Analytical Report for

Northwest Pipe

ASL Report #: R1204
Project ID: 682722.GW.05

Attn: Gretchen Gee

cc:

Beckett, Jamie/RDD

Authorized and Released By:

Kathy McKinley

Laboratory Project Manager
Kathy McKinley
(541) 758-0235 ext.23144
February 16, 2017

All analyses performed by CH2M HILL are clearly indicated. Any subcontracted analyses are included as appended reports as received from the subcontracted laboratory. 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.

Any unusual difficulties encountered during the analysis of your samples are discussed in the attached case narratives.

Accredited in accordance with NELAP:
Oregon (100022)
Louisiana (05031)

CH2M – Applied Sciences Laboratory
1100 NE Circle Boulevard, Suite 300
Corvallis, Oregon 97330 Email: asl@ch2m.com
www.ch2m.com

Sample Receipt Comments

We certify that the test results meet all NELAP requirements.

Sample Cross-Reference

ASL Sample ID	Client Sample ID	Date/Time Collected	Date Received
R120401	T4S1MW-09-020117-0	02/01/17 10:00	02/02/17
R120402	T4S1MW-03S-020117-0	02/01/17 11:40	02/02/17
R120403	TRIPBLANK-020117-01	02/01/17 08:00	02/02/17
R120404	MW-02-020117-0	02/01/17 13:20	02/02/17
R120405	MW-04-020117-0	02/01/17 14:50	02/02/17
R120406	T4S1MW-23-020117-0	02/01/17 16:40	02/02/17
R120407	T4S1MW-22-020117-0	02/01/17 17:30	02/02/17

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CASE NARRATIVE
GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
SW8260C-SIM: SW5030

CH2M ASL

Client Information

Client Sample ID: **T4S1MW-09-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 10:00
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120401**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	11.3	J	ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	17.7	J	ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	112	70-130	
1,2-Dichloroethane-d4	113	70-130	
Toluene-d8	96	70-130	
4-Bromofluorobenzene	104	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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Client Information

Client Sample ID: **T4S1MW-03S-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 11:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120402**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	8.00	U	ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	230		ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	116	70-130	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	107	70-130	

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Client Information

Client Sample ID: **TRIPBLANK-020117-01**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 08:00
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120403**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	8.00	U	ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	5.00	U	ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	112	70-130	
1,2-Dichloroethane-d4	113	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	105	70-130	

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Client Information

Client Sample ID: **MW-02-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 13:20
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120404**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	37.0		ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	169		ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	112	70-130	
1,2-Dichloroethane-d4	114	70-130	
Toluene-d8	97	70-130	
4-Bromofluorobenzene	104	70-130	

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Client Information

Client Sample ID: **T4S1MW-23-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 16:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120406**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	18.8	J	ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	937		ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	118	70-130	
1,2-Dichloroethane-d4	118	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	107	70-130	

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Client Information

Client Sample ID: **T4S1MW-22-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 17:30
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120407**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	106		ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	1280		ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	115	70-130	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	108	70-130	

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Client Information

Client Sample ID: **WB1-0208**

Project Name: Northwest Pipe
Sample Date: N/A
Sample Time: N/A
Type: QC
Matrix: Water

Lab Information

Lab Sample ID: **WB1-0208**

Date Received: N/A
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	8.00	20.0	8.00	U	ng/L	SW8260C-SI	02/08/17
Tetrachloroethene (PCE)	127-18-4	5.00	20.0	5.00	U	ng/L	SW8260C-SI	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	110	70-130	
1,2-Dichloroethane-d4	110	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	108	70-130	

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J=Estimated value below reporting limit
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Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

LCS ID: BS1W0208

Report Revision No.: 0
Dilution Factor: 1

Analyte	CAS#	Spike Amount	Sample Result	Units	%Recovery	Analysis Method	Date Analyzed
GC/MS Volatiles							
Vinyl Chloride	75-01-4	500	535	ng/L	107	SW8260C-SIM	02/08/17
Tetrachloroethene (PCE)	127-18-4	500	514	ng/L	103	SW8260C-SIM	02/08/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	109	70-130	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	103	70-130	
4-Bromofluorobenzene	109	70-130	

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CASE NARRATIVE
GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

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Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
SW8260C: SW5030

CH2M ASL

Client Information

Client Sample ID: **T4S1MW-09-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 10:00
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120401**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	105	70-130	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	89	70-130	

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CH2M ASL

Client Information

Client Sample ID: **T4S1MW-03S-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 11:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120402**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	109	70-130	
1,2-Dichloroethane-d4	115	70-130	
Toluene-d8	102	70-130	
4-Bromofluorobenzene	90	70-130	

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CH2M ASL

Client Information

Client Sample ID: **TRIPBLANK-020117-01**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 08:00
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120403**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	108	70-130	
1,2-Dichloroethane-d4	111	70-130	
Toluene-d8	102	70-130	
4-Bromofluorobenzene	91	70-130	

U=Not detected and reported as less than detection limit
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CH2M ASL

Client Information

Client Sample ID: **MW-02-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 13:20
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120404**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.20	J	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	112	70-130	
1,2-Dichloroethane-d4	116	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	91	70-130	

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B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: **T4S1MW-23-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 16:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120406**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.65		ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.41	J	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	109	70-130	
1,2-Dichloroethane-d4	117	70-130	
Toluene-d8	103	70-130	
4-Bromofluorobenzene	89	70-130	

U=Not detected and reported as less than detection limit
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CH2M ASL

Client Information

Client Sample ID: **T4S1MW-22-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 17:30
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120407**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	5.36		ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	4.29		ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	111	70-130	
1,2-Dichloroethane-d4	117	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	88	70-130	

U=Not detected and reported as less than detection limit
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B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: **WB1-0203**

Project Name: Northwest Pipe
Sample Date: N/A
Sample Time: N/A
Type: QC
Matrix: Water

Lab Information

Lab Sample ID: **WB1-0203**

Date Received: N/A
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	105	70-130	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	92	70-130	

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B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

LCS ID: BS1W0203

Report Revision No.: 0
Dilution Factor: 1

Analyte	CAS#	Spike Amount	Sample Result	Units	%Recovery	Analysis Method	Date Analyzed
GC/MS Volatiles							
cis-1,2-Dichloroethene	156-59-2	20.0	17.8	ug/L	89	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	20.0	20.1	ug/L	100	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	105	70-130	
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	96	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
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CASE NARRATIVE
GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

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Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

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Method(s):
SW8260C: SW5030

CH2M ASL

Client Information

Client Sample ID: **MW-04-020117-0**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 14:50
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120405**

Date Received: 02/02/17
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	0.15	0.50	9.73		ug/L	SW8260C	02/03/17
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	123	E	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	20.3		ug/L	SW8260C	02/03/17
Tetrachloroethene (PCE)	127-18-4	0.15	0.50	12.4		ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	113	70-130	
1,2-Dichloroethane-d4	116	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	90	70-130	

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CH2M ASL

Client Information

Client Sample ID: **MW-04-020117-0DL**

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 14:50
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: **R120405DL**

Date Received: 02/02/17
Dilution Factor: 10
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	1.50	5.00	8.85		ug/L	SW8260C	02/06/17
cis-1,2-Dichloroethene	156-59-2	1.50	5.00	119		ug/L	SW8260C	02/06/17
Trichloroethene (TCE)	79-01-6	1.50	5.00	21.6		ug/L	SW8260C	02/06/17
Tetrachloroethene (PCE)	127-18-4	1.50	5.00	14.3		ug/L	SW8260C	02/06/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	107	70-130	
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	90	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: **WB1-0203**

Project Name: Northwest Pipe
Sample Date: N/A
Sample Time: N/A
Type: QC
Matrix: Water

Lab Information

Lab Sample ID: **WB1-0203**

Date Received: N/A
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17
Tetrachloroethene (PCE)	127-18-4	0.15	0.50	0.15	U	ug/L	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	105	70-130	
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	92	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: **WB1-0206**

Project Name: Northwest Pipe
Sample Date: N/A
Sample Time: N/A
Type: QC
Matrix: Water

Lab Information

Lab Sample ID: **WB1-0206**

Date Received: N/A
Dilution Factor: 1
Report Revision No.: 0

Analyte	CAS#	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC/MS Volatiles								
Vinyl Chloride	75-01-4	0.15	0.50	0.15	U	ug/L	SW8260C	02/06/17
cis-1,2-Dichloroethene	156-59-2	0.15	0.50	0.15	U	ug/L	SW8260C	02/06/17
Trichloroethene (TCE)	79-01-6	0.15	0.50	0.15	U	ug/L	SW8260C	02/06/17
Tetrachloroethene (PCE)	127-18-4	0.15	0.50	0.15	U	ug/L	SW8260C	02/06/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	106	70-130	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	91	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

LCS ID: BS1W0203

Report Revision No.: 0
Dilution Factor: 1

Analyte	CAS#	Spike Amount	Sample Result	Units	%Recovery	Analysis Method	Date Analyzed
GC/MS Volatiles							
Vinyl Chloride	75-01-4	20.0	17.2	ug/L	86	SW8260C	02/03/17
cis-1,2-Dichloroethene	156-59-2	20.0	17.8	ug/L	89	SW8260C	02/03/17
Trichloroethene (TCE)	79-01-6	20.0	20.1	ug/L	100	SW8260C	02/03/17
Tetrachloroethene (PCE)	127-18-4	20.0	19.3	ug/L	97	SW8260C	02/03/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	105	70-130	
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	96	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

LCS ID: BS1W0206

Report Revision No.: 0
Dilution Factor: 1

Analyte	CAS#	Spike Amount	Sample Result	Units	%Recovery	Analysis Method	Date Analyzed
GC/MS Volatiles							
Vinyl Chloride	75-01-4	20.0	17.3	ug/L	86	SW8260C	02/06/17
cis-1,2-Dichloroethene	156-59-2	20.0	17.8	ug/L	89	SW8260C	02/06/17
Trichloroethene (TCE)	79-01-6	20.0	19.2	ug/L	96	SW8260C	02/06/17
Tetrachloroethene (PCE)	127-18-4	20.0	19.3	ug/L	97	SW8260C	02/06/17

Surrogate	% Recovery	Control Limits	Qualifier
Dibromofluoromethane	104	70-130	
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	99	70-130	
4-Bromofluorobenzene	93	70-130	

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

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CASE NARRATIVE
HEADSPACE ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
RSK-175

CH2M ASL

Client Information

Client Sample ID: T4S1MW-09-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 10:00
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120401

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.30	26.5	1220		ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	32.9	199	29000		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: T4S1MW-03S-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 11:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120402

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.19	25.6	10.1	J	ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	32.6	197	13900		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: MW-02-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 13:20
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120404

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.67	29.4	3300		ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	33.7	204	17600		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: MW-04-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 14:50
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120405

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.91	31.4	1860		ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	34.2	207	98400		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
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*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: T4S1MW-23-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 16:40
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120406

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.97	31.8	37.9		ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	34.3	207	26900		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Client Sample ID: T4S1MW-22-020117-0

Project Name: Northwest Pipe
Sample Date: 02/01/17
Sample Time: 17:30
Type: Grab
Matrix: Water

Lab Information

Lab Sample ID: R120407

Date Received: 02/02/17
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	3.72	29.8	33.4		ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	33.8	204	84500		ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Sample Date: N/A
Sample Time: N/A
Type: QC
Matrix: Water

Lab Information

Method Blank ID: XB1-0203

Date Received: N/A
Report Revision No: 0

Analyte	CAS#	Dilution Factor	DL	RL	Sample Result	Qualifier	Units	Analysis Method	Date Analyzed
GC Volatiles									
Methane	74-82-8	1	14.3	114	14.3	U	ug/L	RSK-175	02/03/17
Carbon dioxide	124-38-9	1	56.6	342	56.6	U	ug/L	RSK-175	02/03/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

LCS ID: BS1X0203

Report Revision No.: 0
Dilution Factor: 1

Analyte	CAS#	Spike Amount	Sample Result	Units	%Recovery	Analysis Method	Date Analyzed
GC Volatiles							
Methane	74-82-8	593	614	ug/L	103	RSK-175	02/03/17
Carbon dioxide	124-38-9	3180	3300	ug/L	104	RSK-175	02/03/17

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E=Estimated value above calibration range
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CASE NARRATIVE
METALS ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
E200.7: FLDFLT

CH2M ASL

Client Information

Project Name: Northwest Pipe

Date Received: 02/02/17
Type: See C.O.C.
Matrix: Water

Lab Information

Lab Batch ID: R1204

Report Revision No.: 0

Client Sample ID	Lab Sample ID	Dilution Factor	DL	RL	Result	Qual	Units	Date Analyzed
Iron: E200.7								
Dissolved Metals								
T4S1MW-09-020117-0	R120401F	1	10.0	100	4410		ug/L	02/14/17
T4S1MW-03S-020117-0	R120402F	1	10.0	100	10.0	U	ug/L	02/14/17
MW-02-020117-0	R120404F	1	10.0	100	5390		ug/L	02/14/17
MW-04-020117-0	R120405F	1	10.0	100	9750		ug/L	02/14/17
T4S1MW-23-020117-0	R120406F	1	10.0	100	185		ug/L	02/14/17
T4S1MW-22-020117-0	R120407F	1	10.0	100	10.0	U	ug/L	02/14/17
Total Metals								
WB10-0214	WB10-0214	1	10.0	100	10.0	U	ug/L	02/14/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Lab Information

Blank Spike ID: BS10W0214

Report Revision No: 0
Dilution Factor: 1

Analyte	Spike Amount	Result	Units	%Recovery	Analysis Method	Prep Method	Date Analyzed
Metals							
Iron	50000	50300	ug/L	101	E200.7	E200.2	02/14/17

U=Not detected and report as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

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CASE NARRATIVE
GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
E300.0A

CH2M ASL

Client Information

Project Name: Northwest Pipe

Date Received: 02/02/17
Type: See C.O.C.
Matrix: Water

Lab Information

Lab Batch ID: R1204

Analysis Method: E300.0A
Units: mg/L
Report Revision No.: 0

Client Sample ID	Lab Sample ID	Dilution Factor	DL	RL	Chloride Result	Qualifier	Date Analyzed
General Chemistry							
T4S1MW-09-020117-0	R120401	1	0.020	0.20	1.70		02/02/17
T4S1MW-03S-020117-0	R120402	1	0.020	0.20	0.86		02/02/17
MW-02-020117-0	R120404	1	0.020	0.20	2.50		02/02/17
MW-04-020117-0	R120405	1	0.020	0.20	4.90		02/02/17
T4S1MW-23-020117-0	R120406	1	0.020	0.20	4.24		02/02/17
T4S1MW-22-020117-0	R120407	1	0.020	0.20	4.56		02/02/17
WB1-0202	WB1-0202	1	0.020	0.20	0.020	U	02/02/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

B=Analyte detected in blank

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CH2M ASL

Client Information

Project Name: Northwest Pipe

Date Received: 02/02/17
Type: See C.O.C.
Matrix: Water

Lab Information

Lab Batch ID: R1204

Analysis Method: E300.0A
Units: mg/L
Report Revision No.: 0

Client Sample ID	Lab Sample ID	Dilution Factor	DL	RL	Sulfate Result	Qualifier	Date Analyzed
General Chemistry							
T4S1MW-09-020117-0	R120401	1	0.023	0.20	5.66		02/02/17
T4S1MW-03S-020117-0	R120402	1	0.023	0.20	4.54		02/02/17
MW-02-020117-0	R120404	1	0.023	0.20	8.09		02/02/17
MW-04-020117-0	R120405	1	0.023	0.20	4.42		02/02/17
T4S1MW-23-020117-0	R120406	1	0.023	0.20	8.74		02/02/17
T4S1MW-22-020117-0	R120407	1	0.023	0.20	8.90		02/02/17
WB1-0202	WB1-0202	1	0.023	0.20	0.023	U	02/02/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

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CH2M ASL

Client Information

Lab Information

Lab Batch ID: R1204

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Report Revision No.: 0

LCS ID	Analyte	Spike Amount	Sample Result	Units	% Recovery	Analysis Method	Date Analyzed
General Chemistry							
BS1W0202	Chloride	5.00	5.02	mg/L	100	E300.0A	02/02/17
BS1W0202	Sulfate	5.00	4.99	mg/L	100	E300.0A	02/02/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

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CASE NARRATIVE
GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
E353.2

CH2M ASL

Client Information

Project Name: Northwest Pipe

Date Received: 02/02/17
Type: See C.O.C.
Matrix: Water

Lab Information

Lab Batch ID: R1204

Analysis Method: E353.2
Units: mg/L
Report Revision No.: 0

Client Sample ID	Lab Sample ID	Dilution Factor	DL	RL	Nitrate-N Result	Qualifier	Date Analyzed
General Chemistry							
T4S1MW-09-020117-0	R120401	4	0.011	0.040	2.94		02/02/17 18:21
T4S1MW-03S-020117-0	R120402	4	0.011	0.040	1.23		02/02/17 18:23
MW-02-020117-0	R120404	1	0.0028	0.010	0.39		02/02/17 18:03
MW-04-020117-0	R120405	1	0.0028	0.010	0.0028	U	02/02/17 18:04
T4S1MW-23-020117-0	R120406	1	0.0028	0.010	0.58		02/02/17 18:05
T4S1MW-22-020117-0	R120407	1	0.0028	0.010	0.039		02/02/17 18:06
WB1-020217	WB1-020217	1	0.0028	0.010	0.0028	U	02/02/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

B=Analyte detected in blank

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CASE NARRATIVE
GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL **ASL SDG#:** R1204

Project: Northwest Pipe **Project #:** 682722.GW.05

With the exceptions noted as flags, footnotes, or detailed in the section below; standard operating procedures were followed in the analysis of the samples and no problems were encountered or anomalies observed.

All laboratory quality control samples were within established control limits, with any exceptions noted below, or in the associated QC summary forms.

Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. For diluted samples, the reporting limits are adjusted for the dilution required.

Calculations are performed before rounding to minimize errors in calculated values.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the section below, or in the sample receipt documentation.

Method(s):
SM5310B

CH2M ASL

Client Information

Project Name: Northwest Pipe

Date Received: 02/02/17
Type: See C.O.C.
Matrix: Water

Lab Information

Lab Batch ID: R1204

Analysis Method: SM5310B
Units: mg/L
Report Revision No.: 0

Client Sample ID	Lab Sample ID	Dilution Factor	DL	RL	Total Organic Carbon Result	Qualifier	Date Analyzed
General Chemistry							
T4S1MW-09-020117-0	R120401	1	0.20	0.50	0.61		02/04/17
T4S1MW-03S-020117-0	R120402	1	0.20	0.50	0.39	J	02/04/17
MW-02-020117-0	R120404	1	0.20	0.50	1.23		02/04/17
MW-04-020117-0	R120405	1	0.20	0.50	1.09		02/04/17
T4S1MW-23-020117-0	R120406	1	0.20	0.50	0.68		02/04/17
T4S1MW-22-020117-0	R120407	1	0.20	0.50	1.09		02/04/17
WB1-0204	WB1-0204	1	0.20	0.50	0.20	U	02/04/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative
B=Analyte detected in blank

1100 NE Circle Blvd., Suite 300
Corvallis, OR 97330
Tel 541-768-3120 Fax 541-752-0276

CH2M ASL

Client Information

Lab Information

Lab Batch ID: R1204

Project Name: Northwest Pipe
Type: QC
Matrix: Water

Report Revision No.: 0

LCS ID	Analyte	Spike Amount	Sample Result	Units	% Recovery	Analysis Method	Date Analyzed
General Chemistry							
BS1W0204	Total Organic Carbon	5.00	4.64	mg/L	93	SM5310B	02/04/17

U=Not detected and reported as less than detection limit
J=Estimated value below reporting limit
E=Estimated value above calibration range
*=See case narrative

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CH2MHILL Applied Sciences Laboratory
CHAIN OF CUSTODY RECORD
AND AGREEMENT TO PERFORM SERVICES

Chain of Custody Record

1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330
(541) 768-3120

Client Contact

- Project Name: NORTHWEST PIPE
- Project # or PO #:
- Company Name: CH2M
- Address: 2020 SW FOURTH AVE, STE 300
- City/State/Zip: PORTLAND, OR 97201
- Project Manager: GRETCHEN GEE
- Phone #:
- Report to email: GRETCHEN GEE/PDX

Analysis Turnaround Time

TAT is Calander days

TAT if different from below ______

- [x] 21 days (STD)
- [ ] 14 days *
- [ ] 7 days *
- [ ] 5 days *
- [ ] 3 day *
- [ ] 2 days *
- [ ] 1 day *

* (Surcharges will apply)

For Lab Use Only:

- SDG: R1204
- Custody Seals intact? [x] Yes [ ] No
- Hand delivered? [ ] Yes [x] No
- Cooler Temp: 3.6 °C
- Therm ID No.: 173 Therm Exp. 4/17/17
- Packing Material: Circle Below: (Ice) Blue Ice Box Bubble Wrap
- Radiological Screen? [ ] Yes [x] No

Sample Identification (Limit of 20 characters)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Soil, Air)	Total # of Cont.	VOCs-8260C	VOCs-8260SIM	Methane, CO2 RSK-175	TOC	Nitrate, Sulfate, chloride	Dissolved Ferrous Iron (FIELD FILTERED)				Sample Specific Notes:	Lab ID:
Preservation Used						HCL	HCL	–			HNO3					
T4SI MW-09-020117-0	02/01/17	1000	G	W	12	X	X	X	X	X	X					1
T4SI MW-03S-020117-0	02/01/17	1140	G	W	12	X	X	X	X	X	X					2
TRIPBLANK-020117-01	02/01/17	0800	G	W	2	X	X									3
MW-02-020117-0	02/01/17	1320	G	W	12	X	X	X	X	X	X					4
MW-04-020117-0	02/01/17	1450	G	W	12	X	X	X	X	X	X					5
T4SI MW-23-020117-0	02/01/17	1640	G	W	12	X	X	X	X	X	X					6
T4SI MW-22-020117-0	02/01/17	1730	G	W	12	X	X	X	X	X	X					7

Preservation Used: (1= Ice), (2= HCl); (3= H2SO4); (4=HNO3); 5=NaOH; 6= Other ______

Possible Hazard Identification:

Are samples hazardous? [ ] Yes [x] No

If yes, select hazard(s): [ ] Listed [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Toxic

If YES or NO is not checked above, samples will be assumed hazardous and hazardous disposal fees will be applied.

Sample Disposal (A fee may be added if samples are retained longer than 30 day per client request, samples are returned to client, or classified as hazardous.)

[ ] Return to Client [x] Disposal by Lab [ ] Archive for ______ months

Sampled By: BRAD OSTAPKOWICZ [signature]	Date/Time: 02/01/17 1800	Relinquished by: BRAD OSTAPKOWICZ [signature]	Date/Time: 02/01/17 1800
Received by:	Date/Time:	Relinquished by:	Date/Time:
Received in Laboratory by: [signature]	Date/Time: 2/2/17 1045	Shipped Via: [ ] UPS [x] Fed-Ex [ ] USPS [ ] Other	Tracking #:

Special Instructions/QC Requirements

DOC CONTROL ID: ASL1081-0814

CH2M Applied Sciences Laboratory

Sample Receipt Record

SDG ID: R1204 Date Received: 2/2/2017

Client/Project: Northwest Pipe Received by: PC

Were custody seals intact and on the outside of the cooler?	☑ Yes	☐ No	☐ N/A	
Shipping Record:	☐ Hand Delivered	☑ On File	☐ COC	
Radiological Screening for DoD	☐ Yes	☐ No	☑ N/A	
Packing Material:	☐ Hand Delivered	☑ Ice	☐ Blue Ice	☐ Box
Temp OK? (<6C) Therm ID: TH173 Exp. 4/17/17	3.6 °C	☑ Yes	☐ No	☐ N/A
Was a Chain of Custody (CoC) Provided?	☑ Yes	☐ No	☐ N/A	
Was the CoC correctly filled out (If No, document below)	☑ Yes	☐ No	☐ N/A	
Did sample labels agree with COC? (If No, document below)	☑ Yes	☐ No	☐ N/A	
Did the CoC list a correct bottle count and the preservative types (No=Correct on CoC)	☑ Yes	☐ No	☐ N/A	
Were the sample containers in good condition (not broken or leaking)?	☑ Yes	☐ No	☐ N/A	
Was enough sample volume provided for analysis? (If No, document below)	☑ Yes	☐ No	☐ N/A	
Containers supplied by ASL?	☑ Yes	☐ No	☐ N/A	
Any sample with < 1/2 holding time remaining? If so contact LPM and document below.	☑ Yes	☐ No	☐ N/A	
Samples have multi-phase? If yes, document on SRER	☐ Yes	☑ No	☐ N/A	
All water VOCs free of air bubbles? No, document on SRER	☑ Yes	☐ No	☐ N/A	
pH of all samples met criteria on receipt? If "No", preserve and document below.	☑ Yes	☐ No	☐ N/A	
Dissolved/Soluble metals filtered in the field?	☑ Yes	☐ No	☐ N/A	
Dissolved/Soluble metals have sediment in bottom of container? If so document below.	☐ Yes	☑ No	☐ N/A	

Preservation Adjustment

Sample ID	Reagent	Reagent Lot Number	Volume Added	Initials/Date-Time	24 hour pH check Initials/Time

Did pH of all metals samples preserved upon receipt meet criteria 24 hours after preservation? ☐ Yes ☐ No

Sample Exception Report (The following exceptions were noted)

1. Nitrate sample T4S1MW-09-020117-0 (R120401) received with less than half holding time remaining.

Client was notified on: Client contact:

Resolution to Exception: