.0010	mg/L	0.10		105	85-115	1	20	10/28/16	
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Matrix Spike (A614919-MS1), Source: A6J2619-01

Lead	0.21	0.0020	mg/L	0.20	ND	105	70-130			10/28/16	
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Matrix Spike (A614919-MS2), Source: A6J2696-05

Lead	0.21	0.0020	mg/L	0.20	ND	104	70-130			10/28/16	
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Matrix Spike Dup (A614919-MSD1), Source: A6J2619-01

Lead	0.21	0.0020	mg/L	0.20	ND	106	70-130	1	20	10/28/16	
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Matrix Spike Dup (A614919-MSD2), Source: A6J2696-05

Lead	0.21	0.0020	mg/L	0.20	ND	105	70-130	1	20	10/28/16	
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EPA 200.8 - Quality Control

Batch: A614923

Prepared: 10/31/2016

Prep Method: EPA 200.2

Analyst: MAS

Blank (A614923-BLK1)

Lead	ND	0.0010	mg/L							11/03/16	
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Blank Spike (A614923-BS1)

Lead	0.18	0.0010	mg/L	0.20		90	85-115			11/03/16	
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Blank Spike Dup (A614923-BSD1)

Lead	0.18	0.0010	mg/L	0.20		92	85-115	2	20	11/03/16	
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Matrix Spike (A614923-MS1), Source: A6J3128-01

Lead	0.19	0.0010	mg/L	0.20	ND	95	70-130			11/03/16	
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Matrix Spike (A614923-MS2), Source: A6J3128-04

Lead	0.18	0.0010	mg/L	0.20	ND	89	70-130			11/03/16	
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Matrix Spike Dup (A614923-MSD1), Source: A6J3128-01

Lead	0.18	0.0010	mg/L	0.20	ND	91	70-130	5	20	11/03/16	
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Matrix Spike Dup (A614923-MSD2), Source: A6J3128-04

Lead	0.18	0.0010	mg/L	0.20	ND	91	70-130	3	20	11/03/16	
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BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A615447

Prepared: 11/9/2016

Prep Method: EPA 200.2 - Pb/Cu Rule

Analyst: GNG

Blank (A615447-BLK1)

Lead	ND	0.0010	mg/L							11/09/16	
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Blank Spike (A615447-BS1)

Lead	0.089	0.0010	mg/L	0.10		89	85-115			11/09/16	
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Blank Spike Dup (A615447-BSD1)

Lead	0.089	0.0010	mg/L	0.10		89	85-115	0	20	11/09/16	
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Matrix Spike (A615447-MS1), Source: A6J2696-10

Lead	0.18	0.0020	mg/L	0.20	0.0048	89	70-130			11/09/16	
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Matrix Spike (A615447-MS2), Source: A6J3336-12

Lead	0.23	0.0020	mg/L	0.20	0.026	101	70-130			11/09/16	
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Matrix Spike Dup (A615447-MSD1), Source: A6J2696-10

Lead	0.18	0.0020	mg/L	0.20	0.0048	87	70-130	2	20	11/09/16	
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Matrix Spike Dup (A615447-MSD2), Source: A6J3336-12

Lead	0.21	0.0020	mg/L	0.20	0.026	94	70-130	6	20	11/09/16	
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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

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	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:

****NA****

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	CA000792016-1	State of Oregon - NELAP	4021
EPA - UCMR3	CA00079	State of Washington	C997-16

Sacramento

State of California - ELAP	2435
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San Bernardino

State of California - ELAP	2993	State of Oregon - NELAP	4119-001
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Vancouver

State of Oregon - NELAP	WA100008-008	State of Washington	C824-16
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Engineering + Environmental

A6J2696
PBSEN1939



10/20/2016
10

OREGON DAS

LEAD IN DRINKING WATER
TESTING PROGRAM

25103.003

FACILITY NAME: REVENUE

PROJECT #: [REDACTED] PH 25

ANALYSIS REQUESTED:

- LEAD (Pb) IN DRINKING WATER
- COPPER (Cu) IN DRINKING WATER

DATE: 10/17/16

RELINQ'D BY/SIGNATURE: Mike Golden / [Signature]

DATE/TIME: 10/17/16 10/19/16 1700

196 RECEIVED BY/SIGNATURE: Renea Kangel

DATE/TIME: 10/20/16 0900

EMAIL RESULTS TO: derek.may@pbsenv.com

TURN AROUND TIME: 7-10 days

SAMPLE DATA FORM

LAB	SAMPLE #	BUILDING	ROOM	LOCATION IN ROOM
1	WF-REV-001-FD			Water Fountain Spigot
2	WF-REV-002-FL			4th Floor between Men's/Women's bathroom Southeast (470/471)
3	WF-REV-003-FD			Water Fountain Spigot 4th
4	WF-REV-004-FL			FLOOR 'TOWER ROOM'
5	WF-REV-005-FD			Water Fountain Spigot 2nd
6	WF-REV-006-FL			Floor Southeast between men/woman bathrooms (South stair 2nd Floor)
7	WF-REV-007-FD			Water Fountain, near Cafe
8	WF-REV-008-FL			across from West stairs to 1st Floor basement (upper)
9	WF-REV-009-FD			Water Fountain, Cafe
10	WF-REV-010-FL			across from West stairs to 1st Floor basement (lower)
11	WF-REV-011-FD			Water Fountain, basement
12	WF-REV-012-FL			across from Mech. Room 4

Sample Integrity



BSK Bottles: Yes No Page 1 of 1

COC Info		Yes	No	NA	Were correct containers and preservatives received for the tests requested?		Yes	No	NA
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$				<u>NA</u>			<u>Yes</u>		
If samples were taken today, is there evidence that chilling has begun?				<u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)				<u>NA</u>
Did all bottles arrive unbroken and intact?		<u>Yes</u>	No		Was a sufficient amount of sample received?		<u>Yes</u>	No	
Did all bottle labels agree with COC?		<u>Yes</u>	No		Do samples have a hold time <72 hours?		<u>Yes</u>	<u>No</u>	
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?				<u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____				<u>NA</u>
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?						
	Bacti Na ₂ S ₂ O ₃	—	—						
	None (P) White Cap	—	—						
	Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW	Cl, pH > 8	Y	N					
	Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW	pH 9.3-9.7	Y	N					
	Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***	pH 9.0-9.5	Y	N					
	HNO ₃ (P) ^{Red Cap} or HCl (P) Purple Cap/Lt. Blue Label	—	—						
	H ₂ SO ₄ (P) or (AG) Yellow Cap/Label	pH < 2	Y	N					
	NaOH (P) Green Cap	Cl, pH > 10	Y	N					
	NaOH + ZnAc (P)	pH > 9	Y	N					
	Dissolved Oxygen 300ml (g)	—	—						
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—						
	HCl (AG) Lt. Blue Label O&G, Diesel	—	—						
	Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525	—	—						
	Na ₂ O ₃ S 250mL (AG) Neon Green Label 515	—	—						
	Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549	—	—						
	Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524	—	—						
	Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547	—	—						
	Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531	pH < 3	Y	N					
	NH ₄ Cl (AG) Purple Label 552	—	—						
	EDA (AG) Brown Label DBPs	—	—						
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—						
	Buffer pH 4 (CG)	—	—						
	H ₃ PO ₄ (CG) Salmon Label	—	—						
	Other:								
Asbestos 1Liter Plastic w/ Foil	—	—							
Low Level Hg / Metals Double Baggie	—	—							
Bottled Water	—	—							
Clear Glass 250mL / 500mL / 1 Liter	—	—							
Soil Tube Brass / Steel / Plastic	—	—							
Tedlar Bag / Plastic Bag	—	—							
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials		
	<u>S</u> P S P	250*			S P S P				
Comments	* Odd numbers only. RIL								



A6J2696



10212016

PBSEN1939

Turnaround: Standard

Due Date: 11/4/2016



PBS Environmental



Printed: 10/27/2016 9:47:35AM

Page 1 of 1

Page 15 of 17

Sample Integrity



BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	Yes	No	<u>NA</u>	Were correct containers and preservatives received for the tests requested?	<u>Yes</u>	No	NA
	If samples were taken today, is there evidence that chilling has begun?	Yes	No	<u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)	Yes	No	<u>NA</u>
	Did all bottles arrive unbroken and intact?	<u>Yes</u>	No		Was a sufficient amount of sample received?	<u>Yes</u>	No	
	Did all bottle labels agree with COC?	<u>Yes</u>	No		Do samples have a hold time <72 hours?	Yes	<u>No</u>	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes	No	<u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes	No	<u>NA</u>

Bottles Received	Checks	Passed?	Results								
			1	2	3	4	5	6			
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)											
Bacti Na ₂ S ₂ O ₃	—	—									
None (P) White Cap	—	—									
Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW	Cl, pH > 8	Y N									
Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW	pH 9.3-9.7	Y N									
Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***	pH 9.0-9.5	Y N									
HNO ₃ (P) ^{Brown Cap} or HCl (P) Purple Cap/Lt. Blue Label	—	—									
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label	pH < 2	Y N									
NaOH (P) Green Cap	Cl, pH > 10	Y N									
NaOH + ZnAc (P)	pH > 9	Y N									
Dissolved Oxygen 300ml (g)	—	—									
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—									
HCl (AG) Lt. Blue Label O&G, Diesel	—	—									
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525	—	—									
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515	—	—									
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549	—	—									
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524	—	—									
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547	—	—									
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531	pH < 3	Y N									
NH ₄ Cl (AG) Purple Label 552	—	—									
EDA (AG) Brown Label DBPs	—	—									
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—									
Buffer pH 4 (CG)	—	—									
H ₃ PO ₄ (CG) Salmon Label	—	—									
Other:											
Asbestos 1Liter Plastic w/ Foil	—	—									
Low Level Hg / Metals Double Baggie	—	—									
Bottled Water	—	—									
Clear Glass 250mL / 500mL / 1 Liter	—	—									
Soil Tube Brass / Steel / Plastic	—	—									
Tedlar Bag / Plastic Bag	—	—									

Split	Container			Preservative			Date/Time/Initials		
	<u>S</u>	P	250*				S	P	
	S	P					S	P	

Comments: * Odd numbers only. RUL
* RECEIVED ALL 250 ONLY ON 10/26/16 1503 TBA

Sample Integrity



BSK Bottles: Yes No Page ____ of ____

COC Info		Yes		No		NA		Were correct containers and preservatives received for the tests requested?		Yes		No		NA	
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		Yes		No		NA				Yes		No		NA	
If samples were taken today, is there evidence that chilling has begun?		Yes		No		NA		Were there bubbles in the VOA vials? (Volatiles Only)		Yes		No		NA	
Did all bottles arrive unbroken and intact?		Yes		No				Was a sufficient amount of sample received?		Yes		No			
Did all bottle labels agree with COC?		Yes		No				Do samples have a hold time <72 hours?		Yes		No			
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes		No		NA		Was PM notified of discrepancies? PM: _____ By/Time: _____		Yes		No		NA	
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks		Passed?				-10							
Bacti $\text{Na}_2\text{S}_2\text{O}_3$		—		—											
None (P) White Cap		—		—											
Cr6 (P) Lt. Green Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW		Cl, pH > 8		Y N											
Cr6 (P) Pink Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ WW		pH 9.3-9.7		Y N											
Cr6 (P) Black Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ 7199 ***24 HOUR HOLD TIME***		pH 9.0-9.5		Y N											
HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		—		—				1C							
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2		Y N											
NaOH (P) Green Cap		Cl, pH > 10		Y N											
NaOH + ZnAc (P)		pH > 9		Y N											
Dissolved Oxygen 300ml (g)		—		—											
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—		—											
HCl (AG) Lt. Blue Label O&G, Diesel		—		—											
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		—		—											
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515		—		—											
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		—		—											
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		—		—											
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		—		—											
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3		Y N											
NH ₄ Cl (AG) Purple Label 552		—		—											
EDA (AG) Brown Label DBPs		—		—											
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—		—											
Buffer pH 4 (CG)		—		—											
H ₃ PO ₄ (CG) Salmon Label		—		—											
Other:															
Asbestos 1Liter Plastic w/ Foil		—		—											
Low Level Hg / Metals Double Baggie		—		—											
Bottled Water		—		—											
Clear Glass 250mL / 500mL / 1 Liter		—		—											
Soil Tube Brass / Steel / Plastic		—		—											
Tedlar Bag / Plastic Bag		—		—											
Split	Container		Preservative		Date/Time/Initials		Container		Preservative		Date/Time/Initials				
	S P	1L → 250ml			11/7/16	S P									
	S P					S P									
Comments	FO sample exceeded MCL FL sample pulled for analysis OK *RECEIVED ALL 250ML PLY ON 11-8-16 1230-750														

Labeled by: _____ @ _____

Labels checked by: _____ @ _____

RUSH Paged by: _____ @ _____

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

RE: Report for A6J2701 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 10/20/2016. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) 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 **Invoice Details**

Client: PBS Environmental
Report To: Derek May
Project #: Revenue #25103.003 PH 25
Received: 10/20/2016 - 09:00
Report Due: 11/03/2016

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

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 19.6

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	beth.powers@pbsenv.com



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-01

Sampled By: Client

Sample Description: SK-REV-013-FD // Lactation room 5th Floor kitchen sink

Sample Date - Time: 10/18/16 - 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	0.0016	0.0010	mg/L	1	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-03

Sampled By: Client

Sample Description: WF-REV-015-FD // Water fountain 5th Floor adjacent to South stairs

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-05

Sampled By: Client

Sample Description: SK-REV-017-FD // Employee lunch room 5th Floor kitchen sink

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-07

Sampled By: Client

Sample Description: WF-REV-019-FD // Water fountain 5th Floor adjacent to West stairs

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-09
Sampled By: Client
Sample Description: WF-REV-021-FD // Water fountain 5th Floor tower room
between men's/women's bathrooms

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-11
Sampled By: Client
Sample Description: WF-REV-023-FD // Water fountain 4th Floor adjacent to West stairs

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-13

Sampled By: Client

Sample Description: WF-REV-025-FD // Water fountain 3rd Floor adjacent to South stairs

Sample Date - Time: 10/18/16 - 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	A614919	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-15

Sampled By: Client

Sample Description: WF-REV-027-FD // Water fountain 3rd Floor adjacent to West stairs

Sample Date - Time: 10/18/16 - 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	A614918	10/28/16	10/28/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-17
Sampled By: Client
Sample Description: WF-REV-029-FD // Water fountain 3rd Floor tower room
between men's/women's bathrooms

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-19
Sampled By: Client
Sample Description: WF-REV-031-FD // Water fountain 2nd Floor tower room
between men's/women's bathrooms

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-21

Sampled By: Client

Sample Description: SK-REV-033-FD // Employee lunch room 2nd Floor across from Mapping unit

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-23

Sampled By: Client

Sample Description: WF-REV-035-FD // Water fountain 2nd Floor adjacent to West stairs

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-25

Sampled By: Client

Sample Description: WF-REV-037-FD // Water fountain 1st Floor lobby outside of Room 135

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-27

Sampled By: Client

Sample Description: WF-REV-039-FD // Water fountain 1st Floor vending machine area near lobby

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	



A6J2701

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J2701-29

Sampled By: Client

Sample Description: WF-REV-041-FD // Room 101 water fountain adjacent to 1st Floor North stairs tower room

Sample Date - Time: 10/18/16 - 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	A614921	10/28/16	11/02/16	

BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A614918

Prepared: 10/28/2016

Prep Method: EPA 200.2 - Pb/Cu Rule

Analyst: GNG

Blank (A614918-BLK1)

Lead ND 0.0010 mg/L 10/28/16

Blank Spike (A614918-BS1)

Lead 0.099 0.0010 mg/L 0.10 99 85-115 10/28/16

Blank Spike Dup (A614918-BSD1)

Lead 0.10 0.0010 mg/L 0.10 100 85-115 1 20 10/28/16

Matrix Spike (A614918-MS1), Source: A6J3055-21

Lead 0.23 0.0020 mg/L 0.20 0.0039 115 70-130 10/28/16

Matrix Spike (A614918-MS2), Source: A6J2779-37

Lead 0.25 0.0020 mg/L 0.20 0.011 119 70-130 10/28/16

Matrix Spike Dup (A614918-MSD1), Source: A6J3055-21

Lead 0.23 0.0020 mg/L 0.20 0.0039 114 70-130 1 20 10/28/16

Matrix Spike Dup (A614918-MSD2), Source: A6J2779-37

Lead 0.25 0.0020 mg/L 0.20 0.011 119 70-130 0 20 10/28/16

EPA 200.8 - Quality Control

Batch: A614919

Prepared: 10/28/2016

Prep Method: EPA 200.2 - Pb/Cu Rule

Analyst: GNG

Blank (A614919-BLK1)

Lead ND 0.0010 mg/L 10/28/16

Blank Spike (A614919-BS1)

Lead 0.10 0.0010 mg/L 0.10 105 85-115 10/28/16

Blank Spike Dup (A614919-BSD1)

Lead 0.11 0.0010 mg/L 0.10 105 85-115 1 20 10/28/16

Matrix Spike (A614919-MS1), Source: A6J2619-01

Lead 0.21 0.0020 mg/L 0.20 ND 105 70-130 10/28/16

Matrix Spike (A614919-MS2), Source: A6J2696-05

Lead 0.21 0.0020 mg/L 0.20 ND 104 70-130 10/28/16

Matrix Spike Dup (A614919-MSD1), Source: A6J2619-01

Lead 0.21 0.0020 mg/L 0.20 ND 106 70-130 1 20 10/28/16

Matrix Spike Dup (A614919-MSD2), Source: A6J2696-05

Lead 0.21 0.0020 mg/L 0.20 ND 105 70-130 1 20 10/28/16

BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A614921

Prepared: 10/28/2016

Prep Method: EPA 200.2 - Pb/Cu Rule

Analyst: GNG

Blank (A614921-BLK1)

Lead	ND	0.0010	mg/L							11/02/16	
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Blank Spike (A614921-BS1)

Lead	0.098	0.0010	mg/L	0.10		98	85-115			11/02/16	
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Blank Spike Dup (A614921-BSD1)

Lead	0.098	0.0010	mg/L	0.10		98	85-115	0	20	11/02/16	
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Matrix Spike (A614921-MS1), Source: A6J2701-17

Lead	0.20	0.0020	mg/L	0.20	ND	98	70-130			11/02/16	
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Matrix Spike (A614921-MS2), Source: A6J2705-15

Lead	0.19	0.0020	mg/L	0.20	ND	97	70-130			11/02/16	
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Matrix Spike Dup (A614921-MSD1), Source: A6J2701-17

Lead	0.20	0.0020	mg/L	0.20	ND	98	70-130	0	20	11/02/16	
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Matrix Spike Dup (A614921-MSD2), Source: A6J2705-15

Lead	0.20	0.0020	mg/L	0.20	ND	98	70-130	1	20	11/02/16	
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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

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	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:

****NA****

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	CA000792016-1	State of Oregon - NELAP	4021
EPA - UCMR3	CA00079	State of Washington	C997-16

Sacramento

State of California - ELAP 2435

San Bernardino

State of California - ELAP 2993 State of Oregon - NELAP 4119-001

Vancouver

State of Oregon - NELAP WA100008-008 State of Washington C824-16



Engineering + Environmental

A6J2701
PBS EN1939



10/20/2016
10

OREGON DWS
LEAD IN DRINKING WATER
TESTING PROGRAM

25103.003

FACILITY NAME: REVENUE

PROJECT #: [REDACTED] PH-25

ANALYSIS REQUESTED:

- LEAD (PB) IN DRINKING WATER
- COPPER (CU) IN DRINKING WATER

DATE: 10/18/16

RELINQ'D BY/SIGNATURE: Mike Golden / [Signature]

DATE/TIME: 10/19/16 1700

RECEIVED BY/SIGNATURE: [Signature]

DATE/TIME: 10/20/16 0900

EMAIL RESULTS TO: derek.may@pbsenv.com

TURN AROUND TIME: 7-10 days

196

SAMPLE DATA FORM

LAB	SAMPLE #	BUILDING	ROOM	LOCATION IN ROOM
1	SK-REV-013-FD			Lactation Room, 5th Floor
2	SK-REV-014-FL			Kitchen Sink, 5th Floor,
3	WF-REV-015-FD			Water Fountain, Adjacent to
4	WF-REV-016-FL			5th Floor Stairs South
5	SK-REV-017-FD			EMPLOYEE LUNCH ROOM
6	SK-REV-018-FL			5th Floor, Kitchen Sink
7	WF-REV-019-FD			Water Fountain, 5th Floor,
8	WF-REV-020-FL			Adjacent to 5th Floor Stairs West
9	WF-REV-021-FD			Water Fountain, 5th Floor
10	WF-REV-022-FL			Tower Room between mens/womens room
11	WF-REV-023-FD			Water Fountain, 4th Floor, Adjacent
12	WF-REV-024-FL			to 4th Floor Stairs West
13	WF-REV-025-FD			Water Fountain, 3rd Floor,
14	WF-REV-026-FL			Adjacent to 2nd Floor Stairs South
15	WF-REV-027-FD			Water Fountain, 3rd Floor,
16	WF-REV-028-FL			Adjacent to 3rd Floor Stairs West
17	WF-REV-029-FD			Water Fountain 3rd Floor
18	WF-REV-030-FL			Tower room, between mens/womens
19	WF-REV-031-FD			Water Fountain 2nd Floor
20	WF-REV-032-FL			Tower Room between mens/womens
21	SK-REV-033-FD			Employee Lunch Room, 2nd Floor
22	SK-REV-034-FL			across from Mapping Unit
23	WF-REV-035-FD			Water Fountain, 2nd Floor,
24	WF-REV-036-FL			adjacent to 2nd Floor Stairs West
25	WF-REV-037-FD			Water Fountain, 1st Floor
26	WF-REV-038-FL			Lobby, outside of Room 195

Sample Integrity

BSK Bottles: Yes No Page 1 of 1



COC Info		Yes		No		NA		Yes		No		NA	
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
If samples were taken today, is there evidence that chilling has begun?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Did all bottles arrive unbroken and intact?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Did all bottle labels agree with COC?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Were correct containers and preservatives received for the tests requested?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Were there bubbles in the VOA vials? (Volatiles Only)		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Was a sufficient amount of sample received?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Do samples have a hold time <72 hours?		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Was PM notified of discrepancies? PM: _____ By/Time: _____		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?	1-30									
Bacti Na ₂ S ₂ O ₃		—	—										
None (P) White Cap		—	—										
Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW		Cl, pH > 8	Y N										
Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW		pH 9.3-9.7	Y N										
Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***		pH 9.0-9.5	Y N										
HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		—	—	1C									
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2	Y N										
NaOH (P) Green Cap		Cl, pH > 10	Y N										
NaOH + ZnAc (P)		pH > 9	Y N										
Dissolved Oxygen 300ml (g)		—	—										
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—										
HCl (AG) Lt. Blue Label O&G, Diesel		—	—										
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		—	—										
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515		—	—										
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		—	—										
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		—	—										
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		—	—										
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3	Y N										
NH ₄ Cl (AG) Purple Label 552		—	—										
EDA (AG) Brown Label DBPs		—	—										
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—	—										
Buffer pH 4 (CG)		—	—										
H ₃ PO ₄ (CG) Salmon Label		—	—										
Other:													
Asbestos 1Liter Plastic w/ Foil		—	—										
Low Level Hg / Metals Double Baggie		—	—										
Bottled Water		—	—										
Clear Glass 250mL / 500mL / 1 Liter		—	—										
Soil Tube Brass / Steel / Plastic		—	—										
Tedlar Bag / Plastic Bag		—	—										
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials							
	S P 250*			S P									
	S P			S P									
Comments	* Odd numbers only. RIL												



A6J2701



10242016

PBSEN1939

Turnaround: Standard

Due Date: 11/3/2016



PBS Environmental



Printed: 10/27/2016 9:47:21AM

Page 1 of 1

Page 24 of 25

Sample Integrity

BSK Bottles: Yes No

Page 1 of 1



COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	Yes	No	<u>NA</u>	Were correct containers and preservatives received for the tests requested?	<u>Yes</u>	No	NA
	If samples were taken today, is there evidence that chilling has begun?	Yes	No	<u>NA</u>	Were there bubbles in the VOA vials? (Volatiles Only)	Yes	No	<u>NA</u>
	Did all bottles arrive unbroken and intact?	<u>Yes</u>	No		Was a sufficient amount of sample received?	<u>Yes</u>	No	
	Did all bottle labels agree with COC?	<u>Yes</u>	No		Do samples have a hold time <72 hours?	Yes	<u>No</u>	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes	No	<u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes	No	<u>NA</u>

Bottles Received	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?						
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—	1-30					
	None (P) White Cap	—	—						
	Cr6 (P) Lt. Green Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	Cl, pH > 8	Y N						
	Cr6 (P) Pink Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ WW	pH 9.3-9.7	Y N						
	Cr6 (P) Black Label/Blue Cap $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ 7199 ***24 HOUR HOLD TIME***	pH 9.0-9.5	Y N						
	HNO_3 (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label	—	—	1C					
	H_2SO_4 (P) or (AG) Yellow Cap/Label	pH < 2	Y N						
	NaOH (P) Green Cap	Cl, pH > 10	Y N						
	$\text{NaOH} + \text{ZnAc}$ (P)	pH > 9	Y N						
	Dissolved Oxygen 300ml (g)	—	—						
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—						
	HCl (AG) Lt. Blue Label O&G, Diesel	—	—						
	Ascorbic, EDTA, KH_2Ct (AG) Pink Label 525	—	—						
	$\text{Na}_2\text{O}_3\text{S}$ 250mL (AG) Neon Green Label 515	—	—						
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—						
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) Blue Label 548, THM, 524	—	—						
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) Blue Label 504, 505, 547	—	—						
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) Orange Label 531	pH < 3	Y N						
	NH_4Cl (AG) Purple Label 552	—	—						
	EDA (AG) Brown Label DBPs	—	—						
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—						
	Buffer pH 4 (CG)	—	—						
	H_3PO_4 (CG) Salmon Label	—	—						
	Other:								
	Asbestos 1Liter Plastic w/ Foil	—	—						
	Low Level Hg / Metals Double Baggie	—	—						
	Bottled Water	—	—						
	Clear Glass 250mL / 500mL / 1 Liter	—	—						
	Soil Tube Brass / Steel / Plastic	—	—						
	Tedlar Bag / Plastic Bag	—	—						

Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	<u>S</u> P 250*			S P		
	S P			S P		

Comments: * Odd numbers only. RIL
* RECEIVED ALL 250 POLY ON 10/26/16 1903 TBJ



BSK Associates Fresno
 1414 Stanislaus St
 Fresno, CA 93706
 559-497-2888 (Main)
 559-485-6935 (FAX)



A6J3312
 11/11/2016

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

RE: Report for A6J3312 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 10/26/2016. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) 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 **Invoice Details**

Client: PBS Environmental
Report To: Derek May
Project #: Revenue #25103.003 PH 25
Received: 10/26/2016 - 17:15
Report Due: 11/10/2016

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

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 20.4

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	beth.powers@pbsenv.com



A6J3312

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J3312-01
Sampled By: Client
Sample Description: SK-REV-043-FD // Cafe Handwash station kitchen sink

Sample Date - Time: 10/15/16 - 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	A615128	11/02/16	11/02/16	



A6J3312

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J3312-03
Sampled By: Client
Sample Description: SK-REV-045-FD // Cafe Dishwash area kitchen sink

Sample Date - Time: 10/15/16 - 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	0.0013	0.0010	mg/L	1	A615128	11/02/16	11/02/16	



A6J3312

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J3312-05
Sampled By: Client
Sample Description: SK-REV-047-FD // Cafe Food prep area 1 kitchen sink

Sample Date - Time: 10/15/16 - 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	A615128	11/02/16	11/02/16	



A6J3312

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J3312-07
Sampled By: Client
Sample Description: SK-REV-049-FD // Cafe Food prep area 2 kitchen sink

Sample Date - Time: 10/15/16 - 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	A615128	11/02/16	11/02/16	



A6J3312

Oregon DAS - Lead
Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6J3312-09
Sampled By: Client
Sample Description: SK-REV-051-FD // Cafe Food prep area 3 kitchen sink

Sample Date - Time: 10/15/16 - 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	A615128	11/02/16	11/02/16	

BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A615128

Prepared: 11/2/2016

Prep Method: EPA 200.2

Analyst: GNG

Blank (A615128-BLK1)

Lead	ND	0.0010	mg/L							11/02/16	
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Blank Spike (A615128-BS1)

Lead	0.098	0.0010	mg/L	0.10		98	85-115			11/02/16	
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Blank Spike Dup (A615128-BSD1)

Lead	0.098	0.0010	mg/L	0.10		98	85-115	0	20	11/02/16	
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Matrix Spike (A615128-MS1), Source: A6J3246-41

Lead	0.20	0.0020	mg/L	0.20	ND	101	70-130			11/02/16	
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Matrix Spike (A615128-MS2), Source: A6J3305-04

Lead	0.19	0.0020	mg/L	0.20	ND	95	70-130			11/02/16	
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Matrix Spike Dup (A615128-MSD1), Source: A6J3246-41

Lead	0.20	0.0020	mg/L	0.20	ND	100	70-130	1	20	11/02/16	
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Matrix Spike Dup (A615128-MSD2), Source: A6J3305-04

Lead	0.19	0.0020	mg/L	0.20	ND	96	70-130	1	20	11/02/16	
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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

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	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:

****NA****

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	CA000792016-1	State of Oregon - NELAP	4021
EPA - UCMR3	CA00079	State of Washington	C997-16

Sacramento

State of California - ELAP	2435
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San Bernardino

State of California - ELAP	2993	State of Oregon - NELAP	4119-001
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Vancouver

State of Oregon - NELAP	WA100008-008	State of Washington	C824-16
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Sample Integrity

BSK Bottles: **Yes** No

Page 1 of 1



COC Info		Yes		No		NA		Yes		No		NA	
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		Yes		No		NA		Yes		No		NA	
If samples were taken today, is there evidence that chilling has begun?		Yes		No		NA		Yes		No		NA	
Did all bottles arrive unbroken and intact?		Yes		No		NA		Yes		No		NA	
Did all bottle labels agree with COC?		Yes		No		NA		Yes		No		NA	
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes		No		NA		Yes		No		NA	
		PM:		By/Time:				Yes		No		NA	
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks		Passed?		1-10							
Bacti Na ₂ S ₂ O ₃		—		—									
None (P) White Cap		—		—									
Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW		Cl, pH > 8		Y N									
Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW		pH 9.3-9.7		Y N									
Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***		pH 9.0-9.5		Y N									
HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		—		—		1C							
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2		Y N									
NaOH (P) Green Cap		Cl, pH > 10		Y N									
NaOH + ZnAc (P)		pH > 9		Y N									
Dissolved Oxygen 300ml (g)		—		—									
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—		—									
HCl (AG) Lt. Blue Label O&G, Diesel		—		—									
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		—		—									
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515		—		—									
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		—		—									
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		—		—									
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		—		—									
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3		Y N									
NH ₄ Cl (AG) Purple Label 552		—		—									
EDA (AG) Brown Label DBPs		—		—									
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—		—									
Buffer pH 4 (CG)		—		—									
H ₃ PO ₄ (CG) Salmon Label		—		—									
Other:													
Asbestos 1Liter Plastic w/ Foil		—		—									
Low Level Hg / Metals Double Baggie		—		—									
Bottled Water		—		—									
Clear Glass 250mL / 500mL / 1 Liter		—		—									
Soil Tube Brass / Steel / Plastic		—		—									
Tedlar Bag / Plastic Bag		—		—									
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials							
	S P 250			S P									
	S P			S P									
Comments	* Odd numbers only. per												

Sample Integrity

BSK Bottles: Yes No Page 1 of 1



COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	Yes	No	<input checked="" type="radio"/> NA	Were correct containers and preservatives received for the tests requested?	<input checked="" type="radio"/> Yes	No	NA
	If samples were taken today, is there evidence that chilling has begun?	Yes	No	<input checked="" type="radio"/> NA	Were there bubbles in the VOA vials? (Volatiles Only)	<input checked="" type="radio"/> Yes	No	<input checked="" type="radio"/> NA
	Did all bottles arrive unbroken and intact?	<input checked="" type="radio"/> Yes	No		Was a sufficient amount of sample received?	<input checked="" type="radio"/> Yes	No	<input checked="" type="radio"/> NA
	Did all bottle labels agree with COC?	<input checked="" type="radio"/> Yes	No		Do samples have a hold time <72 hours?	Yes	<input checked="" type="radio"/> No	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes	No	<input checked="" type="radio"/> NA	Was PM notified of discrepancies? PM: _____ By/Time: _____	Yes	No	<input checked="" type="radio"/> NA
Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?		1-10			
	Bacti Na ₂ S ₂ O ₃	—	—					
	None (P) White Cap	—	—					
	Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW	Cl, pH > 8	Y	N				
	Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW	pH 9.3-9.7	Y	N				
	Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***	pH 9.0-9.5	Y	N				
	HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label	—	—		1C			
	H ₂ SO ₄ (P) or (AG) Yellow Cap/Label	pH < 2	Y	N				
	NaOH (P) Green Cap	Cl, pH > 10	Y	N				
	NaOH + ZnAc (P)	pH > 9	Y	N				
	Dissolved Oxygen 300ml (g)	—	—					
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—					
	HCl (AG) Lt. Blue Label O&G, Diesel	—	—					
	Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525	—	—					
	Na ₂ O ₃ S 250mL (AG) Neon Green Label 515	—	—					
	Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549	—	—					
	Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524	—	—					
	Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547	—	—					
	Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531	pH < 3	Y	N				
	NH ₄ Cl (AG) Purple Label 552	—	—					
	EDA (AG) Brown Label DBPs	—	—					
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	—	—					
	Buffer pH 4 (CG)	—	—					
	H ₃ PO ₄ (CG) Salmon Label	—	—					
	Other:							
	Asbestos 1Liter Plastic w/ Foil	—	—					
	Low Level Hg / Metals Double Baggie	—	—					
	Bottled Water	—	—					
Clear Glass 250mL / 500mL / 1 Liter	—	—						
Soil Tube Brass / Steel / Plastic	—	—						
Tedlar Bag / Plastic Bag	—	—						
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials	
	<input checked="" type="radio"/> S <input type="radio"/> P 250*				<input type="radio"/> S <input type="radio"/> P			
Comments	* Odd numbers only. per							
	All containers received intact 11-1 re							



BSK Associates Fresno
1414 Stanislaus St
Fresno, CA 93706
559-497-2888 (Main)
559-485-6935 (FAX)



A6K0414
11/11/2016

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

RE: Report for A6K0414 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 11/2/2016. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) 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	Invoice Details
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Client: PBS Environmental
Report To: Derek May
Project #: Revenue #25103.003 PH 25
Received: 11/02/2016 - 11:36
Report Due: 11/16/2016

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

Sample Receipt Conditions

Cooler: Default Cooler	Containers Intact
Temperature on Receipt °C: 20.0	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	beth.powers@pbsenv.com



A6K0414

Oregon DAS - Lead

Revenue #25103.003 PH 25

Certificate of Analysis

Sample ID: A6K0414-01

Sampled By: Client

Sample Description: SK-REV-053-FD // Room 357 3rd Floor Breakroom kitchenette sink

Sample Date - Time: 11/01/16 - 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	A615373	11/08/16	11/08/16	

BSK Associates Fresno
Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: A615373

Prepared: 11/8/2016

Prep Method: EPA 200.2

Analyst: PSK

Blank (A615373-BLK1)

Lead	ND	0.0010	mg/L							11/08/16	
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Blank Spike (A615373-BS1)

Lead	0.10	0.0010	mg/L	0.10		102	85-115			11/08/16	
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Blank Spike Dup (A615373-BSD1)

Lead	0.10	0.0010	mg/L	0.10		101	85-115	1	20	11/08/16	
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Matrix Spike (A615373-MS1), Source: A6K0695-41

Lead	0.20	0.0020	mg/L	0.20	0.0048	98	70-130			11/08/16	
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Matrix Spike (A615373-MS2), Source: A6K0414-01

Lead	0.20	0.0020	mg/L	0.20	ND	99	70-130			11/08/16	
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Matrix Spike Dup (A615373-MSD1), Source: A6K0695-41

Lead	0.20	0.0020	mg/L	0.20	0.0048	99	70-130	1	20	11/08/16	
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Matrix Spike Dup (A615373-MSD2), Source: A6K0414-01

Lead	0.20	0.0020	mg/L	0.20	ND	100	70-130	1	20	11/08/16	
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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

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	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:

****NA****

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	CA000792016-1	State of Oregon - NELAP	4021
EPA - UCMR3	CA00079	State of Washington	C997-16

Sacramento

State of California - ELAP	2435
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San Bernardino

State of California - ELAP	2993	State of Oregon - NELAP	4119-001
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Vancouver

State of Oregon - NELAP	WA100008-008	State of Washington	C824-16
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Sample Integrity



BSK Bottles: Yes No Page 1 of 1

COC Info		Yes	No	NA	Were correct containers and preservatives received for the tests requested?		Yes	No	NA
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$				<input checked="" type="radio"/>	Were correct containers and preservatives received for the tests requested?		<input checked="" type="radio"/>		<input type="radio"/>
If samples were taken today, is there evidence that chilling has begun?				<input checked="" type="radio"/>	Were there bubbles in the VOA vials? (Volatiles Only)		<input checked="" type="radio"/>		<input type="radio"/>
Did all bottles arrive unbroken and intact?		<input checked="" type="radio"/>			Was a sufficient amount of sample received?		<input checked="" type="radio"/>		<input type="radio"/>
Did all bottle labels agree with COC?		<input checked="" type="radio"/>			Do samples have a hold time <72 hours?		<input checked="" type="radio"/>		<input type="radio"/>
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?				<input checked="" type="radio"/>	Was PM notified of discrepancies? PM: _____ By/Time: _____		<input checked="" type="radio"/>		<input type="radio"/>
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?		1-2				
Bacti Na ₂ S ₂ O ₃		—	—						
None (P) White Cap		—	—						
Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW		Cl, pH > 8	Y N						
Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW		pH 9.3-9.7	Y N						
Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***		pH 9.0-9.5	Y N						
HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		—	—		1C				
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2	Y N						
NaOH (P) Green Cap		Cl, pH > 10	Y N						
NaOH + ZnAc (P)		pH > 9	Y N						
Dissolved Oxygen 300ml (g)		—	—						
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—						
HCl (AG) Lt. Blue Label O&G, Diesel		—	—						
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		—	—						
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515		—	—						
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		—	—						
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		—	—						
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		—	—						
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3	Y N						
NH ₄ Cl (AG) Purple Label 552		—	—						
EDA (AG) Brown Label DBPs		—	—						
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—	—						
Buffer pH 4 (CG)		—	—						
H ₃ PO ₄ (CG) Salmon Label		—	—						
Other:									
Asbestos 1Liter Plastic w/ Foil		—	—						
Low Level Hg / Metals Double Baggie		—	—						
Bottled Water		—	—						
Clear Glass 250mL / 500mL / 1 Liter		—	—						
Soil Tube Brass / Steel / Plastic		—	—						
Tedlar Bag / Plastic Bag		—	—						
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials			
	<input checked="" type="radio"/> S <input type="radio"/> P 250*			<input type="radio"/> S <input type="radio"/> P					
	<input type="radio"/> S <input type="radio"/> P			<input type="radio"/> S <input type="radio"/> P					
Comments	* Add numbers only. per								