

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 Archives Building 800 Summer Street Salem, Oregon 97301 PBS Project #: 25103.003 Phase 0003

Dear Mr. Miller:

On October 10, 2016, PBS Engineering and Environmental Inc. (PBS) performed drinking water sampling at the Archives building located at 800 Summer Street 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.

Ten 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 10 ppb. Laboratory analysis indicates that all of these drinking water samples contained lead at concentrations below the EPA action level of 15 ppb.

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

Drinking Water Sampling for Lead, Department of Administrative Services Archives Building November 22, 2016 Page 2 of 2

Sample Number	Sample Location	Lead Concentration (ppb)
SK-ARB-001-FD	Kitchenette, north side, second floor, adjacent to conference room	10
SK-ARB-003-FD	Kitchenette, conference room, first floor, northwest corner	5.6
WF-ARB-005-FD	Water fountain, first floor across from men's and women's bathrooms and lockers	ND
SK-ARB-007-FD	Kitchenette northeast corner first floor kitchen sink	2.8
SK-ARB-009-FD	Break room southeast corner first floor kitchen sink	ND

#### First Draw Drinking Water Sample Locations and Lead Concentrations

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.

S. Durl Key

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)



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

#### RE: Report for A6J1752 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 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** 



# A6J1752 Oregon DAS - Lead

## **Case Narrative**

Project and	Report Details	Invoice Details
Client:	PBS Environmental	Invoice To: PBS Environmental
Report To:	Derek May	Invoice Attn: Accounts Payable
Project #:	Archives Building #2510	3.003 PH 3 Project PO#: -
Received:	10/13/2016 - 09:00	
Report Due:	10/27/2016	
Sample Red	ceipt Conditions	
	ault Cooler on Receipt ºC: 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 Quali	fiers	
The following	g qualifiers have been ap	plied to one or more analytical results:
***None applie	ed***	
Report Dis	tribution	

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



Archives Building #25103.003 PH 3

## **Certificate of Analysis**

 Sample ID: A6J1752-01
 Sample Date - Time: 10/10/16 - 00:00

 Sampled By:
 Client

 Sample Description: SK-ARB-001-FD // Kitchenette northside 2nd Floor adjacent to conf. room
 Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	0.010	0.0010	mg/L	1	A614381	10/19/16	10/19/16	



Archives Building #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J1752-03 Sampled By: Client Sample Description: SK-ARB-003-FD // Kitchenette conf. room 1st Floor NW corner Sample Date - Time: 10/10/16 - 00:00 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	0.0056	0.0010	mg/L	1	A614379	10/19/16	10/19/16	



Oregon DAS - Lead

Archives Building #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J1752-05	Sample Date - Time: 10/10/16 - 00:00
Sampled By: Client	Matrix: Drinking Water
Sample Description: WF-ARB-005-FD // Water fountain 1st Floor across from men's and women's bathrooms and lockers	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	A614379	10/19/16	10/19/16	

#### A6J1752 FINAL 10252016 1753 Printed: 10/25/2016 QA-RP-0001-10 Final.rpt



Archives Building #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J1752-07 Sampled By: Client Sample Description: SK-ARB-007-FD // Kitchenette NE corner 1st Floor kitchen sink Sample Date - Time: 10/10/16 - 00:00 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	0.0028	0.0010	mg/L	1	A614379	10/19/16	10/19/16	



Archives Building #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J1752-09 Sampled By: Client Sample Description: SK-ARB-009-FD // Breakroom SE Corner 1st Floor kitchen sink Sample Date - Time: 10/10/16 - 00:00 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614379	10/19/16	10/19/16	



### BSK Associates Fresno Metals Quality Control Report

	N	letals Qu	uality (	Sontrol	Report						
				Spike	Source		%REC		RPD	Date	
Analyte	Result	RL	Units	Level	Result	%REC	Limits	RPD	Limit	Analyzed	Qual
		EPA 20	00.8 - Q	uality Co	ntrol						
Batch: A614379										•	10/19/2016
Prep Method: EPA 200.2										Ar	alyst: GNG
Blank (A614379-BLK1)											
Lead	ND	0.0010	mg/L							10/19/16	
Blank Spike (A614379-BS1)											
Lead	0.10	0.0010	mg/L	0.10		104	85-115			10/19/16	
Blank Spike Dup (A614379-BSD1)											
Lead	0.10	0.0010	mg/L	0.10		104	85-115	0	20	10/19/16	
Matrix Spike (A614379-MS1), Source: A Lead	<b>46J1691-01</b> 0.21	0.0020	mg/L	0.20	ND	105	70-130			10/19/16	
		0.0020		0.20							
Matrix Spike (A614379-MS2), Source: A		0.0000		0.00	ND	101	70 400			40/40/40	
Lead	0.20	0.0020	mg/L	0.20	ND	101	70-130			10/19/16	
Matrix Spike Dup (A614379-MSD1), So	urce: A6J1691-01										
Lead	0.21	0.0020	mg/L	0.20	ND	106	70-130	1	20	10/19/16	
Matrix Spike Dup (A614379-MSD2), Sou	urce: A6J1691-21										
Lead	0.20	0.0020	mg/L	0.20	ND	100	70-130	1	20	10/19/16	
		EPA 20	00.8 - Q	uality Co	ntrol						
Batch: A614381				-						Prepared:	10/19/2016
Prep Method: EPA 200.2										Ar	alyst: GNG
Blank (A614381-BLK1)											
Lead	ND	0.0010	mg/L							10/19/16	
Blank Spike (A614381-BS1)											
Lead	0.10	0.0010	mg/L	0.10		100	85-115			10/19/16	
Blank Snike Dun (4644204 BSD4)											
Blank Spike Dup (A614381-BSD1) Lead	0.099	0.0010	mg/L	0.10		99	85-115	1	20	10/19/16	
			U								
Matrix Spike (A614381-MS1), Source: A Lead	<b>A6J1752-01</b> 0.21	0.0020	mg/L	0.20	0.010	100	70-130			10/19/16	
Leau	0.21	0.0020	mg/∟	0.20	0.010	100	70-130			10/19/10	
Matrix Spike (A614381-MS2), Source: A											
Lead	0.20	0.0020	mg/L	0.20	ND	101	70-130			10/19/16	
Matrix Spike Dup (A614381-MSD1), So	urce: A6J1752-01										
Lead	0.21	0.0020	mg/L	0.20	0.010	99	70-130	0	20	10/19/16	
Matrix Spike Dup (A614381-MSD2), So	urce: A6J1785-01										
Lead	0.20	0.0020	mg/L	0.20	ND	100	70-130	2	20	10/19/16	

A6J1752 FINAL 10252016 1753 Printed: 10/25/2016 QA-RP-0001-10 Final.rpt



## **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

	RELINQ'D BY			239	10/13/2016 10 LEAD IN DRINKING WATER TESTING PROGRAM 25103.003 PROJECT #:	
U		TS TO: derek may Ept	senv.com		TURN AROUND TIME: 7-10 days	
		<u> </u>	SAMPLE	DATA FO	)RM	
	LAB	SAMPLE #	BUILDING	ROOM	LOCATION IN ROOM	
	l	SK-ARB-001-FD			Kitchenette, North-side and Floor,	
	2	SK- ALB-DOD-FL			Adjacent to Conf. Room	
	3	SK-ARB-003 - FD			Kitchenette, Conf. Room 1St	
-	4	5K-ARB-004-PL			Floor (NWI-site (orner)	
	5	WF-ALB-005-FD WF-ALB-006-FL SK-ALB-007-FD SK-ALB-008-FL			Whiter Foundain, Pt Floor across from mens and womens bellfrooms and lockers Ritchenette, NE CORNER, 1st Floor Kitchen Sink	
-	0	SP-MCB-000 TC				
	9 10	SK-ARB-009-FO SK-ARB-010-FL			Breakroom, SE Corner, 1St Floor Kitchen Sink	
		· · · · · · · · · · · · · · · · · · ·				
				•		

PAGE \_\_\_\_ OF\_\_

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BSK Associates	SR-FL-0002-16

# Sample Integrity

4/11750	
A6J1752	
PBSEN1939	



10/13/2016

BS	K Bottles: Yes (No ) Page	e_(of	1						2
	Was temperature within range2 Chemistry ≤ 6°C Micro < 10°C		(A)	Wer	e correct contain	ers and preservati	ves	(Yes)	No NA
COC Info	If samples were taken today, is there evidence	Yes No	in)	Wer	ived for the tests e there bubbles in	n the VOA vials?			0
5	that chilling has begun? Did all bottles arrive unbroken and intact?		51	(Vola	atiles Only)			6	No (NA
Ö	Did all bottle labels agree with COC?	(Yes N (Yes) N				unt of sample rece old time <72 hour		(Yes	
	Was sodium thiosulfate added to CN sample(s)		Â,		PM notified of di		51	Yes	- Ch
	until chlorine was no longer present?	<u> </u>	/	PM:		By/Time:		Yes	No (NA
	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V) Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Checks	Pas	sed?	1-10	DATE OF THE REAL PROPERTY OF	Service and Party of		
	None (P) <sup>White Cap</sup>			a de carri	NOT STREET				
	Cr6 (P) L1. Green Label/Blue Cap NH4OH(NH4)2SO4 DW		- -	- N	CONTRACTOR OF THE				
	Cr6 (P) Pink Label/Blue Cap NH4OH(NH4)2SO4 WW	Cl, pH > 8	T Y						
de de		pH 9.3-9.7	Y	N					
the lab		pH 9.0-9.5	Y	N					
din	HNO3 (P) Red Ger or HCI (P) Purple Cap/Lt. Blue Label	. <del>.</del>	-	-	IC			1	
	H <sub>2</sub> SO <sub>4</sub> (P) or (AG) <sup>Yellow Cap/Label</sup>	pH < 2	Y	N					
erform	NaOH (P) Green Cap	Cl, pH >10	Y	N					dia.
are p	NaOH + ZnAc (P)	pH > 9	Y	N		testine, mene			
ora	Dissolved Oxygen 300ml (g)		-	-					
- AN	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		-	_					
Bottles Received ine checks are either N	HCI (AG) <sup>Lt. Blue Label</sup> O&G, Diesel	-	-	_			10.01 10.00	200503000	
cei	Ascorbic, EDTA, KH2Ct (AG)Pink Label 525	_		_					
Ree	Na2O3S 250mL (AG)Neon Green Label 515			_			32 555		
es	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 1 Liter (Brown P) 549		<u></u>	_			Carl Sacha	S2003	
er er	Na2S2O3 (AG) <sup>Blue Label</sup> 548, THM, 524		-	-				N. New York	
orine	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CG) <sup>Blue Label</sup> 504, 505, 547			_			1000		
chlo	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA (CG) <sup>Orange Label</sup> 531	pH < 3	Y	N		Sector Sector		COLUMN T	
ation/	NH <sub>4</sub> Cl (AG) <sup>Purple Label</sup> 552	pri to							
	EDA (AG) <sup>Brown Label</sup> DBPs		See. P		The second s			Charles and	
presen	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624			-					
( <u>8</u> 22		-	_	200000		Contraction of the second		Contractor Contractor	
means	Buffer pH 4 (CG) H <sub>3</sub> PO <sub>4</sub> (CG) <sup>Salmon Label</sup>	-	-	-					
ت ا	Other:	-							
2	Asbestos 1Liter Plastic w/ Foil		<u>.                                    </u>			11-12 March 11-12	100		
	Low Level Hg / Metals Double Baggie	_	_					San San S	
	Bottled Water			-					
	Clear Glass 250mL / 500mL / 1 Liter		_						
	Soil Tube Brass / Steel / Plastic	—	-						
	Tedlar Bag         /         Plastic Bag           Container         Preservative         Date/	Time/Initials			Container	Preservative			11
Split	SP 2504	Time/Initials	s	P	Container	Freservative	Dat	e/ I ime	e/Initials
S	S P		-	P				a a fair an	
Comments	* Odd number	s ænly-	1				-		

6





PBSEN1939



**PBS** Environmental



# 10142016

Turnaround: Standard Due Date: 10/27/2016





Printed: 10/19/2016 10:54:55AM Page 1 of 1 Page 12 of 13

						J1/52		10/1	3/20	16
BSK A	Associates SR-FL-0002-16				PB	SEN1939			10	
-	mple Integrity									
		(	1				CIVICAL CHARMEN			
3S	K Bottles: Yes ('No / Page	eof			N					
	Was temperature within range2	Yes No	(A)		e correct contain				You	No NA
ę	Chemistry ≤ 6°C Micro < 10°C If samples were taken today, is there evidence	Ĺ	¥-		eived for the tests e there bubbles				2	
COC Info	that chilling has begun?	Yes No (	YA'	(Vola	atiles Only)		Yes No (N			
8	Did all bottles arrive unbroken and intact? Did all bottle labels agree with COC?		10	Was	a sufficient amo	ount of sampl	e receive	d? (	Yes	
0	Was sodium thiosulfate added to CN sample(s)		10		amples have a horiginal second				Yes	(No
	until chlorine was no longer present?	Yes No (!	NA)	PM:		By/Time:			Yes	No (NA
:	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Pas	sed?	1-10					
ĺ	Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>									
	None (P) <sup>White Cap</sup>		-					 		
	Cr6 (P) Lt. Green Label/Blue Cap NH4OH(NH4)2SD4 DW	Cl, pH > 8		N					·	
q	Cr6 (P) Pink Label/Blue Cap NH40H(NH4)2SO4 WW	pH 9.3-9.7	Y	N						
the lab	Cr6 (P) Black Label/Blue Cap NH4OH(NH4)2SO4 7199	pH 9.0-9.5	Y	N						
	HNO3 (P) Red Gap or HCI (P) Purple Cap/Lt. Blue Label	_	-	_	10		•			
performed in	H <sub>2</sub> SO <sub>4</sub> (P) or (AG) Yellow Cap/Label	pH < 2	Y	N						<del>.</del>
erfo	NaOH (P) <sup>Green Cap</sup>	Cl, pH >10	Y	Ν			·			
are p	NaOH + ZnAc (P)	pH > 9	Y	N						
ora	Dissolved Oxygen 300ml (g)		_	_					<u></u>	<u></u>
<pre>A</pre>	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		-	-						······
either N/A	HCI (AG)Lt. Blue Label O&G, Diese!									
eith	Ascorbic, EDTA, KH <sub>2</sub> Ct (AG) <sup>Pink Label</sup> 525	_	_	_					-+	
sare either N	Na2O3S 250mL (AG)Neon Green Label 515			- 1	· · · · · · · · · · · · · · · · · · ·					
ecks	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 1 Liter (Brown P) 549			-						
ne checks	Na2S2O3 (AG) <sup>Biue Label</sup> 548, THM, 524	·		-						
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CG) <sup>Blue Label</sup> 504, 505, 547	_		-					<u> </u>	
	Na2S2O3 + MCAA (CG)Orange Label 531	pH < 3	Y	N						
ation	NH4CI (AG) <sup>Purple Label</sup> 552			_						
erva	EDA (AG) <sup>Brown Label</sup> DBPs			_						
81	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624									
H	Buffer pH 4 (CG)									<u>.                                    </u>
	H <sub>3</sub> PO <sub>4</sub> (CG) <sup>Salmon Label</sup>									
- –	Other:									
	Asbestos 1Liter Plastic w/ Foil									a a traine
	Low Level Hg / Metals Double Baggie									
	Bottled Water Clear Glass 250mL / 500mL / 1 Liter									
	Soil Tube Brass / Steel / Plastic									
	Tedlar Bag / Plastic Bag		_	-						
<u>.</u>		Time/Initials			Container	Preserv	ative	Date/	Time	Initials
	s)p 250 \$		S	Р						
	S P		S	Ρ					······	
s I		·	0	n						
nent	* Odd number. All.	sonly.	P	ИC						
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**BSK Associates Fresno** 1414 Stanislaus St Fresno, CA 93706 559-497-2888 (Main)



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

#### RE: Report for A6J2975 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 10/24/2016. 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** 



# A6J2975 Oregon DAS - Lead

## **Case Narrative**

Project and	Report Details		Invoice Details						
Client:	PBS Environmental		Invoice To: PBS Environmental						
Report To:	Derek May		Invoice Attn: Accounts Payable						
Project #:	Central Point OSP Cri	me Lab/110353 #25103.003 PH 3	PH 3 Project PO#: -						
Received:	10/24/2016 - 13:51								
Report Due:	11/07/2016								
Sample Re	ceipt Conditions								
	ault Cooler on Receipt °C: 18.0	Containers Intact COC/Labels Agree Received with no thermal preservation. Sample(s) split after receipt at the laboratory.							
		Initial receipt at BSK-VAL							
Data Quali	fiers								
The followin	g qualifiers have been	applied to one or more analytical	results:						
***None applie	ed***								
Report Dis	stribution								
Decinicat(a)		Depart Format	00						

Recipient(s)	Report Format	CC:
Derek May	FINAL.RPT	beth.powers@pbsenv.com



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-01 Sampled By: Client Sample Description: DF-I-001 // Front lobby Sample Date - Time: 10/19/16 - 09:50 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614950	10/31/16	11/02/16	



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-03 Sampled By: Client Sample Description: S-I-003 // Conference/Training room Sample Date - Time: 10/19/16 - 09:55 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614950	10/31/16	11/02/16	



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-05 Sampled By: Client Sample Description: S-I-005 // Criminal Division/kitchenette Sample Date - Time: 10/19/16 - 10:00 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614950	10/31/16	11/02/16	



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-07 Sampled By: Client Sample Description: S-I-007 // Lunch Room Sample Date - Time: 10/19/16 - 10:06 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614950	10/31/16	11/02/16	



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-09 Sampled By: Client Sample Description: S-I-009 // Lab Lunchroom Sample Date - Time: 10/19/16 - 10:11 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	ND	0.0010	mg/L	1	A614950	10/31/16	11/02/16	



**Oregon DAS - Lead** 

Central Point OSP Crime Lab/110353 #25103.003 PH 3

## **Certificate of Analysis**

Sample ID: A6J2975-11 Sampled By: Client Sample Description: EW-I-011 // Lab eyewash station Sample Date - Time: 10/19/16 - 10:20 Matrix: Drinking Water Sample Type: First Draw

#### **BSK Associates Fresno**

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Lead	EPA 200.8	0.0021	0.0010	mg/L	1	A614950	10/31/16	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
		EPA 20	00.8 - Q	uality Co	ntrol						
Batch: A614950 Prep Method: EPA 200.2 - Pb/Cu Rule	9									•	10/31/2016 alyst: GNG
Blank (A614950-BLK1) Lead	ND	0.0010	mg/L							11/02/16	
Blank Spike (A614950-BS1) Lead	0.096	0.0010	mg/L	0.10		96	85-115			11/02/16	
Blank Spike Dup (A614950-BSD1) Lead	0.097	0.0010	mg/L	0.10		97	85-115	1	20	11/02/16	
Matrix Spike (A614950-MS1), Source: Lead	<b>A6J2779-79</b> 0.19	0.0020	mg/L	0.20	0.0050	91	70-130			11/02/16	
Matrix Spike (A614950-MS2), Source: Lead	<b>A6J2975-05</b> 0.20	0.0020	mg/L	0.20	ND	98	70-130			11/02/16	
Matrix Spike Dup (A614950-MSD1), S Lead	ource: A6J2779-79 0.20	0.0020	mg/L	0.20	0.0050	96	70-130	5	20	11/02/16	
Matrix Spike Dup (A614950-MSD2), S Lead	ource: A6J2975-05 0.20	0.0020	mg/L	0.20	ND	98	70-130	0	20	11/02/16	



## **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

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

	PBS	Engineering + Environmenta	A6J2975 PBSEN19		10/24/2016 State Of 10 Lead in Drinking Testing Pr	WATER
	BUILDING NAM	E: Central Point	OSP Crime	Lab	1/0353 PROJECT #: 25103.003 PHASE	32
		UESTED: LEAD (PB) IN DRINKING COPPER (CU) IN DRINKI	WATER ING WATER		Date: <i>10/19/16</i>	
	RELINQ'D BY/S	IGNATURE: JOSE HERREN	1 1 1 1A		DATE/TIME: 10/19/16 - /	5.70
	RECEIVED BY/S		Jol		DATE/TIME: 10 (741)6 13:5	· · · · · · · · · · · · · · · · · · ·
	EMAIL RESULTS	sto: derek. may	Oppsenv.com		TURN AROUND TIME:	
			SAMPLE	DATA FC	PRM	
	LAB	SAMPLE #/Time	BUILDING	ROOM	LOCATION IN ROOM	
	Test 1	I-001 /950	OSP Crime Lab		Front Lobby DF	DF
	Hold 2	F-002 /952	]		H (1)	DF
	Test 3	I-003/955			Conference /Training Room	5
	Hald 4	F-004 /957			4 11	S
	Test 5	I-005 / 1000			Criminal Division / Kitchenette	S
ų	Hald Q	F-006 / 1003			li V	5
	To- 7	I-067 / 1006			Lunch Room	Z
	Hold 8	F-008 / 1003			( <u>1</u> ()	5
	Test 9	I-009 / 1011			Lab Lunchroom	S
Χ.	Hold [0	F-010 / 1013			ti er	S
1.5	Test 1]	I-011/1020			Lab eyewash station	EW
-	Hold 12	F-012 / 1022	A		н ст	EN
		a and a statement of the	а умп. н			
		weiter auf der Sterner auf der Sterner der Bergeperter	New York Contract of Contract			

1000		ates SR-FL-0002-16					PBSEN	11939		)/24/20 10	16	
	SK B	ottles: (Ye	s No Pag	eof_								
	Chei	s temperature withir mistry ≤ 6°C Mi	cro < 10°C	Yes No (	NA)	We	re correct contai	ners and p	oreservative	es (	Yes	) No NA
Info	If sat	mples were taken t chilling has begun?	Its://iss         Its://iss <thits: iss<="" th="">         Its://iss         <thits: iss<="" th=""> <thits: iss<="" th=""> <thit< td=""><td></td><td>Yes</td><td>No (NA)</td></thit<></thits:></thits:></thits:>		Yes	No (NA)						
COC	Did a	all bottles arrive un	broken and intact?	(Yes 1	No			ount of sa	mple receiv	ved?	Yes	
ŭ		all bottle labels agre		(Yes)	yoy	Do :	samples have a	hold time	<72 hours?	?	Yes	
	until	chlorine was no lor	nger present?	Yes No(	NA)				cies?		Yes	No (NA)
			ter(C) 40ml VOA(V)	Checks	Pa	ssed?	1-12					
		ti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		-	- Contract							
	-	e (P) <sup>White Cap</sup>	0	-		-						
		the second s			N R G S L	N						
		(P) Pink Label/Blue Cap		pH 9.3-9.7	Y	N						
	E		HOLD TIME***	pH 9.0-9.5	Y	N						
	HNC	D3 (P) Bed Cap or HC	CI (P) Purple Cap/Lt. Blue Label	_	-		10,			1		
- Point	H <sub>2</sub> SC	O4 (P) or (A0	G) Yellow Cap/Label	pH < 2	Y	N					1	
offo		H (P) Green Cap		Cl, pH >10	Y	N						
6	NaO	H + ZnAc (P)		pH > 9	Y	N				a formation		
	Diss	olved Oxygen 30	Oml (g)		-					ele decembra		
0/1		e (AG) 608/8081/8082	2, 625, 632/8321, 8151, 8270							17		
Received	HCI	(AG) <sup>Lt. Blue Label</sup> O	and an and a second		Copyoner 							
Ceit	5	a de la companya de l	and the second		_	_						
Re	·	03S 250mL (AG)N			1000						DECES	
Bottles I	Na <sub>2</sub> S	S2O3 1 Liter (Brow	n P) 549		are see							
off.		2O3 (AG)Blue Label								6 6 6 9 6		C. Colorester
Bullorine	Na <sub>2</sub> S	2O3 (CG) Blue Label	504, 505, 547		-	_						
		203 + MCAA (CG	)Orange Label 531	pH < 3	Y	N						and the second
means preservation/c	NH4C	CI (AG) <sup>Purple Label</sup>	552	_	-	_			1 10 10 10 10 10 10			
Serv	EDA	(AG) <sup>Brown Label</sup> D	BPs			_				0 1.301283		
Dre:	HCL	(CG) 524.2, BTEX, G	as, MTBE, 8260/624	— —		_					1.072	
ans	Buffe	r pH 4 (CG)			-	_		and the set	Set Land		Reference of	
me	H <sub>3</sub> PC	4 (CG)Salmon Label		-		_			Contraction (1)			
<u>ן</u>	Other					-						
	Asbe	and the second	And a second			-			Image: state stat			
		ever Hg / Metals	Double Baggle		No.	- Netelar						
		Glass 250mL	/ 500mL / 1 Liter	_		<u>-2684</u>		av di artista			Stell 1	
	Soil T		Steel / Plastic		-	-				1 States	Animal B	
	Tedla		tic Bag	_		-				a antipart a stal	Carrier and a second second	
±4	2-	Container 250 K	Preservative Date	/Time/Initials			Container	Pres	ervative	Date	:/Time	/Initials
Split	S P	2500			-			_				
	<u> 5 г</u>				S	P						
Comments			* odd	numbe	Rs	On	ly. Rik	)				





PBSEN1939



**PBS** Environmental



# 10262016

Turnaround: Standard Due Date: 11/7/2016





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Page 13 of 14

-	Associates SR-FL-0002-16							1939		/24/20	16	
5a	mple Integrity											
BS	K Bottles: (Yes/ No Page	e of _		_			Hi A	A ANNA ANA MARA				
-	Was temperature within range? Chemistry <b>≤ 6°C</b> Micro <b>&lt; 10°C</b>	Yes No (I	CO Were correct containers and press with						es (	Yes	No NA	
COC Info	If samples were taken today, is there evidence that chilling has begun?	Yes No MA Were			re the	re bub		in the VO			Yes	No (NA
Ö	Did all bottles arrive unbroken and intact?		 √0		latiles s.a.su		am		mple receiv	(od?)	/ Yes	$f \rightarrow \checkmark$
8	Did all bottle labels agree with COC?				samp	es hav	/e a	hold time ·	<72 hours?		Yes	1 6
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No	NA)	Was PM:		notifie		discrepand By/Time:	cies?		Yes	No (NA
	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V) Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Checks	Pas	sed?	<b>├</b>		2	· · · · · · · · · · · · · · · · · · ·		_	. <u> </u>	
	None (P) <sup>White Cap</sup>				<u> </u>							
	Cr6 (P) Lt. Green Label/Blue Cap NH4OH(NH4)2SO4 DW					<del></del> .						
		Cl, pH > 8	Y	N				·		<u>.</u>		
q		pH 9.3-9.7	Y	N								
the lat	Cr6 (P) <sup>Black Label/Blue Cap</sup> NH4OH(NH4)2SO4 <b>7199</b>	pH 9.0-9.5	Y	N								
ed ir	HNO3 (P) Bed Cap or HCI (P) Purple Cap/Lt. Blue Label			-		$\mathcal{C}$		· · · · · · · · · · · · · · · · · · ·				
performed in	H <sub>2</sub> SO <sub>4</sub> (P) or (AG) Yellow Cap/Label	pH < 2	Y	N								
berto	NaOH (P) Green Cap	Cl, pH >10	Y	Ν					1			
are	NaOH + ZnAc (P)	pH > 9	Υ	N					1	•		
ő	Dissolved Oxygen 300ml (g)		_	-						•••		<u></u>
, ¥	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—		-					1			<del></del>
are either N	HCI (AG) <sup>Lt. Blue Label</sup> O&G, Diesel		_	-								
e eit	Ascorbic, EDTA, KH2Ct (AG)Pink Label 525		_	-			-					
	Na2O3S 250mL (AG)Neon Green Label 515			-	-	· · · · · ·			1	+		
ne check:	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 1 Liter (Brown P) 549		<u> </u>	-								
- C-	Na2S2O3 (AG) <sup>Blue Label</sup> 548, THM, 524			-								
orin	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CG) <sup>Blue Label</sup> 504, 505, 547	_		-								
/chlori	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA (CG) <sup>Orange Label</sup> 531	pH < 3	Y	N	······································	····			1. A. 1.			
농년	NH4CI (AG) <sup>Purple Label</sup> 552								<u></u>			
	EDA (AG)Brown Label DBPs									1		
- 61 F	HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624									1.0.1		
	Buffer pH 4 (CG)						-+					
- mb-	H <sub>3</sub> PO <sub>4</sub> (CG) <sup>Salmon Label</sup>											
	Other:											
	Asbestos 1Liter Plastic w/ Foil											<u> </u>
	Low Level Hg / Metals Double Baggie					· · · · ·				1		
	Bottled Water						<u>.</u>					·····
	Clear Glass 250mL / 500mL / 1 Liter Soil Tube Brass / Steel / Plastic	-							·····			
	Tedlar Bag / Plastic Bag						<u> </u>	· · · ·				
	Container Preservative Date/	ime/Initials	<u>,</u>		Cr	ontain	 er	Press	ervativo	Data		/Initial-
≣′([:	SP 250*		s	P				1,030		Date	<del>s/ i i</del> me	annuals
<u> </u>	S P		s	Р				1	······			
א הי	s) p 250* s p * Odd 1	rumber	s RA	P On	ly	- R	ıR	-	ervative		e/Time	/Initials
	<i>F)</i> ) d by: @ Labels check	I containe						RUSH Pa		· · · · · · · · · · · · · · · · · · ·		age 14 c