

Amended Report

| | | | |
|---------------------|----------|---------------|---------|
| Date: | 11/14/16 | Client: | NW Pipe |
| SDG No.: | Q3342 | Project/Task: | |
| Revision No.: | 1 | Completed by: | MB |
| Affected Method(s): | VOC | Approved by: | KJM |

Amendment(s) Completed and Reason(s):

| |
|---|
| Sample 1 and 2 missing TCE and cis-1,2-DCE in final report. |
|---|

Amendment(s) Justification:

- Reporting error
- Calculation error
- Missing information/data
- Wrong information/data
- Analytical problem/correction
- Client change/request
- Subcontracted laboratory error
- Other (define) _____

Edata Required:

- Yes
- No



Analytical Report for Northwest Pipe

ASL Report #: Q3342

Project ID: 682722.GW.SB

Attn: Gretchen Gee

cc:

Beckett, Jamie/RDD

Authorized and Released By:

Laboratory Project Manager

Kathy McKinley

(541) 758-0235 ext.23144

November 14, 2016

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)



ASL Report #: Q3342

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 |
|--------------------------|-------------------------|--------------------------------|--------------------------|
| Q334201 | TRIPBLANK_102616 | 10/26/16 07:30 | 10/27/16 |
| Q334202 | MW02-102616-0 | 10/26/16 09:10 | 10/27/16 |
| Q334203 | MW03-102616-0 | 10/26/16 10:15 | 10/27/16 |
| Q334204 | MW01-102616-0 | 10/26/16 11:13 | 10/27/16 |
| Q334205 | MW04-102616-0 | 10/26/16 12:10 | 10/27/16 |
| Q334206 | MW05-102616-0 | 10/26/16 13:20 | 10/27/16 |
| Q334207 | MW06-102616-0 | 10/26/16 14:20 | 10/27/16 |
| Q334208 | MW06-102616-1 | 10/26/16 14:25 | 10/27/16 |

CASE NARRATIVE GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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: SW5030

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW03-102616-0 | | | | Lab Sample ID: Q334203 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 10:15 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 22.8 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 424 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 218 | E | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 572 | E | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 107 | 70-130 | |
| 1,2-Dichloroethane-d4 | 109 | 70-130 | |
| Toluene-d8 | 94 | 70-130 | |
| 4-Bromofluorobenzene | 81 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|---------------------------------|--|--|--|
| Client Sample ID: MW03-102616-ODL | | | | Lab Sample ID: Q334203DL | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 20 | | | |
| Sample Time: 10:15 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 3.00 | 10.0 | 25.4 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 3.00 | 10.0 | 428 | | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 3.00 | 10.0 | 221 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 3.00 | 10.0 | 630 | | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 111 | 70-130 | |
| 1,2-Dichloroethane-d4 | 113 | 70-130 | |
| Toluene-d8 | 98 | 70-130 | |
| 4-Bromofluorobenzene | 84 | 70-130 | |

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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW01-102616-0 | | | | Lab Sample ID: Q334204 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 11:13 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 16.7 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 116 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 22.8 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 158 | E | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 110 | 70-130 | |
| 1,2-Dichloroethane-d4 | 111 | 70-130 | |
| Toluene-d8 | 94 | 70-130 | |
| 4-Bromofluorobenzene | 82 | 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

CH2M ASL

| Client Information | Lab Information |
|-----------------------------------|--------------------------|
| Client Sample ID: MW01-102616-ODL | Lab Sample ID: Q334204DL |
| Project Name: Northwest Pipe | Date Received: 10/27/16 |
| Sample Date: 10/26/16 | Dilution Factor: 10 |
| Sample Time: 11:13 | Report Revision No.: 0 |
| Type: Grab | |
| Matrix: Water | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 1.50 | 5.00 | 20.1 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 1.50 | 5.00 | 113 | | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 1.50 | 5.00 | 22.8 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 1.50 | 5.00 | 158 | | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 118 | 70-130 | |
| 1,2-Dichloroethane-d4 | 120 | 70-130 | |
| Toluene-d8 | 102 | 70-130 | |
| 4-Bromofluorobenzene | 83 | 70-130 | |

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 E=Estimated value above calibration range
 *=See case narrative

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW04-102616-0 | | | | Lab Sample ID: Q334205 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 12:10 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 4.45 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 117 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 38.4 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 28.2 | | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 113 | 70-130 | |
| 1,2-Dichloroethane-d4 | 115 | 70-130 | |
| Toluene-d8 | 99 | 70-130 | |
| 4-Bromofluorobenzene | 84 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|-----------------------------------|--|--|--|--------------------------|--|--|--|
| Client Sample ID: MW04-102616-ODL | | | | Lab Sample ID: Q334205DL | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 10 | | | |
| Sample Time: 12:10 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 1.50 | 5.00 | 3.97 | J | ug/L | SW8260C | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 1.50 | 5.00 | 111 | | ug/L | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 1.50 | 5.00 | 38.1 | | ug/L | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 1.50 | 5.00 | 31.3 | | ug/L | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 100 | 70-130 | |
| 1,2-Dichloroethane-d4 | 97 | 70-130 | |
| Toluene-d8 | 96 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW05-102616-0 | | | | Lab Sample ID: Q334206 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 13:20 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 40.4 | | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 998 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 192 | E | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 1810 | E | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 110 | 70-130 | |
| 1,2-Dichloroethane-d4 | 110 | 70-130 | |
| Toluene-d8 | 97 | 70-130 | |
| 4-Bromofluorobenzene | 83 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|---------------------------------|--|--|--|
| Client Sample ID: MW05-102616-ODL | | | | Lab Sample ID: Q334206DL | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 100 | | | |
| Sample Time: 13:20 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 15.0 | 50.0 | 35.0 | J | ug/L | SW8260C | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 15.0 | 50.0 | 1160 | | ug/L | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 15.0 | 50.0 | 195 | | ug/L | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 15.0 | 50.0 | 3510 | | ug/L | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 106 | 70-130 | |
| 1,2-Dichloroethane-d4 | 100 | 70-130 | |
| Toluene-d8 | 98 | 70-130 | |
| 4-Bromofluorobenzene | 96 | 70-130 | |

U=Not detected and reported as less than detection limit

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E=Estimated value above calibration range

*=See case narrative

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW06-102616-0 | | | | Lab Sample ID: Q334207 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 14:20 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 180 | E | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 1010 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 60.4 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 267 | E | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 111 | 70-130 | |
| 1,2-Dichloroethane-d4 | 111 | 70-130 | |
| Toluene-d8 | 96 | 70-130 | |
| 4-Bromofluorobenzene | 79 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|---------------------------------|--|--|--|
| Client Sample ID: MW06-102616-ODL | | | | Lab Sample ID: Q334207DL | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 100 | | | |
| Sample Time: 14:20 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 15.0 | 50.0 | 170 | | ug/L | SW8260C | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 15.0 | 50.0 | 1160 | | ug/L | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 15.0 | 50.0 | 66.6 | | ug/L | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 15.0 | 50.0 | 287 | | ug/L | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 105 | 70-130 | |
| 1,2-Dichloroethane-d4 | 101 | 70-130 | |
| Toluene-d8 | 97 | 70-130 | |
| 4-Bromofluorobenzene | 89 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW06-102616-1 | | | | Lab Sample ID: Q334208 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 14:25 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 0.15 | 0.50 | 178 | E | ug/L | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 1020 | E | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 70.9 | | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 319 | E | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 112 | 70-130 | |
| 1,2-Dichloroethane-d4 | 111 | 70-130 | |
| Toluene-d8 | 95 | 70-130 | |
| 4-Bromofluorobenzene | 84 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|---------------------------------|--|--|--|
| Client Sample ID: MW06-102616-1DL | | | | Lab Sample ID: Q334208DL | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 100 | | | |
| Sample Time: 14:25 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 15.0 | 50.0 | 177 | | ug/L | SW8260C | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 15.0 | 50.0 | 1130 | | ug/L | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 15.0 | 50.0 | 65.1 | | ug/L | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 15.0 | 50.0 | 299 | | ug/L | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 104 | 70-130 | |
| 1,2-Dichloroethane-d4 | 103 | 70-130 | |
| Toluene-d8 | 98 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|-----------------------------------|--|--|--|--------------------------------|--|--|--|
| Client Sample ID: WB1-1031 | | | | Lab Sample ID: WB1-1031 | | | |
| Project Name: Northwest Pipe | | | | Date Received: N/A | | | |
| Sample Date: N/A | | | | Dilution Factor: 1 | | | |
| Sample Time: N/A | | | | Report Revision No.: 0 | | | |
| Type: QC | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 109 | 70-130 | |
| 1,2-Dichloroethane-d4 | 114 | 70-130 | |
| Toluene-d8 | 101 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|-----------------------------------|--|--|--|--------------------------------|--|--|--|
| Client Sample ID: WB1-1101 | | | | Lab Sample ID: WB1-1101 | | | |
| Project Name: Northwest Pipe | | | | Date Received: N/A | | | |
| Sample Date: N/A | | | | Dilution Factor: 1 | | | |
| Sample Time: N/A | | | | Report Revision No.: 0 | | | |
| Type: QC | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 104 | 70-130 | |
| 1,2-Dichloroethane-d4 | 99 | 70-130 | |
| Toluene-d8 | 102 | 70-130 | |
| 4-Bromofluorobenzene | 100 | 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

CH2M ASL

| Client Information | | Lab Information | |
|------------------------------|--|------------------------|--|
| Project Name: Northwest Pipe | | LCS ID: BS1W1031 | |
| Type: QC | | Report Revision No.: 0 | |
| Matrix: Water | | 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 | 20.3 | ug/L | 101 | SW8260C | 10/31/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 20.0 | 17.9 | ug/L | 89 | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 20.0 | 18.8 | ug/L | 94 | SW8260C | 10/31/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 20.0 | 18.3 | ug/L | 91 | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 102 | 70-130 | |
| 1,2-Dichloroethane-d4 | 100 | 70-130 | |
| Toluene-d8 | 95 | 70-130 | |
| 4-Bromofluorobenzene | 98 | 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

CH2M ASL

| Client Information | | Lab Information | |
|------------------------------|--|------------------------|--|
| Project Name: Northwest Pipe | | LCS ID: BS1W1101 | |
| Type: QC | | Report Revision No.: 0 | |
| Matrix: Water | | 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 | 18.0 | ug/L | 90 | SW8260C | 11/01/16 |
| cis-1,2-Dichloroethene | 156-59-2 | 20.0 | 16.7 | ug/L | 83 | SW8260C | 11/01/16 |
| Trichloroethene (TCE) | 79-01-6 | 20.0 | 19.8 | ug/L | 99 | SW8260C | 11/01/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 20.0 | 19.7 | ug/L | 98 | SW8260C | 11/01/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 100 | 70-130 | |
| 1,2-Dichloroethane-d4 | 91 | 70-130 | |
| Toluene-d8 | 97 | 70-130 | |
| 4-Bromofluorobenzene | 100 | 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

CASE NARRATIVE GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | | | Lab Information | | | |
|---|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: TRIPBLANK_102616 | | | | Lab Sample ID: Q334201 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 07:30 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 11/03/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 5.00 | 20.0 | 5.00 | U | ng/L | SW8260C-SI | 11/03/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 128 | 70-130 | |
| 1,2-Dichloroethane-d4 | 124 | 70-130 | |
| Toluene-d8 | 95 | 70-130 | |
| 4-Bromofluorobenzene | 102 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW02-102616-0 | | | | Lab Sample ID: Q334202 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 09:10 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| Analyte | CAS# | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|-------------------------|----------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC/MS Volatiles | | | | | | | | |
| Vinyl Chloride | 75-01-4 | 8.00 | 20.0 | 65.2 | | ng/L | SW8260C-SI | 11/03/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 5.00 | 20.0 | 59.8 | | ng/L | SW8260C-SI | 11/03/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 121 | 70-130 | |
| 1,2-Dichloroethane-d4 | 116 | 70-130 | |
| Toluene-d8 | 86 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|-----------------------------------|--|--|--|--------------------------------|--|--|--|
| Client Sample ID: WB1-1103 | | | | Lab Sample ID: WB1-1103 | | | |
| Project Name: Northwest Pipe | | | | Date Received: N/A | | | |
| Sample Date: N/A | | | | Dilution Factor: 1 | | | |
| Sample Time: N/A | | | | Report Revision No.: 0 | | | |
| Type: QC | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 11/03/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 5.00 | 20.0 | 5.00 | U | ng/L | SW8260C-SI | 11/03/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 125 | 70-130 | |
| 1,2-Dichloroethane-d4 | 123 | 70-130 | |
| Toluene-d8 | 95 | 70-130 | |
| 4-Bromofluorobenzene | 102 | 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

CH2M ASL

| Client Information | Lab Information |
|---|--|
| Project Name: Northwest Pipe Type: QC Matrix: Water | LCS ID: BS1W1103 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 | 575 | ng/L | 115 | SW8260C-SIM | 11/03/16 |
| Tetrachloroethene (PCE) | 127-18-4 | 500 | 437 | ng/L | 87 | SW8260C-SIM | 11/03/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 115 | 70-130 | |
| 1,2-Dichloroethane-d4 | 111 | 70-130 | |
| Toluene-d8 | 91 | 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

CASE NARRATIVE GC/MS VOLATILES ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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: SW5030

CH2M ASL

| Client Information | | | | Lab Information | | | |
|------------------------------------|--|--|--|-------------------------|--|--|--|
| Client Sample ID: TRIPBLANK_102616 | | | | Lab Sample ID: Q334201 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 07:30 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 107 | 70-130 | |
| 1,2-Dichloroethane-d4 | 114 | 70-130 | |
| Toluene-d8 | 97 | 70-130 | |
| 4-Bromofluorobenzene | 83 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|--|--|--|--|-------------------------------|--|--|--|
| Client Sample ID: MW02-102616-0 | | | | Lab Sample ID: Q334202 | | | |
| Project Name: Northwest Pipe | | | | Date Received: 10/27/16 | | | |
| Sample Date: 10/26/16 | | | | Dilution Factor: 1 | | | |
| Sample Time: 09:10 | | | | Report Revision No.: 0 | | | |
| Type: Grab | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 110 | 70-130 | |
| 1,2-Dichloroethane-d4 | 115 | 70-130 | |
| Toluene-d8 | 100 | 70-130 | |
| 4-Bromofluorobenzene | 83 | 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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|-----------------------------------|--|--|--|--------------------------------|--|--|--|
| Client Sample ID: WB1-1031 | | | | Lab Sample ID: WB1-1031 | | | |
| Project Name: Northwest Pipe | | | | Date Received: N/A | | | |
| Sample Date: N/A | | | | Dilution Factor: 1 | | | |
| Sample Time: N/A | | | | Report Revision No.: 0 | | | |
| Type: QC | | | | | | | |
| Matrix: Water | | | | | | | |

| 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 | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 0.15 | 0.50 | 0.15 | U | ug/L | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 109 | 70-130 | |
| 1,2-Dichloroethane-d4 | 114 | 70-130 | |
| Toluene-d8 | 101 | 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

CH2M ASL

| Client Information | | Lab Information | |
|------------------------------|--|------------------------|--|
| Project Name: Northwest Pipe | | LCS ID: BS1W1031 | |
| Type: QC | | Report Revision No.: 0 | |
| Matrix: Water | | 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 | 17.9 | ug/L | 89 | SW8260C | 10/31/16 |
| Trichloroethene (TCE) | 79-01-6 | 20.0 | 18.8 | ug/L | 94 | SW8260C | 10/31/16 |

| Surrogate | % Recovery | Control Limits | Qualifier |
|-----------------------|------------|----------------|-----------|
| Dibromofluoromethane | 102 | 70-130 | |
| 1,2-Dichloroethane-d4 | 100 | 70-130 | |
| Toluene-d8 | 95 | 70-130 | |
| 4-Bromofluorobenzene | 98 | 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

CASE NARRATIVE HEADSPACE ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW02-102616-0 | | | | | Lab Sample ID: Q334202 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 09:10 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.27 | 34.3 | 3680 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 35.0 | 211 | 29600 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW03-102616-0 | | | | | Lab Sample ID: Q334203 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 10:15 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.23 | 33.9 | 1480 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 34.9 | 211 | 53600 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW01-102616-0 | | | | | Lab Sample ID: Q334204 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 11:13 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.20 | 33.7 | 1250 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 34.8 | 211 | 81000 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW04-102616-0 | | | | | Lab Sample ID: Q334205 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 12:10 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.17 | 33.4 | 1460 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 34.8 | 210 | 104000 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW05-102616-0 | | | | | Lab Sample ID: Q334206 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 13:20 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.23 | 33.9 | 1160 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 34.9 | 211 | 75100 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW06-102616-0 | | | | | Lab Sample ID: Q334207 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 14:20 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.45 | 35.7 | 2280 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 35.4 | 214 | 57100 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|---------------------------------|--|--|--|--|-------------------------|--|--|--|--|
| Client Sample ID: MW06-102616-1 | | | | | Lab Sample ID: Q334208 | | | | |
| Project Name: Northwest Pipe | | | | | Date Received: 10/27/16 | | | | |
| Sample Date: 10/26/16 | | | | | Report Revision No: 0 | | | | |
| Sample Time: 14:25 | | | | | | | | | |
| Type: Grab | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| Analyte | CAS# | Dilution Factor | DL | RL | Sample Result | Qualifier | Units | Analysis Method | Date Analyzed |
|---------------------|----------|-----------------|------|------|---------------|-----------|-------|-----------------|---------------|
| GC Volatiles | | | | | | | | | |
| Methane | 74-82-8 | 1 | 4.14 | 33.2 | 2040 | | ug/L | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 34.7 | 210 | 59500 | | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | | Lab Information | | | | |
|------------------------------|--|--|--|--|---------------------------|--|--|--|--|
| Project Name: Northwest Pipe | | | | | Method Blank ID: XB1-1031 | | | | |
| Sample Date: N/A | | | | | Date Received: N/A | | | | |
| Sample Time: N/A | | | | | Report Revision No: 0 | | | | |
| Type: QC | | | | | | | | | |
| Matrix: Water | | | | | | | | | |

| 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 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 1 | 56.6 | 342 | 56.6 | U | ug/L | RSK-175 | 10/31/16 |

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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|---|--|--|--|--|--|--|--|
| Project Name: Northwest Pipe Type: QC Matrix: Water | | | | LCS ID: BS1X1031 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 | 589 | ug/L | 99 | RSK-175 | 10/31/16 |
| Carbon dioxide | 124-38-9 | 3180 | 3120 | ug/L | 98 | RSK-175 | 10/31/16 |

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

CASE NARRATIVE METALS ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | | | Lab Information | | | |
|------------------------------|--|--|--|------------------------|--|--|--|
| Project Name: Northwest Pipe | | | | Lab Batch ID: Q3342 | | | |
| Date Received: 10/27/16 | | | | Report Revision No.: 0 | | | |
| Type: See C.O.C. | | | | | | | |
| Matrix: Water | | | | | | | |

| Client Sample ID | Lab Sample ID | Dilution Factor | DL | RL | Result | Qual | Units | Date Analyzed |
|-------------------------|---------------|-----------------|------|-----|--------|------|-------|---------------|
| Iron: E200.7 | | | | | | | | |
| <i>Dissolved Metals</i> | | | | | | | | |
| MW02-102616-0 | Q334202F | 1 | 10.0 | 100 | 5450 | | ug/L | 11/04/16 |
| MW03-102616-0 | Q334203F | 1 | 10.0 | 100 | 6140 | | ug/L | 11/04/16 |
| MW01-102616-0 | Q334204F | 1 | 10.0 | 100 | 1590 | | ug/L | 11/04/16 |
| MW04-102616-0 | Q334205F | 1 | 10.0 | 100 | 12900 | | ug/L | 11/04/16 |
| MW05-102616-0 | Q334206F | 1 | 10.0 | 100 | 4460 | | ug/L | 11/04/16 |
| MW06-102616-0 | Q334207F | 1 | 10.0 | 100 | 7290 | | ug/L | 11/04/16 |
| MW06-102616-1 | Q334208F | 1 | 10.0 | 100 | 7400 | | ug/L | 11/04/16 |
| <i>Total Metals</i> | | | | | | | | |
| WB10-1102 | WB10-1102 | 1 | 10.0 | 100 | 10.0 | U | ug/L | 11/04/16 |

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

CH2M ASL

| Client Information | Lab Information |
|---|--|
| Project Name: Northwest Pipe Type: QC Matrix: Water | Blank Spike ID: BS10W1102 Report Revision No: 0 Dilution Factor: 1 |

| Analyte | Spike Amount | Result | Units | %Recovery | Analysis Method | Prep Method | Date Analyzed |
|---------------|--------------|--------|-------|-----------|-----------------|-------------|---------------|
| Metals | | | | | | | |
| Iron | 1000 | 1090 | ug/L | 109 | E200.7 | E200.2 | 11/04/16 |

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

CASE NARRATIVE GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | Lab Information | |
|-------------------------------------|--|----------------------------|--|
| Project Name: Northwest Pipe | | Lab Batch ID: Q3342 | |
| Date Received: 10/27/16 | | Analysis Method: E300.0A | |
| Type: See C.O.C. | | Units: mg/L | |
| Matrix: Water | | Report Revision No.: 0 | |

| Client Sample ID | Lab Sample ID | Dilution Factor | DL | Chloride RL | Result | Qualifier | Date Analyzed |
|--------------------------|---------------|-----------------|-------|-------------|--------|-----------|---------------|
| General Chemistry | | | | | | | |
| MW02-102616-0 | Q334202 | 1 | 0.020 | 0.20 | 1.98 | | 11/03/16 |
| MW03-102616-0 | Q334203 | 1 | 0.020 | 0.20 | 3.61 | | 11/03/16 |
| MW01-102616-0 | Q334204 | 1 | 0.020 | 0.20 | 2.46 | | 11/03/16 |
| MW04-102616-0 | Q334205 | 1 | 0.020 | 0.20 | 3.00 | | 11/03/16 |
| MW05-102616-0 | Q334206 | 1 | 0.020 | 0.20 | 5.36 | | 11/03/16 |
| MW06-102616-0 | Q334207 | 1 | 0.020 | 0.20 | 5.07 | | 11/03/16 |
| MW06-102616-1 | Q334208 | 1 | 0.020 | 0.20 | 5.05 | | 11/03/16 |
| WB1-1103 | WB1-1103 | 1 | 0.020 | 0.20 | 0.020 | U | 11/03/16 |

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

CH2M ASL

| Client Information | | | Lab Information | | |
|------------------------------|--|--|--------------------------|--|--|
| Project Name: Northwest Pipe | | | Lab Batch ID: Q3342 | | |
| Date Received: 10/27/16 | | | Analysis Method: E300.0A | | |
| Type: See C.O.C. | | | Units: mg/L | | |
| Matrix: Water | | | Report Revision No.: 0 | | |

| Client Sample ID | Lab Sample ID | Dilution Factor | DL | RL | Sulfate Result | Qualifier | Date Analyzed |
|--------------------------|---------------|-----------------|-------|------|----------------|-----------|---------------|
| General Chemistry | | | | | | | |
| MW02-102616-0 | Q334202 | 1 | 0.023 | 0.20 | 4.15 | | 11/03/16 |
| MW03-102616-0 | Q334203 | 1 | 0.023 | 0.20 | 10.2 | | 11/03/16 |
| MW01-102616-0 | Q334204 | 1 | 0.023 | 0.20 | 10.1 | | 11/03/16 |
| MW04-102616-0 | Q334205 | 1 | 0.023 | 0.20 | 5.70 | | 11/03/16 |
| MW05-102616-0 | Q334206 | 2 | 0.045 | 0.40 | 20.5 | | 11/04/16 |
| MW06-102616-0 | Q334207 | 1 | 0.023 | 0.20 | 5.17 | | 11/03/16 |
| MW06-102616-1 | Q334208 | 1 | 0.023 | 0.20 | 5.36 | | 11/03/16 |
| WB1-1103 | WB1-1103 | 1 | 0.023 | 0.20 | 0.042 | J | 11/03/16 |
| WB1-1104 | WB1-1104 | 1 | 0.023 | 0.20 | 0.023 | U | 11/04/16 |

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

CH2M ASL

| Client Information | | Lab Information | |
|---|--|---|--|
| Project Name: Northwest Pipe Type: QC Matrix: Water | | Lab Batch ID: Q3342 Report Revision No.: 0 | |

| LCS ID | Analyte | Spike Amount | Sample Result | Units | % Recovery | Analysis Method | Date Analyzed |
|--------------------------|----------|--------------|---------------|-------|------------|-----------------|---------------|
| General Chemistry | | | | | | | |
| BS1W1103 | Chloride | 5.00 | 4.79 | mg/L | 96 | E300.0A | 11/03/16 |
| BS1W1103 | Sulfate | 5.00 | 4.88 | mg/L | 98 | E300.0A | 11/03/16 |
| BS1W1104 | Sulfate | 5.00 | 4.85 | mg/L | 97 | E300.0A | 11/04/16 |

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

CASE NARRATIVE GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | | Lab Information | | |
|------------------------------|--|--|-------------------------|--|--|
| Project Name: Northwest Pipe | | | Lab Batch ID: Q3342 | | |
| Date Received: 10/27/16 | | | Analysis Method: E353.2 | | |
| Type: See C.O.C. | | | Units: mg/L | | |
| Matrix: Water | | | Report Revision No.: 0 | | |

| Client Sample ID | Lab Sample ID | Dilution Factor | DL | Nitrate-N RL | Result | Qualifier | Date Analyzed |
|--------------------------|---------------|-----------------|--------|-----------------|--------|-----------|----------------|
| General Chemistry | | | | | | | |
| MW02-102616-0 | Q334202 | 1 | 0.0028 | 0.010 | 0.023 | | 10/27/16 15:26 |
| MW03-102616-0 | Q334203 | 1 | 0.0028 | 0.010 | 0.018 | | 10/27/16 15:27 |
| MW01-102616-0 | Q334204 | 1 | 0.0028 | 0.010 | 0.37 | | 10/27/16 15:29 |
| MW04-102616-0 | Q334205 | 1 | 0.0028 | 0.010 | 0.043 | | 10/27/16 15:30 |
| MW05-102616-0 | Q334206 | 1 | 0.0028 | 0.010 | 0.34 | | 10/27/16 15:31 |
| MW06-102616-0 | Q334207 | 1 | 0.0028 | 0.010 | 0.016 | | 10/27/16 15:32 |
| MW06-102616-1 | Q334208 | 1 | 0.0028 | 0.010 | 0.017 | | 10/27/16 15:33 |
| WB1-102716 | WB1-102716 | 1 | 0.0028 | 0.010 | 0.0028 | J | 10/27/16 |

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

CASE NARRATIVE GENERAL CHEMISTRY ANALYSIS

Lab Name: CH2M ASL

ASL SDG#: Q3342

Project: Northwest Pipe

Project #: 682722.GW.SB

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 | | | Lab Information | | |
|------------------------------|--|--|--------------------------|--|--|
| Project Name: Northwest Pipe | | | Lab Batch ID: Q3342 | | |
| Date Received: 10/27/16 | | | Analysis Method: SM5310B | | |
| Type: See C.O.C. | | | Units: mg/L | | |
| Matrix: Water | | | Report Revision No.: 0 | | |

| Client Sample ID | Lab Sample ID | Dilution Factor | DL | Total Organic Carbon RL | Result | Qualifier | Date Analyzed |
|--------------------------|---------------|-----------------|------|-------------------------|--------|-----------|---------------|
| General Chemistry | | | | | | | |
| MW02-102616-0 | Q334202 | 1 | 0.20 | 0.50 | 1.48 | | 10/31/16 |
| MW03-102616-0 | Q334203 | 1 | 0.20 | 0.50 | 1.27 | | 10/31/16 |
| MW01-102616-0 | Q334204 | 1 | 0.20 | 0.50 | 1.00 | | 10/31/16 |
| MW04-102616-0 | Q334205 | 1 | 0.20 | 0.50 | 1.21 | | 10/31/16 |
| MW05-102616-0 | Q334206 | 1 | 0.20 | 0.50 | 1.67 | | 10/31/16 |
| MW06-102616-0 | Q334207 | 1 | 0.20 | 0.50 | 1.25 | | 10/31/16 |
| MW06-102616-1 | Q334208 | 1 | 0.20 | 0.50 | 1.15 | | 11/01/16 |
| WB1-1031 | WB1-1031 | 1 | 0.20 | 0.50 | 0.20 | U | 10/31/16 |
| WB2-1031 | WB2-1031 | 1 | 0.20 | 0.50 | 0.20 | U | 10/31/16 |

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

CH2M ASL

| Client Information | | | | Lab Information | | | |
|---|--|--|--|---|--|--|--|
| Project Name: Northwest Pipe Type: QC Matrix: Water | | | | Lab Batch ID: Q3342 Report Revision No.: 0 | | | |

| LCS ID | Analyte | Spike Amount | Sample Result | Units | % Recovery | Analysis Method | Date Analyzed |
|--------------------------|----------------------|--------------|---------------|-------|------------|-----------------|---------------|
| General Chemistry | | | | | | | |
| BS1W1031 | Total Organic Carbon | 5.00 | 4.88 | mg/L | 98 | SM5310B | 10/31/16 |
| BS2W1031 | Total Organic Carbon | 5.00 | 4.79 | mg/L | 96 | SM5310B | 11/01/16 |

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

Chain of Custody Record

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

| Client Contact | | Analysis Turnaround Time | | | | Preservation Used | | | | | | For Lab Use Only: | | |
|---|-------------|---|---------------------------------|------------------------------|------------------|---|--------------|------------|---------|-----|-----------------------------|--|------------------------|---------|
| Project Name: <u>Northwest Pipe</u> Project # or PO #: <u>682722, GWS, RP</u> Company Name: <u>CH2M</u> Address: <u>2020 SW 4th Ave. Suite 300</u> City/State/Zip: <u>Portland, OR 97201</u> Project Manager: <u>Gretehen Gies</u> Phone #: <u>503-736</u> Report to email: <u>Gretehen.Gies@ADX</u> | | TAT is Calendar days TAT if different from below <input type="checkbox"/> 21 days (STD) <input type="checkbox"/> 14 days * <input type="checkbox"/> 7 days * <input type="checkbox"/> 5 days * <input type="checkbox"/> 3 day ** <input type="checkbox"/> 2 days ** <input type="checkbox"/> 1 day * * (Surcharges will apply) | | | | Analysis Requested VOCs 8260C VOCs 8260SIM Metcne, CA RST-175 TOC Phate, nitrite, chloride Dissolved Iron | | | | | | SDG: <u>03342</u> Custody Seals Intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hand delivered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temp <u>19</u> °C <u>1.6</u> C corrected Therm ID No. <u>173</u> Therm Exp. <u>117</u> Packing Material: Circle Below <input checked="" type="checkbox"/> Blue Ice Box <input type="checkbox"/> Bubble Wrap Radiological Screen? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | |
| Sample Identification (Limit of 20 characters) | Sample Date | Sample Time | Sample Type (G=Comp, G=Grab) | Matrix (Water, Soil, Air) | Total # of Cont. | VOCs 8260C | VOCs 8260SIM | Metcne, CA | RST-175 | TOC | Phate, nitrite, chloride | Dissolved Iron | Sample Specific Notes: | Lab ID: |
| TRIP BLANK - 102616 | 10/26 | 0730 | G | W | 6 | X | X | | | | | | | 1 |
| MW02 - 102616-0 | 10/26 | 910 | G | W | 12 | X | X | X | X | X | X | X | | 2 |
| MW03 - 102616-0 | 10/26 | 1015 | G | W | 12 | X | X | X | X | X | X | X | | 3 |
| MW01 - 102616-0 | 10/26 | 1113 | G | W | 12 | X | X | X | X | X | X | X | | 4 |
| MW04 - 102616-0 | 10/26 | 1210 | G | W | 12 | X | X | X | X | X | X | X | | 5 |
| MW05 - 102616-0 | 10/26 | 1320 | G | W | 12 | X | X | X | X | X | X | X | | 6 |
| MW06 - 102616-0 | 10/26 | 1420 | G | W | 12 | X | X | X | X | X | X | X | | 7 |
| MW06 - 102616-1 | 10/26 | 1425 | G | W | 12 | X | X | X | X | X | X | X | | 8 |

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

Possible Hazard Identification:
 Are samples hazardous? Yes No
 If yes, select hazard(s): Used Ignitable Corrosive Reactive Toxic
 If YES or NO is not checked above, samples will be assumed hazardous and hazardous disposal fees will be applied.

Sampled By: [Signature] Date/Time: 10/26/16 1500
 Received by: [Signature] Date/Time: 10/27/16 0940

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 Disposal by Lab Archive for _____ months

Relinquished by: [Signature] Date/Time: 10/26/16 1820
 Relinquished by: _____ Date/Time: _____

Shipped Via: UPS Fed-Ex USPS Other Tracking #: _____

Received in Laboratory by: [Signature] Date/Time: 10/27/16 0940
 Special Instructions/QC Requirements

Sample Receipt Record

SDG ID: Q3342

Date Received: 10/27/2016

Client/Project: Northwest Pipe

Received by: TW

| | | | |
|--|--|---|--|
| Were custody seals intact and on the outside of the cooler? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| Shipping Record: | <input checked="" type="checkbox"/> Hand Delivered | <input type="checkbox"/> On File | <input type="checkbox"/> COC |
| Radiological Screening for DoD | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| Packing Material: | <input type="checkbox"/> Hand Delivered | <input checked="" type="checkbox"/> Ice | <input type="checkbox"/> Blue Ice <input type="checkbox"/> Box |
| Temp OK? (<6C) Therm ID: TH173 Exp. 1/17 | 1.6°C | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No <input type="checkbox"/> N/A |
| Was a Chain of Custody (CoC) Provided? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Was the CoC correctly filled out (If No, document below) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Did sample labels agree with COC? (If No, document below) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Did the CoC list a correct bottle count and the preservative types (No=Correct on CoC) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Were the sample containers in good condition (not broken or leaking)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Was enough sample volume provided for analysis? (If No, document below) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Containers supplied by ASL? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Any sample with < 1/2 holding time remaining? If so contact LPM and document below. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Samples have multi-phase? If yes, document on SRER | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| All water VOCs free of air bubbles? No, document on SRER | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| pH of all samples met criteria on receipt? If "No", preserve and document below. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Dissolved/Soluble metals filtered in the field? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Dissolved/Soluble metals have sediment in bottom of container? If so document below. | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> 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) Sample Q334202 Nitrate has less than half holding time remaining.

Client was notified on: _____ Client contact: _____

Resolution to Exception: