

Village of Pemberton Water System

Annual Report - 2017

INTRODUCTION

This report has been prepared for the consumers of the Drinking Water System of the Village of Pemberton to provide basic information on water quality and compliance with health standards.

Feedback and comments are always appreciated and should be directed to Village staff or Vancouver Coastal Health (Squamish) officials.

1. CONSUMPTION (CUBIC METERS/DAY):

Daily flow numbers are recorded at the Wellhouse located in Pioneer Park. The annual numbers are as follows:

| | |
|---------------------|--------------------------|
| Average Flow/day: | 1,883 cubic metres |
| High Flow/day: | 3,579 (July 7, 2017) |
| Low Flow/day: | 1,102 (January 11, 2017) |
| Total Annual (est.) | 686,254 cubic metres |

For daily results, please refer to **Appendix I**.

2. CHLORINATION:

Chlorination of the water is a condition of the Village of Pemberton’s operating permit and has been in effect since March 2009. The objective is to have a positive residual chlorine reading throughout the water distribution system. The Fire Hall chlorine analyzer serves as the central measuring point, where a minimum residual of 0.20 mg/L is desired.

The chlorine residual is monitored continuously by a dedicated computer and alarm set point ensure consistent dosing. Daily readings of the previous 24 hour average residual are recorded. The annual numbers are as follows:

| | |
|--|------------------------|
| | Residual (mg/L) |
|--|------------------------|

| | |
|----------|------|
| Average: | 0.29 |
| High: | 0.44 |
| Low: | 0.21 |

As a means to ensure that target chlorine residuals are achieved within the distribution system, the Village also carries out sampling at 9 sites spread throughout the distribution system each week.

For daily results, please refer to **Appendix I** and for weekly results **Appendix III**.

3. CHEMISTRY TEST RESULTS:

The annual total metals sampling was performed March 14, 2017. Sampling was conducted on wells #2 and #3, and the Oak St and Industrial Park sample stations. The test results indicate that all of the items tested are within Health Canada, Maximum Acceptable Concentration guidelines. Well #2, which is used as a backup water source exceeds the Aesthetic Objectives for Iron, Maganese and True Colour. Aesthetic quality guidelines address parameters such as taste, odour and colour and are not considered a health concern. For results, please refer to **Appendix II**.

4. CORROSION CONTROL:

In June of 2016, the Village of Pemberton undertook a water sampling program to determine the best course of action to mitigate the corrosion of metallic plumbing systems and fixtures. The results indicated a need to adjust the pH and alkalinity of the well water which is considered slightly acidic. As such, Village engineers proposed treatment options and subsequently prepare design drawings for tendering the construction of a water conditioning plant which would use Sodium Carbonate (Soda Ash) to increase the pH and the Alkalinity of Pemberton’s well water. The soda ash plant was completed in June 2017. The plant was initially run at a lower pH set point during the commissioning phase to establish solution concentrations, test the equipment and controls and to carefully assess the chemical reactions with Pemberton’s well water. In October 2017, the Village established a target pH of 7 and a target Alkalinity between 40 and 80mg/L CaCO3 at which the plant is set to run.

In order to confirm effective treatment, pH and Alkalinity is monitor weekly by collecting and testing water from the 9 sample stations in the distribution system. For results, please refer to **Appendix IV**.

5. TRICHALOMETHANE (THM) TEST RESULTS:

THM testing commenced in January 2010, at the Oak St. sample station and has now been expanded to include production Wells #2 and #3 and the Industrial Park sample station. All readings were well below the Health Canada guidelines.

For results and corresponding guidelines, please refer to **Appendix II**.

6. BACTERIOLOGICAL TEST RESULTS:

Water samples are collected weekly at the following locations:

Source:

- Well No. 2
- Well No. 3

Distribution:

Village of Pemberton

- Oak St
- Village Office
- Health Centre
- Treatment Plant
- Pemberton Plateau
- Industrial Park (Mount Currie water source)

Pemberton North Improvement District

- Collins Rd
- Pemberton Meadows Rd.
- Pemberton Farm Rd (West)
- Urdal Rd.

These samples are submitted for analysis to the laboratory at Vancouver Coastal Health. All results were negative.

The individual results are on file at Vancouver Coastal Health (Squamish) and the Village Office, where they can be reviewed. They can also be viewed at: www.healthspace.ca/Clients/VCHA/CoastGaribaldi/CoastGaribaldi_Website.nsf

For Sample Range Reports, please refer to **Appendix V**.

APPENDIX I

Village of Pemberton Daily Flow and Chlorine Residuals

| | Flow (MG/day) | 24 hr Avg Residual (mg/L) |
|-------------------|------------------|---------------------------------|
| Number of Samples | 364 | 364 |
| Minimum | 1102.000 | 0.21 |
| Maximum | 3579.000 | 0.44 |
| Average | 1883.559 | 0.29 |
| January 1, 2017 | 1261.000 | 0.37 |
| January 2, 2017 | 1261.000 | 0.37 |
| January 3, 2017 | 1261.000 | 0.37 |
| January 4, 2017 | 1261.000 | 0.37 |
| January 5, 2017 | 1261.000 | 0.37 |
| January 6, 2017 | 1261.000 | 0.37 |
| January 7, 2017 | 1261.000 | 0.37 |
| January 8, 2017 | 1261.000 | 0.37 |
| January 9, 2017 | 1261.000 | 0.37 |
| January 10, 2017 | 1261.000 | 0.39 |
| January 11, 2017 | 1102.000 | 0.39 |
| January 12, 2017 | 1666.000 | 0.39 |
| January 13, 2017 | 1232.000 | 0.44 |
| January 14, 2017 | 1232.000 | 0.34 |
| January 15, 2017 | 1232.000 | 0.34 |
| January 16, 2017 | 1232.000 | 0.34 |
| January 17, 2017 | 1449.000 | 0.34 |
| January 18, 2017 | 1449.000 | 0.35 |
| January 19, 2017 | 1806.000 | 0.30 |
| January 20, 2017 | 1806.000 | 0.30 |
| January 21, 2017 | 1759.000 | 0.30 |
| January 22, 2017 | 1759.000 | 0.30 |
| January 23, 2017 | 1759.000 | 0.30 |
| January 24, 2017 | 1759.000 | 0.38 |
| January 25, 2017 | 1657.000 | 0.36 |
| January 26, 2017 | 1985.000 | 0.36 |
| January 27, 2017 | 1948.000 | 0.33 |
| January 28, 2017 | 1948.000 | 0.33 |
| January 29, 2017 | 1948.000 | 0.33 |
| January 30, 2017 | 1830.000 | 0.32 |
| January 31, 2017 | 1830.000 | 0.32 |
| February 1, 2017 | 2140.000 | 0.36 |
| February 2, 2017 | 1617.000 | 0.36 |
| February 3, 2017 | 1557.000 | 0.36 |
| February 4, 2017 | 1784.000 | 0.35 |
| February 5, 2017 | 1784.000 | 0.36 |
| February 6, 2017 | 1784.000 | 0.36 |
| February 7, 2017 | 1784.000 | 0.36 |
| February 8, 2017 | 1352.000 | 0.36 |
| February 9, 2017 | 1369.000 | 0.36 |
| February 10, 2017 | 1369.000 | 0.36 |
| February 11, 2017 | 1369.000 | 0.36 |

| | | |
|----------------|----------|------|
| April 5, 2017 | 1220.000 | 0.36 |
| April 6, 2017 | 1297.000 | 0.27 |
| April 7, 2017 | 1418.000 | 0.31 |
| April 8, 2017 | 1340.000 | 0.31 |
| April 9, 2017 | 1340.000 | 0.34 |
| April 10, 2017 | 1340.000 | 0.43 |
| April 11, 2017 | 2236.000 | 0.43 |
| April 12, 2017 | 2029.000 | 0.43 |
| April 13, 2017 | 1135.000 | 0.39 |
| April 14, 2017 | 1449.000 | 0.36 |
| April 15, 2017 | 1449.000 | 0.36 |
| April 16, 2017 | 1449.000 | 0.36 |
| April 17, 2017 | 1449.000 | 0.36 |
| April 18, 2017 | 1990.000 | 0.36 |
| April 19, 2017 | 1966.000 | 0.34 |
| April 20, 2017 | 1292.000 | 0.35 |
| April 21, 2017 | 1440.000 | 0.32 |
| April 22, 2017 | 1440.000 | 0.32 |
| April 23, 2017 | 1440.000 | 0.32 |
| April 24, 2017 | 1440.000 | 0.27 |
| April 25, 2017 | 1440.000 | 0.24 |
| April 26, 2017 | 1440.000 | 0.26 |
| April 27, 2017 | 1440.000 | 0.29 |
| April 28, 2017 | 1440.000 | 0.34 |
| April 29, 2017 | 1440.000 | 0.34 |
| April 30, 2017 | 1440.000 | 0.34 |
| May 1, 2017 | 1440.000 | 0.39 |
| May 2, 2017 | 1475.000 | 0.39 |
| May 3, 2017 | 1463.000 | 0.38 |
| May 4, 2017 | 1423.000 | 0.38 |
| May 5, 2017 | 1532.000 | 0.37 |
| May 6, 2017 | 1532.000 | 0.35 |
| May 7, 2017 | 1532.000 | 0.35 |
| May 8, 2017 | 1659.000 | 0.35 |
| May 9, 2017 | 1659.000 | 0.35 |
| May 10, 2017 | 1659.000 | 0.39 |
| May 11, 2017 | 1746.000 | 0.38 |
| May 12, 2017 | 1956.000 | 0.35 |
| May 13, 2017 | 1956.000 | 0.31 |
| May 14, 2017 | 1956.000 | 0.31 |
| May 15, 2017 | 1956.000 | 0.31 |
| May 16, 2017 | 1472.000 | 0.31 |
| May 17, 2017 | 1646.000 | 0.31 |
| May 18, 2017 | 2243.000 | 0.31 |
| May 19, 2017 | 2381.000 | 0.29 |
| May 20, 2017 | 2381.000 | 0.32 |
| May 21, 2017 | 2381.000 | 0.34 |
| May 22, 2017 | 2381.000 | 0.34 |
| May 23, 2017 | 1168.000 | 0.33 |
| May 24, 2017 | 1168.000 | 0.33 |
| May 25, 2017 | 1962.000 | 0.32 |
| May 26, 2017 | 1962.000 | 0.28 |

| | | |
|-------------------|----------|------|
| July 18, 2017 | 3281.000 | 0.30 |
| July 19, 2017 | 2674.000 | 0.30 |
| July 20, 2017 | 3361.000 | 0.31 |
| July 21, 2017 | 3307.000 | 0.30 |
| July 22, 2017 | 2828.000 | 0.30 |
| July 23, 2017 | 2828.000 | 0.30 |
| July 24, 2017 | 2828.000 | 0.26 |
| July 25, 2017 | 3484.000 | 0.29 |
| July 26, 2017 | 3484.000 | 0.27 |
| July 27, 2017 | 3374.000 | 0.29 |
| July 28, 2017 | 3374.000 | 0.29 |
| July 29, 2017 | 3474.000 | 0.29 |
| July 30, 2017 | 3474.000 | 0.29 |
| July 31, 2017 | 3474.000 | 0.29 |
| August 1, 2017 | 3139.000 | 0.29 |
| August 2, 2017 | 3139.000 | 0.29 |
| August 3, 2017 | 3352.000 | 0.29 |
| August 4, 2017 | 3352.000 | 0.29 |
| August 5, 2017 | 3352.000 | 0.29 |
| August 6, 2017 | 3104.000 | 0.29 |
| August 7, 2017 | 3104.000 | 0.28 |
| August 8, 2017 | 3104.000 | 0.28 |
| August 9, 2017 | 3104.000 | 0.28 |
| August 10, 2017 | 3114.000 | 0.28 |
| August 11, 2017 | 3184.000 | 0.29 |
| August 12, 2017 | 2769.000 | 0.29 |
| August 13, 2017 | 2769.000 | 0.26 |
| August 14, 2017 | 2769.000 | 0.23 |
| August 15, 2017 | 2925.000 | 0.25 |
| August 16, 2017 | 2977.000 | 0.26 |
| August 17, 2017 | 3301.000 | 0.26 |
| August 18, 2017 | 3147.000 | 0.27 |
| August 19, 2017 | 3452.000 | 0.27 |
| August 20, 2017 | 3452.000 | 0.27 |
| August 21, 2017 | 3452.000 | 0.26 |
| August 22, 2017 | 3452.000 | 0.27 |
| August 23, 2017 | 3032.000 | 0.27 |
| August 24, 2017 | 3185.000 | 0.26 |
| August 25, 2017 | 3011.000 | 0.26 |
| August 26, 2017 | 2701.000 | 0.26 |
| August 27, 2017 | 2976.000 | 0.26 |
| August 28, 2017 | 2976.000 | 0.25 |
| August 29, 2017 | 1636.000 | 0.26 |
| August 30, 2017 | 1969.000 | 0.26 |
| August 31, 2017 | 2674.000 | 0.26 |
| September 1, 2017 | 2305.000 | 0.27 |
| September 2, 2017 | 1639.000 | 0.25 |
| September 3, 2017 | 1639.000 | 0.29 |
| September 4, 2017 | 2040.000 | 0.29 |
| September 5, 2017 | 2040.000 | 0.29 |
| September 6, 2017 | 1900.000 | 0.29 |
| September 7, 2017 | 2636.000 | 0.28 |

| | | |
|-------------------|----------|------|
| October 30, 2017 | 1575.000 | 0.22 |
| October 31, 2017 | 1459.000 | 0.24 |
| November 1, 2017 | 1346.000 | 0.24 |
| November 2, 2017 | 1402.000 | 0.24 |
| November 3, 2017 | 1419.000 | 0.34 |
| November 4, 2017 | 1419.000 | 0.26 |
| November 5, 2017 | 1419.000 | 0.26 |
| November 6, 2017 | 1493.000 | 0.26 |
| November 7, 2017 | 1439.000 | 0.25 |
| November 8, 2017 | 1411.000 | 0.26 |
| November 9, 2017 | 1264.000 | 0.25 |
| November 10, 2017 | 1264.000 | 0.25 |
| November 11, 2017 | 1264.000 | 0.25 |
| November 12, 2017 | 1264.000 | 0.25 |
| November 13, 2017 | 1264.000 | 0.25 |
| November 14, 2017 | 1441.000 | 0.25 |
| November 15, 2017 | 1276.000 | 0.26 |
| November 16, 2017 | 1407.000 | 0.26 |
| November 17, 2017 | 1344.000 | 0.25 |
| November 18, 2017 | 1264.000 | 0.25 |
| November 19, 2017 | 1264.000 | 0.25 |
| November 20, 2017 | 1225.000 | 0.24 |
| November 21, 2017 | 1316.000 | 0.22 |
| November 22, 2017 | 1386.000 | 0.25 |
| November 23, 2017 | 1297.000 | 0.27 |
| November 24, 2017 | 1388.000 | 0.27 |
| November 25, 2017 | 1388.000 | 0.27 |
| November 26, 2017 | 1388.000 | 0.27 |
| November 27, 2017 | 1421.000 | 0.25 |
| November 28, 2017 | 1385.000 | 0.26 |
| November 29, 2017 | 1297.000 | 0.26 |
| November 30, 2017 | 1391.000 | 0.27 |
| December 1, 2017 | 1391.000 | 0.27 |
| December 2, 2017 | 1391.000 | 0.27 |
| December 3, 2017 | 1391.000 | 0.27 |
| December 4, 2017 | 1433.000 | 0.27 |
| December 5, 2017 | 1387.000 | 0.28 |
| December 6, 2017 | 1346.000 | 0.27 |
| December 7, 2017 | 1132.000 | 0.25 |
| December 8, 2017 | 1132.000 | 0.28 |
| December 9, 2017 | 1132.000 | 0.27 |
| December 10, 2017 | 1132.000 | 0.25 |
| December 11, 2017 | 1344.000 | 0.27 |
| December 12, 2017 | 1343.000 | 0.26 |
| December 13, 2017 | 1175.000 | 0.28 |
| December 14, 2017 | 1330.000 | 0.26 |
| December 15, 2017 | 1337.000 | 0.27 |
| December 16, 2017 | 1337.000 | 0.27 |
| December 17, 2017 | 1337.000 | 0.26 |
| December 18, 2017 | 1262.000 | 0.27 |
| December 19, 2017 | 1346.000 | 0.27 |
| December 20, 2017 | 1205.000 | 0.27 |

APPENDIX II

Your C.O.C. #: 518243-01-01

Attention: Jeff Westlake

VILLAGE OF PEMBERTON
Box 100
7400 Prospect St
Pemberton, BC
CANADA V0N 2L0

Report Date: 2017/03/22

Report #: R2360154

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B719010

Received: 2017/03/15, 14:25

Sample Matrix: DRINKING WATER

Samples Received: 4

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|--|----------|-------------------|------------------|-------------------|----------------------|
| Alkalinity - Water | 4 | 2017/03/16 | 2017/03/16 | BBY6SOP-00026 | SM 22 2320 B m |
| Chloride by Automated Colourimetry | 4 | N/A | 2017/03/16 | BBY6SOP-00011 | SM 22 4500-Cl- E m |
| Colour (True) by Kone Lab | 4 | N/A | 2017/03/16 | BBY6SOP-00057 | SM 22 2120 C m |
| Conductance - water | 4 | N/A | 2017/03/16 | BBY6SOP-00026 | SM 22 2510 B m |
| Fluoride | 4 | N/A | 2017/03/16 | BBY6SOP-00048 | SM 22 4500-F C m |
| Hardness Total (calculated as CaCO3) | 4 | N/A | 2017/03/20 | BBY WI-00033 | Auto Calc |
| Mercury (Total) by CVAF | 1 | 2017/03/16 | 2017/03/16 | BBY7SOP-00015 | BCMOE BCLM Oct2013 m |
| Mercury (Total) by CVAF | 3 | 2017/03/17 | 2017/03/17 | BBY7SOP-00015 | BCMOE BCLM Oct2013 m |
| Na, K, Ca, Mg, S by CRC ICPMS (total) | 4 | 2017/03/15 | 2017/03/20 | BBY7SOP-00002 | EPA 6020A R1 m |
| Elements by CRC ICPMS (total) | 1 | 2017/03/17 | 2017/03/17 | BBY7SOP-00003, | BCLM2005,EPA6020bR2m |
| Elements by CRC ICPMS (total) | 3 | 2017/03/17 | 2017/03/18 | BBY7SOP-00003, | BCLM2005,EPA6020bR2m |
| Nitrate + Nitrite (N) | 4 | N/A | 2017/03/16 | BBY6SOP-00010 | SM 22 4500-NO3- I m |
| Nitrite (N) by CFA | 4 | N/A | 2017/03/16 | BBY6SOP-00010 | SM 22 4500-NO3- I m |
| Nitrogen - Nitrate (as N) | 4 | N/A | 2017/03/17 | BBY6SOP-00010 | SM 22 4500-NO3 I m |
| pH Water (1) | 4 | N/A | 2017/03/16 | BBY6SOP-00026 | SM 22 4500-H+ B m |
| Sulphate by Automated Colourimetry | 3 | N/A | 2017/03/16 | BBY6SOP-00017 | SM 22 4500-SO42- E m |
| Sulphate by Automated Colourimetry | 1 | N/A | 2017/03/17 | BBY6SOP-00017 | SM 22 4500-SO42- E m |
| Total Dissolved Solids (Filt. Residue) | 4 | 2017/03/16 | 2017/03/17 | BBY6SOP-00033 | SM 22 2540 C m |
| Total Trihalomethanes Calculation | 4 | N/A | 2017/03/21 | BBY WI-00033 | BC MOE Lab Method |
| Turbidity | 4 | N/A | 2017/03/16 | BBY6SOP-00027 | SM 22 2130 B m |
| VOCs, VH, F1, LH in Water by HS GC/MS | 4 | 2017/03/16 | 2017/03/17 | BBY8SOP-00009 | BC Lab Manual 2007 |
| Volatile HC-BTEX | 4 | N/A | 2017/03/21 | BBY WI-00033 | Auto Calc |

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Your C.O.C. #: 518243-01-01

Attention: Jeff Westlake

VILLAGE OF PEMBERTON
Box 100
7400 Prospect St
Pemberton, BC
CANADA V0N 2L0

Report Date: 2017/03/22
Report #: R2360154
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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B719010

Received: 2017/03/15, 14:25

Sample Matrix: DRINKING WATER
Samples Received: 4

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|--|----------|-------------------|------------------|-------------------|----------------------|
| Alkalinity - Water | 4 | 2017/03/16 | 2017/03/16 | BBY6SOP-00026 | SM 22 2320 B m |
| Chloride by Automated Colourimetry | 4 | N/A | 2017/03/16 | BBY6SOP-00011 | SM 22 4500-Cl- E m |
| Colour (True) by Kone Lab | 4 | N/A | 2017/03/16 | BBY6SOP-00057 | SM 22 2120 C m |
| Conductance - water | 4 | N/A | 2017/03/16 | BBY6SOP-00026 | SM 22 2510 B m |
| Fluoride | 4 | N/A | 2017/03/16 | BBY6SOP-00048 | SM 22 4500-F C m |
| Hardness Total (calculated as CaCO3) | 4 | N/A | 2017/03/20 | BBY WI-00033 | Auto Calc |
| Mercury (Total) by CVAf | 1 | 2017/03/16 | 2017/03/16 | BBY7SOP-00015 | BCMOE BCLM Oct2013 m |
| Mercury (Total) by CVAf | 3 | 2017/03/17 | 2017/03/17 | BBY7SOP-00015 | BCMOE BCLM Oct2013 m |
| Na, K, Ca, Mg, S by CRC ICPMS (total) | 4 | 2017/03/15 | 2017/03/20 | BBY7SOP-00002 | EPA 6020A R1 m |
| Elements by CRC ICPMS (total) | 1 | 2017/03/17 | 2017/03/17 | BBY7SOP-00003, | BCLM2005,EPA6020bR2m |
| Elements by CRC ICPMS (total) | 3 | 2017/03/17 | 2017/03/18 | BBY7SOP-00003, | BCLM2005,EPA6020bR2m |
| Nitrate + Nitrite (N) | 4 | N/A | 2017/03/16 | BBY6SOP-00010 | SM 22 4500-NO3- I m |
| Nitrite (N) by CFA | 4 | N/A | 2017/03/16 | BBY6SOP-00010 | SM 22 4500-NO3- I m |
| Nitrogen - Nitrate (as N) | 4 | N/A | 2017/03/17 | BBY6SOP-00010 | SM 22 4500-NO3 I m |
| pH Water (1) | 4 | N/A | 2017/03/16 | BBY6SOP-00026 | SM 22 4500-H+ B m |
| Sulphate by Automated Colourimetry | 3 | N/A | 2017/03/16 | BBY6SOP-00017 | SM 22 4500-SO42- E m |
| Sulphate by Automated Colourimetry | 1 | N/A | 2017/03/17 | BBY6SOP-00017 | SM 22 4500-SO42- E m |
| Total Dissolved Solids (Filt. Residue) | 4 | 2017/03/16 | 2017/03/17 | BBY6SOP-00033 | SM 22 2540 C m |
| Total Trihalomethanes Calculation | 4 | N/A | 2017/03/21 | BBY WI-00033 | BC MOE Lab Method |
| Turbidity | 4 | N/A | 2017/03/16 | BBY6SOP-00027 | SM 22 2130 B m |
| VOCs, VH, F1, LH in Water by HS GC/MS | 4 | 2017/03/16 | 2017/03/17 | BBY8SOP-00009 | BC Lab Manual 2007 |
| Volatile HC-BTEX | 4 | N/A | 2017/03/21 | BBY WI-00033 | Auto Calc |

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Your C.O.C. #: 518243-01-01

Attention: Jeff Westlake

VILLAGE OF PEMBERTON
Box 100
7400 Prospect St
Pemberton, BC
CANADA V0N 2L0

Report Date: 2017/03/22
Report #: R2360154
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B719010

Received: 2017/03/15, 14:25

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key



Maxxam
22 Mar 2017 11:29:30

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Graham Rudkin, Project Manager, Environmental

Email: GRudkin@maxxam.ca

Phone# (604)638-5926 Ext.5926

=====
This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

VOLATILE ORGANICS BY GC-MS (DRINKING WATER)

| Maxxam ID | | | QS4113 | QS4114 | QS4115 | QS4116 | | |
|----------------------------------|---------------------------------|-----|---------------------|---------------------|---------------------|---------------------|-----|----------|
| Sampling Date | | | 2017/03/14 10:00 | 2017/03/14 10:15 | 2017/03/14 09:45 | 2017/03/14 09:30 | | |
| COC Number | | | 518243-01-01 | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | WELL #2 | WELL #3 | OAK ST | INDUSTRIAL PARK | RDL | QC Batch |
| Volatiles | | | | | | | | |
| Total Trihalomethanes | ug/L | 100 | <1.0 | <1.0 | 1.2 | <1.0 | 1.0 | 8578452 |
| No Fill | No Exceedance | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

WATER POTABILITY (NON DRINKING WATER)

| Maxxam ID | | | | | QS4113 | QS4114 | QS4115 | | |
|----------------------------------|---------------------------------|------------|------------|------------|---------------------|---------------------|---------------------|--------|----------|
| Sampling Date | | | | | 2017/03/14 10:00 | 2017/03/14 10:15 | 2017/03/14 09:45 | | |
| COC Number | | | | | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | AO | OG | WELL #2 | WELL #3 | OAK ST | RDL | QC Batch |
| ANIONS | | | | | | | | | |
| Nitrite (N) | mg/L | 1 | - | - | <0.0050 | <0.0050 | <0.0050 | 0.0050 | 8580212 |
| Calculated Parameters | | | | | | | | | |
| Nitrate (N) | mg/L | 10 | - | - | 0.120 | 0.074 | 0.075 | 0.020 | 8577774 |
| Misc. Inorganics | | | | | | | | | |
| Fluoride (F) | mg/L | 1.5 | - | - | 0.023 | 0.019 | 0.019 | 0.010 | 8580996 |
| Alkalinity (Total as CaCO3) | mg/L | - | - | - | 31.7 | 10.9 | 11.6 | 0.50 | 8579454 |
| Alkalinity (PP as CaCO3) | mg/L | - | - | - | <0.50 | <0.50 | <0.50 | 0.50 | 8579454 |
| Bicarbonate (HCO3) | mg/L | - | - | - | 38.7 | 13.3 | 14.2 | 0.50 | 8579454 |
| Carbonate (CO3) | mg/L | - | - | - | <0.50 | <0.50 | <0.50 | 0.50 | 8579454 |
| Hydroxide (OH) | mg/L | - | - | - | <0.50 | <0.50 | <0.50 | 0.50 | 8579454 |
| Anions | | | | | | | | | |
| Dissolved Sulphate (SO4) | mg/L | - | 500 | - | 18.5 | 7.94 | 8.58 | 0.50 | 8580143 |
| Dissolved Chloride (Cl) | mg/L | - | 250 | - | 31 | 2.2 | 3.2 | 0.50 | 8580142 |
| MISCELLANEOUS | | | | | | | | | |
| True Colour | Col. Unit | - | 15 | - | 20.2 | <5.0 | <5.0 | 5.0 | 8579162 |
| Nutrients | | | | | | | | | |
| Nitrate plus Nitrite (N) | mg/L | - | - | - | 0.120 | 0.074 | 0.075 | 0.020 | 8580210 |
| Physical Properties | | | | | | | | | |
| Conductivity | uS/cm | - | - | - | 220 | 52.4 | 56.7 | 1.0 | 8579461 |
| pH | pH | - | 7.0:10.5 | - | 6.97 | 6.75 | 6.78 | | 8579462 |
| Physical Properties | | | | | | | | | |
| Total Dissolved Solids | mg/L | - | 500 | - | 136 | 46 | 48 | 10 | 8579639 |
| Turbidity | NTU | see remark | see remark | see remark | 2.37 | 0.11 | <0.10 | 0.10 | 8579488 |
| No Fill | No Exceedance | | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

WATER POTABILITY (NON DRINKING WATER)

| | | | | | | | |
|----------------------------------|---------------------------------|------------|------------|------------|------------------------|------------|-----------------|
| Maxxam ID | | | | | QS4116 | | |
| Sampling Date | | | | | 2017/03/14 09:30 | | |
| COC Number | | | | | 518243-01-01 | | |
| | UNITS | MAC | AO | OG | INDUSTRIAL PARK | RDL | QC Batch |
| ANIONS | | | | | | | |
| Nitrite (N) | mg/L | 1 | - | - | <0.0050 | 0.0050 | 8580212 |
| Calculated Parameters | | | | | | | |
| Nitrate (N) | mg/L | 10 | - | - | 0.067 | 0.020 | 8577774 |
| Misc. Inorganics | | | | | | | |
| Fluoride (F) | mg/L | 1.5 | - | - | 0.026 | 0.010 | 8580996 |
| Alkalinity (Total as CaCO3) | mg/L | - | - | - | 23.2 | 0.50 | 8579454 |
| Alkalinity (PP as CaCO3) | mg/L | - | - | - | <0.50 | 0.50 | 8579454 |
| Bicarbonate (HCO3) | mg/L | - | - | - | 28.3 | 0.50 | 8579454 |
| Carbonate (CO3) | mg/L | - | - | - | <0.50 | 0.50 | 8579454 |
| Hydroxide (OH) | mg/L | - | - | - | <0.50 | 0.50 | 8579454 |
| Anions | | | | | | | |
| Dissolved Sulphate (SO4) | mg/L | - | 500 | - | 10.1 | 0.50 | 8582025 |
| Dissolved Chloride (Cl) | mg/L | - | 250 | - | 1.5 | 0.50 | 8580142 |
| MISCELLANEOUS | | | | | | | |
| True Colour | Col. Unit | - | 15 | - | <5.0 | 5.0 | 8579162 |
| Nutrients | | | | | | | |
| Nitrate plus Nitrite (N) | mg/L | - | - | - | 0.067 | 0.020 | 8580210 |
| Physical Properties | | | | | | | |
| Conductivity | uS/cm | - | - | - | 75.6 | 1.0 | 8579461 |
| pH | pH | - | 7.0:10.5 | - | 7.27 | | 8579462 |
| Physical Properties | | | | | | | |
| Total Dissolved Solids | mg/L | - | 500 | - | 60 | 10 | 8579639 |
| Turbidity | NTU | see remark | see remark | see remark | <0.10 | 0.10 | 8579488 |
| No Fill | No Exceedance | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

CSR TOTAL METALS IN WATER WITH CV HG (DRINKING WATER)

| Maxxam ID | | | | | QS4113 | | QS4114 | QS4115 | QS4116 | | |
|----------------------------------|---------------------------------|------|------|-----|---------------------|----------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | | | | 2017/03/14 10:00 | | 2017/03/14 10:15 | 2017/03/14 09:45 | 2017/03/14 09:30 | | |
| COC Number | | | | | 518243-01-01 | | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | AO | OG | WELL #2 | QC Batch | WELL #3 | OAK ST | INDUSTRIAL PARK | RDL | QC Batch |
| Calculated Parameters | | | | | | | | | | | |
| Total Hardness (CaCO3) | mg/L | - | - | - | 64.3 | 8577606 | 17.3 | 18.8 | 30.3 | 0.50 | 8577606 |
| Elements | | | | | | | | | | | |
| Total Mercury (Hg) | ug/L | 1 | - | - | <0.010 | 8579310 | <0.010 | <0.010 | <0.010 | 0.010 | 8580146 |
| Total Metals by ICPMS | | | | | | | | | | | |
| Total Aluminum (Al) | ug/L | - | - | 100 | 99.3 | 8580228 | 8.8 | 8.2 | <3.0 | 3.0 | 8580228 |
| Total Antimony (Sb) | ug/L | 6 | - | - | <0.50 | 8580228 | <0.50 | <0.50 | <0.50 | 0.50 | 8580228 |
| Total Arsenic (As) | ug/L | 10 | - | - | 0.48 | 8580228 | <0.10 | <0.10 | <0.10 | 0.10 | 8580228 |
| Total Barium (Ba) | ug/L | 1000 | - | - | 39.5 | 8580228 | 10.5 | 10.9 | 5.3 | 1.0 | 8580228 |
| Total Beryllium (Be) | ug/L | - | - | - | <0.10 | 8580228 | <0.10 | <0.10 | <0.10 | 0.10 | 8580228 |
| Total Bismuth (Bi) | ug/L | - | - | - | <1.0 | 8580228 | <1.0 | <1.0 | <1.0 | 1.0 | 8580228 |
| Total Boron (B) | ug/L | 5000 | - | - | 103 | 8580228 | <50 | <50 | <50 | 50 | 8580228 |
| Total Cadmium (Cd) | ug/L | 5 | - | - | 0.022 | 8580228 | 0.015 | 0.011 | <0.010 | 0.010 | 8580228 |
| Total Chromium (Cr) | ug/L | 50 | - | - | <1.0 | 8580228 | <1.0 | <1.0 | <1.0 | 1.0 | 8580228 |
| Total Cobalt (Co) | ug/L | - | - | - | 0.73 | 8580228 | <0.20 | <0.20 | <0.20 | 0.20 | 8580228 |
| Total Copper (Cu) | ug/L | - | 1000 | - | 2.37 | 8580228 | 4.94 | 5.69 | 1.45 | 0.50 | 8580228 |
| Total Iron (Fe) | ug/L | - | 300 | - | 846 | 8580228 | 12 | <10 | 50 | 10 | 8580228 |
| Total Lead (Pb) | ug/L | 10 | - | - | 0.47 | 8580228 | 0.40 | 0.41 | <0.20 | 0.20 | 8580228 |
| Total Lithium (Li) | ug/L | - | - | - | <2.0 | 8580228 | <2.0 | <2.0 | <2.0 | 2.0 | 8580228 |
| Total Manganese (Mn) | ug/L | - | 50 | - | 158 | 8580228 | 3.7 | 2.0 | <1.0 | 1.0 | 8580228 |
| Total Molybdenum (Mo) | ug/L | - | - | - | 2.5 | 8580228 | <1.0 | <1.0 | <1.0 | 1.0 | 8580228 |
| Total Nickel (Ni) | ug/L | - | - | - | <1.0 | 8580228 | <1.0 | <1.0 | <1.0 | 1.0 | 8580228 |
| Total Selenium (Se) | ug/L | 50 | - | - | <0.10 | 8580228 | <0.10 | <0.10 | <0.10 | 0.10 | 8580228 |
| Total Silicon (Si) | ug/L | - | - | - | 5540 | 8580228 | 3810 | 4000 | 3080 | 100 | 8580228 |
| Total Silver (Ag) | ug/L | - | - | - | <0.020 | 8580228 | <0.020 | <0.020 | <0.020 | 0.020 | 8580228 |
| Total Strontium (Sr) | ug/L | - | - | - | 131 | 8580228 | 33.0 | 35.5 | 30.7 | 1.0 | 8580228 |
| Total Thallium (Tl) | ug/L | - | - | - | 0.012 | 8580228 | <0.010 | <0.010 | <0.010 | 0.010 | 8580228 |
| Total Tin (Sn) | ug/L | - | - | - | <5.0 | 8580228 | <5.0 | <5.0 | <5.0 | 5.0 | 8580228 |
| Total Titanium (Ti) | ug/L | - | - | - | <5.0 | 8580228 | <5.0 | <5.0 | <5.0 | 5.0 | 8580228 |
| Total Uranium (U) | ug/L | 20 | - | - | <0.10 | 8580228 | <0.10 | <0.10 | <0.10 | 0.10 | 8580228 |
| Total Vanadium (V) | ug/L | - | - | - | <5.0 | 8580228 | <5.0 | <5.0 | <5.0 | 5.0 | 8580228 |
| Total Zinc (Zn) | ug/L | - | 5000 | - | 17.0 | 8580228 | <5.0 | 11.8 | <5.0 | 5.0 | 8580228 |
| Total Zirconium (Zr) | ug/L | - | - | - | <0.10 | 8580228 | <0.10 | <0.10 | <0.10 | 0.10 | 8580228 |
| Total Calcium (Ca) | mg/L | - | - | - | 23.4 | 8577773 | 6.35 | 6.95 | 10.6 | 0.050 | 8577773 |
| Total Magnesium (Mg) | mg/L | - | - | - | 1.42 | 8577773 | 0.341 | 0.346 | 0.938 | 0.050 | 8577773 |
| No Fill | No Exceedance | | | | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

CSR TOTAL METALS IN WATER WITH CV HG (DRINKING WATER)

| Maxxam ID | | | | | QS4113 | | QS4114 | QS4115 | QS4116 | | |
|----------------------------------|---------------------------------|-----|-----|----|---------------------|----------|---------------------|---------------------|---------------------|-------|----------|
| Sampling Date | | | | | 2017/03/14 10:00 | | 2017/03/14 10:15 | 2017/03/14 09:45 | 2017/03/14 09:30 | | |
| COC Number | | | | | 518243-01-01 | | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | AO | OG | WELL #2 | QC Batch | WELL #3 | OAK ST | INDUSTRIAL PARK | RDL | QC Batch |
| Total Potassium (K) | mg/L | - | - | - | 2.09 | 8577773 | 0.684 | 0.689 | 0.483 | 0.050 | 8577773 |
| Total Sodium (Na) | mg/L | - | 200 | - | 10.8 | 8577773 | 1.80 | 2.22 | 1.20 | 0.050 | 8577773 |
| Total Sulphur (S) | mg/L | - | - | - | 6.7 | 8577773 | 3.3 | <3.0 | 3.4 | 3.0 | 8577773 |
| No Fill | No Exceedance | | | | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

CSR VOC + VPH IN WATER (DRINKING WATER)

| Maxxam ID | | | | QS4113 | QS4114 | QS4115 | QS4116 | | |
|----------------------------------|---------------------------------|-----|-----|---------------------|---------------------|---------------------|---------------------|------|----------|
| Sampling Date | | | | 2017/03/14 10:00 | 2017/03/14 10:15 | 2017/03/14 09:45 | 2017/03/14 09:30 | | |
| COC Number | | | | 518243-01-01 | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | AO | WELL #2 | WELL #3 | OAK ST | INDUSTRIAL PARK | RDL | QC Batch |
| Volatiles | | | | | | | | | |
| VPH (VH6 to 10 - BTEX) | ug/L | - | - | <300 | <300 | <300 | <300 | 300 | 8577600 |
| Chloromethane | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Vinyl chloride | ug/L | 2 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Chloroethane | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Trichlorofluoromethane | ug/L | - | - | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 8579605 |
| 1,1-dichloroethene | ug/L | 14 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Dichloromethane | ug/L | 50 | - | <2.0 | <2.0 | <2.0 | <2.0 | 2.0 | 8579605 |
| trans-1,2-dichloroethene | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| 1,1-dichloroethane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| cis-1,2-dichloroethene | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Chloroform | ug/L | - | - | <1.0 | <1.0 | 1.2 | <1.0 | 1.0 | 8579605 |
| 1,1,1-trichloroethane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| 1,2-dichloroethane | ug/L | 5 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Carbon tetrachloride | ug/L | 2 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Benzene | ug/L | 5 | - | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| Methyl-tert-butylether (MTBE) | ug/L | - | 15 | <4.0 | <4.0 | <4.0 | <4.0 | 4.0 | 8579605 |
| 1,2-dichloropropane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| cis-1,3-dichloropropene | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| trans-1,3-dichloropropene | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Bromomethane | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| 1,1,2-trichloroethane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Trichloroethene | ug/L | 5 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Chlorodibromomethane | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Tetrachloroethene | ug/L | 10 | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Bromodichloromethane | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Toluene | ug/L | 60 | 24 | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| Ethylbenzene | ug/L | 140 | 1.6 | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| m & p-Xylene | ug/L | - | - | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| Bromoform | ug/L | - | - | <1.0 | <1.0 | <1.0 | <1.0 | 1.0 | 8579605 |
| Styrene | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| o-Xylene | ug/L | - | - | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| Xylenes (Total) | ug/L | 90 | 20 | <0.40 | <0.40 | <0.40 | <0.40 | 0.40 | 8579605 |
| 1,1,1,2-tetrachloroethane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| 1,1,2,2-tetrachloroethane | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| No Fill | No Exceedance | | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | | |

Maxxam Job #: B719010
Report Date: 2017/03/22

VILLAGE OF PEMBERTON

CSR VOC + VPH IN WATER (DRINKING WATER)

| Maxxam ID | | | | QS4113 | QS4114 | QS4115 | QS4116 | | |
|----------------------------------|---------------------------------|-----|----|---------------------|---------------------|---------------------|---------------------|------|----------|
| Sampling Date | | | | 2017/03/14 10:00 | 2017/03/14 10:15 | 2017/03/14 09:45 | 2017/03/14 09:30 | | |
| COC Number | | | | 518243-01-01 | 518243-01-01 | 518243-01-01 | 518243-01-01 | | |
| | UNITS | MAC | AO | WELL #2 | WELL #3 | OAK ST | INDUSTRIAL PARK | RDL | QC Batch |
| 1,2-dichlorobenzene | ug/L | 200 | 3 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| 1,3-dichlorobenzene | ug/L | - | - | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| 1,4-dichlorobenzene | ug/L | 5 | 1 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| Chlorobenzene | ug/L | 80 | 30 | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 | 8579605 |
| VH C6-C10 | ug/L | - | - | <300 | <300 | <300 | <300 | 300 | 8579605 |
| Surrogate Recovery (%) | | | | | | | | | |
| 1,4-Difluorobenzene (sur.) | % | - | - | 91 | 104 | 91 | 89 | | 8579605 |
| 4-Bromofluorobenzene (sur.) | % | - | - | 77 | 88 | 76 | 75 | | 8579605 |
| D4-1,2-Dichloroethane (sur.) | % | - | - | 83 | 94 | 82 | 80 | | 8579605 |
| No Fill | No Exceedance | | | | | | | | |
| Grey | Exceeds 1 criteria policy/level | | | | | | | | |
| Black | Exceeds both criteria/levels | | | | | | | | |
| RDL = Reportable Detection Limit | | | | | | | | | |

GENERAL COMMENTS

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

Turbidity Guidelines:

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.

Results relate only to the items tested.

Maxxam Job #: B719010
Report Date: 2017/03/22

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | |
|----------|------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-----------|-----------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8579605 | 1,4-Difluorobenzene (sur.) | 2017/03/17 | 103 | 70 - 130 | 109 | 70 - 130 | 101 | % | | |
| 8579605 | 4-Bromofluorobenzene (sur.) | 2017/03/17 | 97 | 70 - 130 | 103 | 70 - 130 | 90 | % | | |
| 8579605 | D4-1,2-Dichloroethane (sur.) | 2017/03/17 | 92 | 70 - 130 | 96 | 70 - 130 | 107 | % | | |
| 8579162 | True Colour | 2017/03/16 | | | 107 | 80 - 120 | <5.0 | Col. Unit | NC | 20 |
| 8579310 | Total Mercury (Hg) | 2017/03/16 | 103 | 80 - 120 | 102 | 80 - 120 | <0.010 | ug/L | NC | 20 |
| 8579454 | Alkalinity (PP as CaCO3) | 2017/03/16 | | | | | <0.50 | mg/L | NC | 20 |
| 8579454 | Alkalinity (Total as CaCO3) | 2017/03/16 | NC | 80 - 120 | 97 | 80 - 120 | <0.50 | mg/L | 0.41 | 20 |
| 8579454 | Bicarbonate (HCO3) | 2017/03/16 | | | | | <0.50 | mg/L | 0.41 | 20 |
| 8579454 | Carbonate (CO3) | 2017/03/16 | | | | | <0.50 | mg/L | NC | 20 |
| 8579454 | Hydroxide (OH) | 2017/03/16 | | | | | <0.50 | mg/L | NC | 20 |
| 8579461 | Conductivity | 2017/03/16 | | | 100 | 80 - 120 | <1.0 | uS/cm | 0.56 | 20 |
| 8579462 | pH | 2017/03/16 | | | 102 | 97 - 103 | | | 0.25 | N/A |
| 8579488 | Turbidity | 2017/03/16 | | | 102 | 80 - 120 | <0.10 | NTU | NC | 20 |
| 8579605 | 1,1,1,2-tetrachloroethane | 2017/03/17 | 86 | 70 - 130 | 89 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,1,1-trichloroethane | 2017/03/17 | 88 | 70 - 130 | 91 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,1,2,2-tetrachloroethane | 2017/03/17 | 76 | 70 - 130 | 79 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,1,2-trichloroethane | 2017/03/17 | 86 | 70 - 130 | 90 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,1-dichloroethane | 2017/03/17 | 88 | 70 - 130 | 92 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,1-dichloroethene | 2017/03/17 | 87 | 70 - 130 | 91 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,2-dichlorobenzene | 2017/03/17 | 82 | 70 - 130 | 84 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,2-dichloroethane | 2017/03/17 | 86 | 70 - 130 | 88 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,2-dichloropropane | 2017/03/17 | 83 | 70 - 130 | 88 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,3-dichlorobenzene | 2017/03/17 | 84 | 70 - 130 | 86 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | 1,4-dichlorobenzene | 2017/03/17 | 80 | 70 - 130 | 84 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Benzene | 2017/03/17 | 87 | 70 - 130 | 93 | 70 - 130 | <0.40 | ug/L | NC | 30 |
| 8579605 | Bromodichloromethane | 2017/03/17 | 85 | 70 - 130 | 88 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | Bromoform | 2017/03/17 | 85 | 70 - 130 | 84 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | Bromomethane | 2017/03/17 | 86 | 60 - 140 | 84 | 60 - 140 | <1.0 | ug/L | NC | 30 |
| 8579605 | Carbon tetrachloride | 2017/03/17 | 76 | 70 - 130 | 75 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Chlorobenzene | 2017/03/17 | 74 | 70 - 130 | 80 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Chlorodibromomethane | 2017/03/17 | 84 | 70 - 130 | 87 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | Chloroethane | 2017/03/17 | 85 | 60 - 140 | 90 | 60 - 140 | <1.0 | ug/L | NC | 30 |

Maxxam Job #: B719010
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QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | |
|----------|-------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8579605 | Chloroform | 2017/03/17 | 86 | 70 - 130 | 88 | 70 - 130 | <1.0 | ug/L | 13 | 30 |
| 8579605 | Chloromethane | 2017/03/17 | 87 | 60 - 140 | 95 | 60 - 140 | <1.0 | ug/L | NC | 30 |
| 8579605 | cis-1,2-dichloroethene | 2017/03/17 | 86 | 70 - 130 | 90 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | cis-1,3-dichloropropene | 2017/03/17 | 69 (1) | 70 - 130 | 74 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | Dichloromethane | 2017/03/17 | 93 | 70 - 130 | 97 | 70 - 130 | <2.0 | ug/L | NC | 30 |
| 8579605 | Ethylbenzene | 2017/03/17 | 82 | 70 - 130 | 89 | 70 - 130 | <0.40 | ug/L | NC | 30 |
| 8579605 | m & p-Xylene | 2017/03/17 | 88 | 70 - 130 | 95 | 70 - 130 | <0.40 | ug/L | NC | 30 |
| 8579605 | Methyl-tert-butylether (MTBE) | 2017/03/17 | 80 | 70 - 130 | 86 | 70 - 130 | <4.0 | ug/L | NC | 30 |
| 8579605 | o-Xylene | 2017/03/17 | 83 | 70 - 130 | 91 | 70 - 130 | <0.40 | ug/L | NC | 30 |
| 8579605 | Styrene | 2017/03/17 | 74 | 70 - 130 | 80 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Tetrachloroethene | 2017/03/17 | 83 | 70 - 130 | 87 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Toluene | 2017/03/17 | 78 | 70 - 130 | 83 | 70 - 130 | <0.40 | ug/L | NC | 30 |
| 8579605 | trans-1,2-dichloroethene | 2017/03/17 | 81 | 70 - 130 | 87 | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | trans-1,3-dichloropropene | 2017/03/17 | 60 (1) | 70 - 130 | 65 (1) | 70 - 130 | <1.0 | ug/L | NC | 30 |
| 8579605 | Trichloroethene | 2017/03/17 | 83 | 70 - 130 | 88 | 70 - 130 | <0.50 | ug/L | NC | 30 |
| 8579605 | Trichlorofluoromethane | 2017/03/17 | 80 | 60 - 140 | 82 | 60 - 140 | <4.0 | ug/L | NC | 30 |
| 8579605 | VH C6-C10 | 2017/03/17 | | | 99 | 70 - 130 | <300 | ug/L | NC | 30 |
| 8579605 | Vinyl chloride | 2017/03/17 | 79 | 60 - 140 | 85 | 60 - 140 | <0.50 | ug/L | NC | 30 |
| 8579605 | Xylenes (Total) | 2017/03/17 | | | | | <0.40 | ug/L | NC | 30 |
| 8579639 | Total Dissolved Solids | 2017/03/17 | NC | 80 - 120 | 106 | 80 - 120 | <10 | mg/L | 3.5 | 20 |
| 8580142 | Dissolved Chloride (Cl) | 2017/03/16 | 99 | 80 - 120 | 100 | 80 - 120 | <0.50 | mg/L | 0.30 | 20 |
| 8580143 | Dissolved Sulphate (SO4) | 2017/03/16 | 108 | 80 - 120 | 101 | 80 - 120 | <0.50 | mg/L | 1.5 | 20 |
| 8580146 | Total Mercury (Hg) | 2017/03/17 | 97 | 80 - 120 | 105 | 80 - 120 | <0.010 | ug/L | NC | 20 |
| 8580210 | Nitrate plus Nitrite (N) | 2017/03/16 | 97 | 80 - 120 | 101 | 80 - 120 | <0.020 | mg/L | 0.99 | 25 |
| 8580212 | Nitrite (N) | 2017/03/16 | 95 | 80 - 120 | 98 | 80 - 120 | <0.0050 | mg/L | 2.6 | 20 |
| 8580228 | Total Aluminum (Al) | 2017/03/17 | 108 | 80 - 120 | 110 | 80 - 120 | <3.0 | ug/L | NC | 20 |
| 8580228 | Total Antimony (Sb) | 2017/03/17 | 101 | 80 - 120 | 99 | 80 - 120 | <0.50 | ug/L | NC | 20 |
| 8580228 | Total Arsenic (As) | 2017/03/17 | 107 | 80 - 120 | 101 | 80 - 120 | <0.10 | ug/L | NC | 20 |
| 8580228 | Total Barium (Ba) | 2017/03/17 | 96 | 80 - 120 | 98 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Beryllium (Be) | 2017/03/17 | 98 | 80 - 120 | 100 | 80 - 120 | <0.10 | ug/L | NC | 20 |
| 8580228 | Total Bismuth (Bi) | 2017/03/17 | 100 | 80 - 120 | 99 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Boron (B) | 2017/03/17 | 103 | 80 - 120 | 101 | 80 - 120 | <50 | ug/L | NC | 20 |

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QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|---------------------|-------|-----------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8580228 | Total Cadmium (Cd) | 2017/03/17 | 101 | 80 - 120 | 98 | 80 - 120 | <0.010 | ug/L | NC | 20 |
| 8580228 | Total Chromium (Cr) | 2017/03/17 | 99 | 80 - 120 | 100 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Cobalt (Co) | 2017/03/17 | 101 | 80 - 120 | 101 | 80 - 120 | <0.20 | ug/L | NC | 20 |
| 8580228 | Total Copper (Cu) | 2017/03/17 | 101 | 80 - 120 | 100 | 80 - 120 | <0.50 | ug/L | NC | 20 |
| 8580228 | Total Iron (Fe) | 2017/03/17 | 100 | 80 - 120 | 105 | 80 - 120 | <10 | ug/L | NC | 20 |
| 8580228 | Total Lead (Pb) | 2017/03/17 | 99 | 80 - 120 | 99 | 80 - 120 | <0.20 | ug/L | NC | 20 |
| 8580228 | Total Lithium (Li) | 2017/03/17 | 97 | 80 - 120 | 103 | 80 - 120 | <2.0 | ug/L | NC | 20 |
| 8580228 | Total Manganese (Mn) | 2017/03/17 | 104 | 80 - 120 | 104 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Molybdenum (Mo) | 2017/03/17 | 106 | 80 - 120 | 105 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Nickel (Ni) | 2017/03/17 | 99 | 80 - 120 | 101 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Selenium (Se) | 2017/03/17 | 108 | 80 - 120 | 103 | 80 - 120 | <0.10 | ug/L | NC | 20 |
| 8580228 | Total Silicon (Si) | 2017/03/17 | | | | | <100 | ug/L | NC | 20 |
| 8580228 | Total Silver (Ag) | 2017/03/17 | 104 | 80 - 120 | 105 | 80 - 120 | <0.020 | ug/L | NC | 20 |
| 8580228 | Total Strontium (Sr) | 2017/03/17 | 101 | 80 - 120 | 94 | 80 - 120 | <1.0 | ug/L | NC | 20 |
| 8580228 | Total Thallium (Tl) | 2017/03/17 | 100 | 80 - 120 | 100 | 80 - 120 | <0.010 | ug/L | NC | 20 |
| 8580228 | Total Tin (Sn) | 2017/03/17 | 99 | 80 - 120 | 99 | 80 - 120 | <5.0 | ug/L | NC | 20 |
| 8580228 | Total Titanium (Ti) | 2017/03/17 | 108 | 80 - 120 | 96 | 80 - 120 | <5.0 | ug/L | NC | 20 |
| 8580228 | Total Uranium (U) | 2017/03/17 | 103 | 80 - 120 | 102 | 80 - 120 | <0.10 | ug/L | NC | 20 |
| 8580228 | Total Vanadium (V) | 2017/03/17 | 100 | 80 - 120 | 101 | 80 - 120 | <5.0 | ug/L | NC | 20 |
| 8580228 | Total Zinc (Zn) | 2017/03/17 | 106 | 80 - 120 | 102 | 80 - 120 | <5.0 | ug/L | NC | 20 |
| 8580228 | Total Zirconium (Zr) | 2017/03/17 | | | | | <0.10 | ug/L | NC | 20 |
| 8580996 | Fluoride (F) | 2017/03/16 | 100 | 80 - 120 | 106 | 80 - 120 | 0.015, RDL=0.010 | mg/L | 3.9 | 20 |

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QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

| QC Batch | Parameter | Date | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | |
|----------|--------------------------|------------|--------------|-----------|--------------|-----------|----------------|-------|-----------|-----------|
| | | | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8582025 | Dissolved Sulphate (SO4) | 2017/03/17 | 110 | 80 - 120 | 102 | 80 - 120 | 0.51, RDL=0.50 | mg/L | | |

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

APPENDIX III

Pemberton Weekly Chlorine and pH Levels

Chlorine in mg/L

Sample Station

| Date | 4-Jan-17 | 10-Jan-17 | 16-Jan-17 | 23-Jan-17 | 31-Jan-17 |
|-----------------|----------|-----------|-----------|-----------|-----------|
| Firehall | | | | | 0.30 |
| Industrial Park | 0.01 | 0.20 | 0.20 | 0.16 | 0.09 |
| Collins Rd | | | | | |
| Pem. Meadows Rd | | | | | |
| Pem. Farm Rd | | | | | |
| Urdal Rd | | | | | |
| Oak St | 0.53 | 0.50 | 0.41 | 0.40 | 0.38 |
| Village Office | 0.47 | 0.41 | 0.38 | 0.29 | 0.28 |
| Plateau | 0.47 | 0.38 | 0.48 | 0.26 | 0.31 |
| Treatment Plant | 0.07 | 0.04 | 0.00 | 0.04 | 0.00 |
| Health Centre | 0.50 | 0.42 | 0.41 | 0.34 | 0.37 |

pH

Sample Station

| Date | 4-Jan-17 | 10-Jan-17 | 16-Jan-17 | 23-Jan-17 | 31-Jan-17 |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| Firehall | | | | | 6.08 / 8.8 |
| Industrial Park | 6.26 / 9.4 | 5.68 / 7.0 | 6.01 / 9.2 | 6.34 / 12.0 | 6.29 / 9.0 |
| Collins Rd | | | | | |
| Pem. Meadows Rd | | | | | |
| Pem. Farm Rd | | | | | |
| Urdal Rd | | | | | |
| Oak St | 6.15 / 10.2 | 5.48 / 7.6 | 5.84 / 9.3 | 6.04 / 12.2 | 6.05 / 8.7 |
| Village Office | 6.13 / 10.8 | 6.17 / 7.8 | 5.86 / 9.1 | 6.11 / 12.4 | 6.07 / 8.7 |
| Plateau | 6.15 / 10.7 | 5.54 / 6.8 | 5.87 / 9.2 | 5.98 / 12.0 | 6.08 / 8.8 |
| Treatment Plant | 6.07 / 12.1 | 5.78 / 12.2 | 5.77 / 13.1 | 5.82 / 15.8 | 5.64 / 15.1 |
| Health Centre | 6.10 / 10.9 | 5.60 / 8.1 | 5.90 / 9.3 | 6.0 / 12.1 | 6.10 / 8.9 |

Chlorine in mg/L

| | | | | |
|-----------------|------|------|------|------|
| Urdal Rd | | 0.34 | 0.33 | 0.21 |
| Oak St | 0.19 | 0.37 | 0.35 | 0.24 |
| Village Office | 0.16 | 0.28 | 0.26 | 0.19 |
| Plateau | 0.24 | 0.37 | 0.40 | 0.25 |
| Treatment Plant | 0.00 | 0.08 | 0.03 | 0.03 |
| Health Centre | 0.15 | 0.35 | 0.31 | 0.19 |

pH/Temperature

| | 6-Mar-17 | 13-Mar-17 | 21-Mar-17 | 28-Mar-17 |
|-----------------|-------------|-------------|-------------|-------------|
| Firehall | 6.74 / 10.9 | | | 6.68 / 9.4 |
| Industrial Park | 6.59 / 10.0 | 6.48 / 16.1 | 6.42 / 15.0 | 6.37 / 10.0 |
| Collins Rd | 6.72 / 10.3 | 6.30 / 15.2 | 6.15 / 15.2 | 5.94 / 9.9 |
| Pem. Meadows Rd | | 6.32 / 14.9 | 6.25 / 14.9 | 5.75 / 8.9 |
| Pem. Farm Rd | 6.66 / 10.4 | 6.29 / 15.0 | 6.44 / 14.8 | 5.90 / 9.8 |
| Urdal Rd | | 6.32 / 14.9 | 6.22 / 14.7 | 5.74 / 8.8 |
| Oak St | 6.63 / 10.9 | 6.26 / 14.9 | 6.22 / 14.5 | 5.82 / 8.8 |
| Village Office | 6.52 / 10.0 | 6.28 / 16.1 | 6.30 / 14.8 | 5.91 / 9.7 |
| Plateau | 6.67 / 10.5 | 6.26 / 16.1 | 6.31 / 14.8 | 5.72 / 9.8 |
| Treatment Plant | 6.53 / 10.5 | 6.26 / 17.2 | 6.36 / 16.2 | 5.68 / 17.6 |
| Health Centre | 6.59 / 11.1 | 6.34 / 15.5 | 6.28 / 14.5 | 5.64 / 8.8 |

Chlorine in mg/L

| | 3-Apr-17 | 12-Apr-17 | 18-Apr-17 | 24-Apr-17 |
|-----------------|----------|-----------|-----------|-----------|
| Firehall | | | | 0.27 |
| Industrial Park | 0.00 | 0.06 | 0.02 | 0.08 |
| Collins Rd | 0.48 | 0.52 | 0.41 | 0.34 |
| Pem. Meadows Rd | 0.35 | 0.47 | 0.25 | 0.36 |
| Pem. Farm Rd | 0.40 | 0.48 | 0.30 | 0.38 |
| Urdal Rd | | | 0.39 | 0.34 |
| Oak St | 0.49 | 0.55 | 0.43 | 0.32 |
| Village Office | 0.38 | 0.36 | 0.33 | 0.12 |
| Plateau | 0.40 | 0.50 | 0.25 | 0.34 |
| Treatment Plant | 0.03 | 0.05 | 0.03 | 0.03 |
| Health Centre | 0.40 | 0.46 | 0.38 | 0.30 |

| | | | | | |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| Firehall | | 6.28 / 15.9 | | | |
| Industrial Park | 6.59 / 19.6 | 6.63 / 16.5 | 6.69 / 17.9 | 6.65 / 15.9 | 6.43 / 16.5 |
| Collins Rd | 6.39 / 18.6 | 6.19 / 15.5 | 6.34 / 16.3 | 6.29 / 14.8 | 6.22 / 16.1 |
| Pem. Meadows Rd | 6.56 / 19.1 | 6.21 / 15.7 | 6.30 / 17.2 | 6.40 / 15.1 | 6.24 / 17.8 |
| Pem. Farm Rd | 6.55 / 18.1 | 6.11 / 15.2 | 6.34 / 17.1 | 6.58 / 15.2 | 6.22 / 17.4 |
| Urdal Rd | 6.50 / 18.5 | 6.29 / 17.1 | 6.36 / 16.5 | 6.62 / 15.7 | 6.28 / 17.9 |
| Oak St | 6.39 / 18.6 | 6.14 / 15.4 | 6.33 / 17.5 | 6.85 / 16.4 | 6.17 / 17.1 |
| Village Office | 6.34 / 18.2 | 6.22 / 16.1 | 6.32 / 16.8 | 6.61 / 15.7 | 6.25 / 16.8 |
| Plateau | 6.46 / 17.9 | 6.19 / 16.2 | 6.30 / 16.3 | 6.87 / 15.2 | 6.14 / 17.9 |
| Treatment Plant | 6.54 / 20.6 | 6.22 / 17.8 | 6.26 / 16.5 | 6.52 / 19.5 | 5.74 / 15.8 |
| Health Centre | 6.61 / 19.6 | 6.25 / 15.5 | 6.35 / 16.8 | 6.56 / 15.8 | 6.26 / 18.1 |

Chlorine in mg/L

| | 5-Jun-17 | 12-Jun-17 | 19-Jun-17 |
|-----------------|----------|-----------|-----------|
| Firehall | | | |
| Industrial Park | 0.09 | 0.10 | 0.08 |
| Collins Rd | 0.43 | 0.39 | 0.40 |
| Pem. Meadows Rd | 0.39 | 0.37 | 0.35 |
| Pem. Farm Rd | 0.40 | 0.32 | 0.36 |
| Urdal Rd | 0.37 | 0.38 | 0.36 |
| Oak St | 0.41 | 0.38 | 0.34 |
| Village Office | 0.25 | 0.31 | 0.32 |
| Plateau | 0.35 | 0.37 | 0.32 |
| Treatment Plant | 0.32 | 0.01 | 0.04 |
| Health Centre | 0.30 | 0.36 | 0.26 |

pH/Temperature

| | 5-Jun-17 | 12-Jun-17 | 19-Jun-17 |
|-----------------|-------------|-------------|-------------|
| Firehall | | | |
| Industrial Park | 6.47 / 16.7 | 7.19 / 17.7 | 7.37 / 21.3 |
| Collins Rd | 6.21 / 16.5 | 6.83 / 16.0 | 6.98 / 19.5 |
| Pem. Meadows Rd | 6.14 / 17.5 | 6.85 / 16.3 | 7.06 / 19.0 |
| Pem. Farm Rd | 6.17 / 17.1 | 6.82 / 16.4 | 7.05 / 20.0 |
| Urdal Rd | 6.23 / 16.6 | 6.86 / 15.4 | 6.99 / 19.9 |

Chlorine in mg/L

| | 1-Aug-17 | 8-Aug-17 | 15-Aug-17 | 21-Aug-17 | 28-Aug-17 |
|-----------------|----------|----------|-----------|-----------|-----------|
| Firehall | | 0.28 | 0.23 | | |
| Industrial Park | 0.01 | 0.09 | 0.11 | 0.07 | 0.08 |
| Collins Rd | 0.40 | 0.36 | 0.33 | 0.35 | 0.38 |
| Pem. Meadows Rd | 0.37 | 0.33 | 0.28 | 0.31 | 0.30 |
| Pem. Farm Rd | 0.37 | 0.32 | 0.29 | 0.32 | 0.30 |
| Urdal Rd | 0.38 | 0.32 | 0.26 | 0.33 | 0.30 |
| Oak St | 0.38 | 0.35 | 0.33 | | 0.32 |
| Village Office | 0.22 | 0.23 | 0.20 | 0.19 | 0.23 |
| Plateau | 0.37 | 0.31 | 0.23 | 0.26 | 0.30 |
| Treatment Plant | 0.15 | 0.24 | 0.05 | 0.30 | 0.27 |
| Health Centre | 0.31 | 0.28 | 0.23 | 0.27 | 0.28 |

pH/Temperature

| | 1-Aug-17 | 8-Aug-17 | 15-Aug-17 | 21-Aug-17 | 28-Aug-17 |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| Firehall | | 6.38 / 17.7 | 6.68 / 17.6 | | |
| Industrial Park | 7.16 / 14.9 | 6.76 / 17.9 | 6.76 / 17.4 | 6.95 / 22.6 | 7.18 / 14.0 |
| Collins Rd | 6.72 / 13.6 | 6.53 / 16.9 | 6.67 / 17.2 | 6.64 / 20.8 | 6.42 / 12.3 |
| Pem. Meadows Rd | 6.68 / 13.5 | 6.36 / 17.7 | 6.58 / 17.1 | 6.71 / 22.0 | 6.39 / 11.8 |
| Pem. Farm Rd | 6.70 / 14.4 | 6.35 / 17.4 | 6.59 / 17.4 | 6.68 / 21.2 | 6.38 / 12.5 |
| Urdal Rd | 6.72 / 14.2 | 6.32 / 17.1 | 6.55 / 17.9 | 6.69 / 21.7 | 6.42 / 13.4 |
| Oak St | 6.71 / 14.5 | 6.31 / 17.3 | 6.61 / 17.1 | | 6.41 / 12.8 |
| Village Office | 6.70 / 14.7 | 6.40 / 18.0 | 6.66 / 17.8 | 6.56 / 21.1 | 6.61 / 13.3 |
| Plateau | 6.72 / 13.9 | 6.46 / 17.4 | 6.49 / 17.6 | 6.59 / 20.9 | 6.55 / 12.2 |
| Treatment Plant | 6.62 / 19.5 | 6.41 / 17.3 | 6.50 / 17.5 | 6.63 / 23.2 | 6.48 / 14.9 |
| Health Centre | 6.69 / 14.9 | 6.42 / 17.5 | 6.64 / 17.4 | 6.61 / 22.2 | 6.40 / 13.5 |

Chlorine in mg/L

| | 5-Sep-17 | 11-Sep-17 | 20-Sep-17 | 25-Sep-17 |
|----------|----------|-----------|-----------|-----------|
| Firehall | | | | |

| | | | | |
|-----------------|------|------|------|------|
| Village Office | 0.23 | 0.21 | 0.20 | 0.19 |
| Plateau | 0.26 | 0.26 | 0.26 | 0.26 |
| Treatment Plant | 0.07 | 0.00 | 0.00 | 0.18 |
| Health Centre | 0.24 | 0.25 | 0.27 | 0.27 |

pH/Temperature

| | 2-Oct-17 | 16-Oct-17 | 23-Oct-17 | 31-Oct-17 |
|-----------------|-------------|-------------|-------------|-------------|
| Firehall | | | | |
| Industrial Park | 7.20 / 15.0 | 6.48 / 14.5 | 7.64 / 15.6 | 8.22 / 11.1 |
| Collins Rd | 6.89 / 13.9 | 6.33 / 15.2 | 6.95 / 15.0 | |
| Pem. Meadows Rd | 6.71 / 14.4 | 6.34 / 14.8 | 6.68 / 13.8 | 7.52 / 9.3 |
| Pem. Farm Rd | 6.74 / 14.2 | 6.38 / 15.2 | 6.99 / 15.2 | 7.63 / 10.7 |
| Urdal Rd | 6.70 / 14.0 | 6.41 / 15.1 | 6.74 / 14.0 | |
| Oak St | 6.78 / 14.2 | 6.58 / 15.1 | 6.92 / 13.5 | 7.41 / 9.8 |
| Village Office | 6.88 / 14.4 | 6.30 / 15.0 | 6.90 / 14.6 | 7.59 / 9.4 |
| Plateau | 6.64 / 13.7 | 6.29 / 14.9 | 6.97 / 14.0 | 7.58 / 9.3 |
| Treatment Plant | 6.79 / 18.5 | 6.40 / 19.6 | 6.84 / 17.3 | 7.57 / 13.0 |
| Health Centre | 6.87 / 14.7 | 6.41 / 16.0 | 6.98 / 14.7 | 7.61 / 11.7 |

Chlorine in mg/L

| | 7-Nov-17 | 14-Nov-17 | 21-Nov-17 | 28-Nov-17 |
|-----------------|----------|-----------|-----------|-----------|
| Firehall | | | | |
| Industrial Park | 0.01 | 0.06 | 0.14 | 0.02 |
| Collins Rd | | 0.35 | 0.28 | 0.34 |
| Pem. Meadows Rd | | 0.29 | 0.28 | 0.29 |
| Pem. Farm Rd | | 0.31 | 0.23 | 0.27 |
| Urdal Rd | | 0.31 | 0.19 | 0.29 |
| Oak St | 0.27 | 0.34 | 0.27 | 0.29 |
| Village Office | 0.21 | 0.30 | 0.20 | 0.22 |
| Plateau | | 0.33 | 0.30 | 0.29 |
| Treatment Plant | 0.20 | 0.04 | 0.04 | 0.01 |
| Health Centre | 0.28 | 0.33 | 0.25 | 0.33 |

| | | | | |
|-----------------|-------------|-------------|-------------|-------------|
| Collins Rd | | | 7.19 / 7.8 | |
| Pem. Meadows Rd | | | 7.44 / 9.3 | |
| Pem. Farm Rd | | | 7.44 / 9.4 | |
| Urdal Rd | | | 7.47 / 9.1 | |
| Oak St | 7.03 / 12.2 | 7.43 / 8.6 | 7.46 / 8.9 | 6.76 / 11.2 |
| Village Office | 7.02 / 12.3 | 7.39 / 9.2 | 7.44 / 9.7 | |
| Plateau | 7.14 / 12.4 | 7.38 / 9.3 | 7.44 / 8.7 | 6.69 / 11.4 |
| Treatment Plant | 6.93 / 15.6 | 7.32 / 14.2 | 7.39 / 12.1 | 6.74 / 12.2 |
| Health Centre | 7.10 / 12.2 | 7.38 / 10.3 | 7.37 / 9.3 | |

APPENDIX IV

Village of Pemberton Water Sampling Program

| Location | Date | CL2 | PH | Alkalinity | Notes |
|----------------|-----------|------|-----|------------|------------------|
| Health Centre | 6/5/2017 | 0.30 | 6.2 | 26 | |
| Village Office | 6/5/2017 | 0.25 | 6.2 | 19 | No pH adjustment |
| Collins | 6/5/2017 | 0.43 | 6.2 | 18 | was carried out |
| Plateau | 6/5/2017 | 0.35 | 6.2 | 24 | during this week |
| Urdal | 6/5/2017 | 0.37 | 6.2 | 13 | |
| Oak | 6/5/2017 | 0.41 | 6.2 | 19 | |
| Farm | 6/5/2017 | 0.40 | 6.2 | 13 | |
| meadows | 6/5/2017 | 0.39 | 6.1 | 7 | |
| | | 0.36 | 6.2 | 17.38 | Weekly Average |
| | | | | | |
| Health Centre | 6/12/2017 | 0.36 | 6.8 | 43 | |
| Village Office | 6/12/2017 | 0.31 | 6.8 | 50 | |
| Collins | 6/12/2017 | 0.39 | 6.8 | 48 | |
| Plateau | 6/12/2017 | 0.37 | 6.9 | 41 | |
| Urdal | 6/12/2017 | 0.38 | 6.9 | 50 | |
| Oak | 6/12/2017 | 0.38 | 6.7 | 38 | |
| Farm | 6/12/2017 | 0.32 | 6.8 | 42 | |
| meadows | 6/12/2017 | 0.37 | 6.9 | 25 | |
| | | 0.36 | 6.8 | 42.13 | Weekly Average |
| | | | | | |
| Health Centre | 6/19/2017 | 0.26 | 7.0 | 41 | |
| Village Office | 6/19/2017 | 0.32 | 7.0 | 75 | |
| Collins | 6/19/2017 | 0.40 | 7.0 | 56 | |
| Plateau | 6/19/2017 | 0.32 | 7.0 | 60 | |
| Urdal | 6/19/2017 | 0.36 | 7.0 | 59 | |
| Oak | 6/19/2017 | 0.34 | 7.1 | 55 | |
| Farm | 6/19/2017 | 0.36 | 7.1 | 41 | |
| meadows | 6/19/2017 | 0.35 | 7.1 | 56 | |
| | | 0.34 | 7.0 | 55.38 | Weekly Average |
| | | | | | |
| Health Centre | 6/26/2017 | 0.38 | 7.1 | 26 | |
| Village Office | 6/26/2017 | 0.28 | 7.1 | 24 | |
| Collins | 6/26/2017 | 0.30 | 7.7 | 46 | |
| Plateau | 6/26/2017 | 0.34 | 7.6 | 32 | |
| Urdal | 6/26/2017 | 0.36 | 7.3 | 25 | |
| Oak | 6/26/2017 | 0.31 | 7.7 | 46 | |
| Farm | 6/26/2017 | 0.36 | 7.4 | 38 | |
| meadows | 6/26/2017 | 0.35 | 7.2 | 36 | |
| | | 0.34 | 7.4 | 34.13 | Weekly Average |
| | | | | | |
| Health Centre | 7/4/2017 | 0.52 | 6.5 | 33 | |
| Village Office | 7/4/2017 | 0.33 | 6.3 | 27 | |
| Collins | 7/4/2017 | 0.40 | 6.4 | 37 | |
| Plateau | 7/4/2017 | 0.35 | 6.3 | 32 | |
| Urdal | 7/4/2017 | 0.37 | 6.5 | 46 | |

| | | | | | |
|----------------|-----------|------|-----|----|----------------|
| Collins | 8/8/2017 | 0.36 | 6.5 | 35 | |
| Plateau | 8/8/2017 | 0.31 | 6.5 | 46 | |
| Urdal | 8/8/2017 | 0.32 | 6.3 | 44 | |
| Oak | 8/8/2017 | 0.35 | 6.3 | 36 | |
| Farm | 8/8/2017 | 0.32 | 6.4 | 34 | |
| meadows | 8/8/2017 | 0.33 | 6.4 | 44 | |
| | | 0.31 | 6.4 | 39 | Weekly Average |
| | | | | | |
| Health Centre | 8/15/2017 | 0.23 | 6.6 | 31 | |
| Village Office | 8/15/2017 | 0.20 | 6.7 | 20 | |
| Collins | 8/15/2017 | 0.33 | 6.7 | 24 | |
| Plateau | 8/15/2017 | 0.23 | 6.5 | 30 | |
| Urdal | 8/15/2017 | 0.26 | 6.6 | 23 | |
| Oak | 8/15/2017 | 0.33 | 6.6 | 22 | |
| Farm | 8/15/2017 | 0.29 | 6.6 | 23 | |
| meadows | 8/15/2017 | 0.28 | 6.6 | 18 | |
| | | 0.27 | 6.6 | 24 | Weekly Average |
| | | | | | |
| Health Centre | 8/21/2017 | 0.27 | 6.6 | 24 | |
| Village Office | 8/21/2017 | 0.19 | 6.6 | 30 | |
| Collins | 8/21/2017 | 0.35 | 6.6 | 29 | |
| Plateau | 8/21/2017 | 0.26 | 6.6 | 29 | |
| Urdal | 8/21/2017 | 0.33 | 6.7 | 33 | |
| Oak | 8/21/2017 | 0.33 | 6.6 | 22 | |
| Farm | 8/21/2017 | 0.32 | 6.7 | 29 | |
| meadows | 8/21/2017 | 0.31 | 6.7 | 27 | |
| | | 0.30 | 6.6 | 28 | Weekly Average |
| | | | | | |
| Health Centre | 8/28/2017 | 0.28 | 6.4 | 23 | |
| Village Office | 8/28/2017 | 0.23 | 6.6 | 26 | |
| Collins | 8/28/2017 | 0.38 | 6.4 | 26 | |
| Plateau | 8/28/2017 | 0.30 | 6.6 | 31 | |
| Urdal | 8/28/2017 | 0.30 | 6.4 | 28 | |
| Oak | 8/28/2017 | 0.32 | 6.4 | 25 | |
| Farm | 8/28/2017 | 0.30 | 6.4 | 25 | |
| meadows | 8/28/2017 | 0.30 | 6.4 | 29 | |
| | | 0.30 | 6.4 | 27 | Weekly Average |
| | | | | | |
| Health Centre | 9/5/2017 | 0.28 | 6.6 | 28 | |
| Village Office | 9/5/2017 | 0.23 | 6.5 | 24 | |
| Collins | 9/5/2017 | 0.38 | 6.5 | 30 | |
| Plateau | 9/5/2017 | 0.30 | 6.4 | 38 | |
| Urdal | 9/5/2017 | 0.30 | 6.6 | 24 | |
| Oak | 9/5/2017 | 0.32 | 6.6 | 43 | |
| Farm | 9/5/2017 | 0.30 | 6.6 | 26 | |
| meadows | 9/5/2017 | 0.30 | 6.5 | 27 | |
| | | 0.30 | 6.5 | 30 | Weekly Average |

| | | | | | |
|----------------|------------|------|-----|-------|------------------------------|
| Farm | 10/16/2017 | 0.26 | 6.4 | 48 | |
| meadows | 10/16/2017 | 0.25 | 6.3 | 53 | |
| | | 0.27 | 6.4 | 52.75 | Weekly Average |
| Health Centre | 10/23/2017 | 0.27 | 7.0 | 54 | |
| Village Office | 10/23/2017 | 0.20 | 6.9 | 59 | |
| Collins | 10/23/2017 | 0.32 | 7.0 | 55 | |
| Plateau | 10/23/2017 | 0.26 | 7.0 | 55 | Target set point established |
| Urdal | 10/23/2017 | 0.26 | 6.7 | 56 | |
| Oak | 10/23/2017 | 0.29 | 6.9 | 58 | |
| Farm | 10/23/2017 | 0.23 | 7.0 | 59 | |
| meadows | 10/23/2017 | 0.27 | 6.7 | 58 | |
| | | 0.26 | 6.9 | 57 | |
| Health Centre | 6/11/2017 | 0.28 | 7.4 | 61 | |
| Village Office | 6/11/2017 | 0.21 | 7.4 | 61 | |
| Collins | 6/11/2017 | | | | frozen |
| Plateau | 6/11/2017 | 0.28 | 7.7 | 50 | |
| Urdal | 6/11/2017 | | | | frozen |
| Oak | 6/11/2017 | 0.27 | 7.6 | 58 | |
| Farm | 6/11/2017 | | | | frozen |
| meadows | 6/11/2017 | | | | frozen |
| | | 0.26 | 7.5 | 58 | |
| Health Centre | 14/11/2017 | 0.33 | 7.0 | 50 | |
| Village Office | 14/11/2017 | 0.30 | 7.0 | 60 | |
| Collins | 14/11/2017 | 0.35 | 7.0 | 57 | |
| Plateau | 14/11/2017 | 0.33 | 7.0 | 54 | |
| Urdal | 14/11/2017 | 0.31 | 7.0 | 53 | |
| Oak | 14/11/2017 | 0.34 | 7.0 | 53 | |
| Farm | 14/11/2017 | 0.31 | 7.0 | 57 | |
| meadows | 14/11/2017 | 0.29 | 7.0 | 50 | |
| | | 0.32 | 7.0 | 54 | |
| Health Centre | 21/11/2017 | 0.25 | 7.3 | 62 | |
| Village Office | 21/11/2017 | 0.20 | 7.3 | 74 | |
| Collins | 21/11/2017 | 0.28 | 7.3 | 59 | |
| Plateau | 21/11/2017 | 0.30 | 7.3 | 52 | |
| Urdal | 21/11/2017 | 0.19 | 7.3 | 68 | |
| Oak | 21/11/2017 | 0.27 | 7.3 | 62 | |
| Farm | 21/11/2017 | 0.23 | 7.3 | 59 | |
| meadows | 21/11/2017 | 0.28 | 7.3 | 57 | |
| | | 0.25 | 7.3 | 62 | |
| Health Centre | 28/11/2017 | 0.23 | 7.4 | 71 | |
| Village Office | 28/11/2017 | 0.22 | 7.3 | 58 | |
| Collins | 28/11/2017 | 0.34 | 7.3 | 49 | |

APPENDIX V

Sample Range Report

Vancouver Coastal Health

Facility Name: Village of Pemberton
Date Range: Jan 1 2017 to Dec 31 2017

Operator Jeff Westlake
 P.O. Box 100
 Pemberton, BC V0N 2L0

| Sampling Site | Date Collected | Total Coliform | E. Coli | Fecal Coliform |
|----------------------------|-------------------------|----------------|-----------|----------------|
| <u>1403 Portage Road -</u> | | | | |
| <u>audit site - PHN</u> | | | | |
| <u>office tap,</u> | | | | |
| <u>Pemberton Health</u> | | | | |
| <u>Centre</u> | | | | |
| | 14/02/2017 | L1 | L1 | |
| | 20/02/2017 | L1 | L1 | |
| | 27/02/2017 | L1 | L1 | |
| | 20/03/2017 | L1 | L1 | |
| | 28/03/2017 | L1 | L1 | |
| | 24/04/2017 | L1 | L1 | |
| | 08/05/2017 | L1 | L1 | |
| | 18/07/2017 | L1 | L1 | |
| | 25/07/2017 | L1 | L1 | |
| | 01/08/2017 | L1 | L1 | |
| | 08/08/2017 | L1 | L1 | |
| | 15/08/2017 | L1 | L1 | |
| | 20/09/2017 | L1 | L1 | |
| | 06/11/2017 | L1 | L1 | |
| | 21/11/2017 | L1 | L1 | |
| | 28/11/2017 | <u>L1</u> | <u>L1</u> | |
| | Total Positive : | 0 | 0 | |
| | | | | |
| <u>Reservoir South,</u> | | | | |
| <u>Pemberton</u> | | | | |
| | 12/04/2017 | <u>L1</u> | <u>L1</u> | |
| | Total Positive : | 0 | 0 | |
| | | | | |
| <u>Treatment</u> | | | | |
| <u>Plant/Airport Rd.,</u> | | | | |
| <u>Pemberton</u> | | | | |
| | 04/01/2017 | L1 | L1 | |
| | 10/01/2017 | L1 | L1 | |
| | 16/01/2017 | L1 | L1 | |
| | 23/01/2017 | L1 | L1 | |
| | 31/01/2017 | L1 | L1 | |
| | 08/02/2017 | L1 | L1 | |
| | 14/02/2017 | L1 | L1 | |
| | 20/02/2017 | L1 | L1 | |

| | | |
|-------------------------|-----------|-----------|
| 27/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 20/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 11/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 06/11/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 05/12/2017 | L1 | L1 |
| 11/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Reservoir North.
Pemberton

| | | |
|-------------------------|-----------|-----------|
| 24/04/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Oak Street At High
School, Pemberton

| | | |
|------------|----|----|
| 04/01/2017 | L1 | L1 |
| 10/01/2017 | L1 | L1 |
| 16/01/2017 | L1 | L1 |

| | | |
|-------------------------|-----------|-----------|
| 23/01/2017 | L1 | L1 |
| 31/01/2017 | L1 | L1 |
| 08/02/2017 | L1 | L1 |
| 14/02/2017 | L1 | L1 |
| 20/02/2017 | L1 | L1 |
| 27/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 20/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 06/11/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 05/12/2017 | L1 | L1 |
| 11/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Pemberton Plateau.
Pemberton

| | | |
|------------|----|----|
| 04/01/2017 | L1 | L1 |
| 10/01/2017 | L1 | L1 |
| 16/01/2017 | L1 | L1 |
| 23/01/2017 | L1 | L1 |
| 31/01/2017 | L1 | L1 |

| | | |
|-------------------------|-----------|-----------|
| 08/02/2017 | L1 | L1 |
| 14/02/2017 | L1 | L1 |
| 20/02/2017 | L1 | L1 |
| 27/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 20/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 06/11/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 05/12/2017 | L1 | L1 |
| 11/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Ad hoc /
miscellaneous site,
Pemberton

| | | |
|-------------------------|-----------|-----------|
| 01/08/2017 | L1 | L1 |
| 02/10/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Pemberton Health

Center, 1403
Portage Road,
Pemberton, B.C.

| | | |
|-------------------------|-----------|-----------|
| 04/01/2017 | L1 | L1 |
| 10/01/2017 | L1 | L1 |
| 16/01/2017 | L1 | L1 |
| 23/01/2017 | L1 | L1 |
| 31/01/2017 | L1 | L1 |
| 08/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 11/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 05/12/2017 | L1 | L1 |
| 11/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Village Office, 7410
Prospect

| | | |
|------------|----|----|
| 04/01/2017 | L1 | L1 |
| 10/01/2017 | L1 | L1 |
| 16/01/2017 | L1 | L1 |
| 23/01/2017 | L1 | L1 |
| 31/01/2017 | L1 | L1 |
| 08/02/2017 | L1 | L1 |
| 14/02/2017 | L1 | L1 |
| 20/02/2017 | L1 | L1 |
| 27/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 20/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |

| | | |
|-------------------------|-----------|-----------|
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 11/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 06/11/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 06/12/2017 | L1 | L1 |
| 11/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

| Result Values: | E - estimated | L - less than | G - greater than |
|--|---------------|---------------|------------------|
| Samples that contain total coliform: | 0 | | 0.00% of total |
| Samples that contain e. coli: | 0 | | 0.00% of total |
| Samples that contain fecal coliform: | 0 | | 0.00% of total |
| Number of consecutive samples that contain total coliform: | 0 | | |
| Number of samples that contain total coliform in last 30 days: | 0/0 | | |
| Total number of samples: | 248 | | |

Comments:

Jul 24 2018

FOR FURTHER INFORMATION PLEASE CALL: Cindy Watson (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Pemberton North Water System

Date Range: Jan 1 2017 to Dec 31 2017

Operator Utilities Department-SLRD
P.O. Box 219
Pemberton, BC V0N 2L0

| <u>Sampling Site</u> | <u>Date Collected</u> | <u>Total Coliform</u> | <u>E. Coli</u> | <u>Fecal Coliform</u> |
|-------------------------|-----------------------|-----------------------|----------------|-----------------------|
| <u>1428 Pemberton</u> | | | | |
| <u>Farm Road,</u> | | | | |
| <u>Adjacent to 1428</u> | | | | |
| <u>Pemberton Farm</u> | | | | |
| <u>Road</u> | | | | |
| | 20/02/2017 | L1 | L1 | |
| | 06/03/2017 | L1 | L1 | |
| | 13/03/2017 | L1 | L1 | |
| | 21/03/2017 | L1 | L1 | |
| | 28/03/2017 | L1 | L1 | |
| | 03/04/2017 | L1 | L1 | |
| | 12/04/2017 | L1 | L1 | |
| | 18/04/2017 | L1 | L1 | |
| | 24/04/2017 | L1 | L1 | |
| | 01/05/2017 | L1 | L1 | |
| | 08/05/2017 | L1 | L1 | |
| | 15/05/2017 | L1 | L1 | |
| | 23/05/2017 | L1 | L1 | |
| | 30/05/2017 | L1 | L1 | |
| | 05/06/2017 | L1 | L1 | |
| | 12/06/2017 | L1 | L1 | |
| | 19/06/2017 | L1 | L1 | |
| | 26/06/2017 | L1 | L1 | |
| | 10/07/2017 | L1 | L1 | |
| | 18/07/2017 | L1 | L1 | |
| | 25/07/2017 | L1 | L1 | |
| | 01/08/2017 | L1 | L1 | |
| | 08/08/2017 | L1 | L1 | |
| | 15/08/2017 | L1 | L1 | |
| | 21/08/2017 | L1 | L1 | |
| | 28/08/2017 | L1 | L1 | |
| | 05/09/2017 | L1 | L1 | |
| | 11/09/2017 | L1 | L1 | |
| | 20/09/2017 | L1 | L1 | |
| | 25/09/2017 | L1 | L1 | |
| | 02/10/2017 | L1 | L1 | |
| | 11/10/2017 | L1 | L1 | |
| | 16/10/2017 | L1 | L1 | |
| | 23/10/2017 | L1 | L1 | |
| | 31/10/2017 | L1 | L1 | |
| | 14/11/2017 | L1 | L1 | |

| | | |
|-------------------------|-----------|-----------|
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

7493 Urdal Road,
Adjacent to 7493
Urdal Road

| | | |
|-------------------------|-----------|-----------|
| 13/03/2017 | L1 | L1 |
| 21/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

7620 Pemberton
Meadows Rd,
Opposite 7620
Pemberton
Meadows Rd

| | | |
|------------|----|----|
| 20/02/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 21/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |

| | | |
|-------------------------|-----------|-----------|
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 31/10/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

400-m South of
Collins Road, 400-m
South of Collins
Road

| | | |
|------------|----|----|
| 20/02/2017 | L1 | L1 |
| 06/03/2017 | L1 | L1 |
| 13/03/2017 | L1 | L1 |
| 21/03/2017 | L1 | L1 |
| 28/03/2017 | L1 | L1 |
| 03/04/2017 | L1 | L1 |
| 12/04/2017 | L1 | L1 |
| 18/04/2017 | L1 | L1 |
| 24/04/2017 | L1 | L1 |
| 01/05/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 23/05/2017 | L1 | L1 |
| 30/05/2017 | L1 | L1 |
| 05/06/2017 | L1 | L1 |
| 12/06/2017 | L1 | L1 |

| | | |
|-------------------------|-----------|-----------|
| 19/06/2017 | L1 | L1 |
| 26/06/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 18/07/2017 | L1 | L1 |
| 25/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 21/08/2017 | L1 | L1 |
| 28/08/2017 | L1 | L1 |
| 05/09/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 20/09/2017 | L1 | L1 |
| 25/09/2017 | L1 | L1 |
| 02/10/2017 | L1 | L1 |
| 16/10/2017 | L1 | L1 |
| 23/10/2017 | L1 | L1 |
| 14/11/2017 | L1 | L1 |
| 21/11/2017 | L1 | L1 |
| 28/11/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Result Values: **E - estimated** **L - less than** **G - greater than**

| | | |
|--|-----|----------------|
| Samples that contain total coliform: | 0 | 0.00% of total |
| Samples that contain e. coli: | 0 | 0.00% of total |
| Samples that contain fecal coliform: | 0 | 0.00% of total |
| Number of consecutive samples that contain total coliform: | 0 | |
| Number of samples that contain total coliform in last 30 days: | 0/0 | |
| Total number of samples: | 146 | |

Comments:

Environmental Health Officer
Jul 20 2018

FOR FURTHER INFORMATION PLEASE CALL: Cindy Watson (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Pemberton Industrial Park Water System

Date Range: Jan 1 2017 to Dec 31 2017

Operator Jeff Westlake
Attn: Jeff Westlake Box 100
Pemberton, BC V0N 2L0

| <u>Sampling Site</u> | <u>Date Collected</u> | <u>Total Coliform</u> | <u>E. Coli</u> | <u>Fecal Coliform</u> |
|-----------------------------|-----------------------|-----------------------|----------------|-----------------------|
| <u>Yard Hydrant,</u> | | | | |
| <u>Pemberton Industrial</u> | | | | |
| <u>Park</u> | | | | |
| | 04/01/2017 | L1 | L1 | |
| | 10/01/2017 | L1 | L1 | |
| | 16/01/2017 | L1 | L1 | |
| | 23/01/2017 | L1 | L1 | |
| | 31/01/2017 | L1 | L1 | |
| | 08/02/2017 | L1 | L1 | |
| | 14/02/2017 | L1 | L1 | |
| | 20/02/2017 | L1 | L1 | |
| | 27/02/2017 | L1 | L1 | |
| | 06/03/2017 | L1 | L1 | |
| | 13/03/2017 | L1 | L1 | |
| | 20/03/2017 | L1 | L1 | |
| | 28/03/2017 | L1 | L1 | |
| | 03/04/2017 | L1 | L1 | |
| | 12/04/2017 | L1 | L1 | |
| | 18/04/2017 | L1 | L1 | |
| | 01/05/2017 | L1 | L1 | |
| | 23/05/2017 | L1 | L1 | |
| | 30/05/2017 | L1 | L1 | |
| | 05/06/2017 | L1 | L1 | |
| | 12/06/2017 | L1 | L1 | |
| | 19/06/2017 | L1 | L1 | |
| | 26/06/2017 | L1 | L1 | |
| | 18/07/2017 | L1 | L1 | |
| | 21/08/2017 | L1 | L1 | |
| | 28/08/2017 | L1 | L1 | |
| | 05/09/2017 | L1 | L1 | |
| | 20/09/2017 | L1 | L1 | |
| | 25/09/2017 | L1 | L1 | |
| | 02/10/2017 | L1 | L1 | |
| | 16/10/2017 | L1 | L1 | |
| | 23/10/2017 | L1 | L1 | |
| | 31/10/2017 | L1 | L1 | |
| | 06/11/2017 | L1 | L1 | |
| | 14/11/2017 | L1 | L1 | |
| | 21/11/2017 | L1 | L1 | |
| | 28/11/2017 | L1 | L1 | |

| | | |
|-------------------------|-----------|-----------|
| 05/12/2017 | L1 | L1 |
| 18/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Sample Station at
Meter Chamber,
Pemberton Industrial
Park

| | | |
|-------------------------|-----------|-----------|
| 24/04/2017 | L1 | L1 |
| 08/05/2017 | L1 | L1 |
| 15/05/2017 | L1 | L1 |
| 10/07/2017 | L1 | L1 |
| 26/07/2017 | L1 | L1 |
| 01/08/2017 | L1 | L1 |
| 08/08/2017 | L1 | L1 |
| 15/08/2017 | L1 | L1 |
| 11/09/2017 | L1 | L1 |
| 11/12/2017 | <u>L1</u> | <u>L1</u> |
| Total Positive : | 0 | 0 |

Result Values: **E - estimated** **L - less than** **G - greater than**

| | | |
|--|-----|----------------|
| Samples that contain total coliform: | 0 | 0.00% of total |
| Samples that contain e. coli: | 0 | 0.00% of total |
| Samples that contain fecal coliform: | 0 | 0.00% of total |
| Number of consecutive samples that contain total coliform: | 0 | |
| Number of samples that contain total coliform in last 30 days: | 0/0 | |
| Total number of samples: | 49 | |

Comments:

Environmental Health Officer
Jul 20 2018

FOR FURTHER INFORMATION PLEASE CALL: Cindy Watson (604) 892-2293