



CH2M HILL
Applied Sciences Laboratory (ASL)
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Tel 541.752.4271
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May 29, 2008

NW Pipe

358932.PH.0E

RE: Laboratory Report for NW Pipe
Applied Sciences Laboratory Reference No. H1981

Pat Heins/PDX:

On May 27, 2008, CH2M HILL Applied Sciences Laboratory received four samples with a request for analysis of selected parameters. All analyses were performed by CH2M HILL unless otherwise indicated below.

The analytical results and associated quality control data are enclosed. Any unusual difficulties encountered during the analysis of your samples are discussed in the case narrative. This data package meets standards requested by client and is not intended or implied to meet any other standard. The results included in this report only relate to the samples listed on the following Sample Cross-Reference page. This report shall not be reproduced except in full, without the written approval of the laboratory.

CH2M HILL Applied Sciences Laboratory appreciates your business and looks forward to serving your analytical needs again. If you should have any questions concerning the data, or if you need additional information, please call Kathy McKinley at (541) 758-0235, extension 3144.

Sincerely,

A handwritten signature in black ink that reads "Kathy McKinley".

Kathy McKinley
Analytical Manager

Enclosures

cc:
Tina Rice/PDX

CLIENT SAMPLE CROSS-REFERENCE

CH2M HILL Applied Sciences Laboratory Reference No. H1981

Sample ID	Client Sample ID	Date Collected	Time Collected
H198101	SW16-52308	05/23/2008	09:00
H198102	SW17-52308	05/23/2008	09:04
H198103	SW18-52308	05/23/2008	09:06
H198104	SW19-52308	05/23/2008	09:10

**CASE NARRATIVE
METALS**

Lab Reference No.: H1981

Client/Project: NW Pipe

- I. Holding Time:
All acceptance criteria were met.

- II. Digestion Exceptions:
None.

- III. Analysis:
 - A. Calibration:
All acceptance criteria were met.

 - B. Method Blank(s):
All acceptance criteria were met.

 - C. Duplicate Sample(s):
All acceptance criteria were met.

 - D. Spike Sample(s):
All acceptance criteria were met.

 - E. Laboratory Control Sample(s):
All acceptance criteria were met.

 - F. ICP Interference Check Sample(s):
All acceptance criteria were met.

 - G. ICP Serial Dilution(s):
All acceptance criteria were met.

 - H. Other:
Not applicable.

- IV. Documentation Exceptions:
None.

- V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Prepared by: *Judy DeL* Date: 5-29-08

Reviewed by: *Douglas A. Handy* Date: 5/29/08

CH2M HILL Applied Sciences Laboratory (ASL)

Client Information

Client Sample ID: SW16-52308

Project Name: NW Pipe

Sample Date: 05/23/08

Sample Time: 09:00

Type: Grab

Matrix: Water

Lab Information

Lab Sample ID: H198101

Date Received: 05/27/08

Report Revision No.: 0

Reported By: JG

Reviewed By: ~~JK~~

Analyte	CAS#	Dilution Factor	MRL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
Metals								
Zinc	7440-66-6	1	20.0	875		ug/L	E200.7	05/28/08

U=Not detected at specified reporting limit

J=Estimated value below reporting limit

E=Estimated value above calibration range

*=See case narrative

CH2M HILL Applied Sciences Laboratory (ASL)

Client Information				Lab Information			
Client Sample ID: SW17-52308				Lab Sample ID: H198102			
Project Name: NW Pipe				Date Received: 05/27/08			
Sample Date: 05/23/08				Report Revision No.: 0			
Sample Time: 09:04				Reported By: JG			
Type: Grab				Reviewed By: SA			
Matrix: Water							

Analyte	CAS#	Dilution Factor	MRL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
Metals								
Zinc	7440-66-6	1	20.0	323		ug/L	E200.7	05/28/08

U=Not detected at specified reporting limit
 J=Estimated value below reporting limit
 E=Estimated value above calibration range
 *=See case narrative

CH2M HILL Applied Sciences Laboratory (ASL)

Client Information

Client Sample ID: SW18-52308

Project Name: NW Pipe

Sample Date: 05/23/08

Sample Time: 09:06

Type: Grab

Matrix: Water

Lab Information

Lab Sample ID: H198103

Date Received: 05/27/08

Report Revision No.: 0

Reported By: JG

Reviewed By: ~~SA~~

Analyte	CAS#	Dilution Factor	MRL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
Metals								
Zinc	7440-66-6	1	20.0	377		ug/L	E200.7	05/28/08

U=Not detected at specified reporting limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

CH2M HILL Applied Sciences Laboratory (ASL)

Client Information

Client Sample ID: SW19-52308

Project Name: NW Pipe

Sample Date: 05/23/08

Sample Time: 09:10

Type: Grab

Matrix: Water

Lab Information

Lab Sample ID: H198104

Date Received: 05/27/08

Report Revision No.: 0

Reported By: JG

Reviewed By: ~~SA~~

Analyte	CAS#	Dilution Factor	MRL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
Metals								
Zinc	7440-66-6	1	20.0	422		ug/L	E200.7	05/28/08

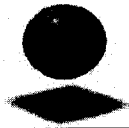
U=Not detected at specified reporting limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

CH2M HILL Applied Sciences Laboratory (ASL)

<u>Client Information</u>	<u>Lab Information</u>
Client Sample ID: WB1-0528	Lab Sample ID: WB1-0528
Project Name: NW Pipe	Date Received: N/A
Sample Date: N/A	Report Revision No.: 0
Sample Time: N/A	Reported By: JG
Type: QC	Reviewed By: <i>JG</i>
Matrix: Water	

Analyte	CAS#	Dilution Factor	MRL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
Metals								
Zinc	7440-66-6	1	20.0	20.0	U	ug/L	E200.7	05/28/08

U=Not detected at specified reporting limit
 J=Estimated value below reporting limit
 E=Estimated value above calibration range
 *=See case narrative



Batch Number: H1981

Date received: 5.27.08

Client/Project NW Pipe

VERIFICATION OF SAMPLE CONDITIONS (verify all items) * HD = Client Hand delivered Samples

Observation	YES	NO
Radiological Screening for AFCEE		N/A
Were custody seals intact and on the outside of the cooler?	X	
If yes, Where? Front <input checked="" type="checkbox"/> Rear <input checked="" type="checkbox"/> Lt Side _____ Rt Side _____		
Type of packing material: Ice Blue Ice <u>Bubble wrap</u>		
Was the Chain of Custody inside the cooler?	X	
Was the Chain of Custody properly filled out?	X	
Were the sample containers in good condition?	X	
Containers supplied by ASL?	X	< Mix
Any sample with < 1/2 holding time remaining? If so contact LPM		X
Was there ice in the cooler? Enter temp. <u>16.8°C</u>		X (melted)
All VOCs free of air bubbles?		N/A

VERIFICATION OF SAMPLE PRESERVATION

Sample No	Nutrients pH <2	Metals pH <2	Volatiles pH <2	Cyanides pH >12	TOC pH <2	TOX pH <2	Other (specify)	N/A (soils/unpres)
1		<2						
2		↓						
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

LOG IN AND pH VERIFICATIONS PERFORMED BY

Shanna McKinley 5.27.08/11:16
Date/Time

Date/Time



Sample Receipt Exception Report

Sample Batch Number: H1981

Client /Project NW Pipe

The following exceptions were noted:		Comments (write number of exception description and the impacted sample numbers)
1. No custody seal as required by project	<p>Received samples at 16.8°C. Samples should be 4°C.</p>	
2. No chain-of-custody provided		
3. Analysis, description, date of collection not provided		
4. Samples broken or leaking on receipt.		
X 5. Temperature of samples inappropriate for analysis requested		
6. Container inappropriate for analysis requested		
7. Inadequate sample volume.		
8. Preservation inappropriate for analysis requested		
9. Samples received out of holding time for analysis requested		
10. Discrepancies between COC form and container labels.		
11. Other.		

ACTION TAKEN:

Originator Anna McKinley
Client was notified on: 5/27/06 PM
(Date/Time)

Date: 5-27-06
Client Contact: Pat Huns / PDX